CENTRAL GOLDFIELDS SHIRE COUNCIL

Amendment to Planning Application

(Section 50 or 57A Application)

- Use this form if you have an existing application with Council that you would like to change before Council makes its decision. This form can be used before or after an application has been notified, but not after Council has made a determination in respect of the application.

CURRENT APPLICATION DETAILS

Planning Permit Application No.:	101-24
Address:	164 Mount View Goldsborough
What was the original proposal	Use and deveopment of land for a dwelling

THE AMENDMENT PROPOSED

This application is being lodged (tick one):	Prior to notification commencing (Section 50 of the *Planning and Environment Act 1987*) ☑ After notification has commenced (Section 57A of the *Planning and Environment Act 1987*) ☐
What changes are you seeking to make to the current application? *Detail any changes sought to the plans or any other documents previously submitted with the Planning Permit Application.* *Attach a supplementary page if more space is required.*	The proposed use and development of a dwelling and associated domestic outbuilidng.

APPLICANT DETAILS * please enter a valid email address

Name:	Julie Lee
Organisation (if applicable):	NRLinks Pty Ltd
Postal Address:	P.O. Box 61, Clunes, Vic
Telephone No.	[redacted]
***Email Address**	[redacted]

DECLARATION:

I declare that all information given is true and correct.	[redacted]	Date: 2/5/2025

If you have any further enquiries please contact Central Goldfields Shire Council Planning Department on ***(03) 5461 0610.***

CENTRAL GOLDFIELDS SHIRE COUNCIL

Office Use Only

Application No.: Date Lodged: / /

Application for
Planning Permit

If you need help to complete this form, read How to complete the Application for Planning Permit 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.

Planning Enquiries
Phone: (03) 5461 0610
email:
planning@cgoldshire.vic.gov.au

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

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

The Land

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

Street Address *

Unit No.: | St. No.: 164 | St. Name: Mount view Road

Suburb/Locality: Heathcote | Postcode: 3523

Formal Land Description *
Complete either A or B.

⚠ This information can be found on the certificate of title.

A Lot No.: ☐ Lodged Plan ☐ Title Plan ☐ Plan of Subdivision No.:

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.

(2) **For what use, development or other matter do you require a permit? ***

If you need help about the proposal, read: How to Complete the Application for Planning Permit Form

Residential Home. Single story, Colorbond Roof & cladding, 4 Bedroom, 2 bathroom, attached carport.

Provide additional information on 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.

(3) **Estimated cost of development for which the permit is required ***

Cost $180,000 ⚠ 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

(4) **Describe how the land is used and developed now ***

eg. vacant, three dwellings, medical centre with two practitioners, licensed restaurant with 80 seats, grazing, the specific agricultural use etc.

Vacant land

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

Title Information

5 **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).

Applicant and Owner

6 Provide details of the applicant a

Applicant *

The person who wants the permit.

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', eg. restrictive covenants.)

Name:

Title: Mr | First Name: Bobby | Surname: Karevski

Organisation (if applicable):

[redacted]

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 (if so, go to 'contact information') ☑

Name:

Title: Mr | First Name: Bobby | Surname: Karevski

Organisation (if applicable):

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

Unit No.: | St. No.: | St. Name:

Suburb/Locality: | State: | Postcode:

Please provide at least one contact phone number *

Contact information

[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.

Name:

Same as applicant ☑

Title: | First Name: | Surname:

Organisation (if applicable):

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

Unit No.: | St. No.: | St. Name:

Suburb/Locality: | State: | Postcode:

Owner's Signature (Optional):

Date: 31/10/2024

day / month / year

Declaration

7 **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.

Sign [redacted]

Date: 31/10/2024

day / month / year

Need help with the Application?

If you need help to complete this form, read How to complete the Application for Planning Permit form
General information about the planning process is available at www.delwp.vic.gov.au/planning

Contact Council's planning department to discuss the specific requirements for this application and obtain a planning permit checklist. Insufficient or unclear information may delay your application.

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

☑ No ☑ Yes

Checklist

9 **Have you:**

☑ Filled in the form completely?

☑ Paid or included the application fee?

⚠ Council will invoice the statutory fee/s as well as any council fees such as advertising.

Provided all necessary supporting information and documents?

- ☑ A full, current copy of title information for each individual parcel of land forming the subject site
- ☑ A plan of existing conditions.
- ☑ Plans showing the layout and details of the proposal
- ☑ Any information required by the planning scheme, requested by council or outlined in a council planning permit checklist.
- ☑ If required, a description of the likely effect of the proposal (eg traffic, noise, environmental impacts).
- ☑ If applicable, a current Metropolitan Planning Levy certificate (a levy certificate expires 90 days after the day on which it is issued by the State Revenue Office and then cannot be used). Failure to comply means the application is void.

☑ Completed the relevant Council planning permit checklist?

☑ Signed the declaration (section 7)?

Lodgement

Lodge the completed application to:

Central Goldfields Shire Council
PO Box 194
Maryborough VIC 3465

22 Nolan Street, Maryborough VIC 3465

Contact information:

Phone: (03) 5461 0610
Email: mail@cgoldshire.vic.gov.au

All correspondence will be via email and that is the preferred lodging method. Once received an invoice will be raised and emailed to the applicant.

