# PP8/2020-1

# 14 Ozone Street SKENES CREEK

Lot: 87 LP: 51921 V/F: 8554/882

# **Development of Single Dwelling**

**TANDEM Design Studio** 

Officer - Ravi Ayyagari

# EXHIBITION FILE

This document is made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any Copyright.

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



available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which Application No.:

available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach party. Goppyright/

The following copied documents are made

Planning Enquiries
Phone: (03) 5232 9400
Email: inc@selectrory

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.

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

Click for further information.

Clear Form

# **Application Type**

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?

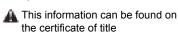
O No	O Yes	If 'Yes', with whom?:	
		Date:	day / month / year

### The Land **I**

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.



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

Un	it No.:	s	t. No.:		St. Nam	e:			
Sul	Suburb/Locality: Postcode:								
А	Lot No.:		OLodged Plar	1 0	Title Plan	OPlan	of Subdivi	sion	No.:
OR									
В	Crown Allotment No.: Section No.:								
	Parish/Township Name:								

		The following copied documents are mad
_		available for the sole purpose of enabling its consideration and review as part of a
Th	ne Proposal	planning process under the Planning and
A	You must give full details of you Insufficient or unclear information	ar proposal and attach the information required to assess the application on will delay your application
:	For what use, development	must not be used for any purpose which may breach any Copyright.
	or other matter do you require a permit? *	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.   You may be required to verify this estimate.
i	Estimated cost of any development for which the permit is required *	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.
Ex	isting Conditions I	
For dwe	scribe how the land is ad and developed now * example, vacant, three ellings, medical centre with two stitioners, licensed restaurant 80 seats, grazing.	
		Provide a plan of the existing conditions. Photos are also helpful.
Tif	le Information I	Does the proposal breach, in any way, an encumbrance on title such as a restrictrive covenant,
	cumbrances on title *	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.

planning process under the Planning and Applicant and Owner Details II Environment Act 1987. The document must not be used for any purpose which Provide details of the applicant and the owner of the land. may breach any Copyright. Applicant \* Name The person who wants the permit. Title: Mr First Name: Tim Surname: HILL Organisation (if applicable): TANDEM design studio Postal Address: If it is a P.O. Box, enter the details here: Unit No.: 2 St. No.: 322 St. Name: Little Lonsdale Street Suburb/Locality: Melbourne State: Vic Postcode: 3000 Please provide at least one contact Contact information for applicant OR contact person below phone number Business phone: 0396004117 Email: farheen@tandem-studio.net Mobile phone: Where the preferred contact person Contact person's details\* Same as applicant for the application is different from Name the applicant, provide the details of Surname: Dossa Title: Ms First Name: Farheen that person. Organisation (if applicable): TANDEM design studio Postal Address: If it is a P.O. Box, enter the details here: Unit No.: 2 St. No.: 322 St. Name: Little Lonsdale Street Suburb/Locality: Melbourne State: Vic Postcode: 3000 Owner \* Same as applicant Name: The person or organisation who owns the land Title: Mr & Mrs First Name: Mark & Sarah Surname: Hastie Organisation (if applicable): Where the owner is different from the applicant, provide the details of that Postal Address: If it is a P.O. Box, enter the details here: person or organisation. Unit No.: St. No.: St. Name: Suburb/Locality: State: Postcode: Owner's Signature (Optional): Date: day / month / year Information Contact Council's planning department to discuss the specific requirements for his application and obtain a planning permit checklist. requirements Is the required information O Yes O No provided? Declaration II This form must be signed by the applicant \* Remember it is against the law I declare that I am the applicant; and that all the information in this application is true and to provide false or misleading correct; and the owner (if not myself) has been notified of the permit application. information, which could result in a heavy fine and cancellatio Signature: of the permit. day / month / year

The following copied documents are made available for the sole purpose of enabling its consideration and review as part of a

14 OZONE STREET, SKENES CREEK 20.12.19

PLANNING SUBMISSION

DOCUMENTATION TO ACCOMPANY DRAWINGS FOR THE PROPOSED SINGLE DWELLING DEVELOPMENT AT

#### 14 OZONE STREET, SKENES CREEK

#### Contents

- clause 42.03 assessment (this document)
- clause 43.02 assessment (this document)
- clause 43.05 assessment (this document)
- clause 44.01 assessment (this document)
- clause 44.06 assessment (this document)
- clause 54 assessment (this document)
- Drawings detailing the proposal including site survey (separate)
- Land title (separate)
- Geotechnical report (separate)

#### **CLAUSE 32.05 TOWNSHIP ZONE**

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 site for the proposal is located within a Township Zone, there are no additional Clause 54 requirements mandated in the schedule to this zone.

The proposed single dwelling accords with the purposes of this zone in that it is residential, and it respects the neighbourhood character of the area.

Please see the drawings that are part of this application for further detail.

#### **CLAUSE 42.03 ASSESSMENT**

This property is part of a significant landscape overlay, SLO2

OBJECTIVES	ASSESSMENT
(A development must meet these objectives)	
Schedule 2 to Clause 42.03	
Objectives	
<ul> <li>To protect and enhance the valued characteristics of the nationally significant Great Ocean Road Region landscape.</li> <li>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.</li> <li>To increase the use of indigenous vegetation to highlight natural features within the precinct.</li> <li>To retain the contrasts between landscape elements within the precinct.</li> <li>To ensure that development that occurs on hill faces or in other prominent locations is not highly visible.</li> <li>To minimise the visual impact of signage and other infrastructure, particularly in coastal areas, hill faces and ridges.</li> <li>To protect the clear, sweeping views to the ocean available from the precinct.</li> <li>To retain the dominance of an indigenous natural landscape in coastal areas, between townships, particularly from the Great Ocean Road.</li> <li>To ensure that fence styles and heights reflect the predominant and preferred character of the townships.</li> </ul>	The proposal seeks to retain as much of the existing vegetation as possible while also providing the required defendable zone around the property required by Clause 44.06. Planting will be predominantly indigenous.  See the drawing set as part of the application for details of proposed landscaping.

#### **CLAUSE 43.02 ASSESSMENT**

This property is part of a Design Development Overlay, DD04

OBJECTIVES	ASSESSMENT
(A development must meet these objectives)	NOCESCIVIENT
Schedule 2 to Clause 42.03  Objectives	
<ul> <li>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.</li> <li>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.</li> </ul>	A contemporary two storey building is proposed to occupy the site. The proposal is articulated as two gable roofed 'pods'; the living pod and the sleeping pod.  Dividing the dwelling into two, connected buildings reduces the visual impact an otherwise larger single volume would have created, while taking advantage of the different views offered by the location.  The living pod is single storey with a carport underneath and is oriented to have views to the beach at one end and receive north sun and be open to the backyard at the other. The orientation of the living pod also reduces the visual impact of the proposal on the neighbouring property at 12 Ozone Street, by skewing it in relation to the envelope prescribed by the Neighbourhood Character Overlay.  The taller volume containing the bedrooms is located towards the rear of the site, adjacent to another two-storey dwelling. This siting is designed to fit in with the natural rise of the land towards the rear of the site. The master bedroom on level 1 of the double storey sleeping pod has sweeping views across Apollo Bay.  This configuration of pods fits the dwelling well within the neighbourhood character overlay setbacks while creating a sunny, north facing, secluded private open space to the rear of the site. The two pods are connected by a third volume which functions as an entrance foyer.  The material palette is minimal and restrained. The predominant weathered timber cladding is BAL 19 rated and references many a country/beach house that blend into their landscape. Care has also been taken to minimise excavation on site.  The proposal also respects the street character and its immediate neighbours by placing the single storey pod next to the single storey dwelling at 16 Ozone Street and the double storey pod adjacent to the double storey dwelling at 12 Ozone Street. These existing dwellings in Skenes Creek are documented as part of the planning submission drawings.

#### **CLAUSE 44.01 ASSESSMENT**

This property is part of an erosion management overlay, EMO1

OBJECTIVES (A development must meet these objectives) Schedule 1 to Clause 44.01 Objectives	ASSESSMENT
<ul> <li>To manage the risk of landslip, to ensure that development can be carried out in a manner which will not adversely increase the landslip risk or property affecting the subject land or adjoining or nearby land.</li> <li>To ensure development is not carried out unless the risk associated with the development is a tolerable risk or lower.</li> </ul>	The Geotechnical Assessment advises that a Landslip Risk Assessment is not required due to the slight slope angle and low risk to life and property.
Requirements	
A Geotechnical Assessment to be prepared by a suitably qualified professional	This application is accompanied by a Geotechnical Assessment and Declaration Verification Form (Form A) prepared by qualified professional, Michael Delahunty of 2020 Engineering Solutions.
Potentially requires a Landslip Risk Assessment to be prepared where required by a Geotechnical Assessment.	The Geotechnical Assessment advises that a Landslip Risk Assessment is not required due to the slight slope angle and low risk to life and property.
Development plans	See the drawing set as part of the application.

#### **CLAUSE 44.06 ASSESSMENT**

This property is part of a bushfire management overlay, BMO1

OBJECTIVES	ASSESSMENT
(A development must meet these objectives)	
CLAUSE 44.06	
Objectives	
To ensure that the development of land prioritises the protection of	The proposal will adhere to the construction standards stated for BAL 12.5 as per AS3959.
human life and strengthens community resilience to bushfire.	Defendable space is taken to the property boundary. Overlapping tree canopies have been proposed to be removed. Nominated Eucalyptus tree to remain is noted on plan TP04 of the planning submission. No tree canopies overhang on the building.
To identify areas where the bushfire hazard warrants bushfire protection measures to be implemented.	The Landscape Plan will comply to this requirement.
To ensure development is only permitted where the risk to life and	A 5000L metal water tank is located above ground within 4 metres of the accessway/driveway. It is unobstructed by vegetation.
property from bushfire can be reduced to an acceptable level.	An unobstructed accessway within the subject property (8m in length) of minimum width of 3.5 metres is provided to enter the site and access the building.
Requirements	
•	
The dwelling must be constructed to BAL 12.5	
Defendable space is to be provided for a distance of 30 metres around the dwelling or to the property boundary, whichever is the lesser and maintained in accordance with the vegetation management requirements of Clause 52.47 with the following variation:	
- The canopy of trees must be separated by at least 2 metres.	
A static water supply must be provided.	
Vehicle access must be provided in accordance with 52.47.	

#### **CLAUSE 54 - RESCODE ASSESSMENT SUMMARY**

Proposal for 14 Ozone Street, Skenes Creek - One dwelling on a lot

CLAUSE 54.01	NEIGHBOURHOOD AND SITE DESCRIPTION AND DESIGN RESPONSE
	This application is accompanied by Neighbourhood and Site Description plans prepared by TANDEM Design Studio.

