NOTICE OF AN APPLICATION FOR PLANNING PERMIT

The land affected by the application is located at:	**48 Pine Ridge Road KINGLAKE WEST, (LOT: 25 LP: 55006)**
The application is for a permit to:	**Use and development of land for a dwelling**
The applicant for the permit is:	**Cadox Building Design Pty Ltd**
The application reference number is:	**2023/199**
You may look at the application and any documents that support the application by visiting our website via the following web address:	**www.murrindindi.vic.gov.au/Planning Comment**

Any person who may be affected by the granting of the permit may object or make other submissions to the responsible authority.

An objection must be sent to the responsible authority in writing, with the full name and postal address of the objector and include the reasons for the objection, and state how the objector would be affected.

The responsible authority must make a copy of every objection available at its office for any person to inspect during office hours free of charge until the end of the period during which an application may be made for review of a decision on the application.

The responsible authority will not decide on the application before:	**19/03/2024**

If you object, the responsible authority will tell you its decision.

The planning unit can be contacted on (03) 5772 0333 or planning@murrrindindi.vic.gov.au.

Murrindindi Shire Council

Planning Enquiries
Phone: (03) 5772 0317
Email: planning@murrindindi.vic.gov.au
Web: www.murrindindi.vic.gov.au

Clear Form

Office Use Only

VicSmart? ☐ YES ☒ NO

Specify class of VicSmart application:

Application No.: 6623 Date Lodged: / /

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.

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

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

i Click for further information.

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?

☐ No ☐ 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 *

Unit No.: St. No.: 48 St. Name: Pine Ridge Road

Suburb/Locality: KingLake Postcode: 3763

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.

A Lot No.: 25 ○ Lodged Plan ○ Title Plan ◉ Plan of Subdivision No.: 055006

OR

B Crown Allotment No.: Section No.:

Parish/Township Name:

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? *

The proposal is to construct a 3 bedroom 2 bathroom dwelling on the property.

☑ 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 $ 499,500

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 certificate **must** be submitted with the application.
Visit www.sro.vic.gov.au for information.

Existing Conditions

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.

The land is currently vacant.

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

Title Information

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

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

Applicant *

The person who wants the permit.

Name:

Title: Cadox | First Name: | Surname:

Organisation (if applicable): Cadox Building Design

Postal Address: | If it is a P.O. Box, enter the details here:

[redacted]

Please provide at least one contact phone number *

Where the preferred contact person for the application is different from the applicant, provide the details of that person.

Contact person's details*

Same as applicant ☐

Name:

Title: Mr | First Name: Adam | Surname: Graham

Organisation (if applicable):

Postal Address: | If it is a P.O. Box, enter the details here:

[redacted]

Owner *

The person or organisation who owns the land

Where the owner is different from the applicant, provide the details of that person or organisation.

Same as applicant ☐

Name:

Title: | First Name: Sergio | Surname: Teodoro

Organisation (if applicable):

Postal Address: | If it is a P.O. Box, enter the details here:

[redacted]

Information requirements

Contact Council's planning department to discuss the specific requirements for this application and obtain a planning permit checklist.

Is the required information provided?

☑ Yes ☐ No

Declaration

This form must be signed by the applicant *

Remember it is against the law to provide false or misleading information, which could result in a heavy fine and cancellation of the permit.

I declare that I am the applicant; and that all the information in this application is true and correct; and the owner (if not myself) has been notified of the permit application.

[redacted]

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

VOLUME 08342 FOLIO 502

Security no : 124108531506A
Produced 22/08/2023 09:55 PM

LAND DESCRIPTION

Lot 25 on Plan of Subdivision 055006.
PARENT TITLE Volume 08337 Folio 158
Created by instrument B293038 23/03/1962

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
CAROLINE ANN BISBAL of 26 LEONARD STREET RINGWOOD VIC 3134
AV370814H 25/02/2022

ENCUMBRANCES, CAVEATS AND NOTICES

MORTGAGE AV370815F 25/02/2022
AUSTRALIA AND NEW ZEALAND BANKING GROUP LTD

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 LP055006 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: 48 PINE RIDGE ROAD KINGLAKE WEST VIC 3757

ADMINISTRATIVE NOTICES

NIL

eCT Control 16165A AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED
Effective from 25/02/2022

DOCUMENT END

Imaged Document Cover Sheet

The document following this cover sheet is an imaged document supplied by LANDATA®, Secure Electronic Registries Victoria.

Document Type	**Plan**
Document Identification	**LP055006**
Number of Pages (excluding this cover sheet)	**2**
Document Assembled	**31/08/2023 12:15**

LP 55006

EDITION 1

PLAN MAY BE LODGED 8/02/1962

PLAN OF SUBDIVISION

OF PART OF CROWN ALLOTMENT 75F

PARISH OF KINGLAKE

COUNTY OF EVELYN

VOL.8337 FOL.158

Measurements are in Feet & Inches

Conversion Factor

FEET X 0.3048 = METRES

DEPTH LIMITATION : 50 FEET

COLOUR CODE

E-1 = BLUE

R1 = BROWN

A-1 = YELLOW

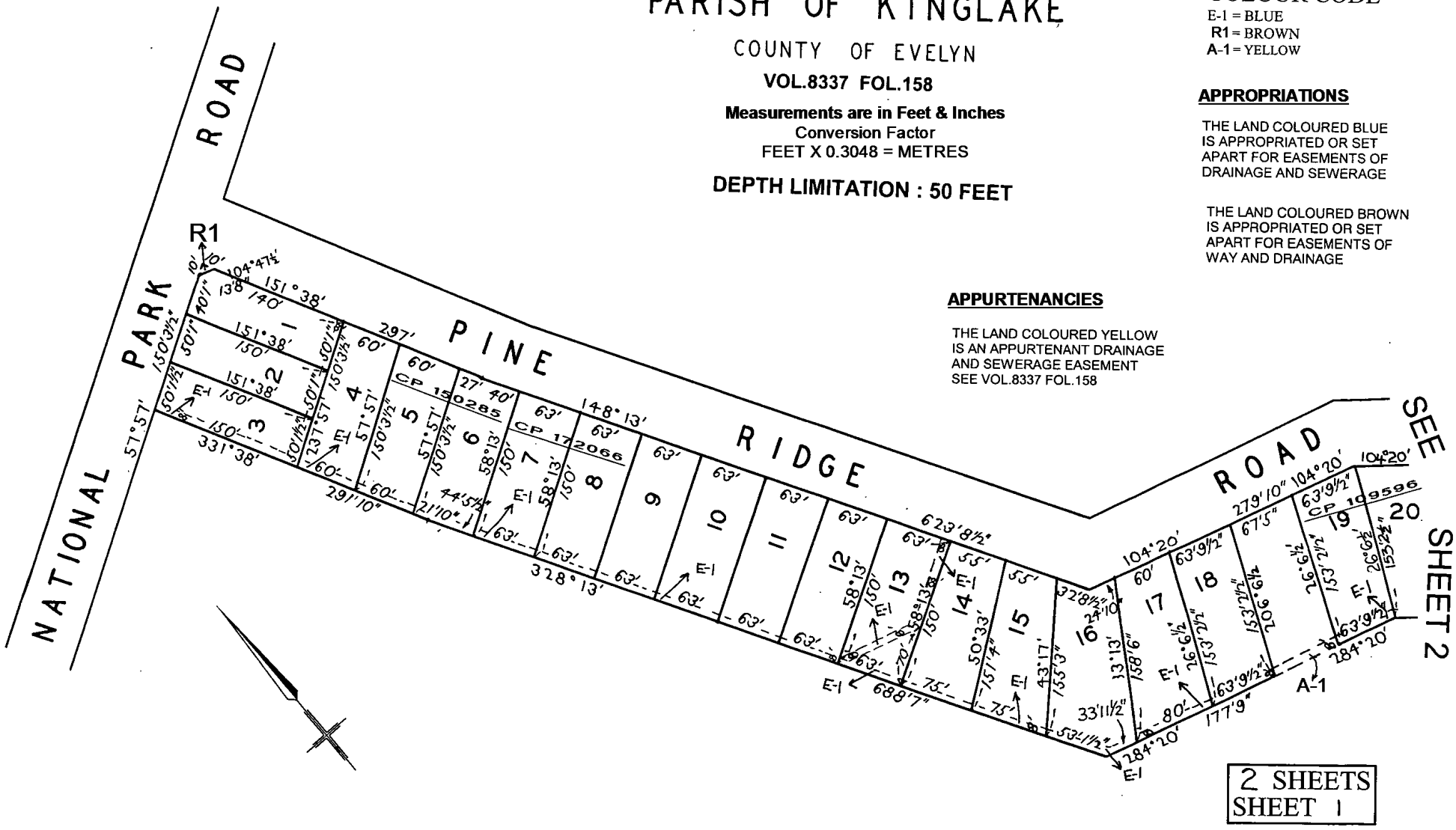
APPROPRIATIONS

THE LAND COLOURED BLUE IS APPROPRIATED OR SET APART FOR EASEMENTS OF DRAINAGE AND SEWERAGE

THE LAND COLOURED BROWN IS APPROPRIATED OR SET APART FOR EASEMENTS OF WAY AND DRAINAGE

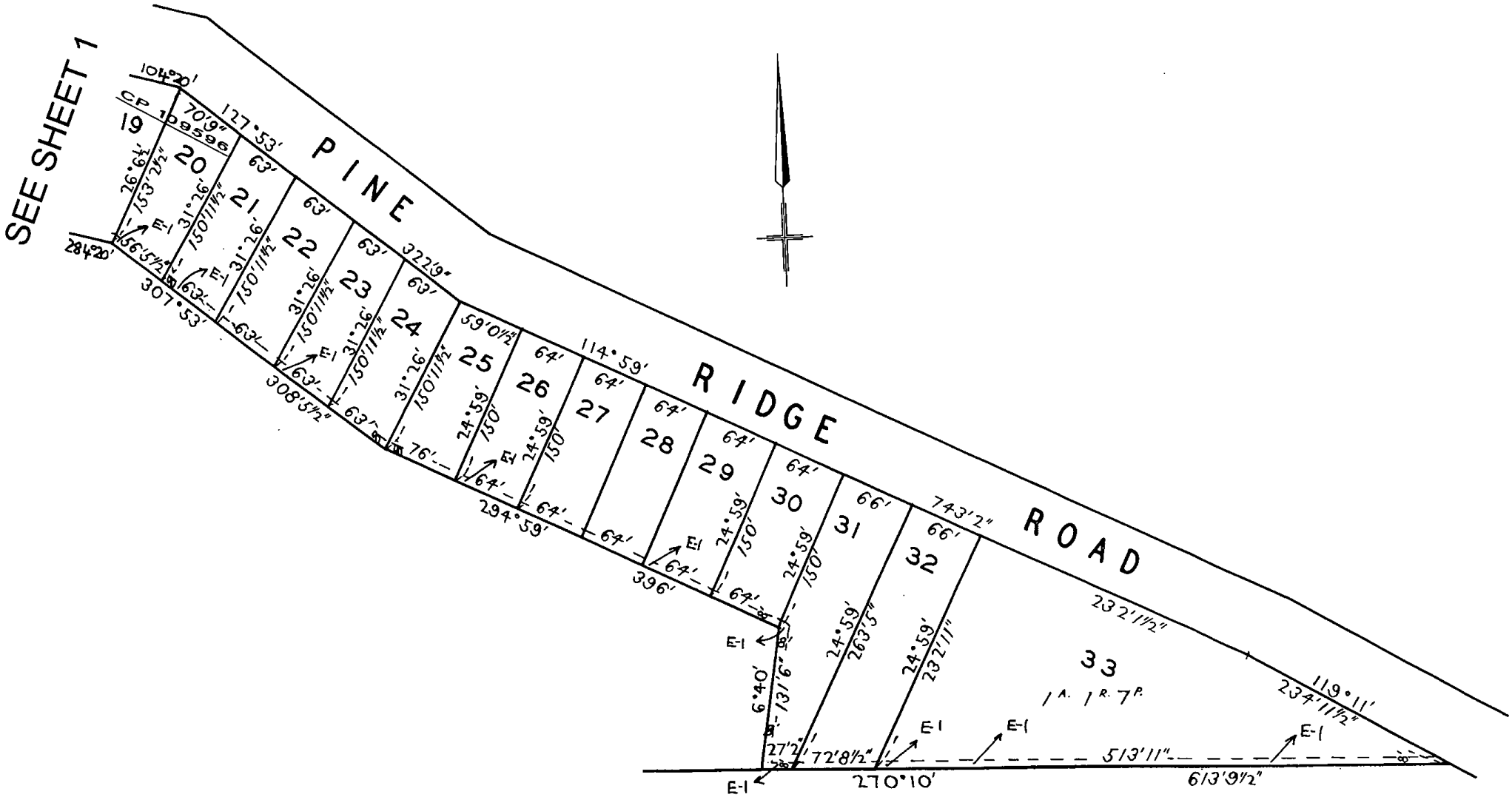
APPURTENANCIES

THE LAND COLOURED YELLOW IS AN APPURTENANT DRAINAGE AND SEWERAGE EASEMENT SEE VOL.8337 FOL.158



2 SHEETS
SHEET 1

LP 55006



2 SHEETS
SHEET 2

07th Dec 2023
Murrindindi Shire Council
Att: Planning Department
P.O.Box 105,
Lilydale, VIC 3140

48 Pine Ridge Road, Kinglake VIC 3763

To whom it may concern,

Please find enclosed the following information concerning the planning application for the proposed works at the above address:

- Town Planning Drawings (6623)
- Copy of Title & Plan of Subdivision
- Planning form
- Bushfire management Statement
- Land capability form
- Soil test

Planning Zones and Overlays:
Farming Zone (FZ)
Bushfire Management Overlay (BMO)
Restructure overlay (RO)

The proposal is to construct a double storey dwelling on the property. The building has been sited to reduce impact and risk in the event of a bushfire.

I appreciate your earliest response regarding this application and should you have any further queries please do not hesitate to contact me.

Kindest Regards,

Clare Cromie
Cadox Building Design Pty Ltd

ABZECO
Applied Botany, Zoology & Ecological Consulting

Bushfire Management Statement
48 Pine Ridge Road, Kinglake West

Prepared for Sergio Teodoro

Report 22044, Version 1.0
June 2022

Abzeco Pty Ltd. Suite 1, 4 Brisbane Street, Eltham, Vic. 3095 T:(03) 9431-5444 F:(03) 9431-5443 ABN 66 967 834 726 www.abzeco.com.au

Acknowledgements

The Authors would like to acknowledge the following personnel that assisted with the development of this report:

- **Sergio Teodoro** – for property access and project information and design.

Version Control

Version	Responsibility	Name	Date	Signature
1.0	Author	Jen Kellett	08/06/2022	[redacted]
1.0	GIS Mapping	Jamie McMahon	07/06/2022	[redacted]

Cover photo: Photo looking south to the study site at 48 Pine Ridge Road, Kinglake West, Victoria.

Table of Contents

1 Introduction

This Bushfire Assessment has been prepared in response to the requirements of Clause 13.02 (Bushfire) outlined in the Murrindindi Shire Council Planning Scheme. In order to assess the risk posed by bushfire to the proposed development at 48 Pine Ridge Road, Kinglake West, (the study site) the method and requirements of Clause 44.06 (Bushfire Management Overlay) and 53.02 (Bushfire Planning) have been used for this assessment. The study site and surrounding area was visited and assessed on the 2nd May 2022 for the purpose of informing this document. The following statement contains four components:

- A **bushfire hazard site assessment** considering an area of 150 metres around the location of the proposed dwelling;
- **Bushfire hazard landscape assessment** describing the bushfire hazard over a broader area;
- A **bushfire management statement** describing how the proposed development responds to the requirements of Clause 44.06 and 53.02-3 of the planning scheme; and,
- A **bushfire management plan –** provided effectively as a stand-alone plan at the end of the Bushfire Management Statement.

Proposal: The current planning proposal seeks a planning permit for the construction of a new single dwelling and underground bushfire shelter at 48 Pine Ridge Road, Kinglake West.

Application Pathway: The study area is zoned Farming Zone (FZ) and is covered by the Bushfire Management Overlay (BMO) and a Restructure Overlay (RO). Given the zoning and overlays this application addresses the requirements of Clause 53.02-4 (Assessment Pathway 2).

1.1 Construction Standard, Defendable Space and Further Requirements

Based on the requirements of the Bushfire Management Overlay (BMO) applying to the property, A Bushfire Attack Level (BAL) 29 construction standard has been applied to the proposed dwelling, with a defendable space around the proposed development of 61 metres or to the property boundary, whichever is lesser. (Section 4.2). This determination is based on the presence of classifiable 'forest' vegetation as per *Australian Standards for construction of buildings in bushfire-prone areas (AS-3959)* within 150 metres of the proposed dwelling on a 15-20 degree downslope to the south and south-west surrounding the proposed development. (Section 3.4).

The study site itself has been mostly cleared and contains vegetation only along the property boundary to the south and east, that has been altered from its natural state, is being managed in a reduced fuel state and only contains mid-story fuel with a sparse understory, therefore reducing bushfire risk.

In this instance an unspecified alternative measure is been applied, as defendable space runs over the Pine Ridge roadway to the north and into neighbouring properties to east and west. To the north and west, the study site is surrounded by residential land containing dwellings that are surrounded by landscaped gardens and areas of watered and managed gardens and road. To the east, there is a cleared and managed lot, with the plan for a future development. These residential dwellings and adjoining land around the proposed dwelling provide a buffer between any potential bushfire and the proposed development and there is a reasonable assurance that vegetation within the proposed defendable space surrounding the dwelling will continue to be managed in a reduced fuel state throughout the declared bushfire danger period in accordance with Section 4.3 as determined by Table 6 to Clause 53.02.

An underground bushfire shelter is planned for the development, and will be located between the dwelling and the road, close to the accessway and Pine Ridge Rd and furthest away from the most hazardous forest vegetation to the south. The underground bushfire shelter must comply with the Victorian Building Regulations 2006 (Regulations) and the National Construction Code (NCC) performance requirements.

Given the context of the planning proposal and identified hazards in the study area, provided that the relevant recommendations within this document are implemented, it is considered that the bushfire risk to the dwelling can be appropriately mitigated.

Vegetation Management

The understorey vegetation within the area of nominated defendable space is generally managed for fire risk, however canopy separation and further understorey management in the future will be needed to meet the defendable space requirements specified by the Country Fire Authority (CFA; Section 4.3).

Water Supply and Access

A 10,000 litre water tank will be required as part of the proposed development. The CFA standards in relation to water supply are detailed in Section 4.4. The Bushfire Management Plan includes an indicative location for a 10,000 litre water tank dedicated to firefighting purposes. Access directly from the road to the dwelling will require specific design requirements (see Section 4.5).

2 Application Details

2.1 Address, Dimensions, Size and Planning Controls

Municipality:	Murrindindi Shire Council
Address:	48 Pine Ridge Rd, Kinglake West
The zoning of the site is:	Farming Zone (FZ)
The overlays that apply to the site are:	Bushfire Management Overlay (BMO) Restructure Overlay (RO)

2.2 Existing Use and Development on the Site

The dimensions of the site are:	A rectangular shape lot
The site has a total area of:	Approximately 940m2
The current use of the site is:	Vacant / Rural Residential
The buildings or works located on the site are:	There are currently no buildings or dwellings on the site area.

2.3 Existing Access Arrangements

The main vehicle access to the site is provided from:	The site is accessible via an existing gravel road of Pine Ridge Road to the north of the property. Pine Ridge Rd runs off National Park Road, approximately 470m to the north of the study site, which then meets Whittlesea-Kinglake Rd at approximately 3.7m to the north-east. Access to into the township of Kinglake is approximately 9km along Whittlesea-Kinglake Rd to the south-east. To the north and north-west, Pine Ridge Rd has little or no vegetation in the easement with surrounding residential land sparsely vegetated with managed lawns. The township of Whittlesea is located approximately 16km to the west along Whittlesea-Yea Road.
Roads and access within the site are currently constructed from the following materials:	Currently, a dirt and gravel accessway from Pine Ridge Rd provides the main vehicle access to the study the site and is approximately 30m in length to the rear of the proposed dwelling.

3 Bushfire Hazard Site Assessment

3.1 Existing Vegetation

OBJECTIVE

Describe the vegetation on the site, including the type, location, extent and any other relevant information.

RESPONSE

Apart from lawn grass species of exotic origin, the immediate area within and around the proposed building footprint is currently clear of all vegetation for approximately 5-10 metres. The shrub layer across most of the site is effectively absent, and almost all of the vegetation on the site is made up of maintained open lawn. The vegetation on the study site has therefore been altered from its natural state and contains lower fuel loads than what would usually be expected within 'forest' vegetation. (Images 1-5).

To the South, South-West and rear of the study site, is private land classified as 'forest' vegetation as per the *Australian Standard for Construction of Buildings in Bushfire-prone Areas* (AS-3959). This 'forest' vegetation is located approximately 35 metres and downslope from the rear of the proposed dwelling (Images 6 & 11).

Surrounding land to the North, East and West of the property is used for residential purposes and is currently 'modified' and managed in a reduced fuel state. The boundary of the study site to the East contains a thin strip of 'modified' forest vegetation of small regrowth understory trees of Blackwood and Pomaderris that are being managed in a reduced fuel state. Ongoing trimming and pruning of this regrowth understory will be required to meet defendable space requirements.

The boundary to the West of the study site is located at a distance of 2 metres from the proposed dwelling and is currently a cleared and managed empty block of land of 46 Pine Ridge Rd, that is owned by the residents at number 44.

Providing the recommended BAL construction standard is achieved for the proposed dwelling, and existing vegetation to the north, east and west continues to be managed in a low fuel state, the proposed development will achieve an acceptable level of bushfire mitigation.

3.2 Site Photos

North

Images 1: Looking north-north-east from rear of the study site along existing access to Pine Ridge Road.

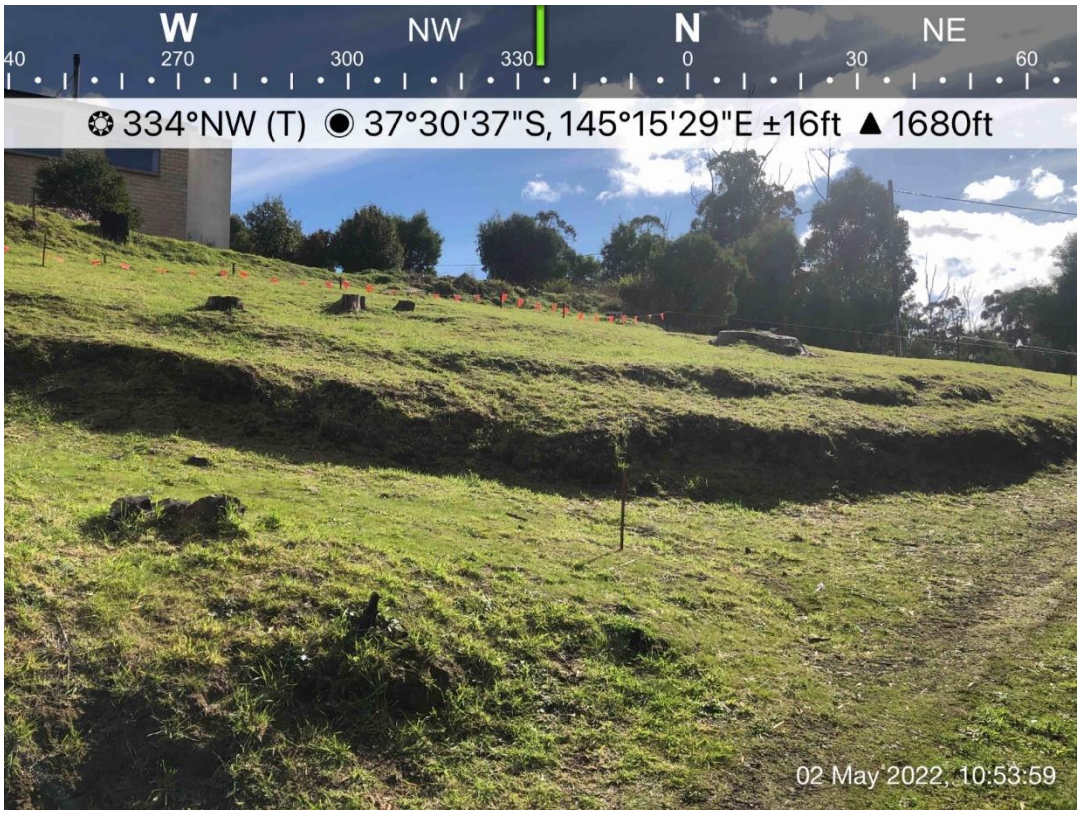


Image 2: Looking north-west towards location of proposed new dwelling within proposed new cut-out area.