SURVEY NOTES

- LEVELS ARE TO AUSTRALIAN HEIGHT DATUM BASED ON PAINSWICK PM 28 WITH A STATED VALUE OF 248.436M. AND CONNECTION HAS BEEN DETERMINED BY THE AID OF A GPS WITH A STATED ACCURACY OF +/-20MM.
- CONTOUR INTERVALS AT 0.2 METRES.
- BOUNDARIES ARE UNFENCED UNLESS NOTED OTHERWISE.
- THE LOCATIONS OF SURFACE PITS, VALVE COVERS ETC. SHOWN HEREON HAVE BEEN DETERMINED BY THIS SURVEY. NO DIRECT KNOWLEDGE IS CLAIMED OF THE LOCATION OF UNDERGROUND SERVICES.
- PRIOR TO ANY EXCAVATION OR CONSTRUCTION, THE RELEVANT AUTHORITY SHOULD BE CONTACTED TO LOCATE POSSIBLE UNDERGROUND SERVICES.
- ADJOINING PROPERTY INFORMATION IS A COMBINATION OF GROUND MEASUREMENT AND INTERPRETATION OF AERIAL IMAGERY.
- DATE OF SURVEY: 27/08/2024

SITE PHOTO

LEGEND

⍋	TEMPORARY SITE LEVEL BENCHMARK
■	TITLE PEG

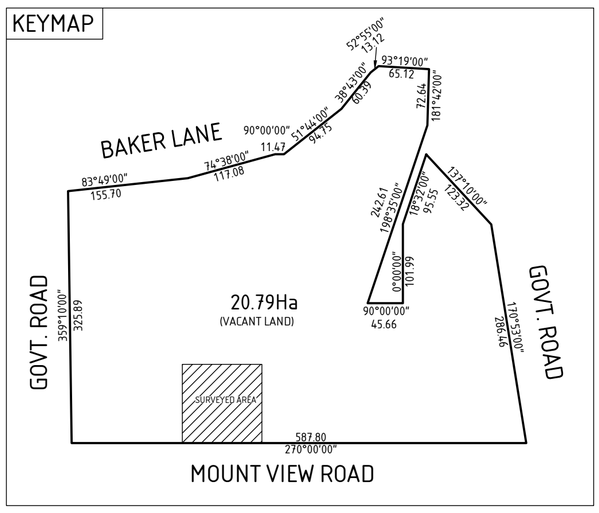
I, SANJEEV SINGH OF 630 MITCHAM ROAD, MITCHAM, VIC, 3132
CERTIFY THAT THIS PLAN HAS BEEN PREPARED FROM A SURVEY MADE UNDER MY DIRECTION AND SUPERVISION IN ACCORDANCE WITH THE SURVEYING ACT 2004 AND COMPLETED ON 27/08/2024, THAT THIS PLAN IS ACCURATE AND CORRECTLY REPRESENTS THE ADOPTED BOUNDARIES AND THAT THE SURVEY ACCURACY ACCORDS WITH THAT REQUIRED BY REGULATION 7(1) OF THE SURVEYING (CADASTRAL SURVEYS) REGULATIONS 2015.

SIGNED BY SANJEEV SINGH 30/08/2024.
LICENSED SURVEYOR, SURVEYING ACT 2004.

NOTES:

THIS SURVEY HAS BEEN CARRIED OUT FOR THE EXCLUSIVE USE OF THE PROPRIETORS FOR THE PURPOSE OF TITLE RE-ESTABLISHMENT ON THE SITE AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE OR BY ANY OTHER PERSON OR CORPORATION. STRUCTURES BELOW THE SURFACE LEVEL (IF ANY) INCLUDING FOOTINGS PROJECTING INTO THE SITE FROM ADJOINING PROPERTIES HAVE NOT BEEN LOCATED BY THIS SURVEY. WE HAVE NOT EXCAVATED THE SITE TO DETERMINE THEIR EXISTENCE. THE POSITION OF OCCUPATION (FENCES, BUILDINGS ETC) SHOWN NEAR BOUNDARIES ARE NOT NECESSARILY PLOTTED TO SCALE AND IN MOST INSTANCES THEIR POSITIONS HAVE BEEN EXAGGERATED FOR CLARITY.

KEYMAP



APPROX. NORTH

STAR PICKET
(CENTER OF PROPOSED BUILDING AREA)

TBM 2
NAIL IN PEG
AHD RL: 228.60

TBM 1
NAIL IN PEG
AHD RL: 230.05

20.79Ha
(VACANT LAND)