OBJECTIVES	ASSESSMENT
(A development must meet these objectives)	
CLAUSE 54.02	NEIGHBOURHOOD CHARACTER AND
CLAUGE 04.02	INFRASTRUCTURE
	INFRASTRUCTURE
Clause 54.02 – 1	
Neighbourhood Character Objectives	
Noighbourhood ondraoter objectives	
To anours that the design research the	The existing neighbourhood consists of a mixture of single and two storay dwellings, usually
To ensure that the design respects the	The existing neighbourhood consists of a mixture of single and two storey dwellings, usually
existing neighbourhood character or	one per lot, with significant open space. The existing dwellings have a mixture of materials and
contributes to a preferred	roof types, however timber and pitched or angled roofs are somewhat more common.
neighbourhood character;	
	The proposal responds to the above neighbourhood character in that it is a single dwelling with
To ensure the development responds	a significant amount of open space around it, is proposed to be clad in timber and has a pitched
to the features of the site and	100f.
10 1.10 100101.00 01 1.10 01.10 1.11	1001.
surrounding area	
Clause 54.02 – 2	
Integration with the street objective	
To integrate the layout of development	The streetscape rhythm is characterized by single storey detached and semi-detached houses
with the street.	from the Federation period, dotted with a few atypical double storey houses from the 1980-90s.
With the Street.	Horn the readitation period, activa with a few atypical acabic storey floades from the 1900-903.
	The design proposal is sited such that it has no visual impost to the atreat front
	The design proposal is sited such that it has no visual impact to the street front.

CLAUSE 54.03	SITE LAYOUT AND BUILDING MASSING
Clause 54.03 - 1 Street Setback Objective	
To ensure that the setbacks of building from a street respect the existing or preferred neighbourhood character and make efficient use of the site.	The existing streetscape is characterised by single and double storey detached houses. The design proposal echoes the existing character by adhering to the setbacks and building height restrictions prescribed by the Neighbourhood Character Overlay (NCO1). See plans and elevations in the planning submission drawing set.
Clause 54.03 – 2 Building Height Objective	
To ensure that the height of the buildings respects the existing or preferred neighbourhood character	The existing streetscape is characterised by single and double storey detached houses. The design proposal echoes the existing character by adhering to the setbacks and building height restriction of 8m above NGL as prescribed by the Neighbourhood Character Overlay (NCO1). See plans and elevations in the planning submission drawing set.
Clause 54.03 – 3 Site Coverage Objective	
To ensure that the site coverage respects the existing or preferred neighbourhood character and responds to the features of the site.	The proposal has similar or slightly less site coverage to the surrounding buildings.  Total Site Area: 585 m2  Total Building Footprint: 96.1m2
	Site Coverage: 16.4% of site
Clause 54.03 – 4  Permeability Objectives  To reduce the impact of increase stormwater run-off on the drainage system;  To facilitate on-site storm water infiltration	The permeable surface has been calculated by excluding accessway/driveway, paved surfaces and external decks.  Site Area = 585 m2 Permeable Area: 404.5 m2 or 69% of site
Clause 54.03-5 Energy Efficiency Objectives	
<ul> <li>To achieve and protect energy efficient dwellings and residential buildings</li> <li>To ensure the orientation and layout of development reduce fossil fuel energy use and make appropriate use of daylight and solar energy</li> </ul>	The house is designed to reduce energy consumption through careful orientation and fenestration. The use of double-glazed windows and cross ventilation will also aid in reducing energy consumption. The design aims to exceed the minimum 6-star energy rating requirement.
Clause 54.03-6 Significant Trees Objective	
<ul> <li>To encourage development that respects the landscape character of the neighbourhood.</li> <li>To encourage the retention of significant trees on the site</li> </ul>	The removal of existing trees on site is governed by the bushfire management requirements i.e. no tree canopies overhanging the building and clearing of excess shrubs. See drawing TP03 and TP04 for nominated trees to be removed.

Clause 54.03-7 Parking objective  To ensure that car parking is adequate to the needs of residents.	Two car parks are provided, as required by Clause 52.06. Car parking is adequate for the resident's needs.
---	--

CLAUSE 54.04	AMENITY IMPACTS
Clause 54.04 - 1 Side and Rear Setbacks Objective	
To ensure that the height and setback of a building from a boundary respects the existing or preferred neighbourhood character and limits the impact of amenity of existing buildings	The proposal is located almost entirely within the side and rear setback envelopes, with a small incursion at the outer edge of the top of the living pod only occurring because of the increased side setbacks required by the Neighbourhood Character Overlay (NCO). This small incursion is detailed in the accompanying drawings.  The setbacks required by the NCO are significantly greater than the setback of the immediate neighbour at 16 Ozone Street, which is a two-storey dwelling located towards the rear of the block. As such, the proposal and the small incursion into the increased setback are in character with the existing development in the immediate vicinity.
Clause 54.04 – 2  Walls on Boundaries Objective	
To ensure that the location, length and height of a wall respects the existing or preferred neighbourhood character and limits the impact on the amenity of existing dwellings.	There are no walls on boundaries proposed.
Clause 54.04-3  Daylight to existing Windows Objective	
To allow adequate daylight into existing habitable room windows	No existing neighbouring habitable rooms will have their access to daylight reduced by the design proposal.
Clause 54.04 – 4 North-facing Windows Objective	
To allow adequate solar access to existing north-facing habitable room windows	No existing neighbouring north facing habitable rooms will have their access to north light reduced by the design proposal.
Clause 54.04 – 5 Overshadowing Open Space Objective	
To ensure buildings do not unreasonably overshadow existing secluded private open space	The proposal does not increase overshadowing of neighbouring private open spaces.  Refer also to overshadowing diagrams which form part of the drawing submission.
Clause 54.04 – 6 Overlooking objective	
To limit views into existing secluded private open space and habitable room windows.	No habitable room windows overlook secluded private open space of the neighbours. Please see TP11 of the drawing set.

CLAUSE 54.05	ON SITE AMENITY AND FACILITIES
Clause 54.05 – 1  Daylight to New Windows Objective	
To allow adequate daylight into new habitable room windows	All proposed habitable room windows receive adequate daylight.
Clause 54.05 – 2 Private Open Space Objective	
To provide for adequate private open space for the reasonable recreation and service needs of residents.	The proposal provides a large, north facing, secluded private open space located behind the living pod, accessed from the dining area and the entry vestibule, adequate to the needs of the residents.
Clause 54.05 – 3 Solar Access to Open Space Objective	
To allow solar access into the secluded private open space of a new dwelling.	Existing solar access to neighbouring private open space is maintained under the design proposal.

CLAUSE 54.06	DETAILED DESIGN
Clause 54.06 - 1 Design Detail Objective	
To encourage design detail that respects the existing or preferred neighbourhood character.	The proposed design is contemporary building that responds to the roof forms, materials and detailing that characterise the immediate neighbourhood.
Clause 54.06 – 2 Front Fences Objective	
To encourage front fence design that respects the existing or preferred neighbourhood character.	There is no proposed front fence thus maintaining the open tree lined character of the street.



The following copied documents are made available for the sole purpose of enabling

Copyright State of Victoria. This publication is copyright. No part may be reproduced by any process excited in a special property in the purposes of Section 32 of the Sale of Land Act 1962 (Vic) or pursuant to a written agreement. The information is only valid at the time and in the form obtained from the LANDATA REGD TM System. None of the State of Victoria, LANDATA REGD TM System. None of t

must not be used for any purpose which may breach any Copyright.

VOLUME 08554 FOLIO 882

Security no : 124080742613T Produced 13/12/2019 01:00 PM

#### LAND DESCRIPTION

Lot 87 on Plan of Subdivision 051921. PARENT TITLE Volume 08267 Folio 161 Created by instrument PS426805F 10/12/1999

#### REGISTERED PROPRIETOR

Estate Fee Simple
Joint Proprietors
MARK GEORGE HASTIE
SARAH MACHEN HASTIE both of 80 HIGHETT STREET RICHMOND VIC 3121
AJ014402C 20/06/2011

#### 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 or imaged folio set out under DIAGRAM LOCATION below.

#### DIAGRAM LOCATION

SEE LP051921 FOR FURTHER DETAILS AND BOUNDARIES

#### ACTIVITY IN THE LAST 125 DAYS

NIL
-----END OF REGISTER SEARCH STATEMENT----Additional information: (not part of the Register Search Statement)
Street Address: 14 OZONE STREET SKENES CREEK VIC 3233

DOCUMENT END

# **PLANNING APPLICATION**

# **SKENES CREEK BEACH HOUSE**

14 OZONE STREET, SKENES CREEK

#### **ARCHITECTURAL DRAWINGS**

#### general notes

TP00 DRAWINGS LIST

#### context

TP01 SURVEY

TP02 CONTEXT

TP03 PROPOSED LANDSCAPE PLAN

TP04 BUSHFIRE MANAGEMENT PLAN

#### proposed plans

TP09 LOWER GROUND PLAN

TP10 GROUND LEVEL PLAN

TP11 LEVEL 1 PLAN

TP12 ROOF PLAN

#### proposed elevations

TP20 PROPOSED STREET ELEVATION

TP21 PROPOSED REAR ELEVATION

TP22 PROPOSED SIDE ELEVATION

TP23 PROPOSED SIDE ELEVATION

TP24 ISOMETRIC DIAGRAM WITH PLANNING ENVELOPE

#### shadow diagrams

TP40 PROPOSED AND EXISTING SHADOWS - 9AM

TP41 PROPOSED AND EXISTING SHADOWS - 12PM

TP42 PROPOSED AND EXISTING SHADOWS - 3PM

The following copied documents are made available for the sole purpose of enabling its consideration manufactory terms and stress to the planning processium depothe Planning and Environment Act 1987. The document must not be used for any purpose which may breach any Copyright CRIPTION

25.09.2019 12.12.2019

03

ISSUE FOR INFORMATION FOR PLANNING PRE-APP ISSUE FOR PLANNING PERMIT APPLICATION 07.01.2020

ISSUE FOR INFORMATION

# Received 08/01/20

 Tandem Design Studio Pty Ltd tandem-studione ACN 115 144 100 ABN 25 15 144 100 L2/322 LITTLE LONSDALE STREET MELBOURNE VICTORIA 3000 + 61 3960 04117

# TANDEM

**SARAH & MARK HASTIE** 

**SKENES CREEK BEACH HOUSE** 

14 OZONE STREET, SKENES CREEK

PROJECT NO. TOWN PLANNING 18\_015

DEC 19

DRAWN

CHECKED FD

#### **ISSUE FOR INFORMATION**

SCALE NTS

DRAWING TITLE

**COVER SHEET** 

DRAWING NO. **TP00**  REVISION NO.