South

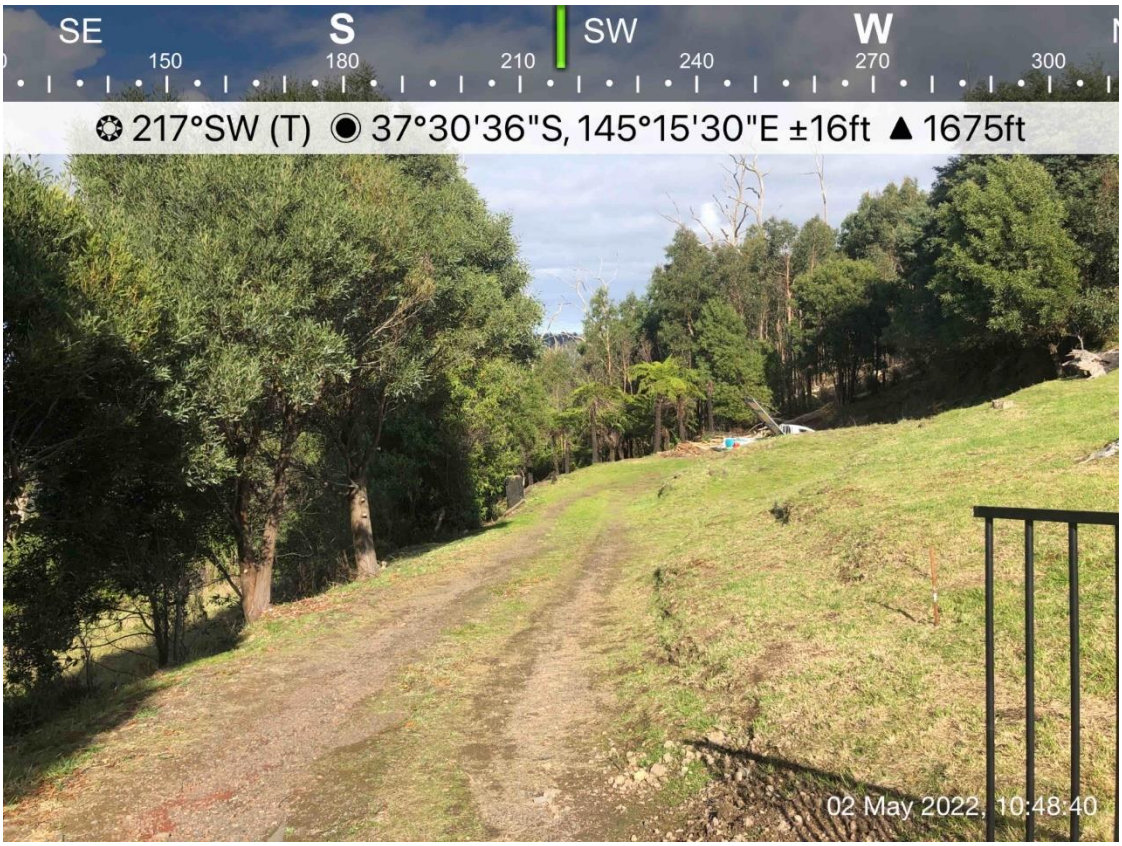


Image 3. Looking south from Pine Ridge Rd accessway to the study site.

Image 4. Looking south from Pine Ridge Rd overlooking northern property boundary and location of proposed dwelling.

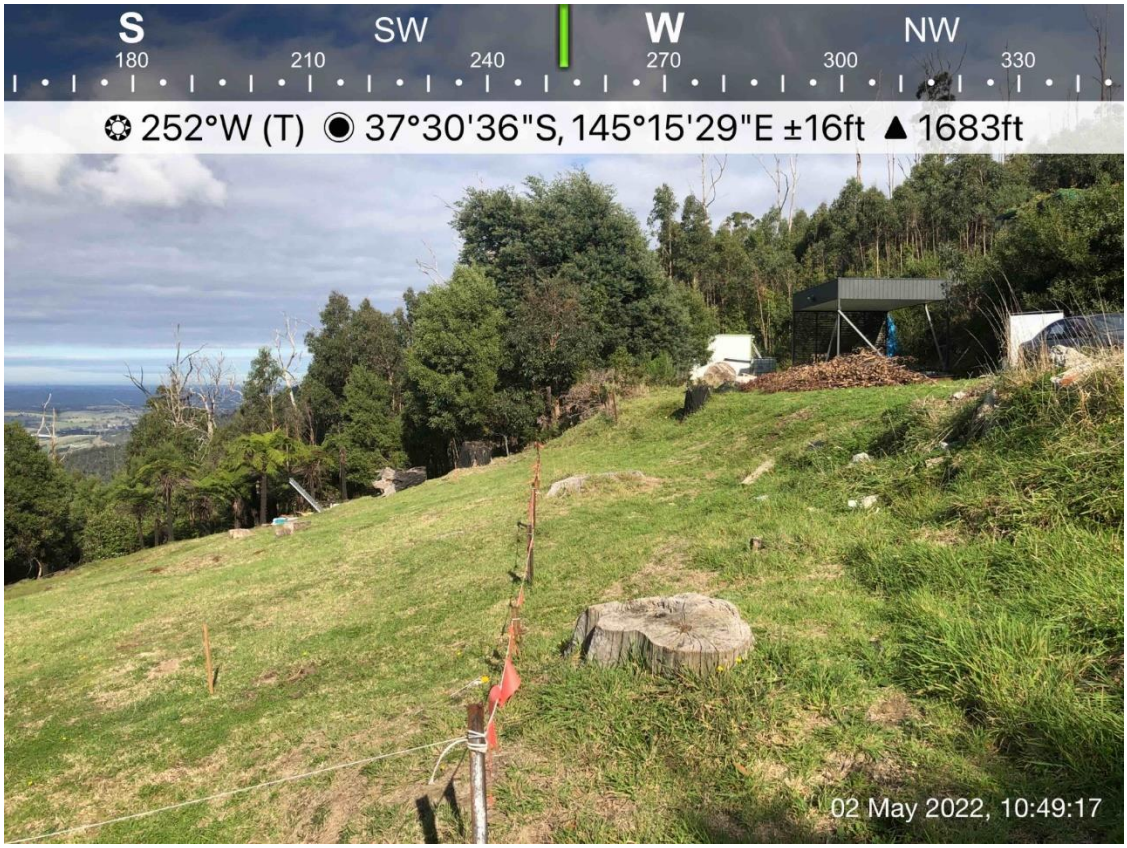


Image 5. Looking south-west from Pine Ridge Rd along western property boundary, showing property to the west.

Image 6. Looking south-west towards forest vegetation from rear of the study site.

Image 7. Looking south from rear of the study site and overlooking neighbouring land to the east.

Image 8. Aerial landscape view looking south across 48 Pine Ridge Road, Kinglake West © GoogleMaps.

East

Images 9. Looking south-east from accessway of study site towards neighbouring number 50 Pine Rd, property.

Image 10. Looking south-east from study site towards neighbouring number 50 Pine Rd, property.

West

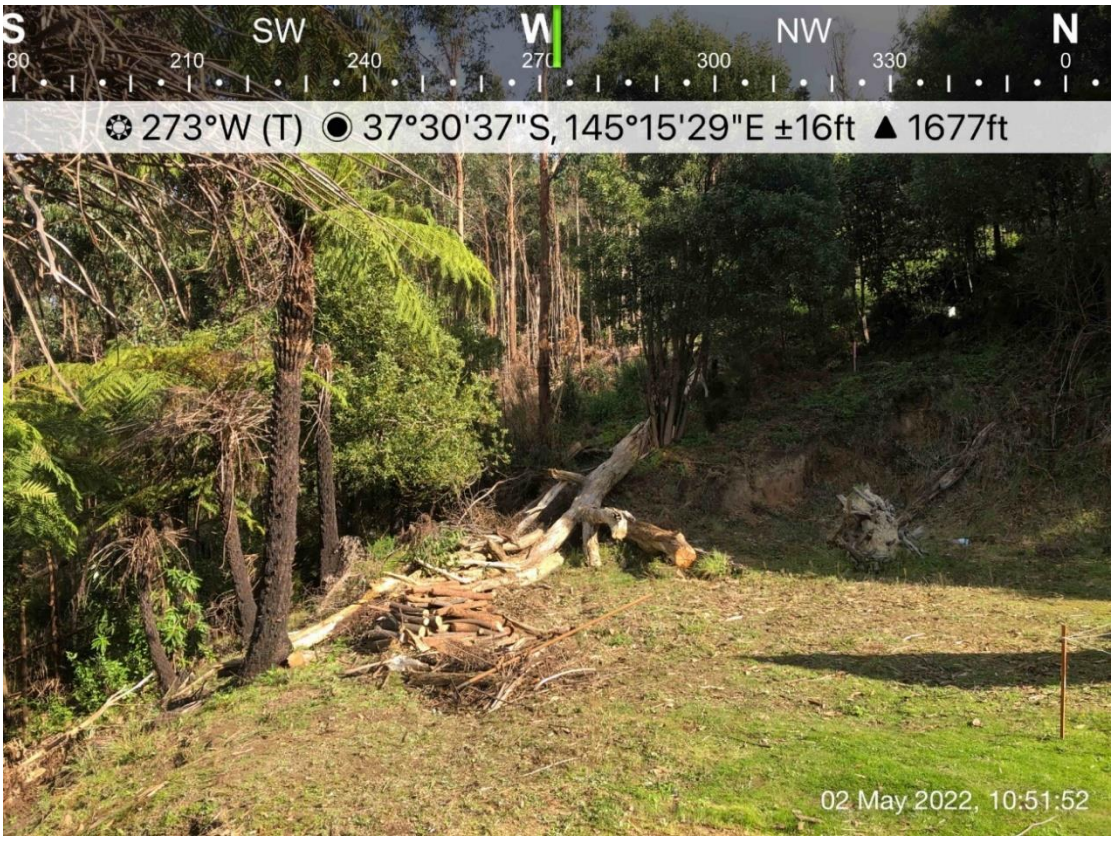


Image 11. Looking west from the rear of the study site towards western property boundary.

Image 12. Looking north-west to the neighbouring properties from the middle of the study site.

Image 13. Looking west from the middle of the study site.

Access

Image 14. Looking north-west along Pine Ridge Rd from front of study site.

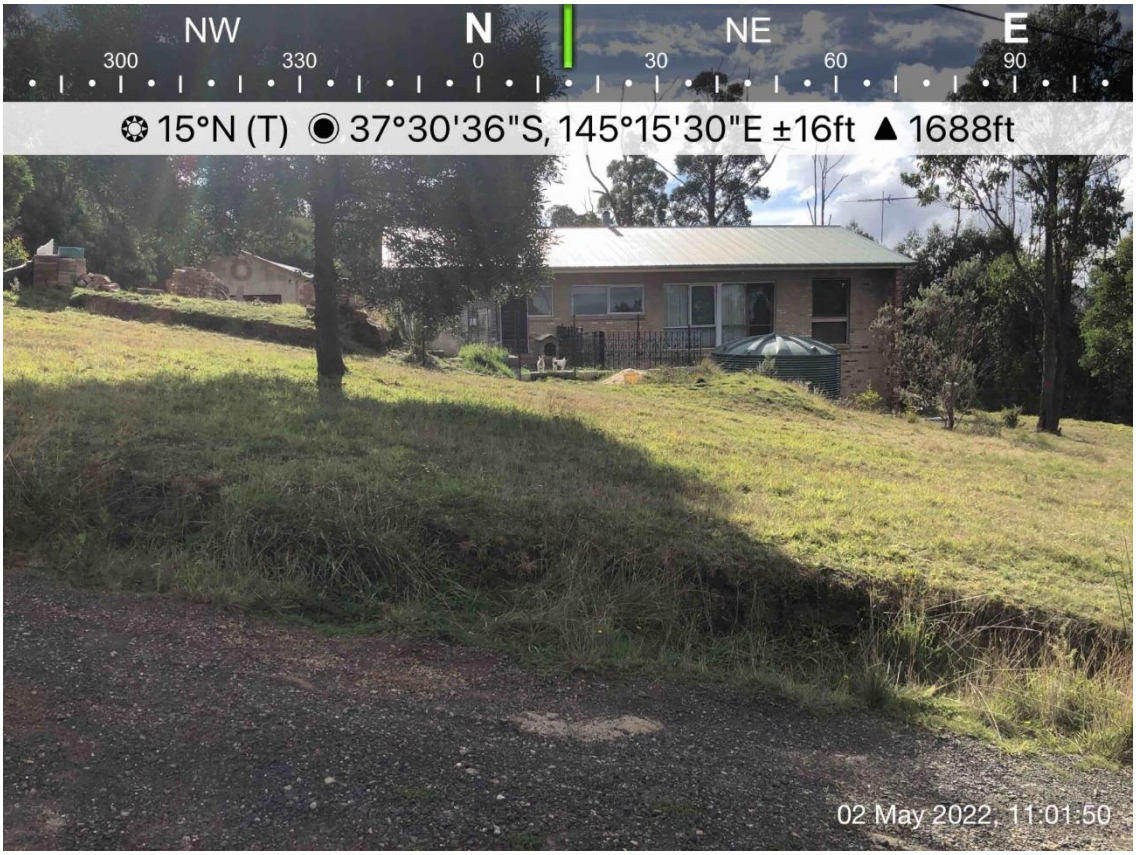


Image 15. Looking north directly over road from study site.

Image 16. Looking south-west towards study site from Pine Ridge Rd.

3.3 Development and Vegetation Types on Adjacent Sites

OBJECTIVE
Describe the land and existing land uses in all directions around the subject land.

RESPONSE

The study site sits within a residential area of the Farming Zone (FZ).

The immediate surrounding land to the North, East and West of the property consists of residential allotments of similar size to study site. Most vegetation surrounding the proposed development in these directions is currently 'modified' forest vegetation within landscaped, maintained gardens and mowed ornamental grassland and limited mid-story and shrub layer and managed to a lower fuel load than would be expected in unmodified vegetation of this type.

Although most land surrounding the study site to the North, East and West is classifiable as 'modified' forest, further out at approximately 70m to the north and east large areas of unmodified forest vegetation exists. The study site is buffered by the residential land with dwellings surrounded by watered and managed gardens and road in these directions, however this forest vegetation would generate radiant heat and localised flame and therefore poses a risk to the proposed dwelling from the north and east.

Vegetation approximately 35m to the south and south-west of the proposed dwelling is classified as 'Forest' as per the *Australian Standard for Construction of Buildings in Bushfire-prone Areas (AS-3959).* This 'forest' vegetation type consists of open forest (Table 2.3.A03) where trees are typically 10-30 m high and dominated by eucalypts, with an understory of sclerophyllous low trees and tall shrubs or grass. (Images 4 to 7).

The areas of managed and unmanaged 'forest' vegetation in the surrounding landscape present a potential fire hazard risk. The landscape to the North, East and West of the proposed dwelling is a mix of 'modified' and low threat vegetation, is fragmented by roads and residential developments with cultivated gardens, lawns and limited understory vegetation, however the short distance to unmodified forest vegetation in addition to the forest vegetation immediately to the South of the study site poses a fire risk to the proposed development.

The residential dwellings and modified and urbanised adjoining land around the proposed dwelling in most directions are in a reduced fuel state and therefore provides a buffer between any potential bushfire and the proposed development. There is a reasonable assurance that vegetation within the proposed defendable space surrounding the dwelling will continue to be managed in a reduced fuel state in the future, reducing the bushfire risk to the proposed development.

3.4 Hazard Assessment in the 150 Metre Radius

OBJECTIVE

Describe the slope of the land and hazards posed by vegetation within a 150m assessment area.

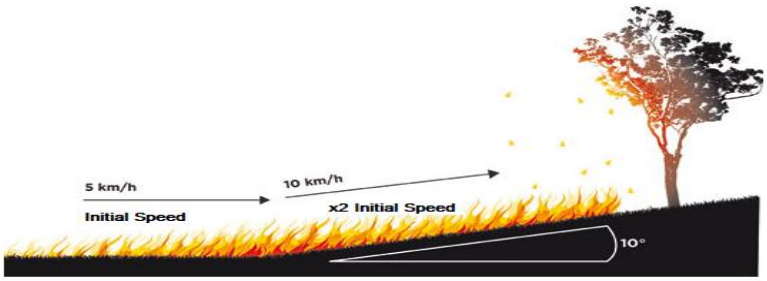
RESPONSE

A 150m area surrounding the subject site was assessed to determine potential hazards (Refer to Attachment 2).

Slope

The effective slope was determined to a distance of 150 metres from the proposed development and towards the vegetation communities constituting a hazard in that direction. The gradient beneath the vegetation (hazard) that would influence any fire behaviour was also considered. Given these criteria the topography of the site was assessed as:

North: *Flat or Upslope*
South: *15-20 degree downslope*
East: *10-15 degree downslope*
West: *Flat or Upslope*



Note: *If a downslope is present from the dwelling to the hazard, any fire in the hazard will be traveling upslope. For every 10˚ slope, fire doubles its speed. For example, if a fire is travelling at 5 km per hour along flat ground and it hits a 10˚ slope, it will double in speed to travel 10 km per hour up the hill. While increasing in speed the fire also increases in intensity, becoming even hotter. The opposite applies to a fire travelling downhill as the flames reach less fuel, less radiant heat pre-heats the fuel in front of the fire. For every 10˚ of downhill slope, the fire will halve its speed.*

Image sourced from https://www.cfa.vic.gov.au/plan-prepare/how-fire-behaves, CFA October 2019.

Classifiable hazardous vegetation

In accordance with *Australian Standard 3959 (AS 3959)*, vegetation immediately surrounding the proposed dwelling to the south and west is classified as 'Forest'. This downslope 'forest' vegetation consists of open forest (Table 2.3.A03) where trees are typically 10-30 m high and dominated by eucalypts, with an understory of sclerophyllous low trees and tall shrubs or grass.

3.5 Access to Infrastructure and Existing Road Networks

OBJECTIVE

Describe the infrastructure and constraints on the site and in the surrounding area (where relevant) including the roads, town water and power supply to the site.

RESPONSE

The proposed dwelling is set back approximately 10 metres south of Pine Ridge Road along a gravel accessway. The gravel and dirt accessway currently extends to the rear of the study site, where the previous dwelling had been positioned.

A new underground Bushfire Shelter is proposed for north of the dwelling, close to the road and furthest away from the forest vegetation to the south. The underground bushfire shelter must comply with the Victorian Building Regulations 2006 (Regulations) and the National Construction Code (NCC) performance requirements.

Pine Ridge Rd runs off National Park Road, approximately 470m to the north of the study site, which then meets Whittlesea-Kinglake Rd at approximately 3.7m to the north-east. Access to into the township of Kinglake is approximately a further 9km tot eh south-east along Whittlesea-Kinglake Rd. To the north and north-west, Pine Ridge Rd has little or no vegetation in the easement with surrounding residential land sparsely vegetated with managed lawns.

The township of Whittlesea is located approximately 16km to the west along Whittlesea-Yea Road. The property has access to mains water and power.

3.6 Landscape Type

The Technical Guide to Planning Permit Applications under clause 44.06 Bushfire Management Overlay outlines 4 Landscape Types. The local landscape character surrounding the property is most attributable to Landscape Type 3 as described below:

- The type and extent of vegetation located more than 150 metres from the site may result in neighbourhood-scale destruction as it interacts with the bushfire hazard on and close to a site;
- Bushfire can approach from more than one aspect;
- The site is located in an area that is not managed in a minimum fuel condition;
- Access to an appropriate place that provides shelter from bushfire is not certain.

The landscape scale bushfire hazard is a mosaic of patches of forest and woodland vegetation, pasture and low-density residential development. A fire run (~10km) is possible from the forest vegetation to the south-west, ~5km to the north-east, and ~10km to the north-west from areas of the Kinglake National Park.

The broader landscape scale bushfire hazard around 48 Pine Ridge Rd Kinglake West is considered extreme bushfire risk. Severe bushfire activity can occur in the wider landscape quickly and from many directions. Given this, and that the study site itself and the immediate surrounding area of Kinglake has experienced major fires in the past, the potential bushfire hazard is significant and therefore the proposed development will need to show consideration for the bushfire risk and to reduce the risk to life and property to an acceptable level.

Given these considerations, and the fact that access is present to Diamond Creek, Doreen, Arthurs Creek and Hurstbridge, all of which would readily provide shelter from a bushfire, the bushfire hazard presented by the wider landscape is deemed to most closely resemble Landscape Type 3.

3.6 Landscape Type

The closest Neighbourhood Safer Place is located at the Kinglake West Recreation Reserve, on the corner of Whittlesea-Kinglake Road and Recreation Road Kinglake West, approximately 6km to the north (~8 min drive).

A secondary NSP is located at the A.F. Walker Reserve, on the corner of Laurel Street and Forest Street Whittlesea, approximately 22km to the west (~23 min drive).

NSPs are Council designated buildings or open space that may afford some protection in a bushfire emergency. NSPs are not designed to replace a personal bushfire survival plan. It is recommended that a Bushfire Plan is developed for the property and practiced regularly. NSPs are not locations to relocate to when leaving early. They are a place of last resort in bushfire emergencies only and may assist people when there is an imminent threat and they have no plan, or their planned options are not possible. On hot, dry, windy days, especially 'Code Red' Fire Danger days, leaving early before any chance of fire activity, including along your travel path, is always the safest option.

3.7 Fire History

Both the study area itself and all surrounding landscape was subjected to The Black Saturday bushfires in 2009, which occurred during extreme bushfire weather conditions and were among Australia's all-time worst bushfire disasters. (See Attachment 3).

According to DELWP there are planned burns to be implemented in the surrounding area to the west of the study site. (Attachment 3).

4 Bushfire Management Statement

53.02-4 – Bushfire protection objective

OBJECTIVE

Clause 53.02-4.1 outlines the following objectives:
To specify bushfire design and construction measures for a single dwelling or alteration and extensions to an existing dwelling that reduces the risk to life and property to an acceptable level.

4.1 Location, Layout and Siting Objectives

Approved Measure

AM 2.2 A building is sited to ensure the site best achieves the following:

- The maximum separation distance between the building and the bushfire hazard.
- The building is in close proximity to a public road.
- Access can be provided to the building for emergency service vehicles.

RESPONSE

Refer to Attachments 1 and 2.

The current cut-out/old dwelling site is located at the rear of the property; however, this location is closest to the most hazardous forest vegetation to the south-south-west.

The new proposed dwelling site is planned for the northern section of the property, close to the road and within an area that is currently cleared of vegetation and furthest away from the greatest bushfire risk from the south. The vegetation immediately surrounding the location of the proposed dwelling to the north, east and west is highly modified 'forest' and generally supports a lower fuel load than would be usually expected in forest vegetation of this type. The proposed dwelling location also takes into consideration the other surrounding dwellings on neighbouring properties, providing an increased defendable space around the proposed dwelling.

In order to provide a suitable bushfire buffer to the proposed dwelling, vegetation across the property will require appropriate management via mowing, tree re-growth removal, established tree loping and pruning and the reduction of understorey fuel loads.

Access is approximately 30 metres in length to the rear of the proposed dwelling, therefore specific design requirements for access will apply (see Section 4.5).

The construction materials used for the new proposed dwelling will need to show consideration for the bushfire risk, while minimising the opportunity for accumulation of debris and the entry of embers. Building design that allows for embers to lodge in re-entrant corners, complex roof lines, gaps between building materials and unenclosed underfloor spaces should be avoided. Construction of the Bushfire Shelter must comply with the Victorian Building Regulations 2006 (Regulations) and the National Construction Code (NCC) performance requirements.

The bushfire risk to the proposed development from the landscape beyond the site can be mitigated to an acceptable level. Provided that appropriate defendable space and vegetation management

requirements are met (see Section 4.3), the bushfire risk from the surrounding landscape can be appropriately mitigated.

Given the siting, extent and design of the proposed dwelling and the addition of underground Bushfire Shelter, this application is considered suitable to address the requirements of Clause 53.02-3.