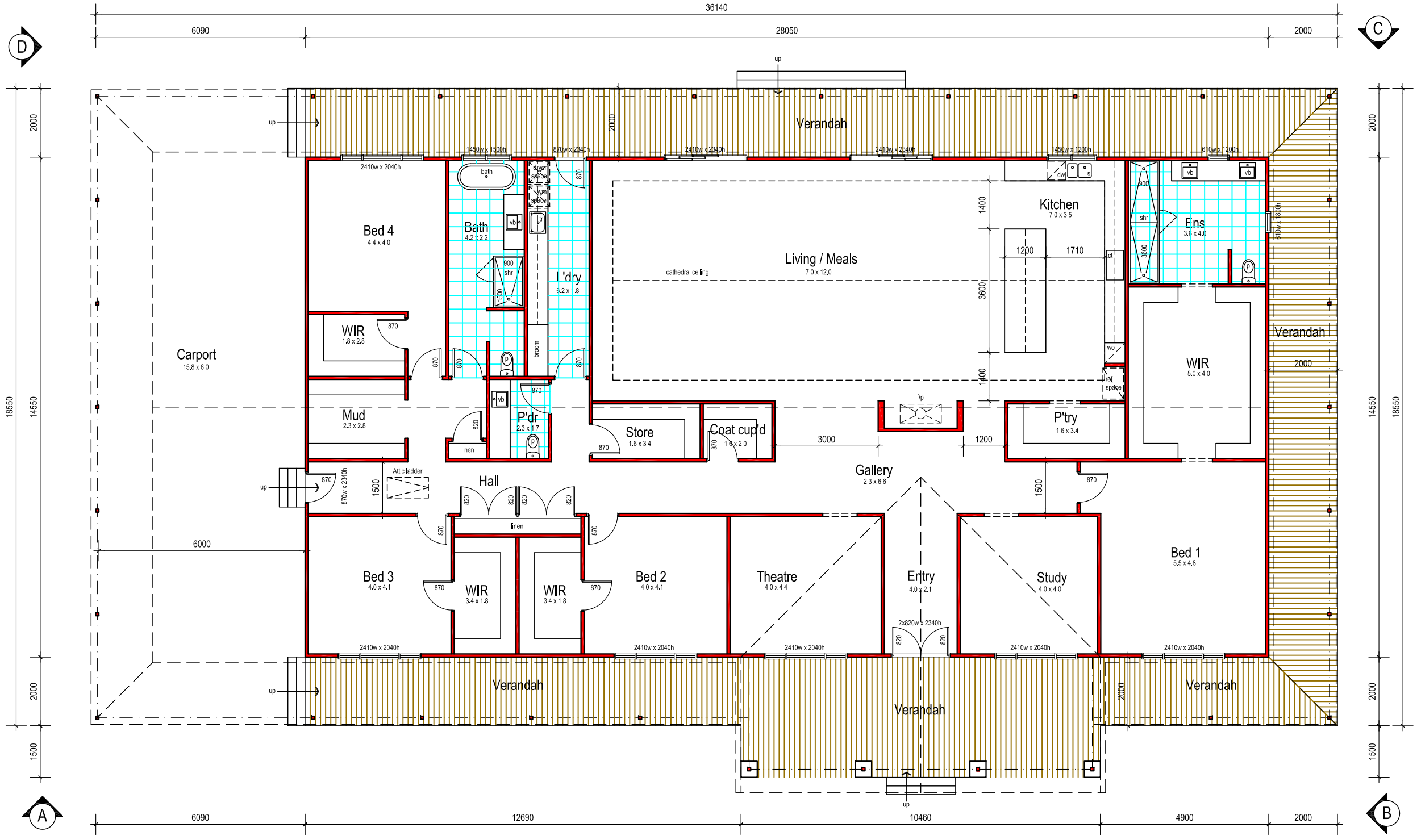
EXISTING 1.4MH STAR PICKET & WIRE FENCE

EDGE OF GARVEL ROAD

MOUNT VIEW ROAD

0 2m 4m 6m 8m 10m

APPROVED	CLIENT	SHEET	PROJECT ADDRESS		DESIGN BY	REVISION	PROJECT NO.
SANJEEV SINGH	BOBBY KAREVSKI	FEATURE SURVEY PLAN	NO. 164 MOUNT VIEW ROAD, GOLDSBOROUGH, VIC	STRUCterre consulting	TOTN	1	3.24.9275.1
LICENSED SURVEYOR		SCALE 1:200 @ A1	PC 375113G VER.1		CHECKED	DATE	SHEET NO.
						30/08/2024	1 of 1



Floor Plan scale1:125

HOUSE	SQM	SQS
FLOOR AREA	408.12	
VERANDAH	164.99	
CARPORT	110.65	
TOTAL AREA	683.76	73.60

REGISTERED Building Practitioner

Rev.	Amendments:	Date:	By:
-	Drawings issued for approval.	18.07.24	F.M.
A	Drawings issued for approval.	07.08.24	F.M.
B	Drawings issued for approval.	19.08.24	F.M.
C	Drawings issued for approval.	17.10.24	F.M.

Project:
NEW RESIDENCE

At:
No. 164 MOUNT VIEW ROAD, GOLDSBOROUGH.