03





The following copied documents are made available for the sole purpose of enabling

VISTA AVENUE

The following copied documents are made available for the sole purpose of enabling

The following copied documents are made

VICTA AVENUE

The following copied documents are made available for the sole purpose of enabling

The following copied documents are made

The following copied documents are made

VISTA AVENUE



BL-1 concrete blockwork





PT-1 matt black



**GLULAM** structure



**BAL 12.5** 

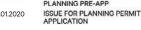
#### The following copied documents are made available for the sole purpose of enabling

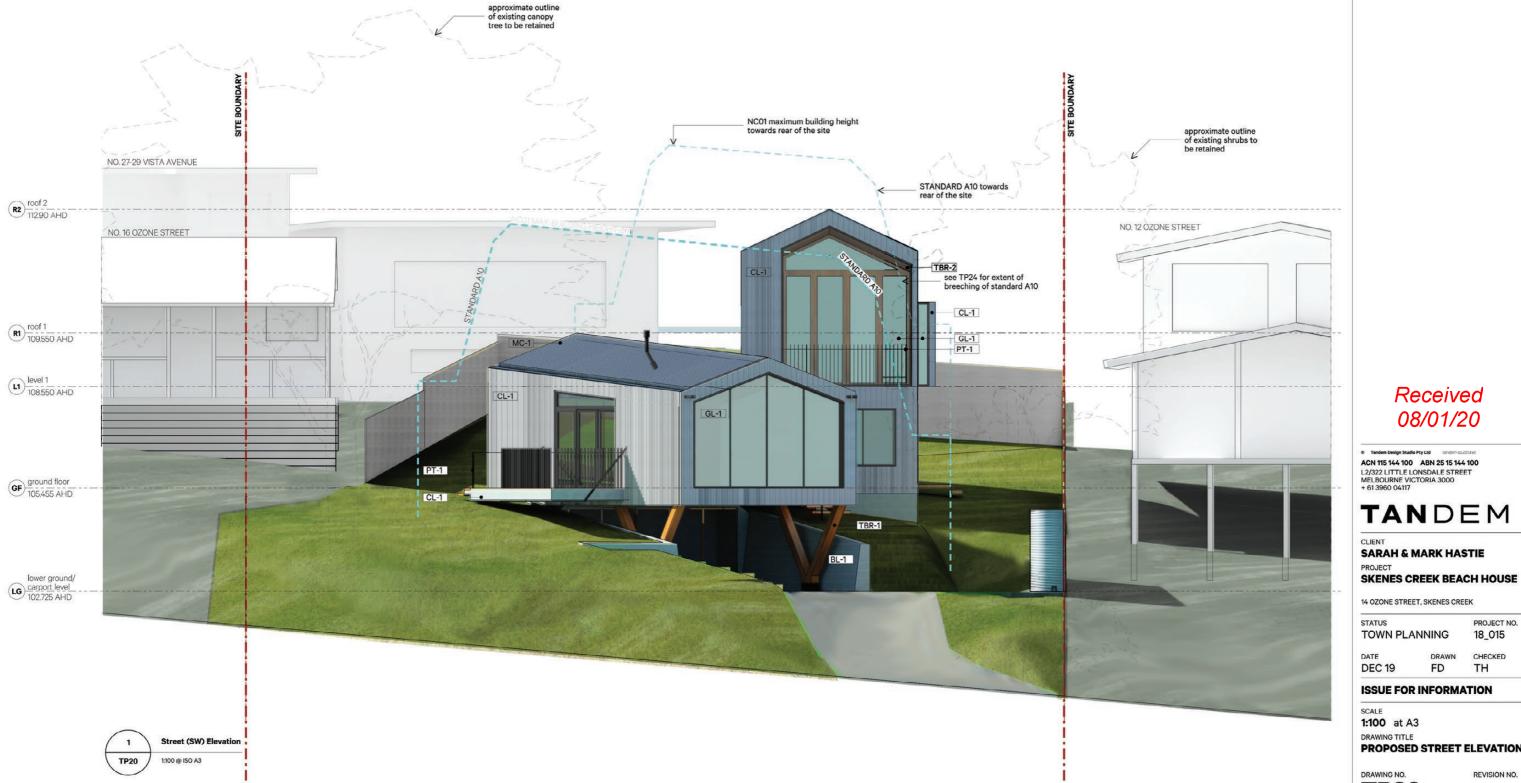
BAL 12.5

Defendable space is to be provided for distanced property of the argument of a 30 metres around the dwelling or to the argument of a 30 metres around the dwelling or to the argument of a 30 metres around the dwelling or to the argument of boundary, whichever is the lesser and maintained of a 30 metres around the dwelling or to the argument of boundary, whichever is the lesser and maintained of a 30 metres around the dwelling or to the argument of boundary, whichever is the lesser and maintained of a 30 metres around the dwelling or to the argument of boundary, whichever is the lesser and maintained of a 30 metres around the dwelling or to the argument of boundary, whichever is the lesser and maintained of a 30 metres around the dwelling or to the argument of the provided for a 30 metres around the dwelling or to the argument of the provided for a 30 metres around the dwelling or to the argument of the provided for a 30 metres around the dwelling or to the argument of the provided for a 30 metres around the dwelling or to the argument of the provided for a 30 metres around the dwelling or to the argument of the provided for a 30 metres around the dwelling or to the argument of the provided for a 30 metres around the dwelling or to the argument of the provided for a 30 metres around the dwelling or to the argument of the provided for a 30 metres around the dwelling or to the argument of the provided for a 30 metres around the dwelling or the provided for a 30 metres around the dwelling or the provided for a 30 metres around the dwelling or to the argument of the provided for a 30 metres around the dwelling or the provided for a 30 metres around the dwelling or the provided for a 30 metres around the dwelling or the provided for a 30 metres around the dwelling or the provided for a 30 metres around the dwelling or the provided for a 30 metres around the dwelling or the provided for a 30 metres around the dwelling or the provided for a 30 metres around the dwelling or the provided for a 30 metres around t

may breach any Copyright

ISSUE FOR INFORMATION ISSUE FOR INFORMATION FOR PLANNING PRE-APP





# Received 08/01/20

ACN 115 144 100 ABN 25 15 144 100 L2/322 LITTLE LONSDALE STREET MELBOURNE VICTORIA 3000 + 61 3960 04117

# TANDEM

PROJECT NO. 18\_015

CHECKED

#### **ISSUE FOR INFORMATION**

PROPOSED STREET ELEVATION

**TP20** 

REVISION NO.

03

BL-1 concrete blockwork



CL-1
BAL 19 rated non-combustible translucent sheet cladding cladding



MC-1

PT-1 matt black



**GLULAM** structure



TBR-2 bushfire resistant ply cladding

TBR-3 bushfire retimber

The following copied documents are made available for the sole purpose of enabling

BAL 12.5

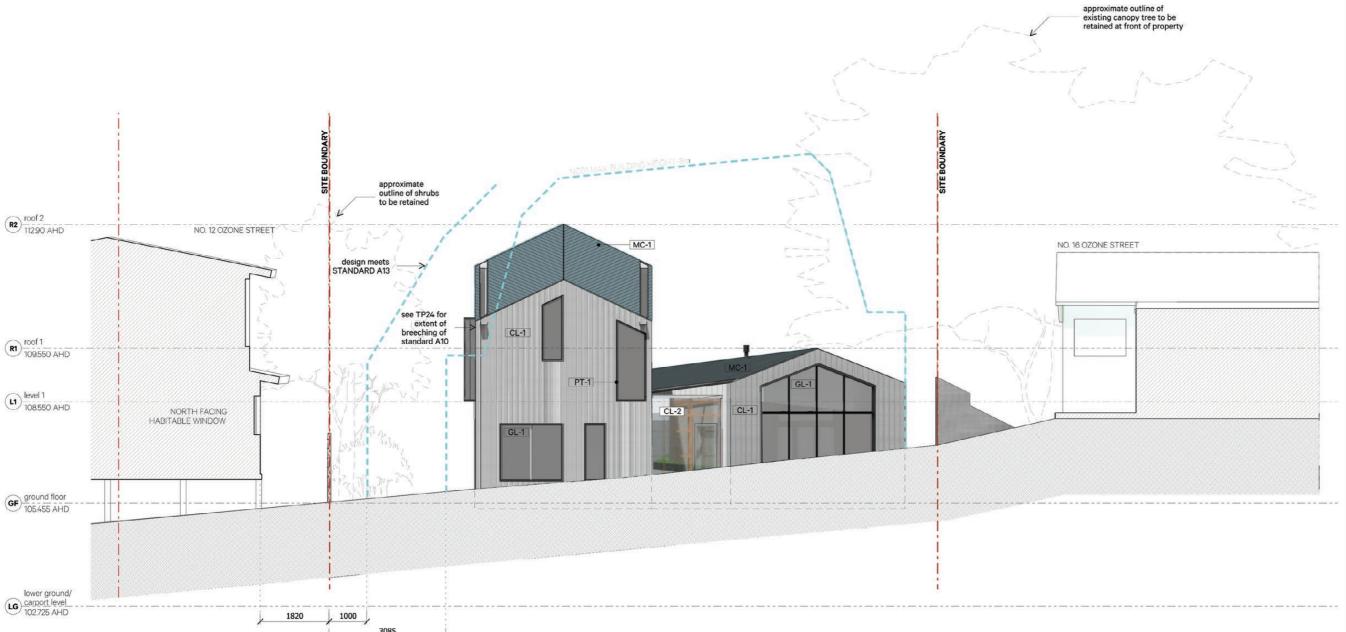
Defendable space is to be provided for a distance of a distance of a metres around the dwelling or to the around the provided the prov

may breach any Copyright Copyright

 25.09.2019
 ISSUE FOR INFORMATION

 12.12.2019
 ISSUE FOR INFORMATION FOR PLANNING PRE-APP

 07.01.2020
 ISSUE FOR PLANNING PERMIT APPLICATION



# 1 Rear (NE) Elevation TP21 1:100 @ ISO A3

08/01/20

Received

TANDEM

CLIENT

**SARAH & MARK HASTIE** 

ACN 115 144 100 ABN 25 15 144 100 L2/322 LITTLE LONSDALE STREET MELBOURNE VICTORIA 3000 + 61 3960 04117

SKENES CREEK BEACH HOUSE

14 OZONE STREET, SKENES CREEK

STATUS PROJECT NO. TOWN PLANNING 18\_015

DATE

DRA

DEC 19 FD

ISSUE FOR INFORMATION

SCALE

1:100 at A3

DRAWING TITLE
PROPOSED REAR ELEVATION

TP21

REVISION NO.

CHECKED



BL-1 concrete blockwork

Side (SE) Elevation

1:100 @ ISO A3

TP22



CL-1 BAL 19 rated hardwood timber cladding



PT-1 matt black

GLULAM structure

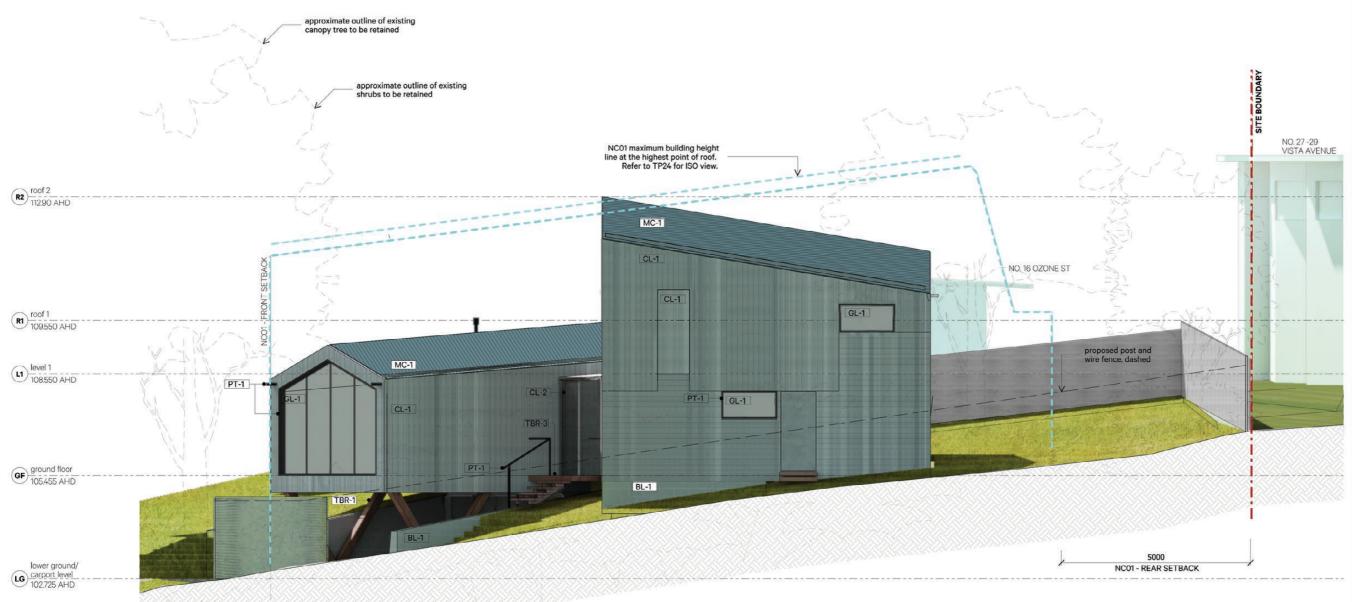


The following copied documents are made available for the sole purpose of enabling