4.2 Buildings and Defendable Space Objectives

OBJECTIVE

53.02-4.2 Defendable space and construction objective

To ensure that defendable space and building construction mitigate the effect of flame contact, radiant heat and embers on buildings.

Defendable space is an area of land around a building where vegetation is modified and managed to reduce the effects of flame contact and radiant heat associated with bushfire.

Approved measures

AM 3.1 A building used for a dwelling (including an extension or alteration to a dwelling), a dependant person's unit, industry, office or retail premises is provided with defendable space in accordance with:

- Table 2, Column A, B or C and Table 6 to Clause 53.02-5 wholly within the title boundaries of the land; or,
- If there are significant siting constraints, Table 2 Column D and Table 6 to Clause 53.02-5.

The building is constructed to the bushfire attack level that corresponds to the defendable space provided in accordance with Table 2 to Clause 53.02-5.

RESPONSE

Classification: Forest

Distance to vegetation: 35 metres

Direction: South and south-west

Slope: 15-20 degree downslope to the south and east and flat or upslope to the north and west

Bushfire Attack Level: 29

The results of the site hazard assessment have determined that in accordance with Table 2, Column B of Clause 53.02-5, 'Forest' vegetation surrounding the proposed dwelling and on a 15-20 degree downslope to the south, requires that the construction is completed to a minimum standard of BAL 29 with defendable space provided for 61 metres or to the property boundary, (whichever is the lesser). The assessment of defendable space in this instance includes consideration of off-site features such as the neighbouring properties and road to the north, east and west.

Defendable space from the building façade:

Defendable space from the building façade: Defendable space must be created for a distance of 61 metres or to the property boundary (whichever distance is lesser) around the proposed dwelling. In this defendable space, vegetation (and other flammable materials) during the declared fire danger period must be managed in accordance with the requirements in Section 4.3.

In this instance an unspecified alternative measure is been applied as defendable space runs over the property boundary and neighbouring properties and road to the north, east and west. The study site is buffered by residential land that contains dwellings surrounded by maintained grass, landscaped gardens and areas of watered and managed gardens and road, and there is reasonable assurance that this adjoining land to the north, east and west will continue to be managed in its current low-fuel condition as part of the defendable space requirements.

4.3 Implementation of Defendable Space

The defendable space area, shown in Attachment 2, around the proposed dwelling is where vegetation and other flammable materials will be maintained in accordance with 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 10cm 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 clumps of shrubs must not exceed 5 square metres in area and must be separated by at least 2 metres.
- Trees must not overhang or touch any elements of the building.
- The canopy of any trees (planted or natural regeneration) must be separated by at least 5 metres.
- There must be a clearance of at least 2 metres between the lowest tree branches and ground level.

Currently, vegetation within 61m of the proposed dwelling is mostly managed for fire risk to all directions excluding the south. This management must continue so the defendable space requirements outlined above continue to be met. Some understorey in the proposed area of defendable space is interconnected along the eastern property boundary and will need to be trimmed or removed.

An unspecified alternative measure is been applied in this instance, as the assessment of defendable space includes consideration of off-site features such as the neighbouring properties to the north, east, and west, and the road immediately to the north.

Tree trimming and pruning may be required to achieve appropriate canopy separation, particularly to the small trees and bushes along the eastern property boundary. Ground storey vegetation will require ongoing management including mowing or slashing of grass and management of any shrub cover via clipping and/or pruning. This vegetation management will ensure that the above requirements are met and canopy remains widely spaced.

4.4 Water Supply Objectives

OBJECTIVES

AM 4.1. A building used for a dwelling (including an extension or alteration to a dwelling), a dependant person's unit, industry, office or retail premises is provided with:

- A static water supply for firefighting and property protection purposes specified in Table 4 to Clause 53.02-5. The water supply may be in the same tank as other water supplies provided that a separate outlet is reserved for firefighting water supplies.

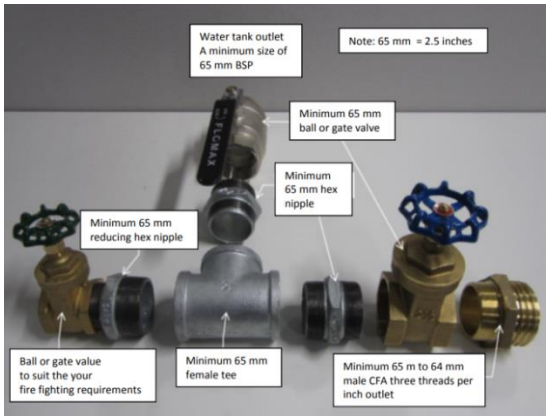
RESPONSE

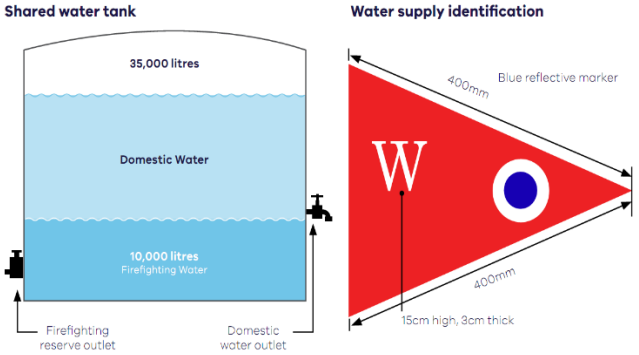
Standards for Water

Given the land is under 1,000 square metres, in accordance with Table 4 of Clause 53.02-5, there is a requirement for a 10,000 litre water supply/tank with appropriate CFA fittings. The water tank is required to be positioned in close proximity to the proposed dwelling and unless otherwise agreed in writing by the relevant fire authority, the water supply must:

- Be stored in an above ground water tank (minimum 10,000L capacity) constructed of concrete or metal.
- Have all fixed above-ground water pipes and fittings required for fire-fighting purposes made of corrosive resistant metal.
- Include a separate outlet for occupant use.
- Be readily identifiable from the building or appropriate identification signage to the satisfaction of CFA must be provided.
- Be located with 60m of the outer edge of the approved building.
- The outlets of the water tank must be within 4m of the access way and be unobstructed.
- Incorporate a separate ball or gate valve (British Standard Pipe (BSP 65mm) and coupling (64mm CFA 3 thread per inch male fitting).
- Any pipework and fittings must be a minimum of 65mm (excluding the CFA coupling).

A 10,000 litre water tank dedicated to firefighting purposes has been indicated for the front of the study site, which is within 4m of the accessway and within 60m of the outer edge of the proposed dwelling and bushfire shelter.





Images sourced from the Technical Guide for Plannning Permit Applications –Bushfire Management Overlay, DELWP September 2017

4.5 Access Objectives

OBJECTIVES

AM 1.3. A building is provided with:

- Vehicle access that is designed and constructed as specified in Table 5 to Clause 53.02-5.

RESPONSE

Standards for Access

Driveway access to the new dwelling is less than 30 metres, however fire authority access to the water supply is required under AM4.1, therefore fire authority vehicles should be able to get within 4 metres of the water supply outlet.

4.6 Building Design

OBJECTIVES

AM 2.3. A building is designed to be responsive to the landscape risk and reduce the impact of bushfire on the building.

RESPONSE

Given the landscape bushfire risk and surrounding vegetation, in the event of a bushfire the proposed dwelling may be predicted to be exposed to some ember attack and potential burning debris ignited by windborne embers, as well as radiant heat of up to **29 kW/m²**.

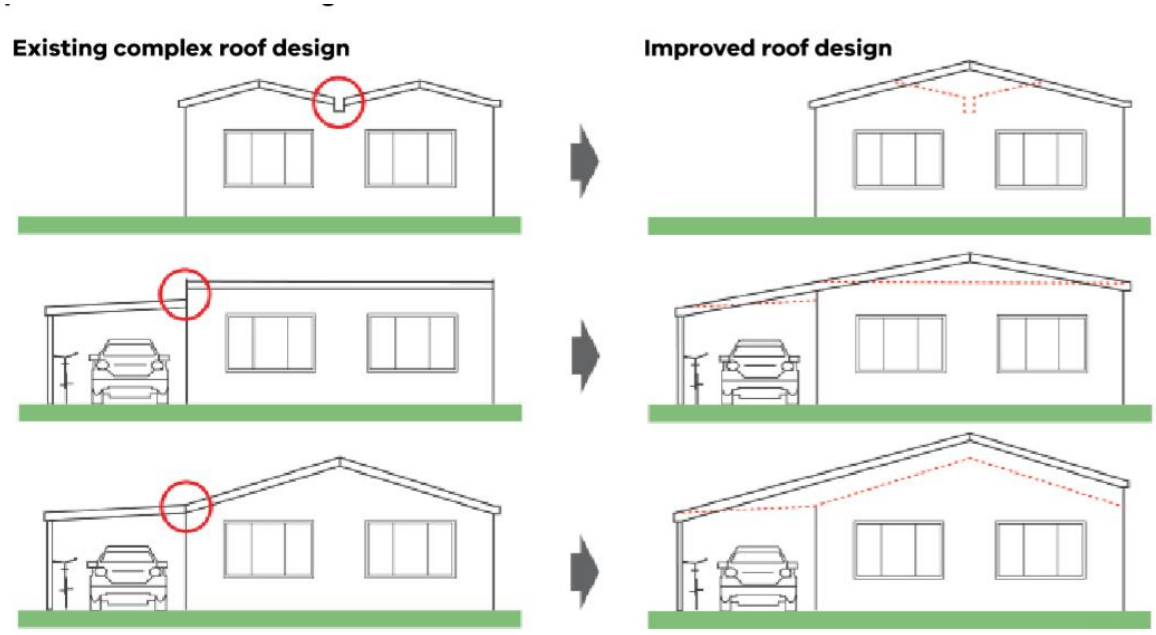
Most homes ignite when burning windborne embers lodge under roofing tiles, setting fire to roofing timbers or accumulated leaf litter. Windborne embers and other flammable material can easily fall into cracks, holes and gaps within your roof, increasing the chances of ignition and putting the property at significant risk. Given this the building design should consider the following design requirements.

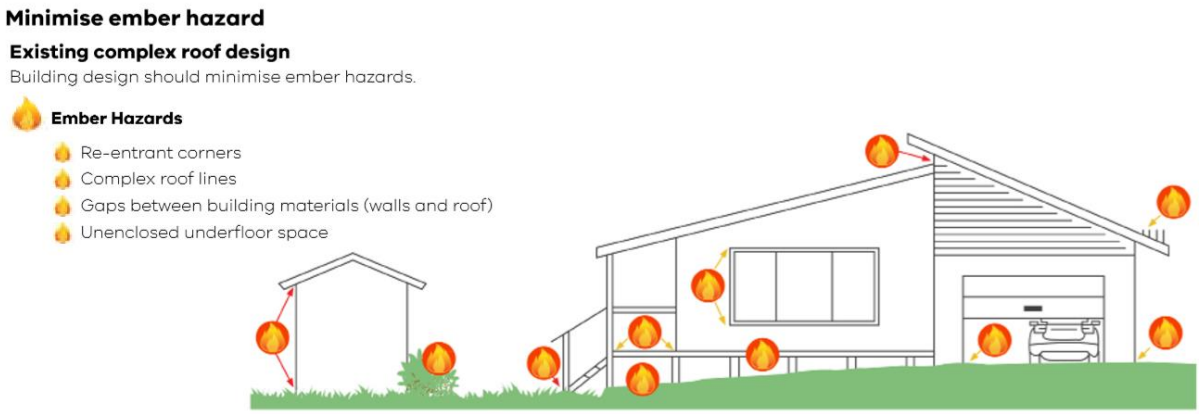
Design Requirements

Avoid building design that allows for embers to lodge in re-entrant corners, complex roof lines, and gaps between building materials and unenclosed floor spaces.

- Construction must comply with *AS3959* Section 6 Construction for **BAL29**, with special construction requirements relating to external walls, windows and doors, roofs, verandahs and decks applying.
- In order to prevent embers form entering your property sarking or wall wrap with a flammability index of not more than five is required:
    - Behind cladding on walls, **and**
    - Under tiled roofs.
- Screening of the openable portions of all windows is required in all BALs to prevent the entry of embers to the building when the window is open.
- Roof tiles, sheets and other covers should be non-combustible.
- Any gaps greater than 3mm within the structures external surfaces should be avoided. Bushfire mesh can be used to meet the requirements of *AS3959* amtd 3 for BAL 12.5 -FZ, where mesh is referenced and if the prescribed construction requirements are met.
- Storage of combustible material beneath the floor should not occur.
- Building should be of simple design with minimal re-entrant corners and basic roof lines.
- Gutter guards should be considered to reduce the amount of debris, like leaves and twigs. from entering your gutters and acting as fuel in the event of a wildfire.

4.6 Building Design





Images sourced from the Technical Guide for Plannning Permit Applications –Bushfire Management Overlay, DELWP September 2017

5 Other Relevant Planning Provisions

5.1 Murrindindi Shire Planning Scheme

The property is situated within the Farming Zone (FZ) and is covered by the Bushfire Management Overlay (BMO) and a Restructure Overlay (RO). Relevant zones and schedules are described below.

Clause 52.17 of the Murrindindi Planning Scheme

The purpose of this Clause is to:

- To ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation. This is achieved by applying the following three step approach in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation* (Department of Environment, Land, Water and Planning, 2017) the Guidelines:
  - Avoid the removal, destruction or lopping of native vegetation.
  - Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.
  - Provide an offset to compensate for the biodiversity impact if a permit is granted to remove, destroy or lop native vegetation.
- To manage the removal, destruction or lopping of native vegetation to minimise land and water degradation.

Implications:

The management of vegetation within the defendable space may trigger the need for a vegetation removal permit however, it is unlikely that council will request that the vegetation is offset under Clause 52.17 of the Murrindindi planning scheme.

Bushfire Management Overlay (BMO)

The purpose of this overlay is to:

- Implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.
- Ensure that the development of land prioritises the protection of human life and strengthens community resilience to bushfire.
- Identify areas where the bushfire hazard warrants bushfire protection measures to be implemented.
- Ensure development is only permitted where the risk to life and property from bushfire can be reduced to an acceptable level.

Implications:

In order to reduce the risk to life and property from bushfire to an acceptable level this document will need to be endorsed by the relevant authority and the relevant recommendations within implemented.

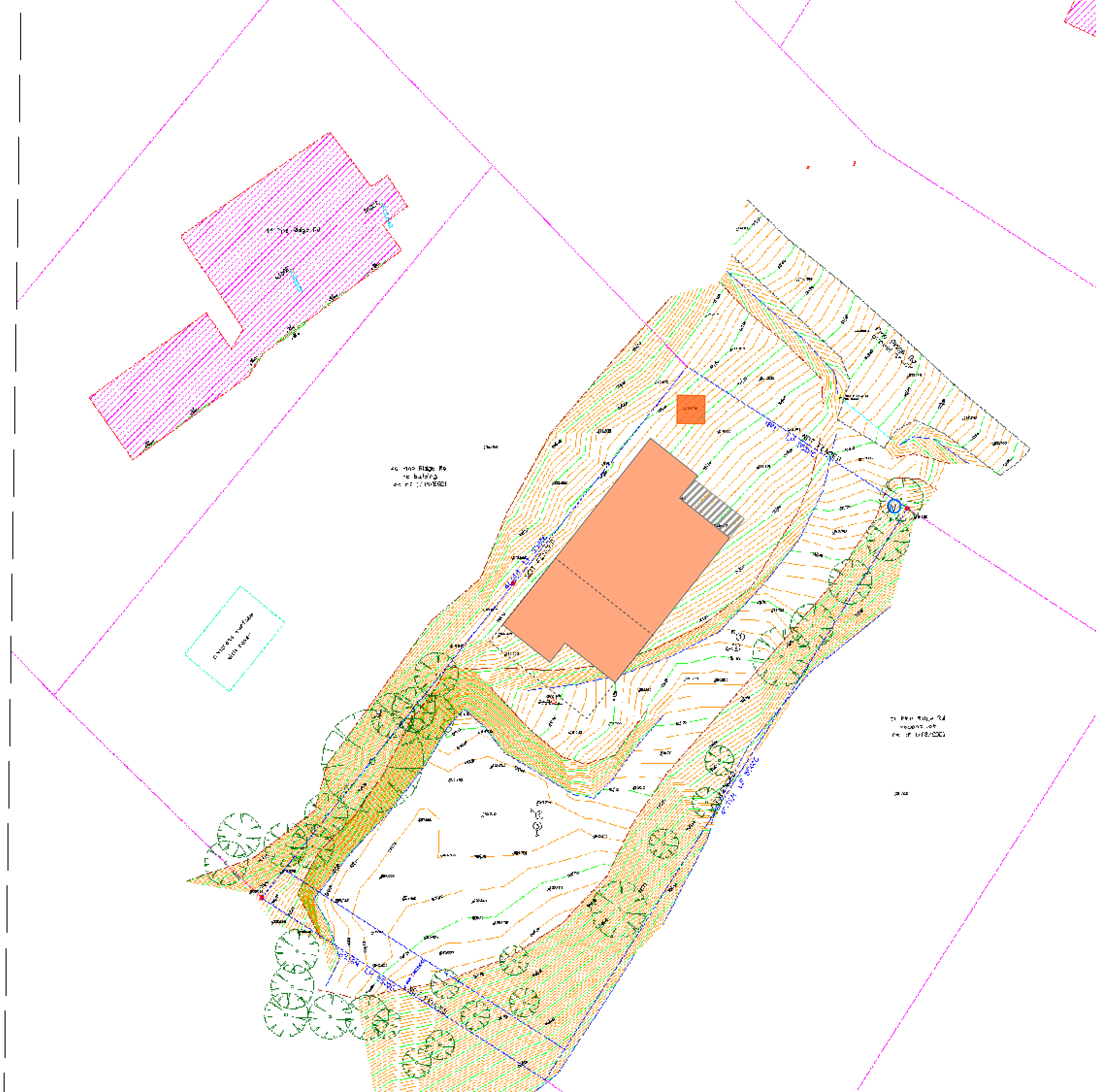
6 Conclusion

The proposed dwelling and underground bushfire shelter at 48 Pine Ridge Road, Kinglake West are required to apply the standards outline in the above Bushfire Management Statement;

- The new dwelling will need to comply with a BAL 29 construction standard;
- The defendable space area of 61 metres or the property boundary (whichever is lesser) will require ongoing management in accordance with Table 6 to Clause 53.02;
- The underground bushfire shelter must comply with the *Victorian Building Regulations 2006* (Regulations) and the National Construction Code (NCC) performance requirements;
- A 10,000 litre water tank for firefighting purposes that meets the requirements outlined in Section 4.4 of this report will be required; and,
- Access that meets the requirements of Section 4.5 of this report is also required.

The bushfire protection measures forming part of this document including those relating to construction standards and defendable space are required to be maintained to the satisfaction of the responsible authority on a continuing basis.

Given the proposed implementation of a BAL 29 construction standard for the proposed dwelling, the provision of an underground bushfire shelter, and 61m of defendable space, as well as requirements for access and water, the development should satisfy requirement to reduce bushfire risk under Clause 53.02 and is consistent with the aims and objectives of Clause 13.02 and 44.06 of the Murrindindi Planning Scheme.




photo#1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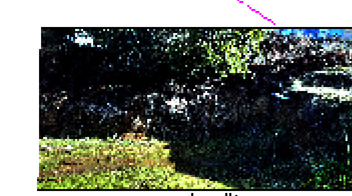
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NORTH

Legend

Floor Level	FL
Electricity Pole Only	
Electricity Pole with Light	
Telco Pit (Point)	
Sewer Pit (Point)	
Water Meter	
Gas Meter	
Single tree	
Group of trees	
Window Head	H
Window Sill	S
Habitable window G. floor	HW(G)
Habitable window 1st floor	HW(1ST)
Window	W
Door	D
site photo indication	

existing feature and level survey 1/06/2021
subject site : 46 Pine Ridge Rd, Kinglake West
subdivision plan LP55208
MGA94 zone 55, elevation AHD
Scale : 1:100 @ A0 plot

SHARP SURVEY

ABN 79156291429
email : admin@sharpsurvey.com.au
www.sharpsurvey.com.au
mobile : 0469834855

EXPLANATORY NOTES:
- ALL TREES SHOWN ON THIS PLAN IS INDICATIVE ONLY
- ONLY SIGNIFICANT TREES HAVE BEEN LOCATED AND SHOWN ON THIS PLAN
- ALL ELEVATIONS SHOWN ON THIS PLAN IS TO BE VERIFIED BY AHD
- WINDOW DESCRIPTIONS ANNOTATED ON THIS PLAN ARE INDICATIVE ONLY AND SHOULD BE VERIFIED BY THE ARCHITECT, OWNER OR BUILDER PRIOR TO ANY DESIGN
- ONLY VISIBLE SERVICES ARE SHOWN ON THIS PLAN
- SHAPE OF EXISTING BUILDINGS ON THIS PLAN HAVE BEEN DRAWN USING AERIAL IMAGE AND ARE INDICATIVE ONLY

Please note: subdivision plan has been overlaid representing the land title only and boundaries should be re-established by a cadastral surveyor prior to any design and construction works

Contour (5m)

Property boundary

Bunker

Decking

Proposed dwelling

Under house garage

Defendable Space

Assessment area

Classified 'Forest' Vegetation

Modified Forest

Attachment 2

Study Site, Surrounding Vegetation and Elevations

48 Pine Ridge Road, Kinglake West

0 20 40 Meters

Date: 27/05/2022 Scale: 1:1,800 (A4)
Created by: JM GDA 1994 MGA Zone 55
Job: 22044
File: OD_22044_KinglakeWest_BMS

Note: Location of property boundaries, watercourse, roads and topography indicative only.

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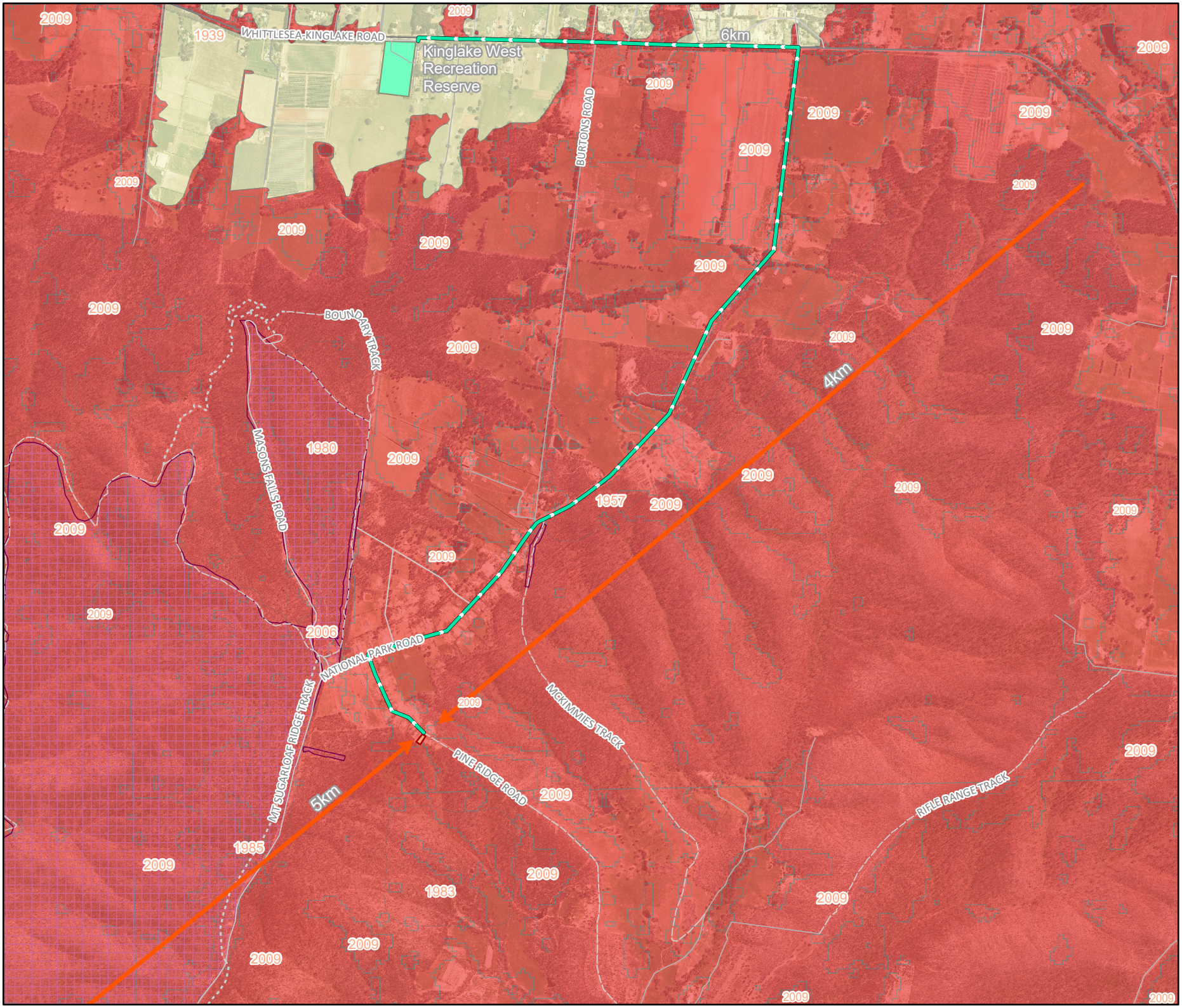

Potential fire run

NSP access (6km)

NSP-BPLR: Kinglake West Recreation Reserve

Property boundary

Bushfire History

Pre 1970

1980's

2000's

2010's

Planned Burn 2021-2023

Attachment 3

Landscape Context, Fire History and Access to NSP

48 Pine Ridge Road, Kinglake West

N

0 500 Meters

Date: 17/05/2022 Scale: 1:22,500 (A4)
Created by: JM GDA 1994 MGA Zone 55
Job: 22044
File: OD_22044_KinglakeWest_BMS

Note: Location of property boundaries, watercourse, roads and topography indicative only.