Client:
BOBBY KAREVSKI & RIKKI MORANI

Drawing Name:
FLOOR PLAN

CBD Creative Building Designers
9A Fosters Road, Kelior Park, Vic. 3042
Office: (03) 9336 3343
Mobile: 0404 856 726
Email: fabio@cbddesigns.com.au
Web: www.cbddesigns.com.au

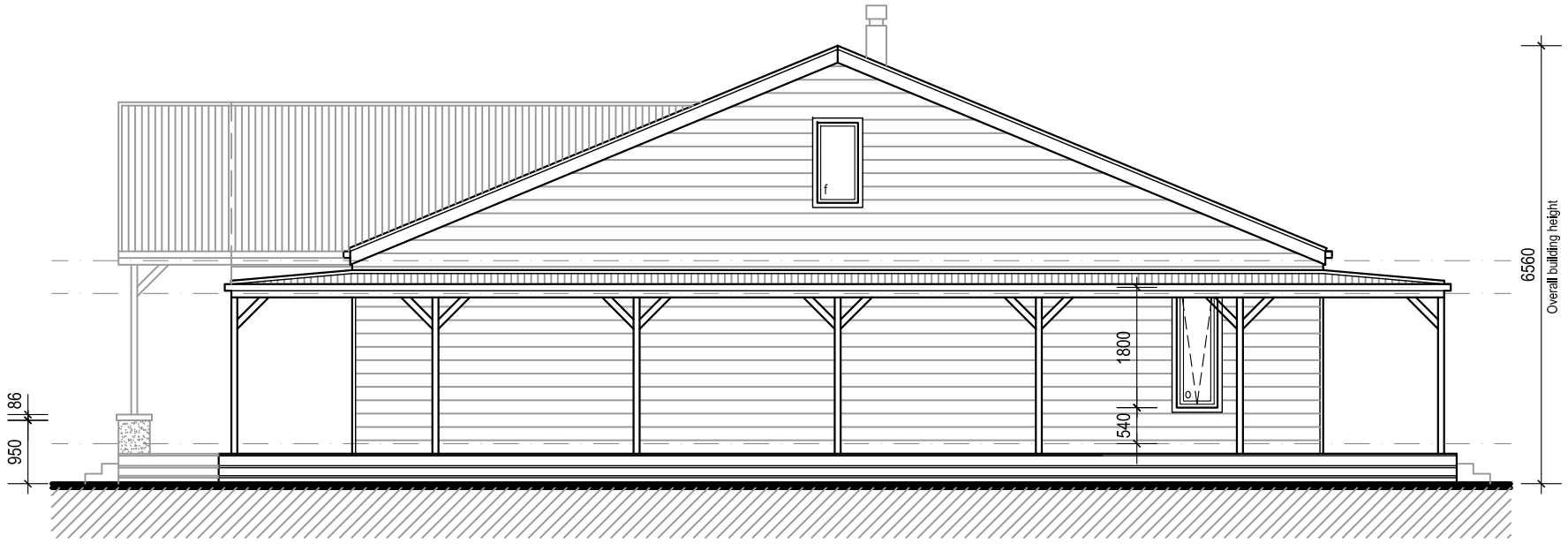
Job No:	061924
Date:	18.07.24
Scale:	1:125 @ A3
Drawn:	F.M.
Checked:	F.M.

Orientation

Drawing No:	Rev:	Stage:
01	C	PD

PRELIMINARY DESIGN
DRAWINGS ISSUED FOR APPROVAL

Elevation A scale1:100



Elevation B scale1:100

Schedule - Material & Finishes

Item	Material	Colour	
Metal roof + fascia & Gutter	Colourbond	Shale Grey	
Exposed timber gable feature and verandah post + decking	Treated structural LVL or LSOP, and Hardwood decking	Natural stained timber	
Main Cladding	James Hardie Linea Board	Surfmist/White Exchange	
Windows & Sliding doors	Aluminium	Monument	
Downpipe	Charged PVC	Surf mist/White exchange	
Balcony Balustrade	Aluminium	Monument/Black	
Entry Door	Hume Hardwood door	Black Caviar	

REGISTERED Building Practitioner

Rev.	Amendments:	Date:	By:
-	Drawings issued for approval.	18.07.24	F.M.
A	Drawings issued for approval.	07.08.24	F.M.
B	Drawings issued for approval.	19.08.24	F.M.
C	Drawings issued for approval.	17.10.24	F.M.

Project:
NEW RESIDENCE

At:
No. 164 MOUNT VIEW ROAD, GOLDSBOROUGH.

Client:
BOBBY KAREVSKI & RIKKI MORANI

Drawing Name:
ELEVATIONS

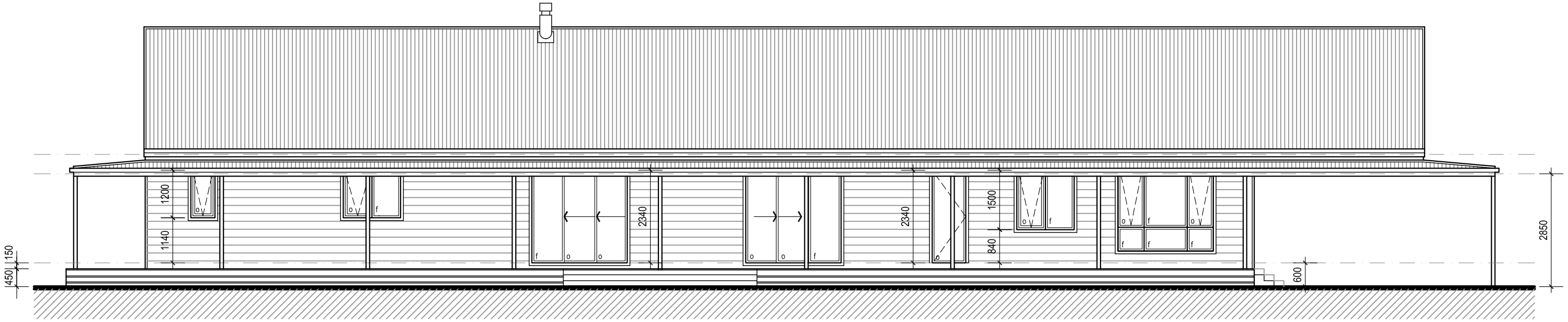
CBD Creative Building Designers
9A Fosters Road, Kelior Park, Vic. 3042
Office: (03) 9336 3343
Mobile: 0404 856 726
Email: fabio@cbddesigns.com.au
Web: www.cbddesigns.com.au

Job No:	061924
Date:	18.07.24
Scale:	1:125 @ A3
Drawn:	F.M.
Checked:	F.M.