Defendable space is to be provided for a distance of a metres around the dwelling or to the stranger of a metres around the dwelling or to the stranger of the provided for a metres around the dwelling or to the stranger of the provided for a metres around the dwelling or to the stranger of the provided for a metres of clause 52.47 with the following onment variation: the canopy of trees must be separated by the at least 2 metres.

may breach any Copyright SCRIPTION

ISSUE FOR INFORMATION
ISSUE FOR INFORMATION FOR
PLANNING PRE-APP 25.09.2019 12.12.2019 ISSUE FOR PLANNING PERMIT APPLICATION



# Received 08/01/20

ACN 115 144 100 ABN 25 15 144 100 L2/322 LITTLE LONSDALE STREET MELBOURNE VICTORIA 3000 + 61 3960 04117

# TANDEM

**SARAH & MARK HASTIE** 

SKENES CREEK BEACH HOUSE

14 OZONE STREET, SKENES CREEK

TOWN PLANNING

CHECKED

**DEC 19** 

FD

#### ISSUE FOR INFORMATION

SCALE 1:100 at A3

PROPOSED SIDE ELEVATION

DRAWING NO. **TP22** 

03

REVISION NO.

PROJECT NO.

18\_015



BL-1 concrete blockwork

Side (NW) Elevation



CL-1 CL-2
BAL 19 rated non-chardwood timber cladding claddi



-1 MC-1



**GLULAM** structure





TBR-2 bushfire resistant ply cladding

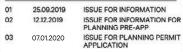
TBR-3 bushfire retimber

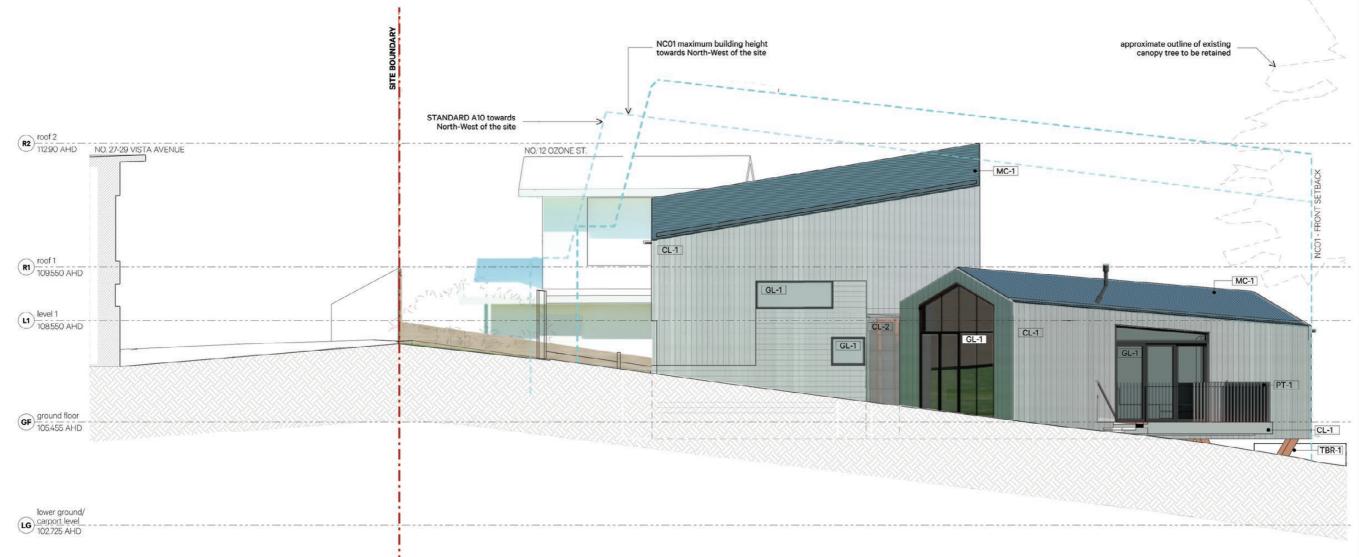
The following copied documents are made available for the sole purpose of enabling

BAL 12.5

Defendable space is to be provided for a distance of the provided for a distance of a stance of the provided for a distance of a stance of the provided for a distance of the provided for a distance of the provided for a stance of the provided for a distance of the provided for a stance of the pr

may breach any Copyright Copyright





SARAH & MARK HASTIE PROJECT

ACN 115 144 100 ABN 25 15 144 100 L2/322 LITTLE LONSDALE STREET MELBOURNE VICTORIA 3000 + 61 3960 04117

SKENES CREEK BEACH HOUSE

TANDEM

Received

08/01/20

14 OZONE STREET, SKENES CREEK

TOWN PLANNING PROJECT NO. 18\_015

DEC 19

FD

ISSUE FOR INFORMATION

SCALE

1:100 at A3
DRAWING TITLE

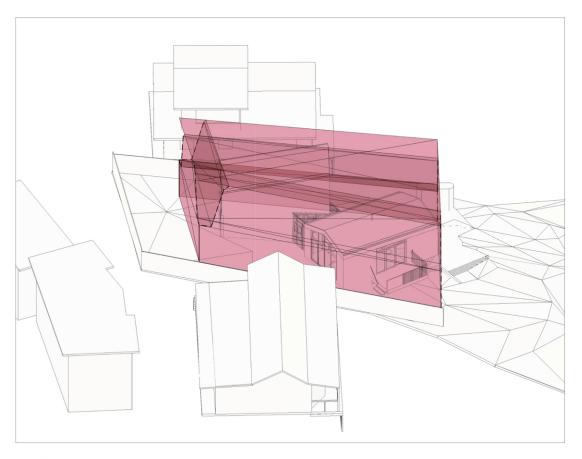
PROPOSED SIDE ELEVATION

TP23

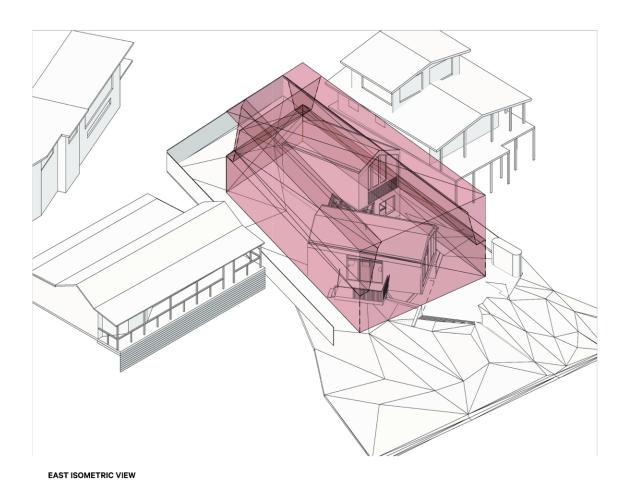
03

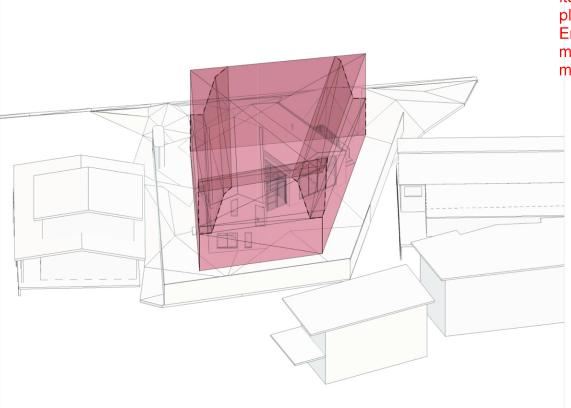
REVISION NO.

CHECKED



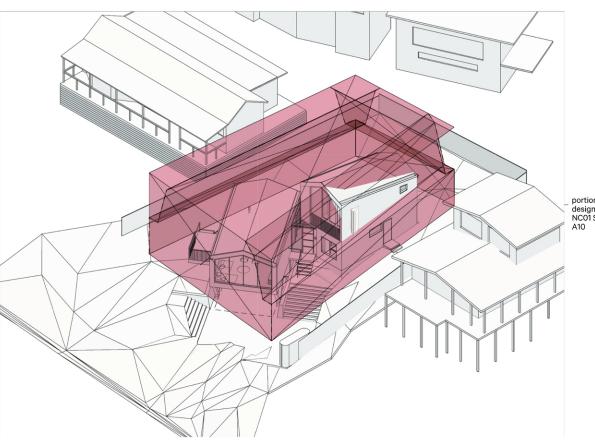






NORTH-WEST ISOMETRIC VIEW

SOUTH ISOMETRIC VIEW



portion of proposed design breaching NC01 STANDARD A10

The following copied documents are made available for the sole purpose of enabling its consideration wanter the preparation of shop praymos and street the preparation of shop praymos and the preparation of the prepar planning process under the Planning and post of the Planning and Plan must not be used for any purpose which may breach any Copyright

ISSUE FOR INFORMATION
ISSUE FOR INFORMATION FOR
PLANNING PRE-APP
ISSUE FOR PLANNING PERMIT
APPLICATION

# Received 08/01/20

© Tandem Design Studio Pty Ltd tandem-studio ret

ACN 115 144 100 ABN 25 15 144 100

L2/222 LITTLE LONSDALE STREET

MELBOURNE VICTORIA 3000

+ 61 3960 04117

# TANDEM

**SARAH & MARK HASTIE** 

**SKENES CREEK BEACH HOUSE** 

14 OZONE STREET, SKENES CREEK

TOWN PLANNING

DATE

**DEC 19** FD

#### **ISSUE FOR INFORMATION**

SCALE 1:100 at A3

DRAWING TITLE
ISOMETRIC VIEW OF PLANNING
ENVELOPE

DRAWING NO.

REVISION NO.

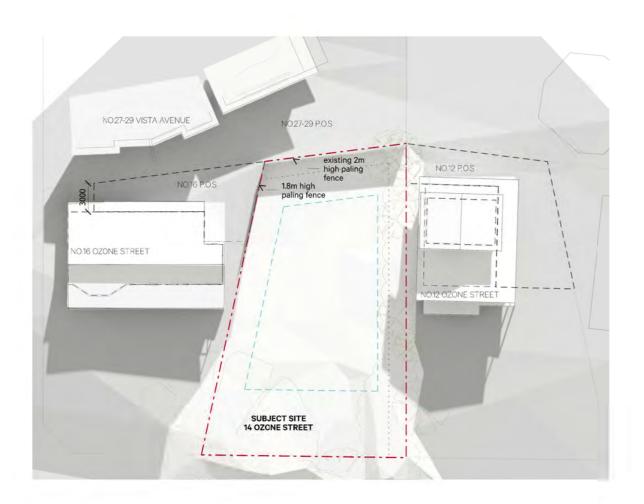
**TP24** 

03

PROJECT NO.