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Attachment 4 – Bushfire Site Assessment

Step 1. Determine the assessment area.

Step 2. Classify the vegetation and slope.

2a. Determine the classifiable vegetation: (circle one from each column).

	North	South	East	West
Vegetation Type	Forest	Forest	Forest	Forest
	Woodland	Woodland	Woodland	Woodland
	Shrubland	Shrubland	Shrubland	Shrubland
	Scrub	Scrub	Scrub	Scrub
	Mallee/Mulga	Mallee/Mulga	Mallee/Mulga	Mallee/Mulga
	Rainforest	Rainforest	Rainforest	Rainforest
	Grassland	Grassland	Grassland	Grassland
	Excludable	Excludable	Excludable	Excludable

2b. Determine the distance of the site from the classifiable vegetation: (enter in metres).

	North	South	East	West
Distance from the building to vegetation (m)	70m	35m	60m	60m

2c. Determine the effective slope under the vegetation: (circle one for each column).

	North	South	East	West
Flat/Upslope	Yes	Yes	Yes	Yes
Downslope	>0-5°	>0-5°	>0-5°	>0-5°
	>5-10°	>5-10°	>5-10°	>5-10°
	>10-15°	>10-15°	>10-15°	>10-15°
	>15-20°	>15-20°	>15-20°	>15-20°

Step 3. Determine your defendable space and corresponding BAL.

Record the highest BAL and associated defendable space below:

BAL: 29

Defendable Space: 61m

Defendable Space

Implement defendable space for a distance of 61maround the proposed building or to the property boundary, whichever is lesser, where vegetation and other flammable materials must be modified and managed in accordance with the following requirements:

1. Grass must be short cropped and maintained during the declared fire danger period.
2. All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period.
3. Within 10 metres of a building, flammable objects must not be located close to vulnerable parts of the building.
4. Plants greater than 10 centimetres in height must not be placed within 3m of a window or glass feature of the building.
5. Shrubs must not be located under the canopy of trees.
6. Individual and clumps of shrubs must not exceed 5 sq. metres in area and must be separated by at least 5 metres.
7. Trees must not overhang or touch any elements of the building.
8. The canopy of trees must be separated by at least 2 metres.
9. There must be a clearance of at least 2 metres between the lowest tree branches and ground level.
10. Pasture grassland within 150m surrounding the proposed building must be managed and maintained by mowing or slashing.

Construction Requirements

Buildings are to be designed and constructed to meet a minimum Bushfire Attack Level of BAL – 29

Water Supply

The water supply is to:

1. Be stored in an above ground water tank (minimum 10,000L capacity) constructed of concrete or metal.
2. Have all fixed above-ground water pipes and fittings required for fire-fighting purposes made of corrosive resistant metal.
3. Include a separate outlet for occupant use.
4. Be readily identifiable from the building or appropriate identification signage to the satisfaction of CFA must be provided.
5. Be located within 60m of the outer edge of the approved building.
6. The outlets of the water tank must be within 4m of the access way and be unobstructed.
7. Incorporate a separate ball or gate valve (British Standard Pipe (BSP 65mm) and coupling (64mm CFA 3 thread per inch male fitting).
8. Any pipework and fittings must be a minimum of 65mm (excluding the CFA coupling).

Access

Driveway access to the new dwelling is less than 30 metres, however fire authority access to the water supply is required under AM4.1, therefore fire authority vehicles should be able to get within 4 metres of the water supply outlet.

BUSHFIRE MANAGEMENT PLAN

48 Pine Ridge Road, Kinglake West

- Water tank (indicative)
- Contour (5m)
- Bunker
- Decking
- Proposed dwelling
- Under house garage
- Defendable Space
- Property boundary

0 5 Meters

Date: 8/06/2022 Scale: 1:300 (A3)
Created by: JM GDA 1994 MGA Zone 55
Job: 22044
File: OD_22044_KinglakeWest_BMS

Note: Location of property boundaries, watercourse, roads and topography indicative only.

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SMOLDERS® GEOTECHNICAL

Land Capability Assessment Report

SITE ADDRESS: **48 Pine Ridge Road, KINGLAKE WEST, VIC 3757**

CLIENT: **Sergio Teodoro**

[redacted]

DATE: **25 July 2022**

REFERENCE NUMBER: **22G5459**

TABLE OF CONTENTS

1. Introduction

THE CONSULTANTS

Smolders Geotechnical Pty Ltd has been engaged to undertake a Land Capability Assessment (LCA) for a site at 48 Pine Ridge Road, KINGLAKE WEST VIC 3757.

The field investigation and report have been undertaken and prepared by suitably experienced staff.

I Richard Smart B.Sc (soils) PhD. undertook the site investigation and prepared this report.

Smolders Geotechnical Pty Ltd has appropriate professional indemnity insurance for this type of work.

REPORT SUMMARY

I understand that this report will accompany an application for a Septic Tank Permit to Install submitted to Murrindindi Shire Council for an onsite wastewater management system for the proposed 3-bedroom residence at the above address. This document provides information about the site and soil conditions. It also provides a detailed Land Capability Assessment for the site and includes a conceptual design for a suitable onsite wastewater management system, including recommendations for monitoring and management requirements. A number of options are provided for both the treatment system and Land Application Area (LAA).

However, the wastewater should be treated to primary level by a suitable EPA-approved septic tank treatment system and the effluent applied to land via a mound system.

The sub-surface dispersal sand mound system has a calculated Basal Horizontal Land Application Area of 45m^2 for this site.

This report has been prepared to address all issues that may be of concern to the relevant utilities including water businesses.

SITE OVERVIEW

The site is fully grassed with occasional native trees present, except for the proposed LAA, which is the base of a large site cut and is virtually cleared of all vegetation.

It is within an existing semi-rural setting.

The proposed Land Application Area (LAA) site is situated on a very slight slope of approximately 1.5^o slope (~2.6%).

There is sufficient land available for sustainable onsite effluent management that maintains the required buffers to protect nearby surface waters and floodways.

There are no sensitive environmental receptor within a 60m downslope setback from the recommended Land Application Area (LAA) envelope.

2. Description of the Development

Site Address: 48 Pine Ridge Road, KINGLAKE WEST VIC 3757. A Land Channel Property Report is appended and indicates the location of the site (Appendix i).

Client/Agent: Sergio Teodoro

Postal Address: 48 Pine Ridge Road, KINGLAKE WEST VIC 3757

Contact: 0400 550 920

Council Area: Murrindindi Shire Council.

Zoning: Farming Zone – (FZ).

Allotment Size: 952 sq.m.

Domestic Water Supply: Assumed not available at site.

Anticipated Wastewater Load: Assume a residence with full water-reduction fixtures at maximum occupancy. Wastewater generation = 150 L/person/day (source Table 4 of the EPA Code of Practice 891.4).

Availability of Sewer: The area is unsewered and highly unlikely to be sewered within the next 10-20 years, due to the considerable distance from existing wastewater services.

3. Site and Soil Assessment

A site investigation was undertaken on the 8th July 2022.

SITE KEY FEATURES

Table 1 summarises the key features of the site in relation to effluent management proposed for the site.

NOTE:

- The site may experience stormwater run-on from the neighbouring lot upslope.
- The majority of natural soil has been removed from the proposed LAA
- There may be a seasonal shallow perched watertable at the mound base.
- The modification of the ground surface below the mound system (ripping/addition of good quality topsoil) will be required to accommodate the effluent disposal system.
- The risk of effluent transport offsite is low.

Both aerial and site photographs are appended to provide current site context (Appendix ii).

Table 1: Risk Assessment of Site Characteristics

Feature	Description	Level of Constraint	Mitigation Measures
Buffer Distances	All relevant buffer distances in Table 5 of the EPA Code of Practice (2016) are achievable from the proposed effluent management area.	Moderate	Locate Land Application Area appropriately.
Climate	Average annual rainfall 1359.1mm Toolangi (Mount St. LeonardDPI) (Station No.086142) (Appendix iii). Rainfall is greater than Evapotranspiration for eight months of the year on average.	Major	Use sand mound to dispose of effluent. Place effluent field in area with good exposure to sun and wind.
Drainage	May be perched water tables after heavy precipitation, some seasonal ponding on surface after precipitation.	Major	Use sand mound to dispose of effluent. ripping/addition of good quality topsoil below mound recommended.
Erosion & Landslip	No evidence of landslip and landslip potential is low.	Minor	NN
Exposure & Aspect	Recommended Land Application Area southeast facing and with trees/shrubs to the northwest leading to dappled shade for periods of the day. However, site is well exposed to winds.	Moderate	NN.

NN: Not needed

Table 1: Risk Assessment of Site Characteristics Continued:

Feature	Description	Level of Constraint	Mitigation Measures
Flooding	The proposed effluent management area is not located within an inundation overlay.	Nil	NN
Groundwater	No signs of shallow groundwater tables to 1.8 m depth.	Nil	NN
Imported Fill	Up to 800mm of good quality caly loam fill.	Moderate	Ripping of soil plus addition of 200mm of good quality Loam fill prior to mound construction.
Land Available for LAA	Considering all the constraints and buffers, there is sufficient area land for land application of treated effluent.	Major	Use of mound systems recommended.
Landform	Cut linear slope.	Moderate	Incorporate upslope diversion berms and downslope cut-off drain
Rock Outcrops	No evidence of surface rocks or outcrops within recommended LAA. <1% rock outcrops over site as a whole.	Nil	NN
Run-on & Runoff	Stormwater run-on and minor run-off hazard.	Moderate	Run-on/run-off diversion berms or cutoff drains required
Slope	The proposed effluent management area has 2.6% fall. The slope is linear to very slightly convex.	Minor	NN
Surface Waters	Nearest surface water >60m downslope from nominated Land Application Area.	Minor	Ensure >30m setback maintained
Vegetation	Very little vegetation on proposed LAA	Major	Plant mound with high evapotranspiration grass species

NN: Not needed

SITE ASSESSMENT RESULTS

Considering the most constraining site features the overall land capability of the site to sustainably manage all effluent onsite is satisfactory. By using a septic tank (primary treatment) and a sand mound disposal system, in my opinion there will be ample protection of surface waters and groundwater.

SOIL KEY FEATURES

The site's soils have been assessed for their suitability for onsite wastewater management by a combination of soil survey and desktop review of published soil survey information as outlined below.

SOIL SURVEY AND ANALYSIS

A soil survey was carried out at the site to determine suitability for application of treated effluent. Soil investigations were conducted at 4 locations in the vicinity of the building envelope in areas that may be potential Land Application Areas, as shown in the Test Site Location Plan (Appendix iv), using a mechanical auger to 1.8m depth and a pit to 900mm depth. This was sufficient to adequately characterise the soils as only minor variation would be expected throughout the area of interest.

Two soil types were encountered in these investigations. Full profile descriptions are provided in the appended borelogs (Appendix v). Samples of all discrete soil layers for each soil type were collected for subsequent laboratory analysis of pH, electrical conductivity and Emerson Aggregate Class. Table 2 describes the soil constraints in detail for each of the soils encountered.

Soils in the vicinity of the building envelope are characterised as massive gravelly loam overlying weakly structured light clay. However, in the area of the proposed LAA the majority of the soil has been removed leaving extremely weathered siltstone with up to 800mm of clay loam fill for the majority of the proposed area, but with a clay loam topsoil underlying the fill in some places. The fill and clay loam were massive in structure.

Considering the physical and chemical characteristics of the subsoil in this area of the site, in my opinion effluent application via a mound system is a suitable and viable disposal system for this site.

Table 2 below provides an assessment of the physical and chemical characteristics of the relevant soil type.

Full laboratory data results are appended (Appendix vi).

TABLE 2: RISK ASSESSMENT OF SOIL CHARACTERISTICS

Feature	Assessment	Level of Constraint	Mitigation Measures
Cation Exchange Capacity (CEC)	Clay loam Fill – 1.2 MEQ%. Soil structural stability is considered satisfactory.	Minor	NN
Electrical Conductivity (ECe)	0.017 to 0.019 dS/m No evidence of restricted plant growth on site.	Minor	NN
Emerson Aggregate Class	2 hours Class 2, slaking, no dispersion. 20 hours Class 2, slaking, no dispersion.	Major	Soil amelioration recommended. Application of 1L liquid gypsum to sump well biannually. Apply Gypsum to ploughed surface before mound construction. Apply gypsum to any imported topsoils.
pH	4.6 to 4.7 No evidence restricted plant growth on site.	Minor	NN
Rock Fragments	<1% rock fragments	Minor	NN
Sodicity (ESP)	Sodic.	Major	Soil amelioration recommended. Application of 1L liquid gypsum to sump well biannually. Apply Gypsum to ploughed surface before mound construction. Apply gypsum to any imported topsoils.
Sodium Absorption Ratio (SAR)	0.10 to 0.14	Minor	NN
Soil Depth	200- to 800mm of clay loam fill over lying up to 900mm of extremely weathered rock. >1.5m to impermeable layer	Minor	NN
Soil Permeability & Design Loading Rates	Clay loam fill: Massive Clay Loam: 0.06 – 0.12 m/day saturated hydraulic conductivity (K_{sat}) (AS/NZS 1547:2012); 5mm/day Design Loading Rate (DLR) for Mound System (Code, 2016)	Major	ripping/addition of good quality Loam topsoil below mound recommended. This would provide a saturated hydraulic conductivity (K_{sat}) of 0.5 to 1.5 m/day. DLR of 16mm/day.

Soil Texture & Structure	Fill (200- to 800mm): Clay Loam (Category 4c) in accordance with AS/NZS/NZS 1547:2012	Minor	Use of mound system for effluent disposal ripping/addition of good quality Loam topsoil below mound recommended.
Watertable Depth	Groundwater not encountered. Deepest borehole terminated at 1.8m.	Minor	NN

NN: Not needed

OVERALL LAND CAPABILITY RATING

Based on the results of the site and soil assessment tabled above and provided in the Appendices, the overall land capability of the proposed effluent management area is constrained. However, the effluent management system will be designed, installed and maintained in ways which will mitigate these factors.

4. Waste Water Management System

The following sections provide an overview of a suitable onsite wastewater management system, with sizing and design considerations and justification for its selection. Detailed design for the system should be undertaken at the time of the building application and submitted to Council.

4.1 LAND APPLICATION

A range of possible land application systems have been considered, such as absorption trenches, evapotranspiration/absorption (ETA) beds, surface and subsurface irrigation, and sand mounds.

The system of sand mound for primary treated waste may be used.

For the soils in the proposed land application area a number of features present a moderate to major constraint and require mitigation measures. It is highly recommended that, in addition to the ripping of the soil surface before sand mound construction, a 200mm layer of good quality Loam fill is imported to act as a base for the sand mound. This enables a higher Design Loading Rate (DLR) to be applied (a DLR of 16mm/day for a good quality Loam rather than 5mm/day for a massive Clay Loam) and reduces the size of the sand mound required.

Nonetheless based on the results of the site and soil assessment tabled above and provided in the Appendices, the overall land capability of the proposed effluent management area is not constrained **as long as disposal of primarary treated effluent by sand mound bed system is used.**

The nominated and preferred system is a sand mound system. This system will provide even and widespread dispersal of the treated effluent within the root-zone of plants in the limited space available. This system will provide beneficial reuse of effluent, which is always desirable. It will also ensure that the risk of effluent being transported off-site will be negligible.

4.2 DESCRIPTION OF THE IRRIGATION SYSTEM

A detailed irrigation system design is beyond the scope of this report; however, a general description of the sand mound system is provided here for the information of the client and Council.

SAND MOUND

The sand mound system comprises of a manifold and perforated pipe distribution laterals set within an aggregate distribution bed placed near to the top of an appropriately sized sand mound. The lateral pipes are sized to accommodate the hydraulic flow rates and dose volume selected by the designer. LPED lines may be used as laterals in place pf perforated lines. Timer dose loading instead of demand dose loading should be used. The lateral pipes are usually 0.6m to 1.0m apart, installed parallel along the contour. Installation depth is approximately 300mm within the mound (See figure N1, AS/NZS 1547: 2012).

It is essential that both the ground surface and the mound itself are properly prepared and that attention is given to the details of mound design, if the mound system is to function properly.

The mound perimeter and bed must be marked out in proper orientation and the area in the mound perimeter must be ploughed. A twin of larger mouldboard plough should be used, ploughing 18 to 20cm deep. Single ploughs should not be used, as the trace wheel runs in every furrow, compacting

soil. A chisel plough may be used in place of a mouldboard plough. Roughening the surface with backhoe teeth may be satisfactory. Works should be completed within the drier months of the year to ensure minimal disturbance to the underlying soils.

The delivery pipe from the pump chamber shall be installed so it drains after dosing. The soil around the pipe shall be backfilled and compacted.

The sand-fill media shall be:

Medium sand with a grain size of 0.25 – 1.0mm, a uniformity coefficient less than 4, less than 3% fines passing a 200 sieve (0.074 mm), free of clay, limestone and organic material;

Carefully placed on to the ploughed area and moved into place either manually or by using a light-weight tracked tractor with a blade; and

Built-up until its height reaches the elevation of the top of the distribution bed.

The distribution bed shall be:

Formed in the top of the fill media, with a level base at the design elevation and with sides shaped to the specified slope; and

Carefully filled with graded river run aggregate (20 – 60 mm, non-crushed, rounded) and levelled at a minimum depth of 150 mm.

A pre-commissioning test shall be carried out after all on-site components including the pump, have been installed but prior to covering the effluent distribution system in the distribution bed.

To finish the distribution bed:

Additional aggregate shall be placed on the distribution bed to a total depth of 225 mm

A suitable backfill barrier such as filter cloth shall be installed over the aggregate

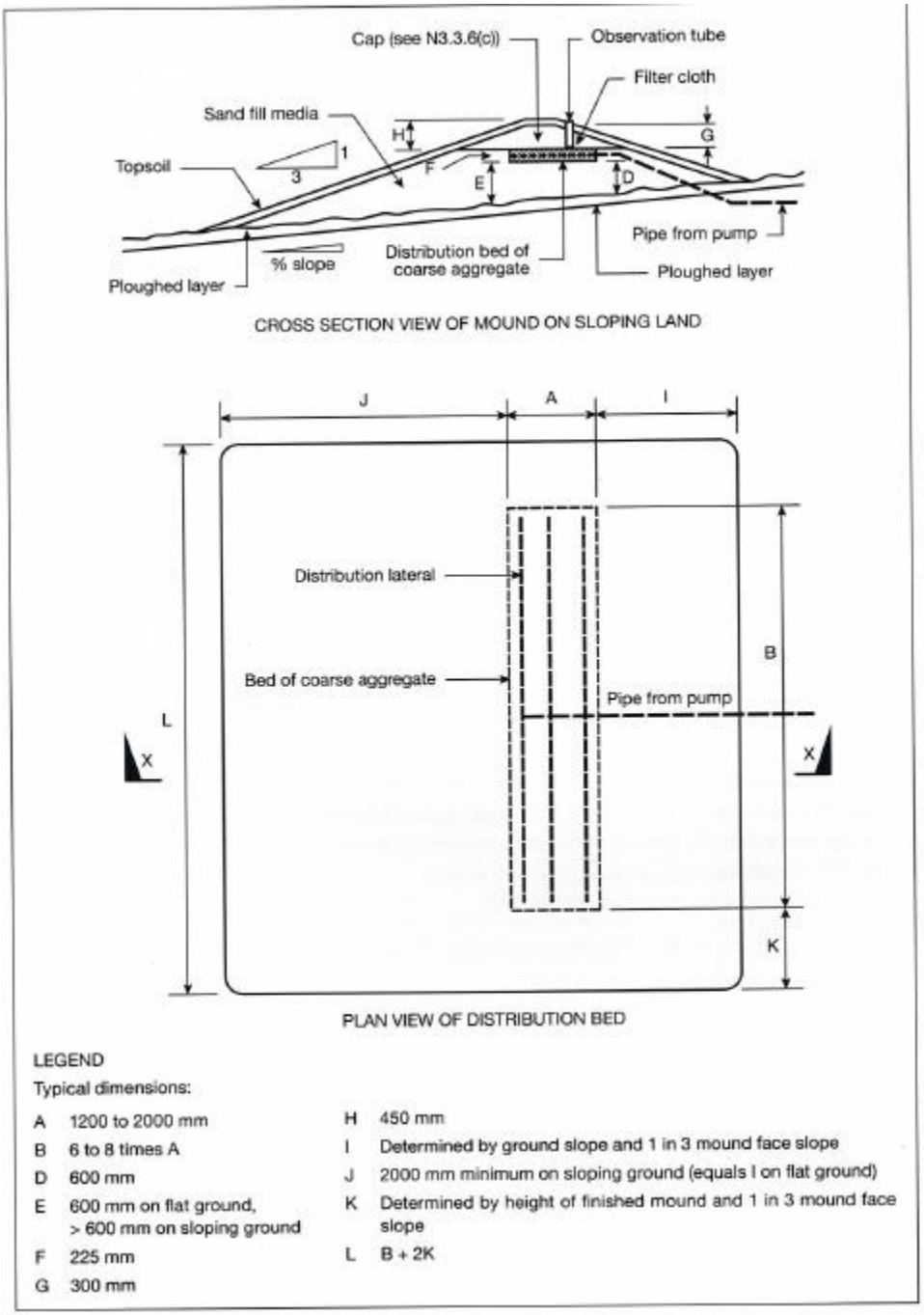
A fine textured soil material such as silt loam shall be placed over the top of the distribution bed to a depth of approximately 300 mm with thickness reducing towards the sides

A further 150 mm (minimum) layer of good quality topsoil shall be placed over the entire mound surface: and

The mound surface shall be grassed using grasses adapted to the area.

An installation and commissioning report shall be produced to include the ‘as-built’ details following construction, the results of construction inspections and commissioning process. This report shall be provided to the property owner and, if required, to the regulatory authority.

The mound system is illustrated below.



4.3 SIZING THE IRRIGATION SYSTEM

Example: 3-bedroom dwelling – five occupants.

SAND MOUND

To determine the necessary size of the irrigation area detailed water balance modelling has been considered using the Excel water balance tool in the Victorian Land Capability Assessment Framework (2014) and the EPA Code (2016). The final sizing of the irrigation system has been undertaken adopting the DIR from Table 9 of the EPA code (2016) for a massive good quality Loam

fill. The minimum area required using the detailed water balance method is 45m^2. The spreadsheet calculations are shown below on p.12.

Climate data for Scoresby Research Institute, the most representative weather station for Kinglake West, has been used in the modelling. (See Appendix iii for complete data).

As the site is not in an environmentally sensitive area a nutrient balance is not deemed necessary.

Therefore, adopt 45m² as required minimal area required for effluent irrigation for a 3-bedroom residence.

Note: This area is that at the soil surface below the mound.

The client should note that Council may consider a study or other utility room as a potential bedroom.