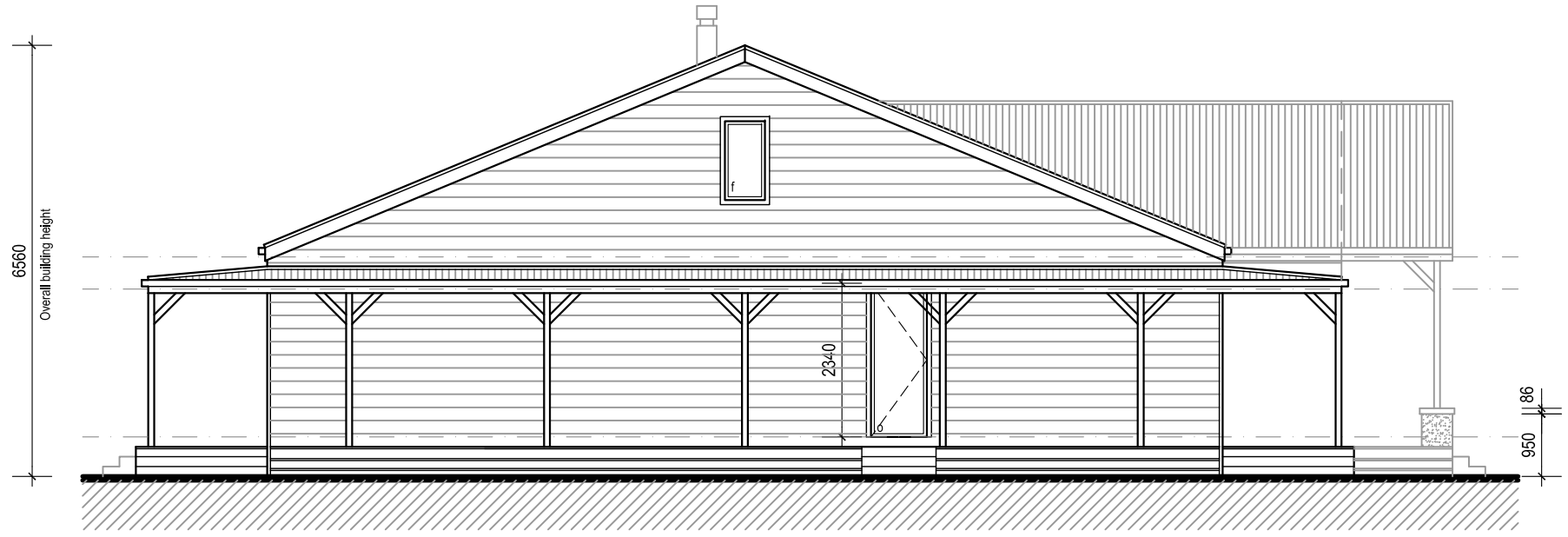
Orientation

Drawing No:	Rev:	Stage:
02	C	PD

PRELIMINARY DESIGN
DRAWINGS ISSUED FOR APPROVAL

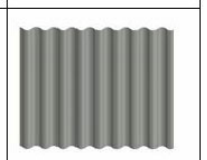
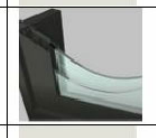


Elevation C scale1:100



Elevation D scale1:100

Schedule - Material & Finishes

Item	Material	Colour	
Metal roof + fascia & Gutter	Colourbond	Shale Grey	
Exposed timber gable feature and verandah post + decking	Treated structural LVL or LSOP, and Hardwood decking	Natural stained timber	
Main Cladding	James Hardie Linea Board	Surfmist/White Exchange	
Windows & Sliding doors	Aluminium	Monument	
Downpipe	Charged PVC	Surf mist/White exchange	
Balcony Balustrade	Aluminium	Monument/Black	
Entry Door	Hume Hardwood door	Black Caviar	

REGISTERED Building Practitioner

Rev.	Amendments:	Date:	By:
-	Drawings issued for approval.	18.07.24	F.M.
A	Drawings issued for approval.	07.08.24	F.M.
B	Drawings issued for approval.	19.08.24	F.M.
C	Drawings issued for approval.	17.10.24	F.M.

Project:
NEW RESIDENCE

At:
No. 164 MOUNT VIEW ROAD, GOLDSBOROUGH.

Client:
BOBBY KAREVSKI & RIKKI MORANI

Drawing Name:
ELEVATIONS

CBD Creative Building Designers
9A Fosters Road, Kelior Park, Vic. 3042
Office: (03) 9336 3343
Mobile: 0404 856 726
Email: fabio@cbddesigns.com.au
Web: www.cbddesigns.com.au

Job No:	061924
Date:	18.07.24
Scale:	1:125 @ A3
Drawn:	F.M.
Checked:	F.M.