18\_015

CHECKED





**EXISTING SHADOW DIAGRAM AT 9AM** 

1:400 @ ISO A3



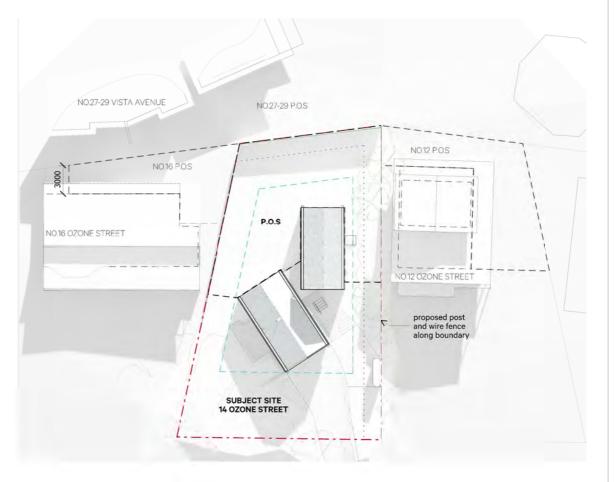
The following copied documents are made available for the sole purpose of enabling

BAL 12.5

Defendable space is to be provided for a distance of reference of a metric around the dwelling or to the supporting process of the provided for a distance of the provided for a variation: the canopy of trees must be separated by be used for any purpose which

may breach any Copyright CRIPTION

ISSUE FOR INFORMATION
ISSUE FOR INFORMATION FOR
PLANNING PRE-APP
ISSUE FOR PLANNING PERMIT
APPLICATION 25.09.2019 12.12.2019 01 02





NO IMPACT ON SUNLIGHT ACCESS AREA at 9am on 22nd SEPT on P.O.S of neighbouring properties

## Received 08/01/20

© Tandem Design Studio Pty Ltd tandem-st ACN 115 144 100 ABN 25 15 144 100 L2/322 LITTLE LONSDALE STREET MELBOURNE VICTORIA 3000 + 61 3960 04117

# TANDEM

**SARAH & MARK HASTIE** 

**SKENES CREEK BEACH HOUSE** 

14 OZONE STREET, SKENES CREEK

TOWN PLANNING

CHECKED

**DEC 19** 

DRAWING TITLE

FD

#### ISSUE FOR INFORMATION

SCALE 1:400 at A3



REVISION NO.

18\_015

**EXISTING AND PROPOSED** SHADOWS AT 9AM

DRAWING NO. **TP40** 

03

# NO27-29 VISTA AVENUE NO.12 P.O.S 1.8m high NO.16 OZONE STREET SUBJECT SITE 14 OZONE STREET NO.12 OZONE STREET



#### BAL 12.5

available for the sole purpose of enabling

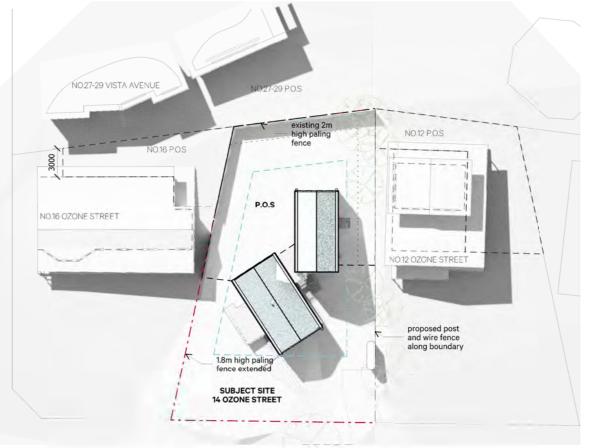
The following copied documents are made

BAL 12.5

Defendable space is to be provided for distance of the provided for distance of a sound the dwelling or to the standard provided in the provided for distance of a sound the dwelling or to the standard provided in the provided for a sound the dwelling or to the standard provided in the provid

may breach any Copyright CRIPTION

ISSUE FOR INFORMATION
ISSUE FOR INFORMATION FOR
PLANNING PRE-APP
ISSUE FOR PLANNING PERMIT
APPLICATION 25.09.2019 12.12.2019





#### © Tandem Design Studio Pty Ltd tandem-stud ACN 115 144 100 ABN 25 15 144 100 L2/322 LITTLE LONSDALE STREET MELBOURNE VICTORIA 3000 + 61 3960 04117

NO IMPACT ON SUNLIGHT ACCESS AREA at 12pm on 22nd SEPT on P.O.S of neighbouring properties

# TANDEM

Received

08/01/20

**SARAH & MARK HASTIE** 

**SKENES CREEK BEACH HOUSE** 

14 OZONE STREET, SKENES CREEK

TOWN PLANNING

18\_015

**DEC 19** 

FD

#### ISSUE FOR INFORMATION

SCALE 1:400 at A3



PROJECT NO.

CHECKED

**EXISTING & PROPOSED SHADOWS AT 12PM** 

DRAWING NO. **TP41** 

DRAWING TITLE

REVISION NO. 03

# NO27-29 VISTA AVENUE existing sunlight access 22.8 sq m existing 2m high paling fence 1.8m high paling fence SUBJECT SITE 14 OZONE STREET NO.12 OZONE STREET



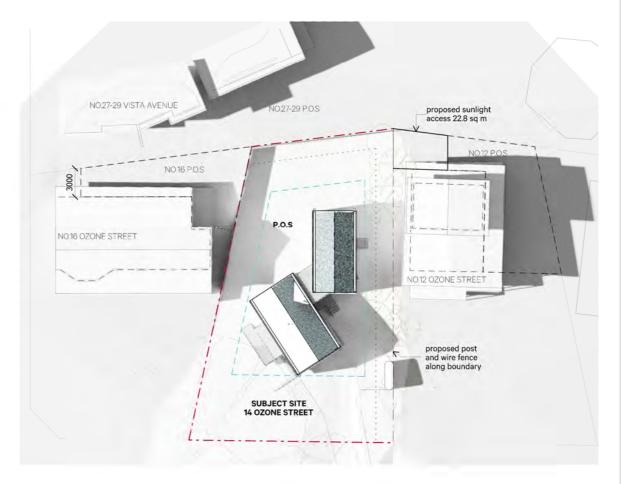
The following copied documents are made available for the sole purpose of enabling

BAL 12.5

Defendable space is to be provided for a distance of the provided for a distance of

may breach any Copyright CRIPTION

25.09.2019	ISSUE FOR INFORMATION
12.12.2019	ISSUE FOR INFORMATION FOR PLANNING PRE-APP
07.01.2020	ISSUE FOR PLANNING PERMIT APPLICATION
	12.12.2019



2	PROPOSED SHADOWS AT 3PM
TP42	1:400 @ ISO A3

# SUNLIGHT ACCESS AREA at 3pm on 22nd SEPT

No. 12 POS AREA 128 sq m EXISTING SUNLIGHT ACCESS 22.8 sq m 17.8%

22.8 sq m 17.8%

PROPOSED SUNLIGHT ACCESS

# © Tandem Design Studio Pty Ltd tandem-stud

Received 08/01/20

ACN 115 144 100 ABN 25 15 144 100 L2/322 LITTLE LONSDALE STREET MELBOURNE VICTORIA 3000 + 61 3960 04117

# TANDEM

**SARAH & MARK HASTIE** 

**SKENES CREEK BEACH HOUSE** 

14 OZONE STREET, SKENES CREEK

PROJECT NO. TOWN PLANNING 18\_015

**DEC 19** FD

#### ISSUE FOR INFORMATION

SCALE 1:400 at A3 DRAWING TITLE

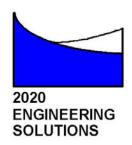


CHECKED

**EXISTING & PROPOSED SHADOWS** AT 3PM

DRAWING NO. **TP42**  REVISION NO.

03



2020Engineering Solutions 1745 Colac – Forrest Rd Colac. Vic. 3249 Mob 0428 14 14 41 Office (03)5233 4608 ABN 57 215 499 312ACN 11 9460 865 info@2020es.com

#### **GEOTECHNICAL ASSESSMENT**



SITE; 14 Ozone St.

Skenes Creek, Victoria. 3233

DEVELOPER; Sarah & Mark Hastie.

REPORT NUMBER; ES19160.1

DATE; Original 21/09/2019

Amended 28/10/2019

REPORTING TO; COLAC OTWAY SHIRE Planning Scheme, Erosion Management

Overlay Procedures (EMO), 2013. Amendment C68

#### **Notes to amended Report**

Our original report was to the sire prior to development of concept drawing plans. Following production of concept drawings this amended Report comments on proposed works.

From the examination of the plans and with reference to original report and field notes, the original risk findings remain valid.

#### **CONTENTS**

**Executive Summary** 

**Succinct Recommendations** 

- 1.0Consultant
- 1.1Details of Qualifications, Experience and Expertise
- 1.2Specific Expertise
- 1.3 Equipment
- 2.0 Date of Assessment
- 2.1 Reporting Date
- 3.0.Address
- 3.1 Site Description. Fig. 1. View to north across proposed build envelope from access track. (Author)
- 3.2 SiteDetailsFig 2. Location and planning details EMO (Planning Maps Online)
- 3.2.2 Property Owner
- 3.3 Developer
- 3.4 Responsible Authority
- 4.0 Site Assessment Plans.
- 5.0 Geology Fig3. Regional geology, subject site (Geovic)
- 5.1 Surface ConditionsFig. 4. View to south. Proposed build site (Author).
- 5.1.1 TopographyFig. 5. Regional topography, (VicPlan),
- 5.2 Subsurface Conditions
- 5.3Groundwater
- 5.4 Geomorphic Process
- 6.0 Regional Instability
- 6.1 Mapped Fig 6. Mapped Slip System (COS)
- 6.2 Unmapped
- 7.0 Assessment Methodology
- 7.1 Slope Model Fig 7. Slope model with proposed build envelope and possible failure modes. (Author). Fig
- 8. Slope model with proposed build envelope. (Author). Fig 9. Computer analysis of slope model (Author)
- 8.0 Plausible Failure Modes
- 8.1. Elements at Risk Failure Analysis.
- 9.0 Risk Analysis
- 9.1 Consequence Analysis
- 9.2 Probability Analysis
- 9.3 Vulnerability Analysis
- 9.4 Spatial factor
- 9.5 Risk Analysis
- 10.1 Footing structure and Foundation Materials
- 10.2 Cut and Fill Earthworks
- 10.3 Soil Retention Structures
- 10.4 Drainage
- 10.5 Building Design and Structural System
- 10.6 Vegetation
- 10.7 Wastewater Management
- 10.8 On-going Maintenance and Mitigation Measures
- 10.9 Development Timeframe 10.10 Additional Geotechnical Requirements
- 11.0 Landslip Risk Assessment Statement1
- 2. Report Recommendations
- 13. Report Restrictions
- 14. Professional Compliance Statement
- 15. Controlling and Referenced Documents
- 16. Site Conditions Photo (Author)
- 17. Geotechnical Declaration.18. The Geotechnical / Landslip Risk Assessment
- 19. Report Limitation

#### **Executive Summary**

The assessed Maximum Annual probability of loss of life is Barely Credible

This figure is below the advised acceptable limit

Property Risk would be Low.

Overall the risk to property is below the advised acceptable limit.

#### **Succinct Recommendations**

- a) The various aspects of the proposal be allowed as the calculated risk is within the acceptable ranges for Life and Property
- b) A Landslip Risk Assessment it is not required due to the slight site slope angle and low risk to Life and Property.

#### **Preamble**

Note; This document reports to Schedule One to the Erosion Management Overlay as in operation at the time of commissioning.