Victorian Land Capability Assessment Framework

Please read the attached notes before using this spreadsheet

Irrigation area sizing using Nominated Area Water Balance for Zero Storage

Site Address:	48 Pine Ridge Road, Kinglake West		
Date:		**Assessor:**	

INPUT DATA

Design Wastewater Flow	Q	600	L/day	Based on maximum potential occupancy and derived from Table 4 in the EPA Code of Practice (2013)
Design Irrigation Rate	DIR	16.0	mm/day	Based on soil texture class/permeability and derived from Table 3 in the EPA Code of Practice (2013)
Nominated Land Application Area	L	45	m^2	[1]
Crop Factor	C	0.6-0.8	unitless	Estimates evapotranspiration as a fraction of pan evaporation; varies with season and crop type[2]
Rainfall Runoff Factor	RF	0.8	unitless	Proportion of rainfall that remains onsite and infiltrates, allowing for any runoff
Mean Monthly Rainfall Data	Toolangi (Mt St Leonard)(086142)			BoM Station and number
Mean Monthly Pan Evaporation Data	Toolangi (Mt St Leonard)(086142)			BoM Station and number

Parameter	Symbol	Formula	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Days in month	D		days	31	28	31	30	31	30	31	31	30	31	30	31	365
Rainfall	R		mm/month	86.2	68.2	79.7	98.6	113	112.6	116.6	138.4	120.4	117.8	122.1	101.8	1275.4
Evaporation	E		mm/month	145.7	120.4	108.5	69	46.5	33	37.2	49.6	66	96.1	114	130.2	1016.2
Crop Factor	C		unitless	0.80	0.80	0.70	0.70	0.60	0.60	0.60	0.60	0.70	0.80	0.80	0.80	
OUTPUTS																
Evapotranspiration	ET	ExC	mm/month	117	96	76	48	28	20	22	30	46	77	91	104	755.35
Percolation	B	DIRxD	mm/month	496.0	448	496.0	480.0	496.0	480.0	496.0	496.0	480.0	496.0	480.0	496.0	5840.0
Outputs		ET+B	mm/month	612.6	544.32	572.0	528.3	523.9	499.8	518.3	525.8	526.2	572.9	571.2	600.2	6595.4
INPUTS																
Retained Rainfall	RR	RxRF	mm/month	64.65	51.15	59.775	73.95	84.75	84.45	87.45	103.8	90.3	88.35	91.575	76.35	956.55
Applied Effluent	W	(QxD)/L	mm/month	413.3	373.3	413.3	400.0	413.3	400.0	413.3	413.3	400.0	413.3	400.0	413.3	4866.7
Inputs		RR+W	mm/month	478.0	424.5	473.1	474.0	498.1	484.5	500.8	517.1	490.3	501.7	491.6	489.7	5823.2
STORAGE CALCULATION																
Storage remaining from previous month			mm/month	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Storage for the month	S	(RR+W)-(ET+B)	mm/month	-134.6	-119.8	-98.8	-54.4	-25.8	-15.4	-17.5	-8.6	-35.9	-71.2	-79.6	-110.5	
Cumulative Storage	M		mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum Storage for Nominated Area	N		mm	0.00												
	V	NxL	L	0												
LAND AREA REQUIRED FOR ZERO STORA			m^2	34	34	36	40	42	43	43	44	41	38	38	36	

MINIMUM AREA REQUIRED FOR ZERO STORAGE 45.0 m^2

CELLS

	Please enter data in blue cells
XX	Red cells are automatically populated by the spreadsheet
XX	Data in yellow cells is calculated by the spreadsheet, DO NOT ALTER THESE CELLS

NOTES

[1] This value should be the largest of the following: land application area required based on the most limiting nutrient balance or minimum area required for zero storage

[2] Values selected are suitable for pasture grass in Victoria

4.5 SITING AND CONFIGURATION OF THE LAND APPLICATION AREA

Considering the allotment's size there is space for location of the effluent disposal envelope on the site.

Whilst there is enough area for application of effluent, it is important that buffer distances be adhered to. It is important to note that buffers are measured as the overland flow path for run-off water from the effluent disposal area.

As a result of my visit the Land Application Area can be located in the area investigated and delineated on the annotated Test Site Location Plan (Appendix iv).

4.5 BUFFER DISTANCES

Buffer distances from Land Application Areas are required to help prevent human contact, maintain public amenity and protect sensitive environments. Council generally adopts the following nominal buffers, described in EPA Code of Practice 891.4 July 2016:

- 20 metres upslope from potable or non-potable groundwater bores.
- 100 metres upslope from watercourses in a potable water supply catchment.
- 3 metres if area up-gradient and 1.5 metres if area down-gradient of property boundaries, swimming pools and buildings.
- 60 metres upslope from surface waters (non-potable).

All nominal buffers are achievable.

4.6 INSTALLATION OF THE IRRIGATION SYSTEM

Installation of the irrigation system must be carried out by a suitably qualified, licensed plumber or drainer experienced with effluent irrigation systems.

To ensure even distribution of effluent, it is essential that the pump capacity is adequate for the size and configuration of the irrigation system, taking into account head and friction losses due to changes in elevation, pipes, valves, fittings etc

The irrigation area and surrounding area must be vegetated or revegetated immediately following installation of the system, preferably with turf. The area should be fenced or otherwise isolated (such as by landscaping), to prevent vehicle and stock access; and signs should be erected to inform householders and visitors of the extent of the effluent irrigation area and to limit their access and impact on the area.

Stormwater run-on and run-off may be a concern for the proposed disposal area, we recommend that up- and down-slope diversion berms or drainage be constructed to divert surface flows to and from the LAA. Stormwater from roofs and other impervious surfaces must not be disposed of into the wastewater treatment system or onto the effluent management system.

5. Monitoring, Operation and Maintenance System

Maintenance is to be carried out in accordance with the certificate of approval and Council's permit conditions. The system proposed above will only function adequately if appropriately maintained.

To ensure the land application system functions adequately, residents must:

- Regularly harvest (mow) vegetation within the LAA and remove this to maximise uptake of water and nutrients;
- Not erect any structures over the Land Application Area;
- Minimise vehicle access to the Land Application Area to prevent compaction;
- Good water conservation is an important aspect in the overall management of onsite systems. It will be important for the ongoing performance of both the treatment and application system that they are not overloaded hydraulically. AAA rated plumbing is recommended for all future water fixtures.

6. Stormwater Management

As mentioned above, stormwater run-off is expected to be a concern in this case, therefore, upslope and downslope diversion berms/cut-off drains should be installed. Roof and road/track stormwater must not be disposed in the Land Application Area.

7. Conclusions

As a result of my investigation I am of the opinion that a sustainable onsite wastewater management system can be built to meet the needs of a new residence on the allotment.

Specifically, I recommend the following:

- Primary treatment of wastewater;
- Location of the Land Application Area as per the recommendations contained in this report;
- Land application of wastewater into a sand mound area relevant to the number of bedrooms proposed;
- Ripping of the soil in the area of the LAA;
- Import and apply 200mm of good quality Loam fill to the LAA prior to mound construction;
- Installation of water saving devices in the residence to reduce the effluent load for onsite disposal;
- Use of low phosphorus and low sodium (liquid) detergents to improve effluent quality and maintain soil properties; and
- Operation and management of the treatment and disposal system in accordance with the recommendations made in this report.

For and on behalf of SMOLDERS GEOTECHNCIAL PTY. LTD.

Dr. Richard Smart
B.Sci (Soils) PhD.

C.E.T. Accredited.

8. References

Environment Protection Authority (2003). *Guidelines for Environmental Management: Use of Reclaimed Water* Publication 464.2.

Environment Protection Authority (1991). *Guidelines for Wastewater Irrigation* Publication 168.

Environment Protection Authority (2016). Publication 891.4 *Code of Practice for Onsite Wastewater Management.*

Geary, P. and Gardner, E. (1996). On-site Disposal of Effluent. In Proceedings from the one day conference *Innovative Approaches to the Management of Waste and Water*, Lismore 1996.

Isbell, R.F. (1996). The Australian Soil Classification. CSIRO Publishing, Melbourne.

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Sargeant and Imhof (2000). *Major Agricultural Soils of the Maffra Region*. Department of Natural Resources and Environment, Victoria, Australia.

Standards Australia / Standards New Zealand (2012). AS/NZS 1547:2012 *On-site domestic-wastewater management*.

USEPA (2002). *Onsite Wastewater Treatment Systems Manual*. United States Environmental Protection Agency.

9. Appendices

i. Land Channel Property Report
ii. Aerial and Site Photographs
iii. Bureau of Meteorology Climate Report
iv. Test Site Location Plan
v. Borelog Descriptions
vi. Analytical Laboratory Results
vii. Floor Plan

APPENDIX i

LAND CHANNEL PROPERTY REPORT

PROPERTY REPORT

VICTORIA State Government | Environment, Land, Water and Planning

From www.planning.vic.gov.au at 11 July 2022 08:23 AM

PROPERTY DETAILS

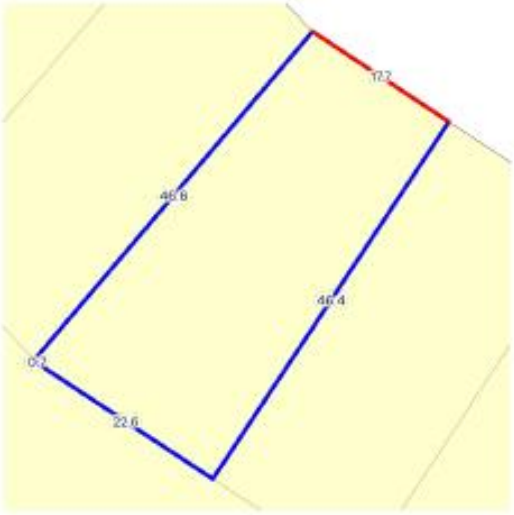
Address:	**48 PINE RIDGE ROAD KINGLAKE WEST 3757**
Lot and Plan Number:	**Lot 25 LP55006**
Standard Parcel Identifier (SPI):	**25\LP55006**
Local Government Area (Council):	**MURRINDINDI** www.murrindindi.vic.gov.au
Council Property Number:	**7131**
Directory Reference:	**Vicroads 79 F2**

This property is in a designated bushfire prone area.
Special bushfire construction requirements apply. Planning provisions may apply.

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website https://www.vba.vic.gov.au

SITE DIMENSIONS

All dimensions and areas are approximate. They may not agree with those shown on a title or plan.



Area: 952 sq. m
Perimeter: 134 m
For this property:
Site boundaries
Road frontages

Dimensions for individual parcels require a separate search, but dimensions for individual units are generally not available.

Calculating the area from the dimensions shown may give a different value to the area shown above

For more accurate dimensions get copy of plan of Title and Property Certificates

UTILITIES

Rural Water Corporation:	**Southern Rural Water**
Melbourne Water Retailer:	**Yarra Valley Water**
Melbourne Water:	**Inside drainage boundary**
Power Distributor:	**AUSNET**

STATE ELECTORATES

Legislative Council:	**NORTHERN VICTORIA**
Legislative Assembly:	**EILDON**

PLANNING INFORMATION

Planning Zone	FARMING ZONE (FZ)
	SCHEDULE TO THE FARMING ZONE (FZ)
Planning Overlay	BUSHFIRE MANAGEMENT OVERLAY (BMO)
	RESTRUCTURE OVERLAY (RO)
	RESTRUCTURE OVERLAY SCHEDULE (RO)

PROPERTY REPORT

Planning scheme data last updated on 6 July 2022.

A **planning scheme** sets out policies and requirements for the use, development and protection of land.
This report provides information about the zone and overlay provisions that apply to the selected land.
Information about the State and local policy, particular, general and operational provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting https://www.planning.vic.gov.au

This report is NOT a **Planning Certificate** issued pursuant to Section 199 of the ***Planning and Environment Act 1987.***
It does not include information about exhibited planning scheme amendments, or zonings that may abut the land.
To obtain a Planning Certificate go to Titles and Property Certificates at Landata - https://www.landata.vic.gov.au

For details of surrounding properties, use this service to get the Reports for properties of interest.

To view planning zones, overlay and heritage information in an interactive format visit https://mapshare.vic.gov.au/vicplan

For other information about planning in Victoria visit https://www.planning.vic.gov.au

Area Map

PLANNING PROPERTY REPORT

Environment, Land, Water and Planning

From www.planning.vic.gov.au at 11 July 2022 08:27 AM

PROPERTY DETAILS

Address:	**48 PINE RIDGE ROAD KINGLAKE WEST 3757**
Lot and Plan Number:	**Lot 25 LP55006**
Standard Parcel Identifier (SPI):	**25\LP55006**
Local Government Area (Council):	**MURRINDINDI** www.murrindindi.vic.gov.au
Council Property Number:	**7131**
Planning Scheme:	**Murrindindi** Planning Scheme - Murrindindi
Directory Reference:	**Vicroads 79 F2**

UTILITIES

Rural Water Corporation:	**Southern Rural Water**
Melbourne Water Retailer:	**Yarra Valley Water**
Melbourne Water:	**Inside drainage boundary**
Power Distributor:	**AUSNET**

STATE ELECTORATES

Legislative Council:	**NORTHERN VICTORIA**
Legislative Assembly:	**EILDON**

OTHER

Registered Aboriginal Party: **Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation**

View location in VicPlan

Planning Zones

FARMING ZONE (FZ)
SCHEDULE TO THE FARMING ZONE (FZ)

FZ - Farming
Water course

Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

PLANNING PROPERTY REPORT

Environment, Land, Water and Planning

Planning Overlays

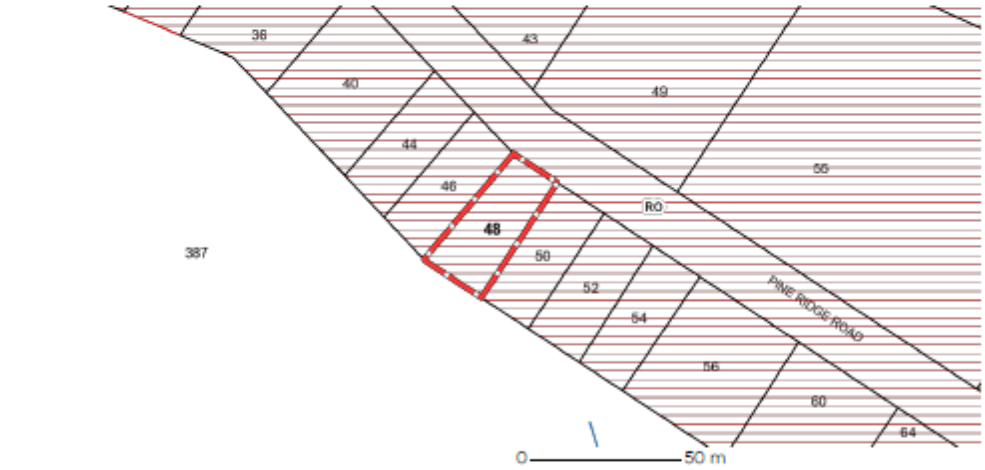
BUSHFIRE MANAGEMENT OVERLAY (BMO)

BMO - Bushfire Management Overlay — Water course

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

RESTRUCTURE OVERLAY (RO)

RESTRUCTURE OVERLAY SCHEDULE (RO)



RO - Restructure Overlay — Water course

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

PLANNING PROPERTY REPORT

VICTORIA State Government | Environment, Land, Water and Planning

Further Planning Information

Planning scheme data last updated on 6 July 2022.

A **planning scheme** sets out policies and requirements for the use, development and protection of land.
This report provides information about the zone and overlay provisions that apply to the selected land.
Information about the State and local policy, particular, general and operational provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting https://www.planning.vic.gov.au

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It does not include information about exhibited planning scheme amendments, or zonings that may abut the land.
To obtain a Planning Certificate go to Titles and Property Certificates at Landata - https://www.landata.vic.gov.au

For details of surrounding properties, use this service to get the Reports for properties of interest.

To view planning zones, overlay and heritage information in an interactive format visit https://mapshare.maps.vic.gov.au/vicplan

For other information about planning in Victoria visit https://www.planning.vic.gov.au

PLANNING PROPERTY REPORT

Designated Bushfire Prone Areas

This property is in a designated bushfire prone area.
Special bushfire construction requirements apply. Planning provisions may apply.

Designated Bushfire Prone Areas Water course

Designated bushfire prone areas as determined by the Minister for Planning are in effect from 8 September 2011 and amended from time to time.

The Building Regulations 2018 through application of the Building Code of Australia, apply bushfire protection standards for building works in designated bushfire prone areas.

Designated bushfire prone areas maps can be viewed on VicPlan at https://mapshare.vic.gov.au/vicplan or at the relevant local council.

Note: prior to 8 September 2011, the whole of Victoria was designated as bushfire prone area for the purposes of the building control system.

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website https://www.vba.vic.gov.au

Copies of the Building Act and Building Regulations are available from http://www.legislation.vic.gov.au

For Planning Scheme Provisions in bushfire areas visit https://www.planning.vic.gov.au

Native Vegetation

Native plants that are indigenous to the region and important for biodiversity might be present on this property. This could include trees, shrubs, herbs, grasses or aquatic plants. There are a range of regulations that may apply including need to obtain a planning permit under Clause 52.17 of the local planning scheme. For more information see Native Vegetation (Clause 52.17) with local variations in Native Vegetation (Clause 52.17) Schedule.

To help identify native vegetation on this property and the application of Clause 52.17 please visit the Native Vegetation Information Management system https://nvim.delwp.vic.gov.au/ and Native vegetation (environment.vic.gov.au) or please contact your relevant council.

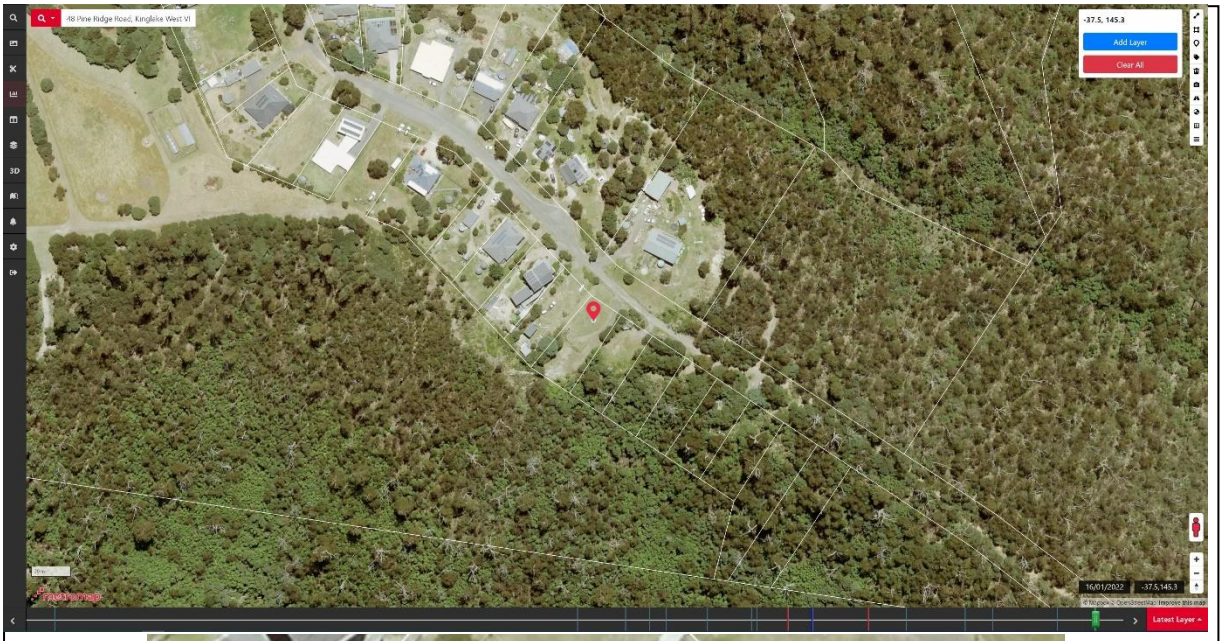
You can find out more about the natural values on your property through NatureKit NatureKit (environment.vic.gov.au)

APPENDIX ii

AERIAL AND SITE PHOTOGRAPHS

AERIAL PHOTOGRAPH

Client: Sergio Teodoro
Ref. Number: 22G5459
Date: 18/07/22
Site: 48 Pine Ridge Road, KINGLAKE WEST, VIC



SITE PHOTOGRAPHS

APPENDIX iii

BUREAU OF METEOROLOGY CLIMATE REPORT

Site name: TOOLANGI (MOUNT ST LEONARD DPI) **Site number:** 086142 **Commenced:** 1953
Latitude: 37.57° S **Longitude:** 145.50° E **Elevation:** 595 m **Operational status:** Open Map

Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Years		Plot	Map
Rainfall																	
Mean rainfall (mm)	87.7	73.4	84.9	106.1	122.2	112.2	117.7	138.6	134.4	127.0	126.8	116.6	1359.1	60	1953 2022		
Highest rainfall (mm)	203.4	242.0	205.1	317.8	296.1	293.2	228.4	262.4	298.8	295.0	293.5	353.6	1826.2	67	1953 2022		
Date	2020	1973	1970	1974	1960	1977	1996	1985	1993	1975	1954	2017	1960				
Lowest rainfall (mm)	8.6	0.0	13.8	22.6	28.8	28.2	43.2	31.0	40.2	31.6	18.4	10.4	882.9	67	1953 2022		
Date	2009	2009	2019	2018	1984	1972	1982	1982	1961	2006	1982	1972	1997				
Decile 1 rainfall (mm)	33.1	12.0	38.8	40.0	57.2	59.8	63.6	74.2	76.7	56.2	54.2	53.9	993.8	67	1953 2022		
Decile 5 (median) rainfall (mm)	86.2	68.2	79.7	98.6	113.0	112.6	116.6	138.4	120.4	117.8	122.1	101.8	1363.4	67	1953 2022		
Decile 9 rainfall (mm)	133.4	163.4	145.9	179.0	196.6	161.2	168.7	204.0	199.3	207.7	217.5	197.5	1707.2	67	1953 2022		
Highest daily rainfall (mm)	70.0	155.8	76.4	137.9	98.0	108.8	81.6	63.0	79.5	110.0	89.2	121.2	155.8	66	1953 2022		
Date	15 Jan 1977	03 Feb 2005	14 Mar 1981	23 Apr 1960	16 May 1974	10 Jun 2021	30 Jul 1996	17 Aug 1983	20 Sep 1959	21 Oct 1953	21 Nov 1954	17 Dec 1991	03 Feb 2005				
Mean number of days of rain	11.1	9.1	12.3	12.4	16.7	17.3	19.4	19.2	16.8	16.0	14.0	12.5	176.8	67	1953 2022		
Mean number of days of rain ≥ 1 mm	7.2	6.0	8.1	8.8	12.2	12.4	14.3	14.7	12.5	11.8	10.1	8.8	126.9	66	1953 2022		
Mean number of days of rain ≥ 10 mm	2.9	2.2	2.6	3.2	4.0	3.5	3.7	4.7	4.6	4.3	4.0	3.6	43.3	66	1953 2022		
Mean number of days of rain ≥ 25 mm	0.9	0.9	0.9	1.1	1.1	0.7	0.7	0.9	1.1	1.1	1.3	1.4	12.1	66	1953 2022		

Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Years		Plot	Map
Other daily elements																	
Mean daily wind run (km)																	
Maximum wind gust speed (km/h)																	
Date																	
Mean daily sunshine (hours)	7.5	7.7	6.1	5.0	3.3	2.6	2.7	3.4	4.2	5.5	6.3	6.4	5.1	31	1965 2001		
Mean daily solar exposure (MJ/m^2)	23.9	20.8	16.1	10.9	7.2	5.5	6.3	9.1	12.6	17.1	20.8	23.2	14.5	33	1990 2022		
Mean number of clear days														1	1965 1968		
Mean number of cloudy days														1	1965 1968		
Mean daily evaporation (mm)	4.7	4.3	3.5	2.3	1.5	1.1	1.2	1.6	2.2	3.1	3.8	4.2	2.8	22	1965 2006		

APPENDIX iv

TEST SITE LOCATION PLAN

TEST SITE LOCATION PLAN MOUND

(Not to Scale) – Distances are approximate)

Client: Sergio Teodoro
Ref. Number: 22G5459
Date: 18/07/22
Site: 48 Pine Ridge Road, KINGLAKE WEST, VIC