Orientation

Drawing No:	Rev:	Stage:
03	C	PD

PRELIMINARY DESIGN
DRAWINGS ISSUED FOR APPROVAL

Bushfire Management Report

For PC 375113

164 Mount View Road, Goldsborough

Apr 2025

NR LINKS
Your Planning & Permit Consultants

Bushfire Report: for a Dwelling in Farming Zone

Project no: 2457

Report Prepared: by Julie Lee (Post Grad. Dip of Bushfire Management and Planning-Melb Uni)

Natural Resource Link Pty Ltd

ABN: 83 609 952 025

Address: P.O. Box 61, Clunes 3370

[redacted]

Email: julie@nrlinks.com.au

REV	DATE	DETAILS
	14 APR 25	FINAL
A	23-7/2025	REVISE LOCATION OF DWELLING
B		
C		

Disclaimer

Natural Resource Link Pty Ltd does not accept any liability for an error, omission or loss or other consequence that may arise from relying on this report. Bushfires are a complex set of inter-related activities and environmental parameters and that the onus is on the owner to ensure all due care is taken to manage the risk. The owner's survival relies on constant vigilance, maintenance and a completed bushfire survival plan.

CONTENTS

Images

BUSHFIRE MANAGEMENT STATEMENT

PATHWAY 2 APPLICATION

Dwelling in a Bushfire Management Overlay (BMO) under Farming Zone

Property Address	164 Mount View Road, Goldborough
Applicant/Owners Name	NRLinks Pty Ltd
Date	14 April 2025

Report By	Julie Lee (Natural Resource Link Pty Ltd) Dip. Post Grad. Bushfire Planning and Management (*Melbourne University*)
Address	P.O. Box 61, Clunes 3370
Contact Number	0406 459 522
Email	julie@nrlinks.com.au

INTRODUCTION

This Bushfire Management Statement has been prepared in response to the requirements of Clause 13.02-1S Bushfire Planning, Clause 44.06 Bushfire Management Overlay, and in accordance with the application requirements of Clause 53.02 Bushfire Planning.

The statement contains three components:

1. A **bushfire hazard landscape assessment** including a plan that describes the bushfire hazard of the general locality more than 150 metres from the site. Photographs or other techniques may be used to assist in describing the bushfire hazard.

2. A **bushfire hazard landscape assessment** including a plan that describes the bushfire hazard of the general locality more than 150 metres from the site. Photographs or other techniques may be used to assist in describing the bushfire hazard. The description of the hazard must be prepared in accordance with Section 2.2.3 to 2.2.5 of AS3959:2018 Construction of Buildings in Bushfire Prone Areas.

3. A **bushfire management statement** describing how the proposed development responds to the requirements of Clause 44.06 and Clause 53.02.

Image 1 Vegetation on site has been classified as Woodland

APPLICATION DETAILS

Municipality	Central Goldfields Shire
Title Description	PC375113
Overlays	Bushfire Management Overlay (BMO)
Zoning	Farming Zone (FZ) and SCHEDULE to zone (FZ)

SITE DESCRIPTION

Site Shape	Odd
Site Dimensions	591m W x 540m L
Site Area	28.48ha
Existing use and siting of buildings and works on and near the land	Vacant site
Existing vehicle arrangements	Existing access to site
Location of nearest fire hydrant	There are no fire hydrants in the area
Any other features of the site relevant to bushfire considerations	Allotment in rural area

BUSHFIRE LANDSCAPE ASSESSMENT – SITE

The landscape scenario that represents this is Broader Landscape Type THREE as the site is situated

in an area that is not managed for fuel loads as shown in Appendix.7 Landscape risk. The site has no history of bushfire and has a low level of a Joint Fuel Management Plan; to note the allotment directly to the north is noted as the Township block and a joint fuel reduction program organized by Forest Fire Management.