The Shire contains areas of land that are susceptible to landslip..... In areas susceptible to landslips, it is necessary to assess the potential impact of buildings, works and vegetation removal on the environment, in order to minimise risk to life and property. (EMO Policy Basis)

The proposal comprises the construction of a dwelling.

This report considers the geotechnical implications of the proposal.

#### 1.0 Consultant

Michael Daniel Delahunty 'Culliamurra' 1745 Colac – Forrest Road Colac Victoria Australia. 3249

### 1.1 Details of Qualifications, Experience and Expertise

Bachelor Degree in Mining Engineering University of Ballarat.

2001-2003 Civiltest, Geotechnical technologist

2006- to current 2020Engineering Solutions P/L Managing Director, Principal Engineer

Member Institute of Engineers Australia Member # 2274072

### 1.2 Specific Expertise

Over the past eighteen years I have personally conducted several hundred site and soil investigations across SW Victoria. This work, along with academic qualifications, has equipped me with an understanding of typical and atypical sub-soil conditions.

The author has valid professional indemnity insurance at the time of inspection and reporting. As part of a commitment to on-going professional development the author is undertaking the process of accreditation and attainment of chartered status.

### 1.3 Equipment

Kobelco 007 hydraulic mounted auger 100mm hand auger GMC Digital spirit level Manual measuring devices Computer hardware and software

### 2.0 Date of Assessment

21<sup>th</sup>Sep 2019

#### 2.1 Reporting Date

23<sup>th</sup>Sep 2019

### 2.1.2 Amended Report

28 Oct 2019

### 3.0 Address

14 Ozone St Skenes Creek Victoria. 3233

## 3.1 Site Description

The subject property comprises a residential allotment in an established medium density setting, rising moderately to the NW, with a short steep access track and with an un-retained cut batter adjoining Ozone Street.



Fig. 1. View to north across proposed build envelope from access track. (Author)

# 3.2 Title Details (Planning Maps On line)

#### PLANNING PROPERTY REPORT

CTORIA

www.colacotway.vic.gov.au

From www.planning.vic.gov.au on 09 August 2019 06:41 PM

PROPERTY DETAILS

14 OZONE STREET SKENES CREEK 3233 Address:

Lot and Plan Number: Lot 87 LP51921 Standard Parcel Identifier (SPI): 87\LP51921 Local Government Area (Council): COLAC OTWAY Council Property Number:

20044 Planning Scheme: Colac Otway planning-schemes.delwp.vic.gov.au/schemes/colacotway

VicRoads 519 N11 Directory Reference:

UTILITIES

Rural Water Corporation: Southern Rural Water

Urban Water Corporation: Barwon Water Melbourne Water: outside drainage boundary

Power Distributor: POWERCOR

#### STATE ELECTORATES

Legislative Council: WESTERN VICTORIA Legislative Assembly: POLWARTH

**Planning Zones** 

TOWNSHIP ZONE (TZ)

SCHEDULE TO THE TOWNSHIP ZONE (TZ)



Fig 2. Location and planning details EMO (Planning Maps Online)

### 3.2.1 Overlays

BMO DDO EMONCO

### 3.2.2 Property Owner /3.3 Developer

Sarah & Mark Hastie.

### 3.4 Responsible Authority

Colac Otway Shire Rae St Colac 3250

#### 4.0 Site Assessment Plans

Detailed plans were not available at the time of inspection, this report will be developed upon construction of a conventional structure within a centrally located building envelope. (Original Report)

A Lower Ground Plan, (TANDEM), following page, shows location and extent of retaining walls. Two cut retaining walls adjoining the car park area and one FILL retaining wall associated with the lower living area.

All retaining walls over 1.0m high must be engineer designed.

Should the cut retaining wall/s fail some damage to property, cars, could be expected but minimal risk to Life.

Should the FILL retaining wall fail very minor property damage could be expected with no risk to Life.

The foregoing opinion is based upon site and soil profile investigation along with the computer analysis which indicated the build envelope is stable.

The following copied documents are made available for the sole purpose of enabling

Fig.3 Lower Ground Plan (Tandem)

# 5.0 Geology

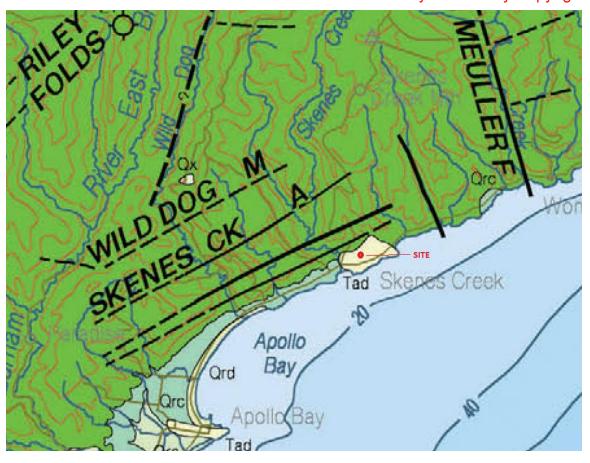


Fig.4. Regional geology, subject site, in red. (GeoVic).

Published maps indicated subject land contains TERTIARY AGE Dilwyn Formation material, part of the Wangerrip Group.

The Skenes Creek Anticline is the principal structural feature of the region.

### **5.1 Surface Conditions**



Fig. 5. View to south. Proposed build site contains a surface covering of grasses. (Author).

# 5.1.1 Topography

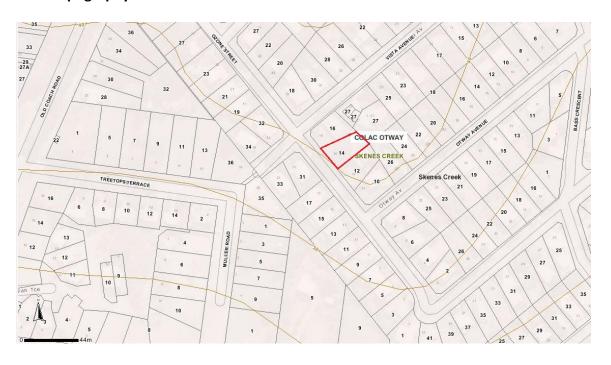


Fig. 6. Regional topography, (VicPlan), showing subject land on side of large broad, spur ridge.

### **5.2 Subsurface Conditions**

Based upon a drilling programme conducted across the site, the substitute profile comprised ght. Silty Sand over a weathered-in-situ very Sandy Clay followed by extremely weathered sandstone. This finding is consistent with geological mapping and topographical opinion.

### 5.3 Groundwater

Groundwater was not noted in boreholes, no discharge areas were noted.

### **5.4 Geomorphic Process**

Dilwyn Formation material overlays Otway Group and is being weathered to expose the Otway Group at a uniform rate due to the slight to moderate surface and underlying slope angles.

From the drilling process the site appears to have weathered in-situ soils with no evidence of slip planes.

### 6.0 Regional Instability

# 6.1 Mapped

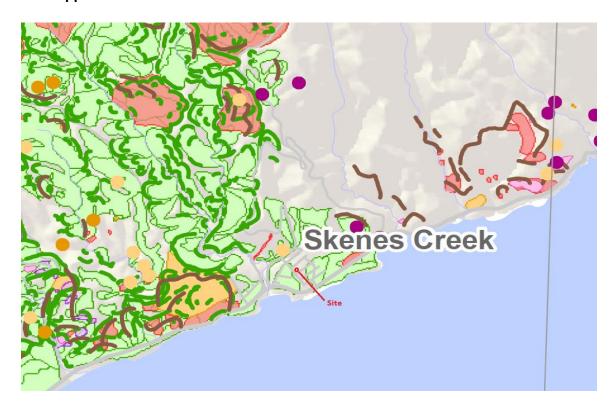


Fig.7.COS Mapped landslides, shows numerous slip systems near the subject land.

These systems will have no impact on the proposed build envelope.

### 6.2 Unmapped

No evidence of soil instability was noted on or near the proposed build site.

# 7.0 Assessment Methodology

The principal assessment methodology of instability analysis for this development was visual with observed soil profile providing input for the following slope model.

### 7.1 Slope Model

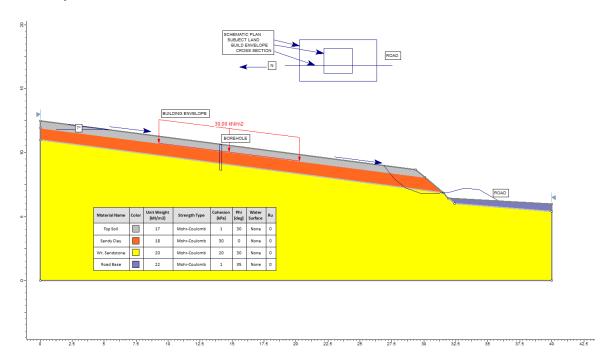


Fig 8.Slope model with proposed build envelope and possible failure modes.(Author).

### 8.0 Plausible Failure Modes

There are no plausible failure modes with the potential to impact upon the proposed development, however a Debris Avalanche on to the road way is possible.

Such an event is unlikely to progress, or be allowed to progress up-slope to the build envelope.

Earth Creep is shown but unlikely on a 7.0° slope and not likely to to be allowed impact on the proposed structure.

A Debris Avalanche in the location shown is unlikely as the material appears to have been unretained for a number of decades and now has a covering of stablising macro vegetation.

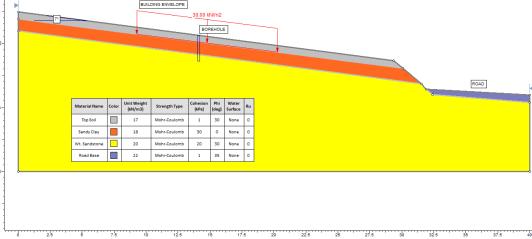


Fig 9.Slope model with proposed build envelope.(Author).

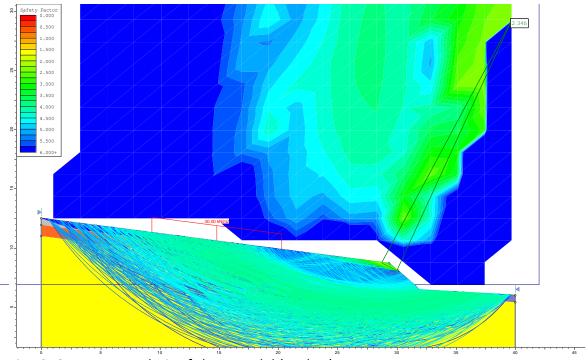


Fig 10. Computer analysis of slope model (Author)

### Comment

Computer analysis indicates un-retained soil material adjoining roadway returns lowest factor of safety, which is still fairly high for the soil type.

www.2020es.com Page 14 of 24 www.2020es.com

#### 8.1Elements at risk

As the proposal is for adwelling, Life would be a risk element, property would also be at risk.

### 8.2 Failure analysis

A Debris Avalanche comprising disturbed soil from the unretained cut adjoining the roadway would comprive a very low volume of material with barely plausable impact on Life and /or Property.

### 9.0 Risk Analysis

Risk Analysis brings together Probability and Consequence.

# 9.1 Consequence Analysis

Life; no consequence. Property; minimal consequence, some sedimentation into stormwater drains.

## 9.2 Probability Analysis

With mass land sliding assessed as not plausible the annual probability would be around  $10^{-5}$  or Rare.