APPENDIX v

BORELOG DESCRIPTIONS

PROJECT ADDRESS: 2 Two Bays Crescent, SELBY VIC
REFERENCE NUMBER: 22E5323
FIELD WORK DATE: 06/05/22
SUPERVISING GEOLOGIST: Richard Smart

TEST SITE 1
EXCAVATION METHOD:
HYDRAULIC DRILLING RIG

Depth mm	SOIL PROFILE	Fill	CAT
100	**Fill, Gravelly, Clayey SILT/Clay mix: brown**		
200	**Massive, moist, moderately compacted**		
300			**4c**
400			
500			
600			
700			
800			
900	**Extremely Weathered SILTSTONE: yellow,**		
1000	**Dry, hard**		
1100			
1200			
1300			
1400			
1500			
1600			
1700			
1800			
1900	**END OF HOLE NO REFUSAL**		
2000			
2100			
2200			
2300			
2400			
2500			
2600			
2700			
2800			
2900			
3000			
3100			
3200			

TEST SITE 2
EXCAVATION METHOD:
HYDRAULIC DRILLING RIG

Depth mm	SOIL PROFILE	Fill	CAT
100	**Fill, Gravelly, Clayey SILT/Clay mix: brown**		**4c**
200	**Massive, moist, moderately compacted**		
300	**Extremely Weathered SILTSTONE: yellow,**		
400	**Dry, hard**		
500			
600			
700			
800			
900			
1000			
1100			
1200			
1300			
1400			
1500			
1600	**END OF HOLE REFUSAL ON ROCK**		
1700			
1800			
1900			
2000			
2100			
2200			
2300			
2400			
2500			
2600			
2700			
2800			
2900			
3000			
3100			
3200			

TEST SITE 3
EXCAVATION METHOD:
BY HAND

Depth mm	SOIL PROFILE	Fill	CAT
100	**Fill, Gravelly, Clayey SILT/Clay mix: brown**		**4C**
200	**Massive, moist, moderately compacted**		
300	**Clayey SILT (ML): dark brown becoming**		
400	**Paler with depth, moist, firm**		
500			
600			
700			
800			
900			
1000	**Extremely Weathered SILTSTONE: yellow,**		
1100	**Dry, hard**		
1200			
1300			
1400			
1500			
1600			
1700	**END OF HOLE REFUSAL ON ROCK**		
1800			
1900			
2000			
2100			
2200			
2300			
2400			
2500			
2600			
2700			
2800			
2900			
3000			
3100			
3200			

APPENDIX vi

ANALYTICAL LABORATORY RESULTS

Groundswell Batch # : GS22564

Groundswell Laboratories

" A New Force in Analytical Testing"

CERTIFICATE OF ANALYSIS

Client Name :	Smolders Geotechnical Pty Ltd	**Groundswell Batch # :**	GS22564
Client Address :	PO Box 7299, Upper Ferntree Gully, VIC 3156	**Project Name :**	48 Pine Ridge Road, Kinglake West VIC
Client Mobile # :	0488 773 060	**Project # :**	22G5459
		Date Samples Received :	11/07/2022
Project Manager :	Xavier Smolders	**Sample Matrix :**	Soil
E-mail :	enquires@smoldersgeotechnical.com.au	**Sample # Submitted :**	1
Project Sample Manager :	Xavier Smolders	**Groundswell Quote # :**	Not Applicable
E-mail :	enquires@smoldersgeotechnical.com.au	**Date CofA Issued :**	21/07/2022

[redacted]

Paul Woodward

Managing Director

paul@groundswelllabs.com.au

Reference AF56.Rev4 Date Issued : 19/5/2014

Groundswell Batch # : GS22564

Soil Analysis Results

Client Sample ID			Sample 1	Sample 1			
Laboratory Sample Number			GS22564-1	GS22564-1			
Date Sampled			8/07/2022	8/07/2022			
Analytes	Units	LOR		Duplicate			
pH	pH Units	0.1	4.7	4.6			
Electrical Conductivity @ 25°C	dS/m	0.005	0.017	0.019			
Exchangeable Calcium	mg/Kg	1	65	69			
Exchangeable Magnesium	mg/Kg	1	69	69			
Exchangeable Potassium	mg/Kg	1	94	92			
Exchangeable Sodium	mg/Kg	1	21	31			
CEC	MEQ%	0.1	1.2	1.3			
ESP	%	0.1	7.5	10.5			
Sodicity Rating	---	---	Sodic	Sodic			
SAR		0.01	0.10	0.14			

Reference AF56.Rev4 Date Issued : 19/5/2014

Comments :

1- pH & electrical conductivity determined & reported on a 1:5 soil:water extraction

2- CEC determined by soil chemical method 15B1 'Exchangeable bases and cation exchange capacity - 1M amonium chloride at pH 7.0, no pre-treatment for soluble salts'

3- ESP, sodicity rating & SAR determined by calculation using the exchangeable cation results

Groundswell Laboratories Pty Ltd ABN 24 133 248 923
116 Moray Street, South Melbourne, Victoria, 3205 Ph (03) 8669 1450 Fax (03) 8669 1451 E-mail : paul@groundswelllabs.com.au

Groundswell Batch # : GS22564

Soil Analysis Results

Client Sample ID			Sample 1	Sample 1			
Laboratory Sample Number			GS22564-1	GS22564-1			
Date Sampled			8/07/2022	8/07/2022			
Analytes	Units	LOR					
Sample Type	---	---	Air Dried Aggregates	Re-moulded Ped			
Emerson Aggregate Class - 2 Hours	---	---	Slaking / No Dispersion	Slaking / No Dispersion			
Emerson Class Number	---	---	Class 2	Class 2			
Emerson Aggregate Class - 20 Hours	---	---	Slaking / No Dispersion	Slaking / No Dispersion			
Emerson Class Number	---	---	Class 2	Class 2			
Addition of 1M HCl	---	---	---	---			
1:5 Soil:Water 10 minute extraction	---	---	---	---			
Emerson Class Number	---	---	---	---			

Reference AFS6.Rev4 Date Issued : 19/5/2014

Comments :

1- Classification conducted in accordance with Emmerson 'A clasification of soil aggregates based on their coherence in water', 1967 & AS1289.C8.1-1980

Groundswell Laboratories Pty Ltd ABN 24 133 248 923
116 Moray Street, South Melbourne, Victoria, 3205 Ph (03) 8669 1450 Fax (03) 8669 1451 E-mail : paul@groundswelllabs.com.au

Groundswell Batch # : GS22564

Inorganics Quality Control Report

Client Sample ID							
Laboratory Sample Number							
QC Parameter			Method Blank		Laboratory Control Standard (LCS)		
			Method Blank	Within GSL Acceptance Criteria (<LOR) (Pass/Fail)	LCS (%R)	LCS (%R) Acceptance Criteria	Within GSL Acceptance Criteria (Pass/Fail)
Analyte	Units	LOR					
pH	pH units	0.1	NA	NA	6.88	7.00 ± 0.1 pH Unit	Pass
Conductivity	dS/m	0.005	<0.005	Pass	98%	80-120%	Pass
Exchangeable Calcium	mg/Kg	1	<1	Pass	114%	70-130%	Pass
Exchangeable Magnesium	mg/Kg	1	<1	Pass	104%	70-130%	Pass
Exchangeable Potassium	mg/Kg	1	<1	Pass	110%	70-130%	Pass
Exchangeable Sodium	mg/Kg	1	<1	Pass	99%	70-130%	Pass
CEC	MEQ%	0.1	NA	NA	NA	NA	NA
ESP	%	0.1	NA	NA	NA	NA	NA
SAR	---	0.01	NA	NA	NA	NA	NA

Reference AF56.Rev4 Date Issued : 3/11/2010

Comments :

1- Exchangeable cations LCS values based on independent water standards

2- NA = Not Applicable

Smolders Geotechnical Pty. Ltd.
p: 0488 773 060
e: enquiries@smoldersgeotechnical.com.au
p: PO Box 7299, Upper Ferntree Gully, VIC 3156

DATE: 12 July 2022

To: Groundswell Laboratories
116 Moray Street
South Melbourne, VIC 3205

SITE: 48 Pine Ridge Road,
KINGLAKE WEST, VIC

REF No.: 22G5459

Please perform the following soil tests:

i Emerson Aggregate Class
ii Cation Exchange Capacity
iii Electrical Conductivity (EC)
iv pH
v Sodicity – Exchangeable Sodium Percentage (ESP)
iv Sodium Absorption Ratio (SAR)

For the following Two (2) sample from one (1) location:

DATE	SAMPLE	TEST SITE	DEPTH (mm)	MATERIAL	LAB ID
8/07/2022	1	Pit 1	600-800 mm	SUBSOIL	

We request that the sample be put through on the accelerated turnaround stream.

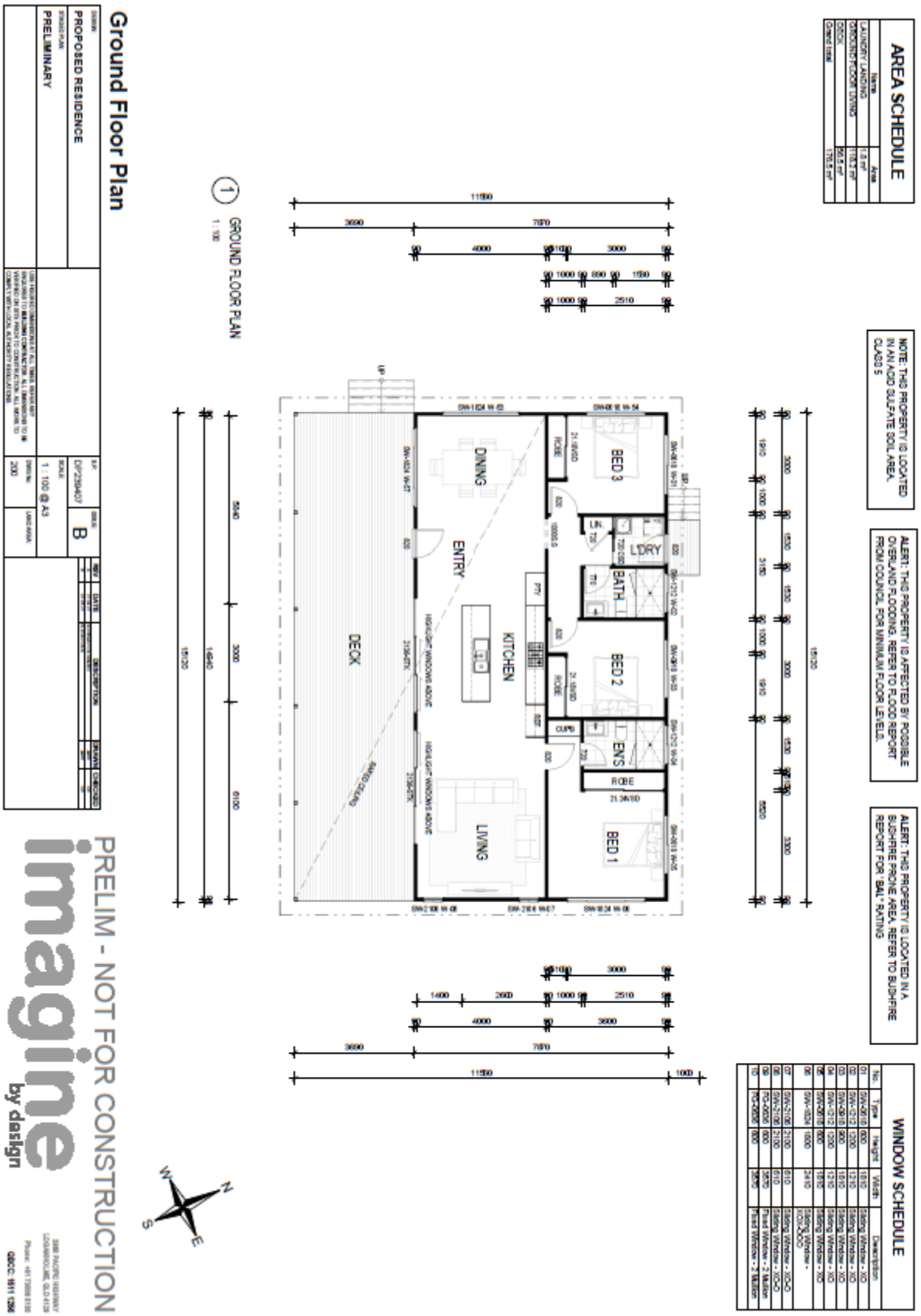
Yours sincerely
For and on behalf of SMOLDERS GEOTECHNCIAL PTY. LTD.

[redacted]

Xavier Smolders

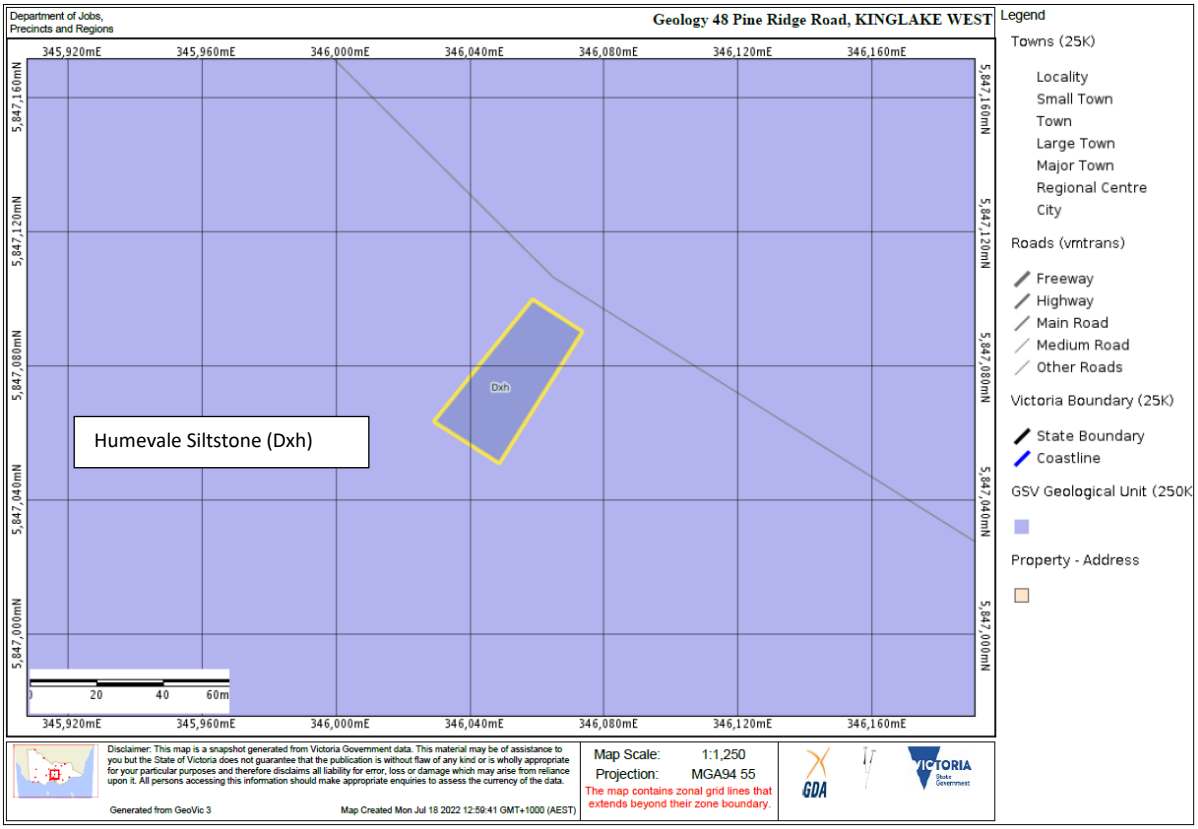
APPENDIX vii

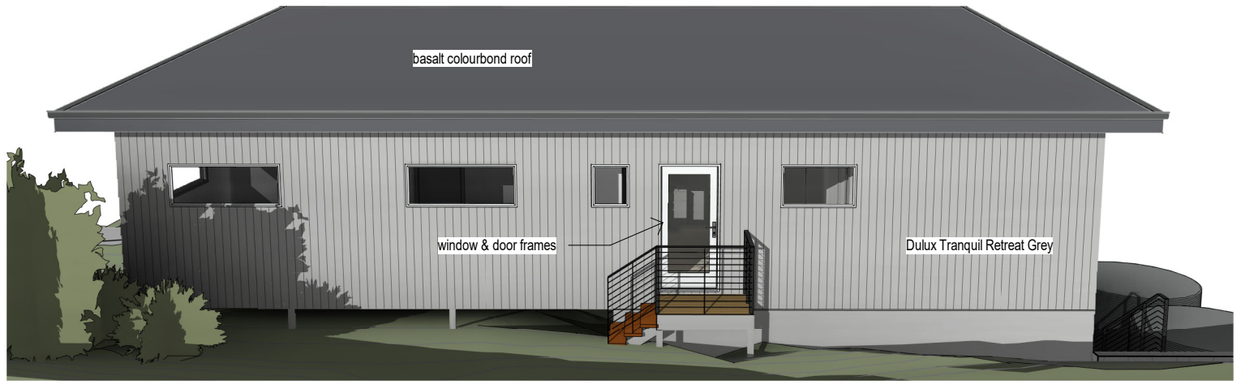
FLOOR PLAN OF PROPOSED RESIDENCE


Ground Floor Plan
PROPOSED RESIDENCE
PRELIMINARY
1 : 100 @ A3
B
GROUND FLOOR PLAN
1 : 100
AREA SCHEDULE
NOTE: THIS PROPERTY IS LOCATED IN AN ASS SULFATE SOIL AREA. CLASS 5
ALERT: THIS PROPERTY IS AFFECTED BY POSSIBLE OVERLAND FLOODING. REFER TO FLOOD REPORT FROM COUNCIL FOR MINIMUM FLOOR LEVELS.
ALERT: THIS PROPERTY IS LOCATED IN A BUSHFIRE PRONE AREA. REFER TO BUSHFIRE REPORT FOR 'BAL' RATING
WINDOW SCHEDULE
DECK
DINING
ENTRY
KITCHEN
LIVING
BED 1
BED 2
BED 3
ENS
BATH
LDRY
ROBE
PRELIM - NOT FOR CONSTRUCTION
imagine
by design

APPENDIX viii

GEOVIC MAP


Department of Jobs, Precincts and Regions
Geology 48 Pine Ridge Road, KINGLAKE WEST
345,920mE
345,960mE
346,000mE
346,040mE
346,080mE
346,120mE
346,160mE
5,847,160mN
5,847,120mN
5,847,080mN
5,847,040mN
5,847,000mN
Dxh
Humevale Siltstone (Dxh)
0
20
40
60m
Legend
Towns (25K)
Locality
Small Town
Town
Large Town
Major Town
Regional Centre
City
Roads (vmtrans)
Freeway
Highway
Main Road
Medium Road
Other Roads
Victoria Boundary (25K)
State Boundary
Coastline
GSV Geological Unit (250K)
Property - Address
Disclaimer: This map is a snapshot generated from Victoria Government data. This material may be of assistance to you but the State of Victoria does not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for error, loss or damage which may arise from reliance upon it. All persons accessing this information should make appropriate enquiries to assess the currency of the data.
Generated from GeoVic 3
Map Created Mon Jul 18 2022 12:59:41 GMT+1000 (AEST)
Map Scale: 1:1,250
Projection: MGA94 55
The map contains zonal grid lines that extends beyond their zone boundary.
GDA
VICTORIA



NOT TO SCALE - COLOURS ARE INDICATIVE ONLY. SUBJECT TO CHANGE

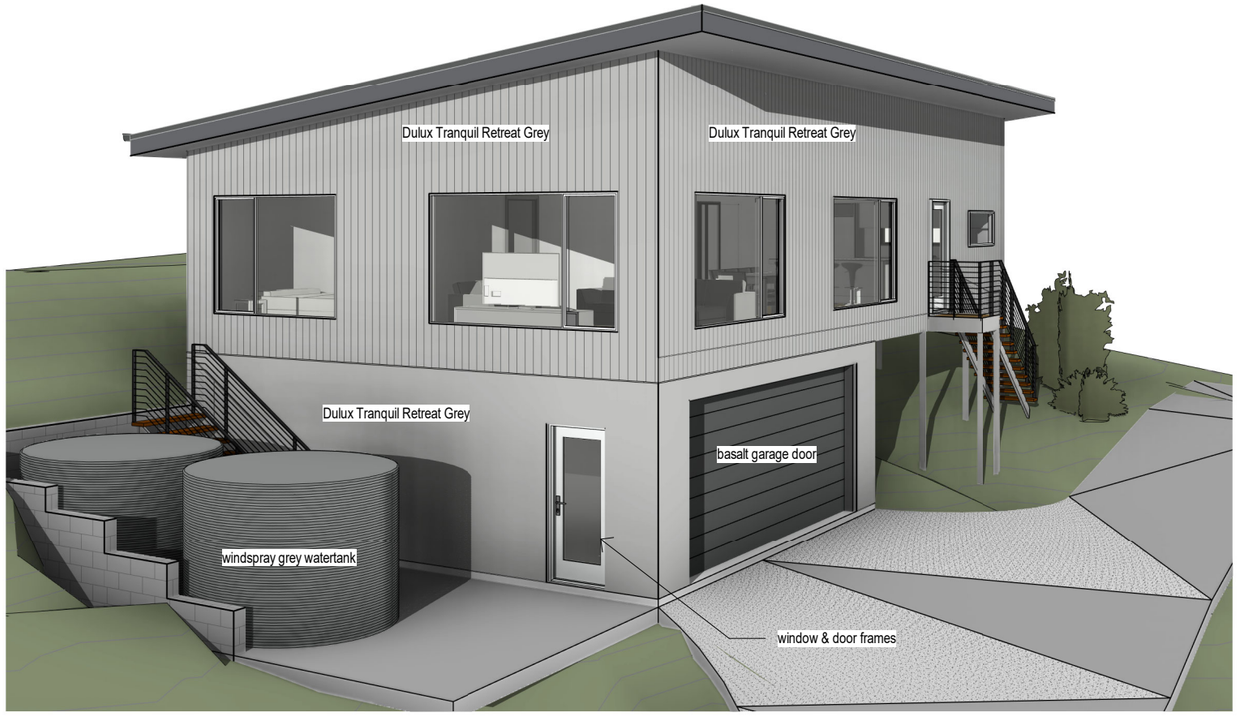


Illustration of Design

DESIGN: **CUSTOM**	JOB ADDRESS: **LOT 25, 48 PINE RIDGE ROAD, KINGLAKE WEST**	S.P: LP55006	ISSUE: **E**
STAGED PLAN: **PRELIMINARY**		SCALE: @ A3	
CLIENT: **BISBAL & TEODORO**	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRES TO **BUILDING CONTRACTOR**. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORK TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.	DWG No: 002	LAND AREA: 953m²

REV	DATE	DESCRIPTION	DRAWN	CHECKED
A	07.06.23	SCHEMATICS ISSUED	RR	RR
B	23.06.23	CLIENT CHANGES	RR	RR
C	18.08.23	CLIENT CHANGES	RR	RR
D	05.12.23	RFI CHANGES	RR	RR
E	21.12.23	RFI CHANGES	RR	RR

PRELIM - NOT FOR CONSTRUCTION

imagine by design

3968 PACIFIC HIGHWAY
LOGANHOLME, QLD 4129

Phone: +61 73806 5100

QBCC: 1511 1256

AREA SCHEDULE

Name	Area
LAUNDRY LANDING	1.8 m²
GROUND FLOOR LIVING	131.6 m²
ENTRY LANDING	1.2 m²
GARAGE	65.3 m²
Grand total	199.8 m²