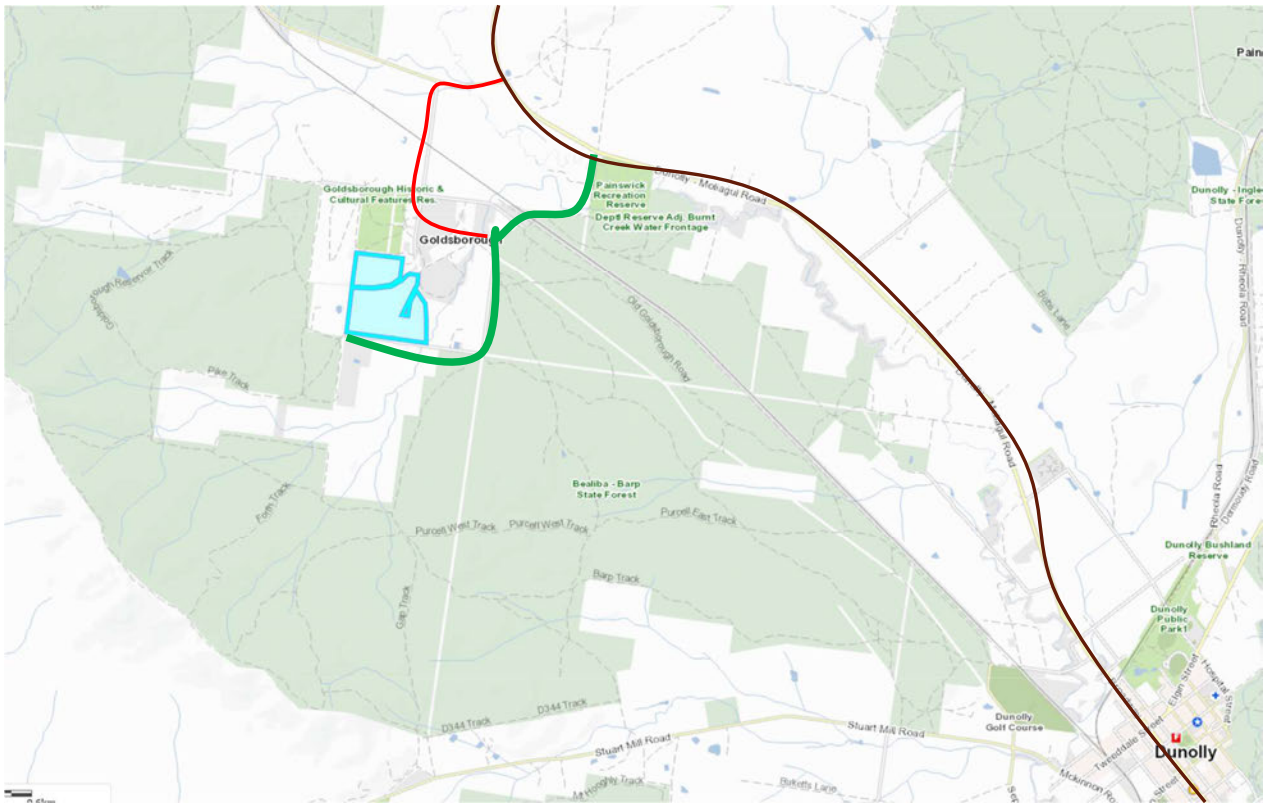


Image .2 egress from site options

The site has limited options for egress to the Dunolly-Moliagul Road (brown) which is a category one road between Dunolly and Bealiba. Egress from the site is only as shown above with the green being the preferred option to the highway. Egress to the south is not possible as the roads are not constructed and there are only winding tracks available on the South Mill Road to the south. These are not suited to egress and travel through a dense forest vegetation.

This limited egress will require the house to be designed well to suit the landscape risk as there is a possibility that safe egress could be lost in the event of a landscape fire.

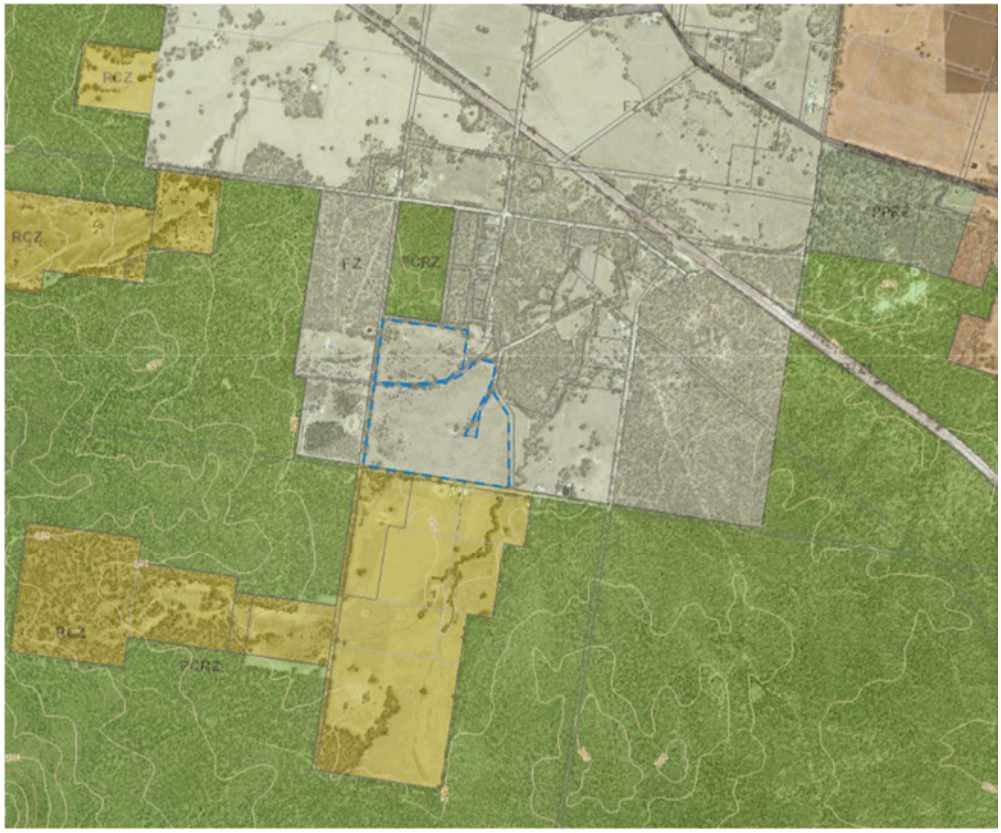


Image .3 landscape (red circle approximate dwelling location).