### 9.3 Vulnerability Analysis

Life; Taken as unity Property; Unity

#### 9.4 Spatial Factor

Life; Unlikely to involve entire building, 0.3 Property; 0.2

### 9.5Risk analysis

Annual probability of loss of life, from the proposed development computes to Barely Credible

This figure is below the advised acceptable limit

Property Risk would be Low.

This is also below the advised acceptable limit.

### 10.1 Footing structure and Foundation Materials

Found into underlying clay/s.

#### 10.2 Cut and Fill Earthworks

See site plans.

#### 10.3 Soil Retention Structures

Retaining walls over 1.0m high to be engineer designed.

### 10.4 Drainage

To suitable legal point of discharge.

### 10.5 Building Design and Structural System

Conventional

### 10.6 Vegetation

At the time of inspection the site contained a surface covering of grasses, there are no trees on the build site and none are proposed for removal.

Some vegetation on the southern portion of the property may be removed to comply with bushfire requirements, however tree roots should be left in the ground.

### 10.7 Wastewater Management

N/A

#### 10.8 On-going Maintenance and Mitigation Measures

This report does not recommend specific on-going erosion mitigation measures aside from good property maintenance practices.

#### 10.9 Development Timeframe

There is no geotechnical timeline for this development.

# 10.10 Additional Geotechnical Requirements

Additional geotechnical requirements not required.

### 11.0 Landslip Risk Assessment Statement

Landslip Risk Assessment is not required due to the slightslope angles displayed by the subject land and that annual risk to Life of Barely Credible is applicable to an acceptable level for an existing slope.

### 12. Report Recommendations

Proposal be approved as development can be considered safe from the hazard of landslip.

#### 13. Report Restrictions

Should the final proposal differ substantially from the assessed proposal, the testing and resultant recommendations, may not be valid. It also assumes the 'as tested' conditions are consistent across the site. If this is not the case, the client would be advised to contact the author, should encountered conditions vary from those reported.

2020Engineering Solutions takes no responsibility for errors or omissions contained in sourced material. This report should be read in entirety and not selectively reproduced.

### 14. Professional Compliance Statement

The author has valid professional indemnity insurance at the time of inspection and reporting. As part of a commitment to on-going professional development the author is undertaking the process of accreditation and attainment of chartered status.

### 15 Controlling and Referenced Documents;

AS1726-1993 (incorporating amendments to #2-1994)

AS4360-2005 Risk Management Set

AS4200-2000 General Conditions of Contract for Engagement of Consultants

AS2870-2011 Residential Slabs and Footings

Colac Otway Shire

Planning Scheme, Erosion Management Overlay Procedures (EMO)

Schedule 1

Geographic Information System (GIS) Data base

Geological Survey of Victoria (GSV)

Colac 7621-3 Zone 54

1:50,000 Map Series

Tickell S.J. 1990.

Report 103 (Department of Agriculture, Energy and Minerals)

2020ES JSA 02.22.08.19www.dse.vic.gov.au

# 16. Site Condition Photo.



Fig 11. Surface conditions of subject land and roadway batter, view to north, along line of cross section.(Author)

Page 1 of 2

### 17. Geotechnical Declaration

FORM	Α	Geotechnical Declaration and Verification Development Application					
Office Use Only		эсторионг дрягация	Colac Otway				
			SHIRE				
This for accorda	m is essenti ance with Cl	ith planning application. It must accompany the Geotec al to verify that the Geotechnical Assessment and/or Land 44.01 of the Colac Otway Planning Scheme and that the a ogist as defined by this clause.	slip Risk Assessment has been prepared in				
Section	1	Related Application					
Planning Application Number (if known)		TO BE ADVISED					
Site Address		14 OZONE STREET, SKENES CREEK. VICTORIA. 3233					
Applicant		S & M HASTIE					
Section	2	Cantachnical Assassment and lar Landslin Disk Assassm	nent				
Details		Geotechnical Assessment and /or Landslip Risk Assessment  Report Title: GEOTECHNICAL ASSESSMENT					
		Author's Companyl Organisation Name: 2020 ENGINEERING SOLUTIONS	Report Reference No: ES19160.1				
		Author: MR MICHAEL DELAHUNTY	Dated: 28/10/2019				
		WIN WHEN IEE BEBUILDING	20, 10, 2013				
Section	3	Checklist					
Requ (Tick as	technical uirements appropriate Yes or No)	The following checklist covers the minimum re Assessment and/or Landslip Risk Assessment. T required by Clause 44.01. This checklist must ac referenced to the section or page of the Geotechni which addresses that item.	he report must also cover any additional matter company each report. Each item is to be cross				
Yes	No	A review of readily available history of slope instability in	in the site or related land as per <section 6=""></section>				
Yes	□No	An assessment of the risk posed by all reasonably identi	sonably identifiable geotechnical hazards as per <section 6.1<="" td=""></section>				
Yes	□No						
Yes	□No	Plans and sections of the site and related land as per <s< td=""><td>ECTIONS 17 &gt;</td></s<>	ECTIONS 17 >				
Yes	□No	Plans and sections of the site and related land as per <si 8<="" <section="" a="" as="" geological="" model="" of="" per="" presentation="" td=""><td>ECTIONS 17 &gt;</td></si>	ECTIONS 17 >				
_		Presentation of a geological model as per <section 8<="" td=""><td>&gt;</td></section>	>				
Yes	□ No	Presentation of a geological model as per <section 8="" <="" a="" and="" as="" conclusion="" determinant.<="" drawings="" for="" is="" of="" or="" per="" photographs="" section="" site="" suitable="" td="" the="" to="" whether=""><td>&gt; ON 16 &gt;</td></section>	> ON 16 >				
		Presentation of a geological model as per <section 8="" 8<="" <="" and="" as="" drawings="" of="" or="" per="" photographs="" section="" site="" td="" the=""><td>&gt; ON 16 &gt; velopment proposed to be carried out either &gt;</td></section>	> ON 16 > velopment proposed to be carried out either >				
	□No	Presentation of a geological model as per <section 12="" 8="" <="" <section="" a="" above="" an="" and="" any="" are="" as="" be<="" conclusion="" deconditionally="" drawings="" explanation="" for="" if="" is="" items="" no,="" of="" or="" per="" photographs="" section="" site="" suitable="" td="" the="" ticked="" to="" unconditionally="" whether=""><td>&gt; ON 16 &gt; velopment proposed to be carried out either &gt; included in the report to justify why &lt;</td></section>	> ON 16 > velopment proposed to be carried out either > included in the report to justify why <				
Yes	□No	Presentation of a geological model as per < SECTION 8  Photographs and/or drawings of the site as per < SECTION 8  A conclusion as to whether the site is suitable for the deconditionally or unconditionally as per < SECTION 12	> ON 16 > velopment proposed to be carried out either > included in the report to justify why <				
	□No	Presentation of a geological model as per <section 12="" 8="" <="" <section="" a="" above="" an="" and="" any="" approval="" are="" as="" be="" conclusion="" cor<="" deconditionally="" drawings="" explanation="" for="" if="" is="" items="" no,="" of="" or="" per="" photographs="" recommendations="" section="" site="" subject="" suitable="" td="" the="" ticked="" to="" unconditionally="" whether=""><td>&gt; ON 16 &gt; velopment proposed to be carried out either &gt; included in the report to justify why &lt;</td></section>	> ON 16 > velopment proposed to be carried out either > included in the report to justify why <				
Yes Yes Yes	□ No □ No	Presentation of a geological model as per <section 12="" 8="" <="" <section="" a="" above="" an="" and="" any="" approval="" are="" as="" be="" conclusion="" construction="" cor="" deconditionally="" drawings="" explanation="" footing="" for="" if="" is="" items="" ls="" no,="" of="" or="" per="" photographs="" recommendations="" section="" selection="" site="" subject="" suitable="" systems.<="" td="" the="" ticked="" to="" unconditionally="" whether=""><td>&gt; ON 16 &gt; velopment proposed to be carried out either &gt; included in the report to justify why &lt;</td></section>	> ON 16 > velopment proposed to be carried out either > included in the report to justify why <				
Yes Yes Yes Yes	□ No □ No □ No	Presentation of a geological model as per <section 12="" 8="" <="" <section="" a="" above="" an="" and="" any="" approval="" are="" as="" be="" conclusion="" construction="" cor="" deconditionally="" drainage.="" drawings="" earthworks.="" explanation="" footing="" for="" if="" is="" items="" no,="" of="" or="" per="" photographs="" recommendations="" section="" selection="" site="" structural="" sub="" subject="" suitable="" surface="" systems.="" systems.<="" td="" the="" ticked="" to="" unconditionally="" whether=""><td>&gt; ON 16 &gt; velopment proposed to be carried out either &gt; included in the report to justify why &lt; inditions relevant to:</td></section>	> ON 16 > velopment proposed to be carried out either > included in the report to justify why < inditions relevant to:				
Yes Yes Yes Yes Yes	No No No No	Presentation of a geological model as per <section 12="" 8="" <="" <section="" a="" above="" an="" and="" any="" approval="" are="" as="" be="" conclusion="" conditions="" construction="" cor="" deconditionally="" drainage.="" drawings="" earthworks.="" explanation="" footing="" for="" if="" is="" items="" may="" mititions.<="" no,="" of="" ongoing="" or="" per="" photographs="" recommendations="" required="" risk.="" section="" selection="" site="" structural="" sub="" subject="" suitable="" surface="" systems="" systems.="" td="" that="" the="" ticked="" to="" unconditionally="" whether=""><td>&gt; ON 16 &gt; velopment proposed to be carried out either &gt; included in the report to justify why &lt; inditions relevant to:</td></section>	> ON 16 > velopment proposed to be carried out either > included in the report to justify why < inditions relevant to:				
Yes Yes Yes Yes Yes Yes Yes Yes Yes	□No □No □No □No □No □No	Presentation of a geological model as per <section 12="" 8="" <="" <section="" a="" above="" an="" and="" any="" approval="" are="" as="" be="" conclusion="" conditions="" construction="" cor="" deconditionally="" detailing="" drainage.="" drawings="" earthworks.="" explanation="" footing="" for="" geotechnical="" highlighting="" if="" inspection="" is="" items="" may="" mitigrom="" no,="" of="" ongoing="" or="" per="" photographs="" provide<="" recommendations="" regime="" required="" risk.="" section="" selection="" site="" structural="" sub="" subject="" suitable="" surface="" systems="" systems.="" td="" that="" the="" ticked="" to="" unconditionally="" viewpoint.="" whether=""><td>&gt; ON 16 &gt; velopment proposed to be carried out either &gt; included in the report to justify why &lt; inditions relevant to:  s consistent with the geotechnical assessment of the gation and maintenance of the site and the proposal</td></section>	> ON 16 > velopment proposed to be carried out either > included in the report to justify why < inditions relevant to:  s consistent with the geotechnical assessment of the gation and maintenance of the site and the proposal				
	No No No No	Presentation of a geological model as per <section 12="" 8="" <="" <section="" a="" above="" adopted="" all="" an="" and="" any="" approval="" are="" as="" be="" conclusion="" conditions="" construction="" cor="" deconditionally="" design="" detailing="" drainage.="" drawings="" earthworks.="" explanation="" footing="" for="" geo<="" geotechnical-viewpoint.="" highlighting="" if="" in="" inspection="" inspections.="" is="" items="" life="" may="" mitiform="" necessary="" no,="" of="" ongoing="" or="" per="" photographs="" provice="" recommendations="" regime="" required="" risk.="" section="" selection="" site="" state="" structural="" structure="" sub="" subject="" suitable="" surface="" systems="" systems.="" td="" that="" the="" ticked="" to="" unconditionally="" whether=""><td>&gt; ON 16 &gt; velopment proposed to be carried out either &gt; included in the report to justify why ≤ included in the report to:  s consistent with the geotechnical assessment of the gation and maintenance of the site and the proposal de the <pca> and builder with adequate notification for</pca></td></section>	> ON 16 > velopment proposed to be carried out either > included in the report to justify why ≤ included in the report to:  s consistent with the geotechnical assessment of the gation and maintenance of the site and the proposal de the <pca> and builder with adequate notification for</pca>				
¥Yes     ¥Yes     ¥Yes     ¥Yes     ¥Yes     ¥Yes     ¥Yes     ¥Yes	INO INO INO INO INO INO INO INO INO	Presentation of a geological model as per <section 12="" 8="" <="" <section="" a="" above="" all="" an="" and="" any="" approval="" are="" as="" be="" conclusion="" conditions="" construction="" cor="" deconditionally="" detailing="" drainage.="" drawings="" earthworks.="" explanation="" footing="" for="" geotechnical="" highlighting="" if="" inspection="" inspections.<="" is="" items="" may="" mitifrom="" necessary="" no,="" of="" ongoing="" or="" per="" photographs="" provid="" recommendations="" regime="" required="" risk.="" section="" selection="" site="" structural="" sub="" subject="" suitable="" surface="" systems="" systems.="" td="" that="" the="" ticked="" to="" unconditionally="" viewpoint.="" whether=""><td>&gt; ON 16 &gt; velopment proposed to be carried out either &gt; Included in the report to justify why ≤ Inditions relevant to:  s consistent with the geotechnical assessment of the gation and maintenance of the site and the proposal de the <pca> and builder with adequate notification for otechnical Assessment and/or the Landslip Risk</pca></td></section>	> ON 16 > velopment proposed to be carried out either > Included in the report to justify why ≤ Inditions relevant to:  s consistent with the geotechnical assessment of the gation and maintenance of the site and the proposal de the <pca> and builder with adequate notification for otechnical Assessment and/or the Landslip Risk</pca>				