LEGAL DESCRIPTION

ADDRESS: **48 PINE RIDGE ROAD, KINGLAKE WEST LOT 25, LP55006**

SITE AREA: **953m²**
DRIVEWAY AREA: **138m²**
GARAGE AREA: **65.3m²**

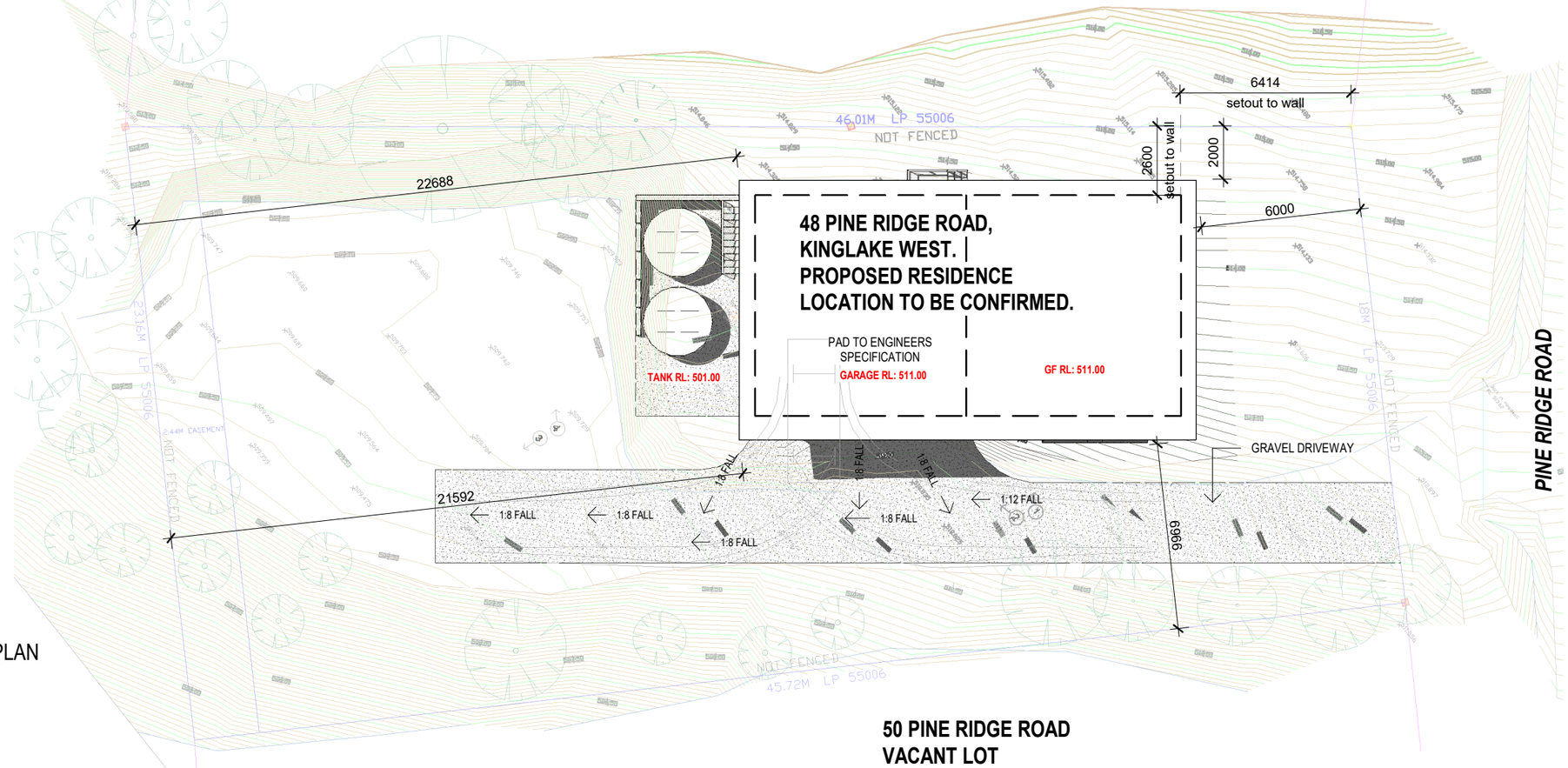
ZONE: **F2 - FRAMING ZONE**

OVERLAYS: **-BUSHFIRE PRONE LAND**

ALERT: THIS PROPERTY IS LOCATED IN A BUSHFIRE PRONE AREA. REFER TO BUSHFIRE REPORT FOR **"BAL 29"** RATING

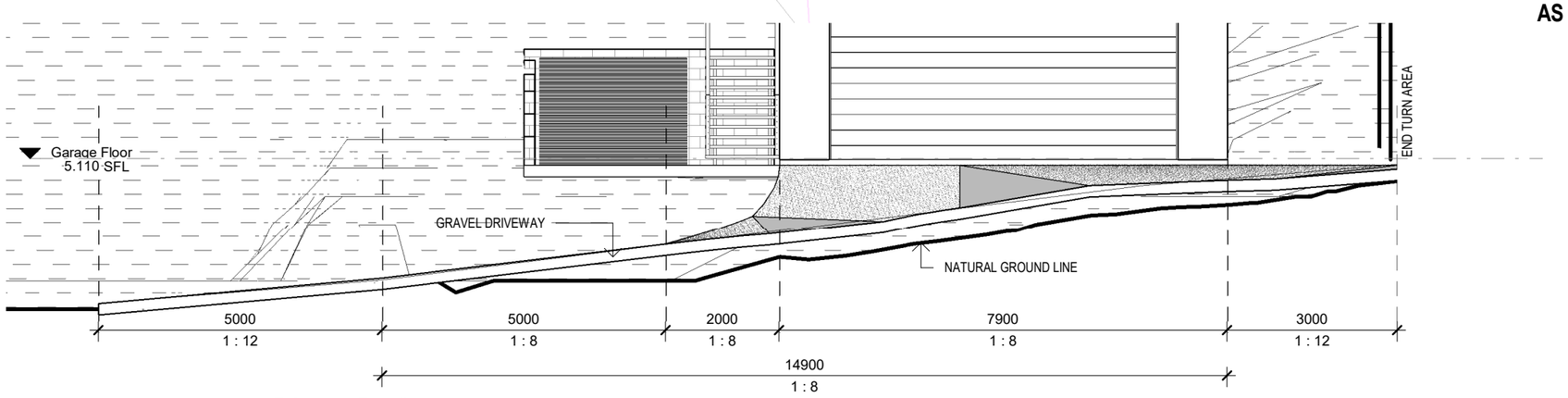
NOTE: LOCATION OF SITE BOUNDARIES ARE A ***GUIDE ONLY***. THESE HAVE BEEN SCALED FROM LOCAL SHIRE COUNCIL RECORDS. NOT FOR CONSTRUCTION PURPOSES.

46 PINE RIDGE ROAD
NO BUILDING
AS OF 01/08/2021



1 SITE PLAN
1 : 200

50 PINE RIDGE ROAD
VACANT LOT
AS OF 01/08/2021



2 Driveway Detail
1 : 100

Site Plan

DESIGN: **CUSTOM**	JOB ADDRESS: **LOT 25, 48 PINE RIDGE ROAD, KINGLAKE WEST**	S.P: LP55006	ISSUE: **E**
STAGED PLAN: **PRELIMINARY**		SCALE: As indicated @ A3	
CLIENT: **BISBAL & TEODORO**	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRES TO **BUILDING CONTRACTOR**. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORK TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.	DWG No: 100	LAND AREA: 953m²

REV	DATE	DESCRIPTION	DRAWN	CHECKED
A	07.06.23	SCHEMATICS ISSUED	RR	RR
B	23.06.23	CLIENT CHANGES	RR	RR
C	18.08.23	CLIENT CHANGES	RR	RR
D	05.12.23	RFI CHANGES	RR	RR
E	21.12.23	RFI CHANGES	RR	RR

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3968 PACIFIC HIGHWAY
LOGANHOLME, QLD 4129
Phone: +61 73806 5100
QBCC: 1511 1256

AREA SCHEDULE

Name	Area
LAUNDRY LANDING	1.8 m²
GROUND FLOOR LIVING	131.6 m²
ENTRY LANDING	1.2 m²
GARAGE	65.3 m²
Grand total	199.8 m²

ALERT: THIS PROPERTY IS LOCATED IN A BUSHFIRE PRONE AREA. REFER TO BUSHFIRE REPORT FOR **"BAL 29"** RATING

NOTE:
DOUBLE GLAZING THROUGHOUT

NOTE:
ALL INTERNAL DOORS TO BE SOLID CORE THROUGHOUT

NOTE:
FIRE CRUNCH EXTERNAL & INTERNAL WALLS, EAVES, CEILING LININGS

NOTE:
19mm TG K-FLOOR FIRE CRUNCH

WINDOW SCHEDULE

No.	Type	Height	Width	Description	Location
01	AW-1830	1800	3010	AL Awning Window	Living
02	AW-1830	1800	3010	AL Awning Window	Dining
03	AW-0718	700	1810	AL Awning Window	Kitchen
04	FG-0718	700	1800	AL Fixed Glass	Kitchen
05	AW-0718	700	1810	AL Awning Window	Bed 2
06	AW-0718	700	1810	AL Awning Window	Bed 2
07	AW-0718	700	1810	AL Awning Window	Bed 3
08	AW-0706	700	610	AL Awning Window	L'dry/Bath
09	AW-0712	700	1210	AL Awning Window	ENS
10	AW-1824	1800	2410	AL Awning Window	Master
11	AW-1830	1800	3010	AL Awning Window	Living

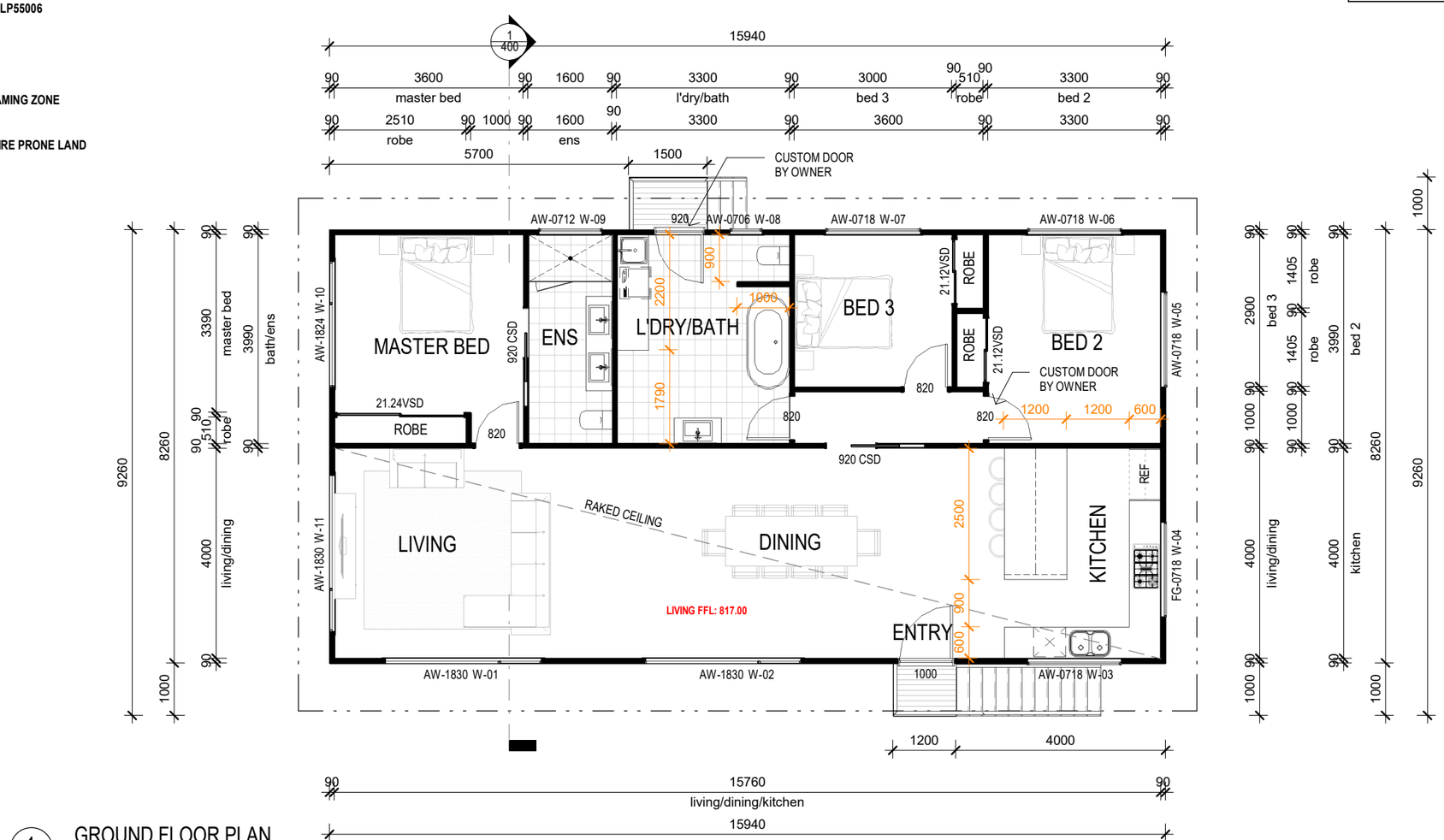
LEGAL DESCRIPTION

ADDRESS: **48 PINE RIDGE ROAD, KINGLAKE WEST LOT 25, LP55006**

SITE AREA: **953m²**
DRIVEWAY AREA: **138m²**
GARAGE AREA: **65.3m²**

ZONE: **F2 - FRAMING ZONE**

OVERLAYS: **-BUSHFIRE PRONE LAND**



1 GROUND FLOOR PLAN
1 : 100

Ground Floor Plan

DESIGN: **CUSTOM**	JOB ADDRESS: **LOT 25, 48 PINE RIDGE ROAD, KINGLAKE WEST**	S.P: LP55006	ISSUE: **E**
STAGED PLAN: **PRELIMINARY**		SCALE: 1 : 100 @ A3	
CLIENT: **BISBAL & TEODORO**	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRES TO **BUILDING CONTRACTOR**. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORK TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.	DWG No: 200	LAND AREA: 953m²

REV	DATE	DESCRIPTION	DRAWN	CHECKED
A	07.06.23	SCHEMATICS ISSUED	RR	RR
B	23.06.23	CLIENT CHANGES	RR	RR
C	18.08.23	CLIENT CHANGES	RR	RR
D	05.12.23	RFI CHANGES	RR	RR
E	21.12.23	RFI CHANGES	RR	RR

PRELIM - NOT FOR CONSTRUCTION

imagine by design
3968 PACIFIC HIGHWAY
LOGANHOLME, QLD 4129
Phone: +61 73806 5100
QBCC: 1511 1256

AREA SCHEDULE

Name	Area
LAUNDRY LANDING	1.8 m²
GROUND FLOOR LIVING	131.6 m²
ENTRY LANDING	1.2 m²
GARAGE	65.3 m²
Grand total	199.8 m²

ALERT: THIS PROPERTY IS LOCATED IN A BUSHFIRE PRONE AREA. REFER TO BUSHFIRE REPORT FOR **"BAL 29"** RATING

NOTE:
DOUBLE GLAZING THROUGHOUT

NOTE:
ALL INTERNAL DOORS TO BE SOLID CORE THROUGHOUT

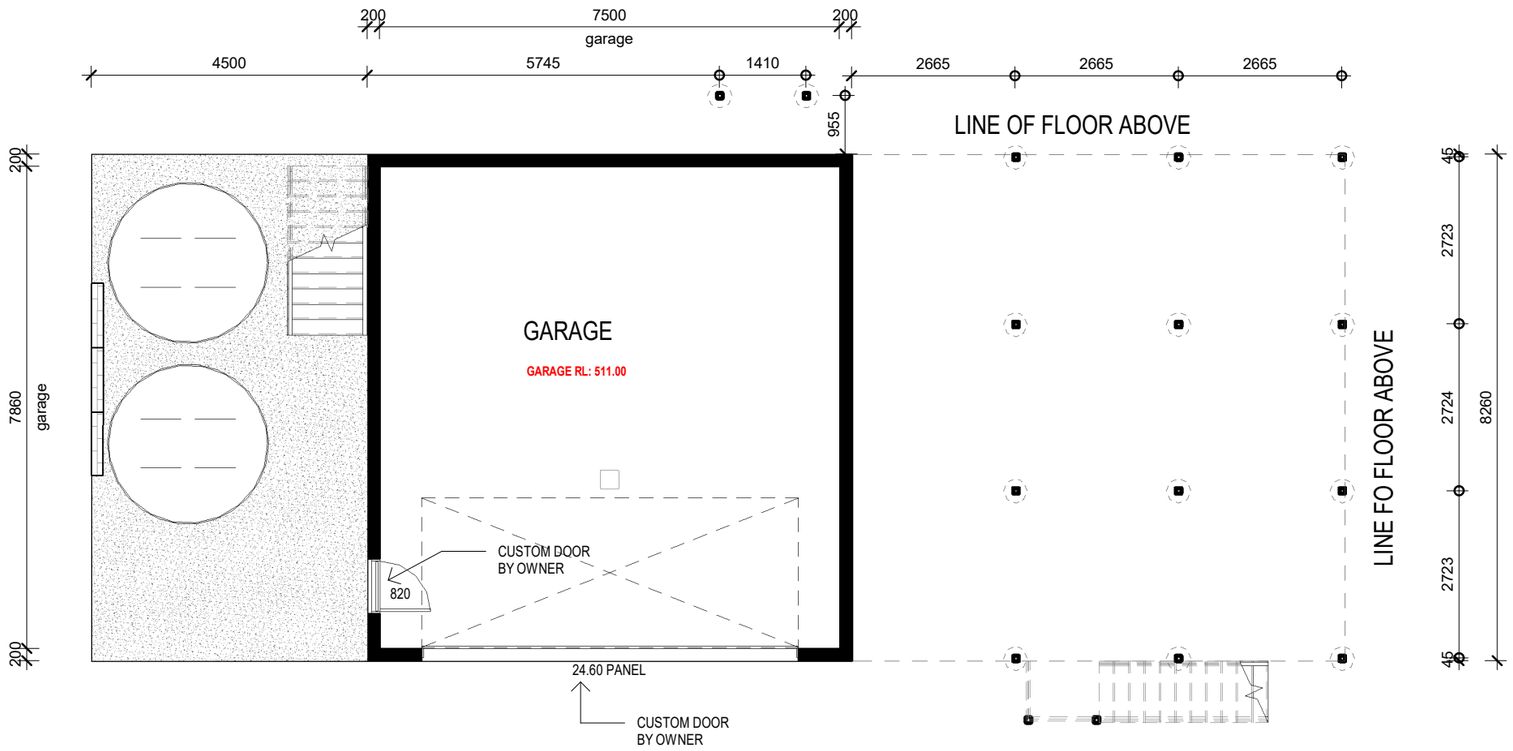
LEGAL DESCRIPTION

ADDRESS: **48 PINE RIDGE ROAD, KINGLAKE WEST LOT 25, LP55006**

SITE AREA: **953m²**
DRIVEWAY AREA: **138m²**
GARAGE AREA: **65.3m²**

ZONE: **F2 - FRAMING ZONE**

OVERLAYS: **-BUSHFIRE PRONE LAND**



1 Garage Floor
1 : 100

Lower Floor Plan

DESIGN: **CUSTOM**	JOB ADDRESS: **LOT 25, 48 PINE RIDGE ROAD, KINGLAKE WEST**	S.P: LP55006	ISSUE: **E**
STAGED PLAN: **PRELIMINARY**		SCALE: 1 : 100 @ A3	
CLIENT: **BISBAL & TEODORO**	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRES TO **BUILDING CONTRACTOR**. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORK TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.	DWG No: 201	LAND AREA: 953m²

REV	DATE	DESCRIPTION	DRAWN	CHECKED
A	07.06.23	SCHEMATICS ISSUED	RR	RR
B	23.06.23	CLIENT CHANGES	RR	RR
C	18.08.23	CLIENT CHANGES	RR	RR
D	05.12.23	RFI CHANGES	RR	RR
E	21.12.23	RFI CHANGES	RR	RR

PRELIM - NOT FOR CONSTRUCTION

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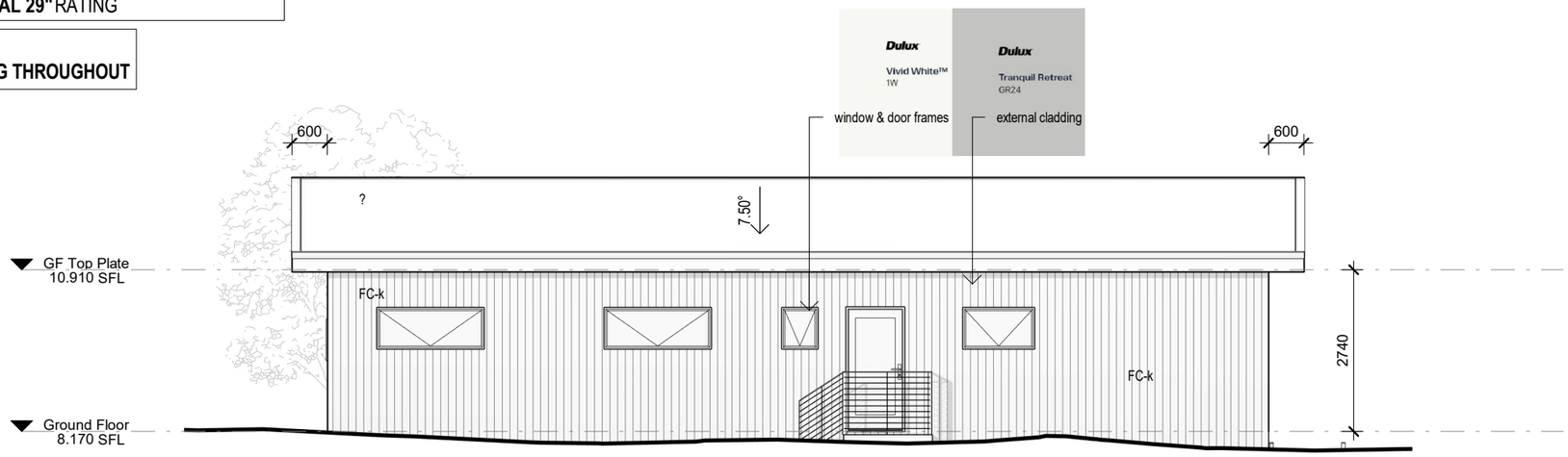
3968 PACIFIC HIGHWAY
LOGANHOLME, QLD 4129
Phone: +61 73806 5100
QBCC: 1511 1256

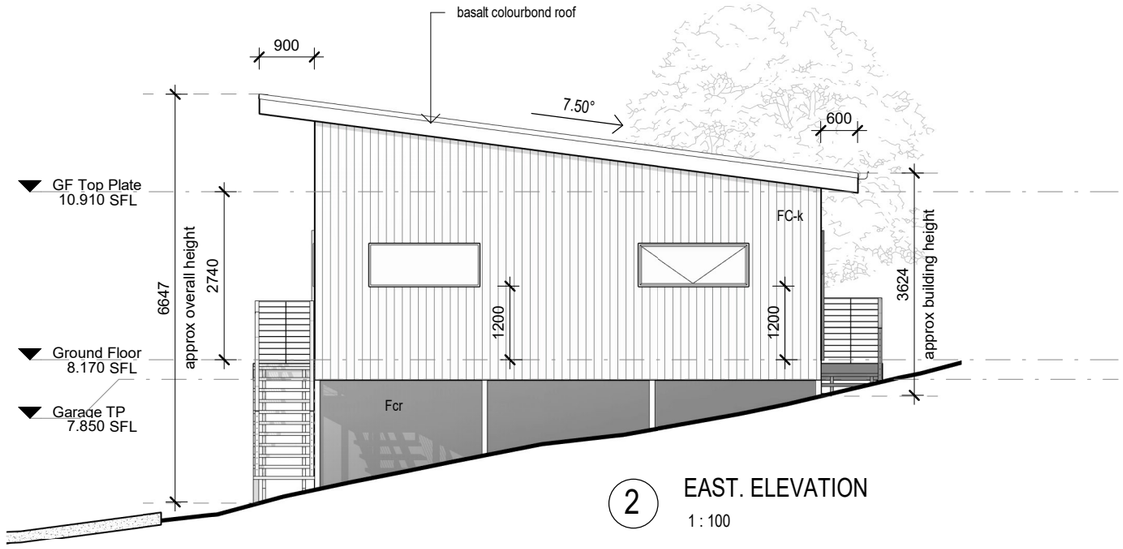
ALERT: THIS PROPERTY IS LOCATED IN A BUSHFIRE PRONE AREA. REFER TO BUSHFIRE REPORT FOR **"BAL 29"** RATING

NOTE:
DOUBLE GLAZING THROUGHOUT

LEGEND	
FC-k	FireCrunch K-Clad
Fcr	Fibre-Cement, Render Finish



1 NORTH. ELEVATION
1 : 100



2 EAST. ELEVATION
1 : 100

Elevations - North & East

DESIGN: **CUSTOM**	JOB ADDRESS: **LOT 25, 48 PINE RIDGE ROAD, KINGLAKE WEST**	S.P: LP55006	ISSUE: **E**
STAGED PLAN: **PRELIMINARY**		SCALE: 1 : 100 @ A3	
CLIENT: **BISBAL & TEODORO**	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRES TO **BUILDING CONTRACTOR**. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORK TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.	DWG No: 300	LAND AREA: 953m²

REV	DATE	DESCRIPTION	DRAWN	CHECKED
A	07.06.23	SCHEMATICS ISSUED	RR	RR
B	23.06.23	CLIENT CHANGES	RR	RR
C	18.08.23	CLIENT CHANGES	RR	RR
D	05.12.23	RFI CHANGES	RR	RR
E	21.12.23	RFI CHANGES	RR	RR

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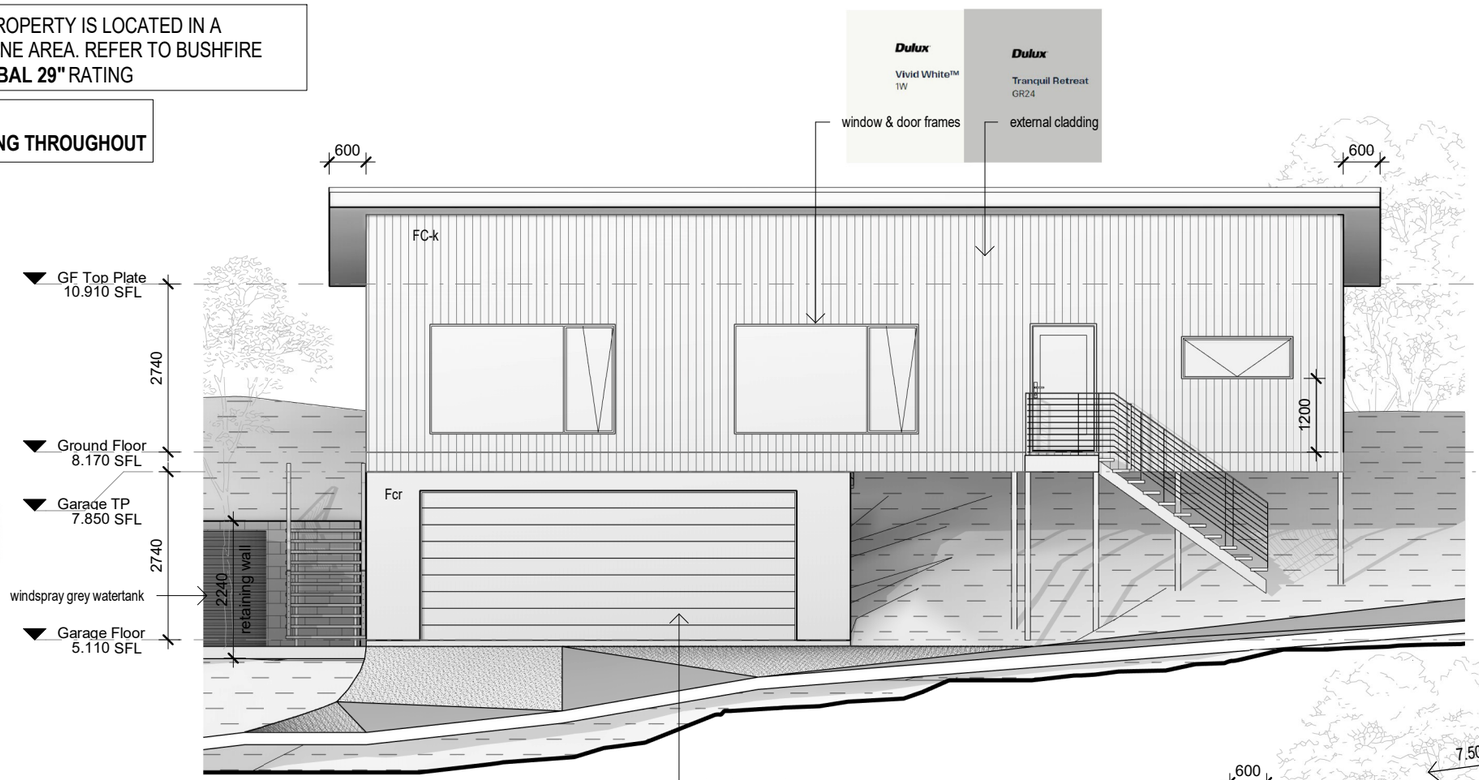
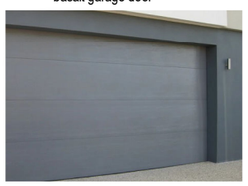
NOTE:
DOUBLE GLAZING THROUGHOUT

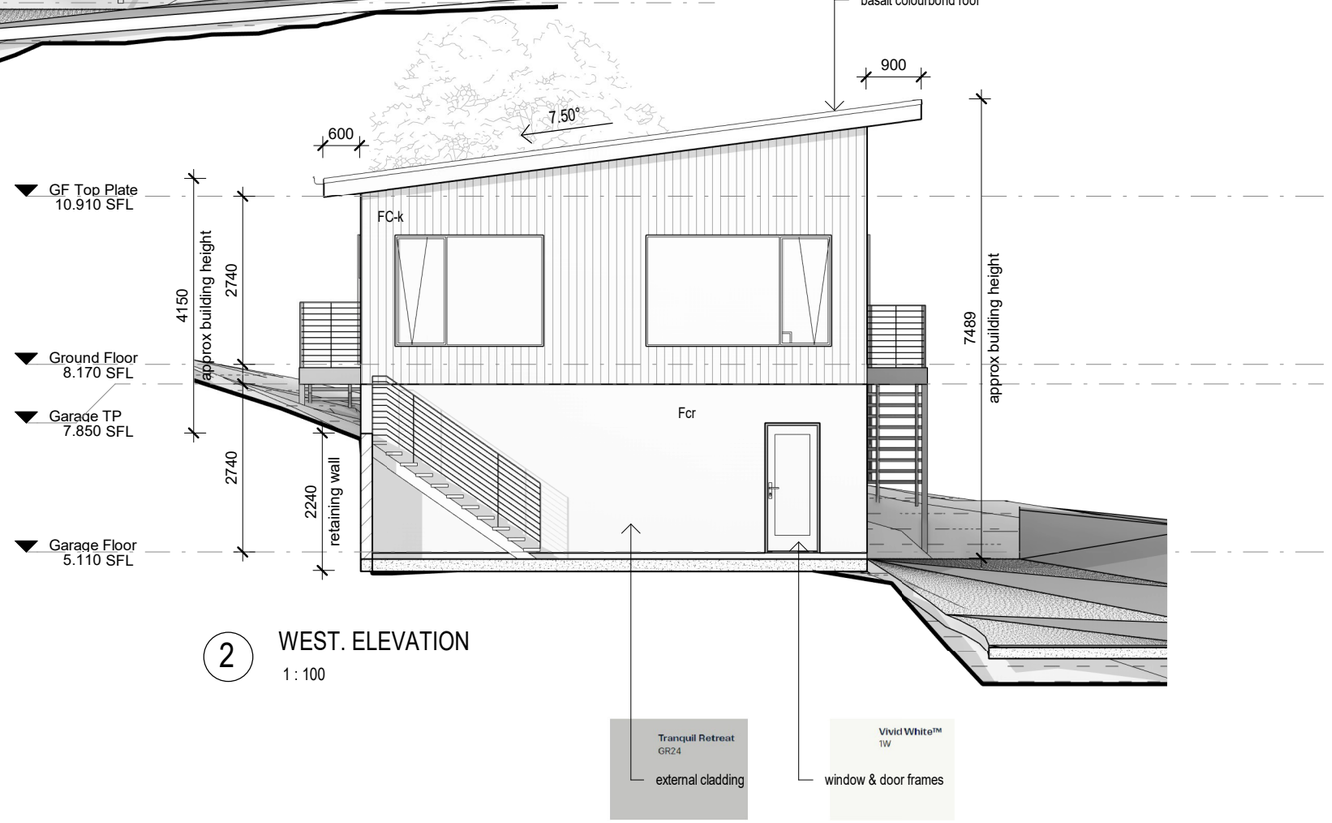
LEGEND	
FC-k	FireCrunch K-Clad
Fcr	Fibre-Cement, Render Finish



1 SOUTH. ELEVATION
1 : 100



basalt colourbond roof



2 WEST. ELEVATION
1 : 100

Elevations - South & West

DESIGN: **CUSTOM**	JOB ADDRESS: **LOT 25, 48 PINE RIDGE ROAD, KINGLAKE WEST**	S.P: LP55006	ISSUE: **E**
STAGED PLAN: **PRELIMINARY**		SCALE: 1 : 100 @ A3	
CLIENT: **BISBAL & TEODORO**	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRES TO **BUILDING CONTRACTOR**. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORK TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.	DWG No: 301	LAND AREA: 953m²

REV	DATE	DESCRIPTION	DRAWN	CHECKED
A	07.06.23	SCHEMATICS ISSUED	RR	RR
B	23.06.23	CLIENT CHANGES	RR	RR
C	18.08.23	CLIENT CHANGES	RR	RR
D	05.12.23	RFI CHANGES	RR	RR
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LOGANHOLME, QLD 4129

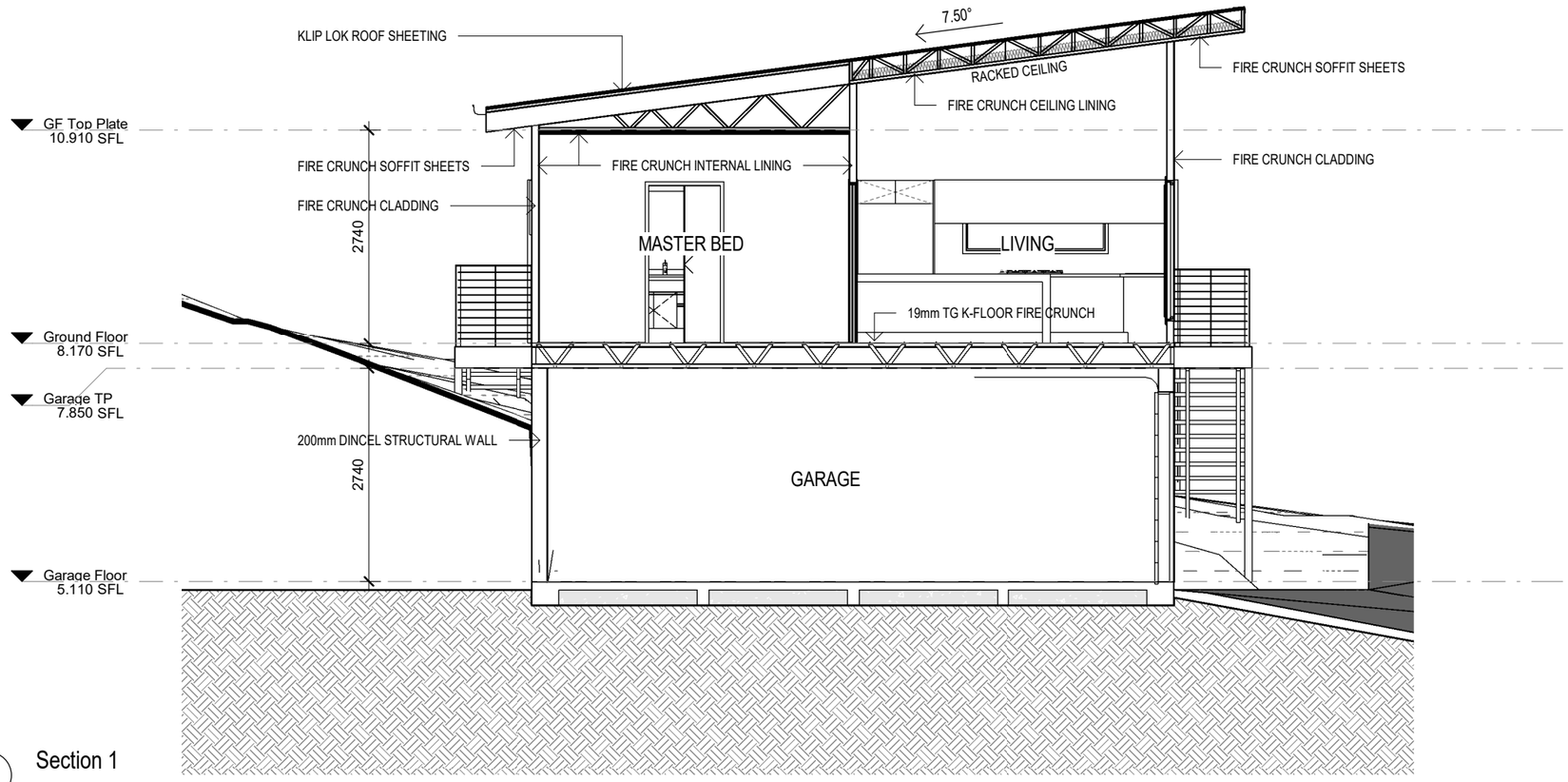
Phone: +61 73806 5100

QBCC: 1511 1256

NOTES:
- SELECTED ROOF FIXED IN ACCORDANCE WITH STRUCTURAL FABRICATION DRAWINGS.
- ROOF BATTENS FIXED IN ACCORDANCE WITH STRUCTURAL FABRICATION DRAWINGS.
- ROOF TRUSSES TO STRUCTURAL FABRICATION DRAWINGS.
- BRACING OF TRUSSES & SUB-FLOOR TO BE IN ACCORDANCE WITH STRUCTURAL FABRICATION DRAWINGS.
- SLAB & FOOTINGS TO ENGINEERS DETAIL.
- FLOORING MEMBERS TO STRUCTURAL FABRICATION DRAWINGS.
- TERMITE TREATMENT TO BE INSTALLED AS PER MANUFACTURERS SPEC. & IN ACCORDANCE WITH AS 3660.1 BY LICENSED CONTRACTOR

ALERT: THIS PROPERTY IS LOCATED IN A BUSHFIRE PRONE AREA. REFER TO BUSHFIRE REPORT FOR **"BAL 29"** RATING

NOTE:
DOUBLE GLAZING THROUGHOUT



1 Section 1
1 : 75

Sections

DESIGN: **CUSTOM**	JOB ADDRESS: **LOT 25, 48 PINE RIDGE ROAD, KINGLAKE WEST**	S.P: LP55006	ISSUE: **E**
STAGED PLAN: **PRELIMINARY**		SCALE: 1 : 75 @ A3	
CLIENT: **BISBAL & TEODORO**	USE FIGURED DIMENSIONS AT ALL TIMES. REFER ANY ENQUIRES TO **BUILDING CONTRACTOR**. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION. ALL WORK TO COMPLY WITH LOCAL AUTHORITY REGULATIONS.	DWG No: 400	LAND AREA: 953m²

REV	DATE	DESCRIPTION	DRAWN	CHECKED
A	07.06.23	SCHEMATICS ISSUED	RR	RR
B	23.06.23	CLIENT CHANGES	RR	RR
C	18.08.23	CLIENT CHANGES	RR	RR
D	05.12.23	RFI CHANGES	RR	RR
E	21.12.23	RFI CHANGES	RR	RR

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CADOX

Cadox Building Design Pty Ltd

Quality Design and Drafting - Plan Your Dreams





Shire of Yarra Ranges

Proposed Residence

FARMING ZONE 35.07-6

Written Assessment Responding to Decision Guidelines for Zone 35.07-6

48 Pine Ridge Road, Kinglake 3757

Submission prepared by: Clare Cromie

Date: FEBUARY 2024

APPLICANT

Cadox Building Design Pty Ltd
On behalf of Sergio Teodoro & Caroline Bisbal

SUBJECT SITE

48 Pine Ridge Road, Kinglake 3757

ZONES AND OVERLAYS

- Farming Zone (FZ)
- Schedule to the zone (FZ)
- Bushfire Management Overlay (BMO)
- Restructure overlay (RO)
- Restructure overlay Schedule (RO)

INTRODUCTION

Our client wishes to develop a double-storey dwelling on the property. The proposal is intended as a home to live in. The owner does not have the intention of perusing any agricultural activity on the site.

As Pine Ridge Road serves the same or similar purposes for many of the other residents, we do not believe this proposal to be dissimilar and ask that the council consider the following responses to the local policies.

CLAUSE 35.07-6: GENERAL ISSUES

- The Municipal Planning Strategy and the Planning Policy Framework.
- Any Regional Catchment Strategy and associated plan applying to the land.
- The capability of the land to accommodate the proposed use or development, including the disposal of effluent.
- How the use or development relates to sustainable land management.
- Whether the site is suitable for the use or development and whether the proposal is compatible with adjoining and nearby land uses.
- How the use and development make use of existing infrastructure and services.

Response

Although the property is in near proximity of the Goulburn Broken Regional Catchment Strategy The property under consideration falls outside the purview of a Regional Catchment Strategy.

The land is more than capable to accommodate the proposed use or development, including the disposal of effluent, for detailed insights, it is recommended to consult the Smolders Geotechnical – Land Capability Assessment Report.
The proposed two storey development relates to sustainable land management due to the design minimizing environmental impact, it is promoting resource efficiency, and prioritises the ability of future generations to meet their own needs.

The development is suitable for the site as it blends in with the surrounding areas with the materials chosen. It also is compatible with the surrounding properties as Pine Ridge Road has multiple single and double storey dwellings with approximately similar sized blocks, and a common feel for various architectural styles, aligning well with the proposed development. Given the site location and the relevant planning provisions for this area, the site is ideally positioned and designed to accommodate for the proposed development. In response to the use of existing infrastructure, the site is currently without water supply and septic connection.

AGRICULTURAL ISSUES AND THE IMPACTS FROM NON-AGRICULTURAL USES

- Whether the use or development will support and enhance agricultural production.
- Whether the use or development will adversely affect soil quality or permanently remove land from agricultural production.
- The potential for the use or development to limit the operation and expansion of adjoining and nearby agricultural uses.
- The capacity of the site to sustain the agricultural use.
- The agricultural qualities of the land, such as soil quality, access to water and access to rural infrastructure.
- Any integrated land management plan prepared for the site.
- Whether Rural worker accommodation is necessary having regard to:
  - The nature and scale of the agricultural use.
  - The accessibility to residential areas and existing accommodation, and the remoteness of the location.
- The duration of the use of the land for Rural worker accommodation.

Response

Given the precedence in the area, future agricultural activities will not be a viable option as a self-sustaining method down the track. The proposal offers minimal site cuts which in turn reduce any impact and protects the land for future use should it be required.

The proposed dwelling on the site is anticipated to have no detrimental impact on the soil's capacity for agricultural stimulation, maintaining a comparable level to its condition prior to the development.

As the site and neighbouring properties are all on separate titles, future expansion of the use and development of the land is not an option. The lots size would need to be consolidated to produce a suitable land size far more than the current site to offer any means of suitable land development.

The proposal for the dwelling is a proposed two storey dwelling and its intention is not to be used for agricultural purposes and therefore rural worker accommodation is not necessary.

ACCOMADATION ISSUES

- Whether the dwelling will result in the loss or fragmentation of productive agricultural land.

- Whether the dwelling will be adversely affected by agricultural activities on adjacent and nearby land due to dust, noise, odour, use of chemicals and farm machinery, traffic and hours of operation.

- Whether the dwelling will adversely affect the operation and expansion of adjoining and nearby agricultural uses.

- The potential for the proposal to lead to a concentration or proliferation of dwellings in the area and the impact of this on the use of the land for agriculture.

- The potential for accommodation to be adversely affected by noise and shadow flicker impacts if it is located within one kilometre from the nearest title boundary of land subject to:

  - A permit for a wind energy facility; or
  - An application for a permit for a wind energy facility; or
  - An incorporated document approving a wind energy facility; or
  - A proposed wind energy facility for which an action has been taken under section 8(1), 8(2), 8(3) or 8(4) of the *Environment Effects Act 1978*.

- The potential for accommodation to be adversely affected by vehicular traffic, noise, blasting, dust and vibration from an existing or proposed extractive industry operation if it is located within 500 metres from the nearest title boundary of land on which a work authority has been applied for or granted under the *Mineral Resources (Sustainable Development) Act 1990*.

Response

The proposed dwelling is a two-storey house and its design approach to ensure minimal impact on the agricultural aspects of the land. The Dwellings purpose is to accommodate the residents of the house and will not be proving accommodation for others that might influence the surrounding agricultural environment. The property will not affect adjacent properties with dust, noise, odour, use of chemicals and farm machinery, traffic, and hours of operation due to only the resident's cars coming in and out of the property.

This approach seeks to establish a harmonious coexistence between the dwelling and the agricultural setting, assuring that the dwelling does not adversely affect the farming or cultivation activities in the surrounding vicinity.

ENVIRONMENTAL ISSUES

- The impact of the proposal on the natural physical features and resources of the area, in particular on soil and water quality.

- The impact of the use or development on the flora and fauna on the site and its surrounds.

- The need to protect and enhance the biodiversity of the area, including the retention of vegetation and faunal habitat and the need to revegetate land including riparian buffers along waterways, gullies, ridgelines, property boundaries and saline discharge and recharge area.

- The location of on-site effluent disposal areas to minimise the impact of nutrient loads on waterways and native vegetation.

Response

The site will sustain minimal cuts and fill and in turn will have a minimal effect on soil and water quality. The foundation of the building is to be on a timber sub-floor, which will inhibit the ability of land shift on the site.

Our design carefully considers the existing vegetation and habitat on the property. The design will have minimal disruption to the natural environment as the development proposed takes up a small amount of land on the property, and the cladding chosen is Eco-friendly using 95% less CO2 emission than plasterboard.

Flora and fauna on the site will not be largely affected by the proposed works. Further planting will be adopted to help reticulate the site once the proposed works are complete. Which will add to the visual appeal as well as landscape significance.

The designs landscaping prioritizes the use of native plants that are well-adapted to the local ecosystem. This approach promotes biodiversity and provides resources for native wildlife, such as food and shelter.

The location of the existing effluent field is unknown. Please refer to the Smolders Geotechnical land and capability assessment report for further information.

DESIGN AND SITING ISSUES

- The need to locate buildings in one area to avoid any adverse impacts on surrounding agricultural uses and to minimise the loss of productive agricultural land.
- The impact of the siting, design, height, bulk, colours and materials to be used, on the natural environment, major roads, vistas and water features and the measures to be undertaken to minimise any adverse impacts.
- The impact on the character and appearance of the area or features of architectural, historic or scientific significance or of natural scenic beauty or importance.
- The location and design of existing and proposed infrastructure including roads, gas, water, drainage, telecommunications and sewerage facilities.
- Whether the use and development will require traffic management measures.
- The need to locate and design buildings used for accommodation to avoid or reduce noise and shadow flicker impacts from the operation of a wind energy facility if it is located within one kilometre from the nearest title boundary of land subject to:
    - A permit for a wind energy facility; or
    - An application for a permit for a wind energy facility; or
    - An incorporated document approving a wind energy facility; or
    - A proposed wind energy facility for which an action has been taken under section 8(1), 8(2), 8(3) or 8(4) of the Environment Effects Act 1978.
- The need to locate and design buildings used for accommodation to avoid or reduce the impact from vehicular traffic, noise, blasting, dust and vibration from an existing or proposed extractive industry operation if it is located within 500 metres from the nearest title boundary of land on which a work authority has been applied for or granted under the *Mineral Resources (Sustainable Development) Act 1990*.

Response

The design fits into the surrounding environment and has minimal impacts on agriculture as the design integrates sustainability which is essential for achieving sustainable land use patterns. We aim to ensure that our development has minimal effects on the environment, major roads, vistas, and water features. The thoughtful integration of these elements reflects our dedication to preserving the natural beauty of the area.

The development was designed to suit the area and its environment with the colours selected to blend into the natural scenic beauty of the surrounding properties.

The proposed infrastructure is located on Pine Ridge Road, and it does not affect any roads. The property also efficiently uses water tanks for its water sauce. It is important to note that the property is not connected to sewerage, please read the Land Capability report for further information. Additionally, it is explicitly stated that the property will solely be utilized for residential purposes, with no plans for external accommodation beyond the dwelling itself.

CONCLUSION

The design and construction of the proposed two-storey dwelling aligns with the requirements outlined within the Farming Zone and we therefore believe the council will have no issue with the works conducted on the subject land.

We ask that the council strongly consider this report and grant approval accordingly.