FORM	Α	Geotechnical Declaration and V	erification	n 3 Inwer@mund!	Plan (Tandam)	
		<b>Development Application</b>		2 1040 (10310)	ten panceny	
Section	4	List of Drawings referenced in Geotechnical Assessment	and/or Lands	ip Risk Asses	sment	
Design Documents		Description	Plan or Document No.	Revision or Version No.	Date	Author
		LOCATION & PLANNING DETAILS	FIG 2.		PLANNING MAPS ON LINE	
-		LOWER GROUND PLAN	FIG 3.	18015	MAY'19	TANDE
	2	SITE GEOLOGY	FIG 5.			GEOVIC
		TOPOGRAPHY	FIG 6.			VICPLAN
		MAPPED SLIP SYSTEMS	FIG 7.			cos
	SLOPE N	100EL WITH PROPOSED BUILD ENVELOPE & FAILURE MODES	FIG 8.		AUG'19	M DELAHUN
		SLOPE MODEL WITH PROPOSED BUILD	FIG 9.		AUG'19	M DELAHUN
		COMPUTER ANALYSIS OF SLOPE	FIG 10.		AUG'19	M DELAHUN
Yes Yes Yes Yes	No N	on behalf of the company below:  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  I prepared the Geotechnical Assessment and/or Landslip Risk Assessment referenced above in accordance with the Colac Otway Planning Scheme and the AGS Guidelines 2007 as defined in the planning scheme.  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.  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.  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		Geotechnical Engineer or Engineering Geologist Details				
	tion Name	2020 ENGINEERING SOLUTIONS PTY LTD				
Name (Company Representative)		Surname: DELAHUNTY	Dr / Mr / Mrs / Ms / Miss			
		Given Name(s) MICHAEL				
		Chartered Professional Status	Registration N	Number		

Reference: AGS Guidelines 2007c "Practice Note Guidelines for Landstide Risk Management", Australian Geomechanics Society, Australian Geomechanics. V42. N1 March 2007.

Note: N/A = Not Applicable

April 2013.

#### 18. The Geotechnical Assessment

The initial level of assessment requires a report known as a "Geotechnical Assessment". A primary purpose of the Geotechnical Assessment is the collection of base information about the site. This is to include:

- A detailed site description typically including aspects of the site geomorphology, site drainage and site physiography including slope and aspect.
- It is expected that the site description also includes other site features such as existing development, access roads, retaining walls and site excavations and/or fills.
- Site assessment plans and cross sections of the subject site and related lands that may contribute to or be affected by instability at the site. This should include contours and ground slopes drawn to scale and dimensioned from a survey and recent field measurements. The plan and section should be separate from any geological model or stability model provided as additional analysis/assessment information.
- A detailed assessment of subsurface conditions including both surface and subsurface geology. Such information is vital in developing a geological model for the site and should include any exposures or outcrops as well as groundwater discharges or seeps
- The above information should then be summarised in a description of a geological/ geotechnical model for the site
- Details of all site investigations and any other information used in developing the Geotechnical Assessment.

The purpose of the base information is to effectively describe key aspects of the site in detail so as to clearly establish a context for the site conditions prior to the proposed development.

The next aim of the Geotechnical Assessment is to establish relevant features of the slope stability conditions of the site. This should include:

- A statement indicating whether there are natural slopes on or immediately adjacent to the subject lot which exhibit evidence of possible or past slope instability such as landslide, rockfall or erosion.
- The Geotechnical Assessment should list all credible, potential modes of failure.

By combining an understanding of the site conditions and aspects of slope stability, a primary finding from the Geotechnical Assessment must be:

 A statement indicating risks for all slope stability hazards identified are of an ACCEPTABLE RISK level (as defined by the schedule) and that these risks will remain at an ACCEPTABLE RISK level over the design life of the development.

The following copied documents are made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document

An ACCEPTABLE RISK level by necessity must be defined by COS, But is explicitly for any purpose which line with risk levels recommended in the Australian Geomechanics Society (AGS) pyright.

Landslide Risk Management Guidelines (AGS 2007c and d). For a typical low rise residential development, ACCEPTABLE levels of risk as recommended by AGS are as follows:

Risk Type for low rise residential	ACCETABLE RISK level
development	(as per AGS 2007 c and d)
Risk to Property and Infrastructure	LOW
(Qualitative Assessment)	
Risk to Life for existing slopes and	1 x 10-5
development (Quantitative Assessment)	
Risk to Life for new slopes and new	1 x 10-6
development (Quantitative Assessment)	

Note other combinations of building importance and slope conditions can result in different levels of ACCEPTABLE risk (e.g. a hay shed has less stringent criteria whilst heavily used building such as schools or recreation centers will require more stringent criteria). The AGS guidelines offer detailed recommendations on this aspect of ACCEPTABLE RISK.

If the Geotechnical Assessment <u>cannot</u> make the statement regarding ACCEPTABLE RISK levels for <u>all slope hazards</u>, then the assessment must proceed to a second more detailed assessment known as a "Landslide Risk Assessment".

It is generally not expected that detailed risk calculations would be included in a Geotechnical Assessment however a consultant may choose to include some calculations if they feel the need to justify the required statement regarding ACCEPTABLE RISK levels.

Other recommendations regarding the development must also be included in the Geotechnical Assessment where they have influence on the final recommendation for approval. These include:

- Determination of appropriate founding depths
- Location and depth of cuts and fills,
- Construction of retention systems
- Details of surface and sub-surface drainage
- Vegetation retention
- Drainage and effluent disposal
- Need for ongoing mitigation measures
- Timeframes for completion of works
- Any other geotechnical approvals

The following copied documents are made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document

Finally the Geotechnical Assessment must <u>include</u> a statement of whether send for hany purpose which next level assessment i.e. a Landslip Risk Assessment is required. breach any Copyright.

### The Landslip Risk Assessment

A Landslip Risk Assessment may be required in one of two ways:

- Where the Geotechnical Assessment cannot make the statement regarding <u>all</u> <u>potential slope hazards</u> are at an ACCEPTABLE risk level and hence the call for a more detailed assessment or;
- 2. Where landform data indicates the natural slopes on or immediately adjacent to the subject lot exceed certain slope angle thresholds for various geologic units (as defined in the schedule). In the case of the spatially extensive Eumeralla Formation (Otway Group) this threshold angle is 14°.

The Landslip Risk Assessment must include the initial Geotechnical Assessment OR must include all information required in a Geotechnical Assessment where the initial level of assessment was bypassed by the slope threshold requirement.

The Landslide Risk Assessment then requires a full risk assessment in accordance with the requirements of the AGS2007 guidelines.

This includes an assessment for risks for all reasonably identified geotechnical hazards and must be undertaken for risks to life and risk to property/infrastructure. Qualitative and quantitative calculations must be included in this assessment.

The Landslip Risk Assessment must include a specific statement as follows:

 A statement that the subject lots are suitable or can be made suitable for the proposed development and that the subject lot or the proposed development can meet the TOLERABLE RISK criteria as defined in the schedule.

As before, a TOLERABLE RISK level will need to be defined by COS but is again expected to be in line with risk levels recommended in the Australian Geomechanics Society's Landslide Risk Management Guidelines (AGS 2007c and d). For a typical low rise residential development TOLERABLE levels of risk as recommended by AGS are as follows:

Risk Type for low rise residential	TOLERABLE RISK level
development	(as per AGS 2007 c and d)
Risk to Property and Infrastructure	MODERATE
(Qualitative Assessment)	
Risk to Life for existing slopes and	1 x 10-4
development (Quantitative Assessment)	
Risk to Life for new slopes and new	1 x 10-5
development (Quantitative Assessment)	

It is again noted that different combinations of building importance and slope conditions may result in different levels of tolerable risk.

### 19. Report Limitations

#### 2020 Engineering Solutions Pty Ltd ("2020") Geotechnical Report Limitations

The report to which this document has been attached assesses risks arising from land slope instability and proposes risk minimisation solutions. Absolute risk avoidance cannot be assured, principally due to assessment cost factors. It is therefore necessary to rely on instructions and make assumptions.

#### **Changed Conditions**

The report may be invalidated by changed conditions including:-

- topography.
- soil moisture content.
- above or below ground structures.
- soil and substrate profiles.
- location of site boundaries.

#### Causes of Changed Conditions

Changed conditions may occur due to:-

- 1. extreme conditions such as flood, drought, cold, heat or fire.
- human activities.
- natural processes.
- planning or design requirements.

#### Client to inform 2020 of any changes

2020 will endeavour to identify any reasonably foreseeable risk factors on the site which may cause changed conditions. Samples are taken at reasonable intervals bearing in mind the cost to the client. In the absence of specific instructions or patent conditions it will be assumed that conditions observed in samples are consistent across the site.

This document is provided to inform the client that their responsibility for risk is shared with 2020. The client will be responsible for inaccurate instructions or failure to instruct in relation to changed conditions, events that may cause changed conditions or when it becomes evident that assumptions may be invalid. Failure to do so could result in substantial and costly damage and disputes.

#### Interpretation

The report must be considered in its entirety. Each part of the report may be dependent on other parts for meaningful interpretation. The report should also only be used by the client. It may not be relied upon by any other person without first conferring with 2020. The report should only be acted upon and interpreted by persons qualified and competent in the activities contemplated in the report.

130433 - 13 05 31 Geotechnical Report Limitation