The landscape is a mix of crown land and privately owned land which predominantly is remnant bushland with some farming. The northern extent is low level grazing balanced with pocket or remnant vegetation. The old township area has a historic settlement pattern reflecting the hisorty of the area; however there is no actual township and the closest town is Dunolly.

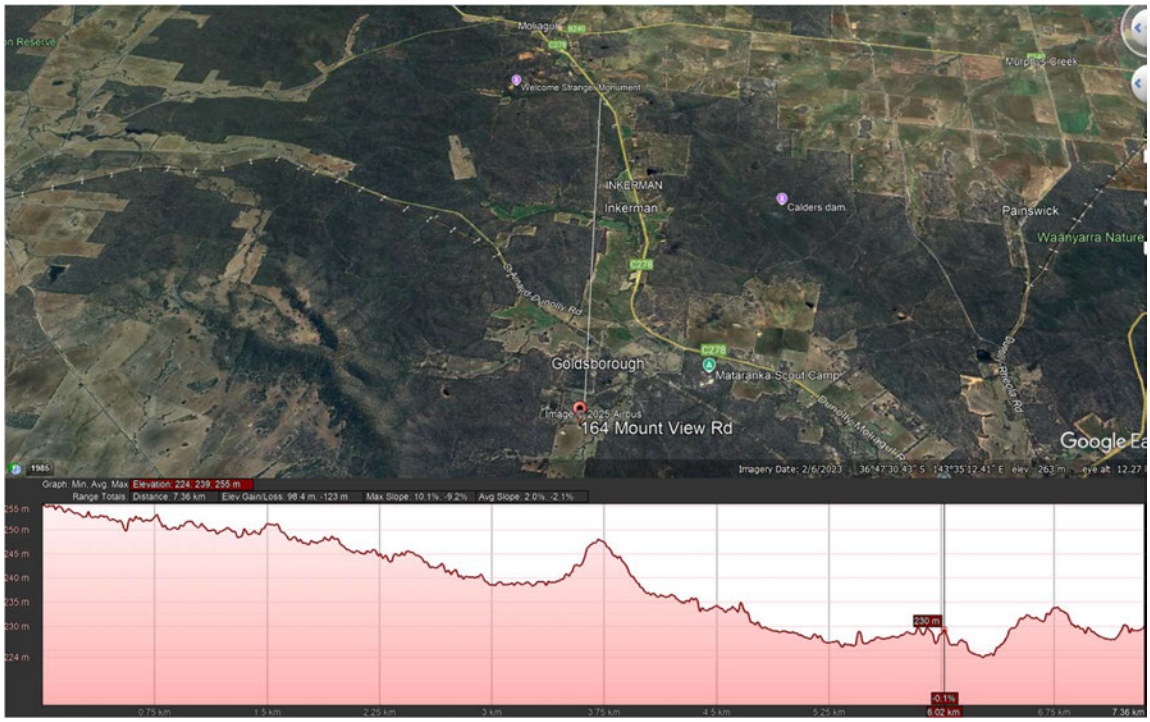
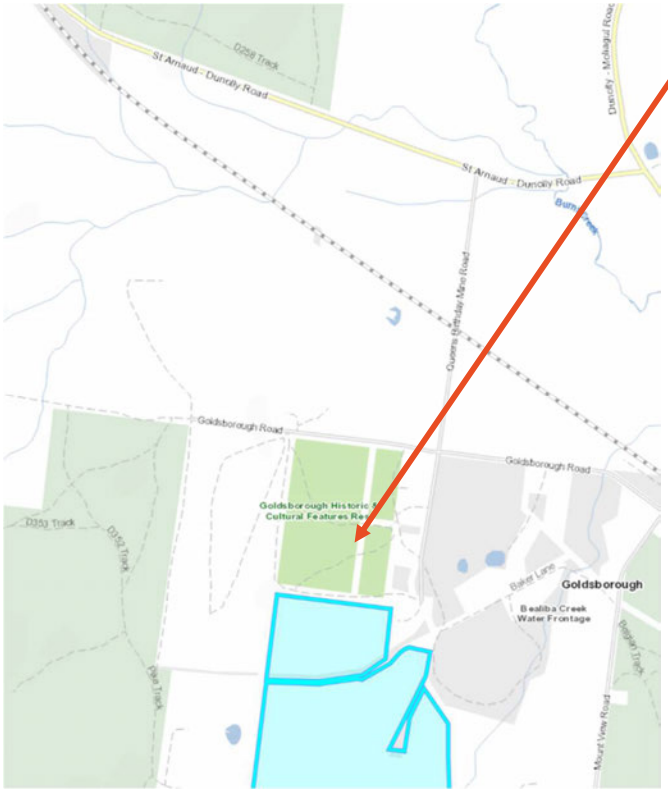


Image.4 Landscape run to the north cross section 7km

The landscape elevation to the north would place a fire upslope of the site, with a gradual decrease in fire intensity due to slope. This elevation slope does not play into the fire intensity; the landscape vegetation is small to large parcels of remnant forest and open pastures.



The land directly to the north is crown land that is managed for fuel. A convection fire to the state forest to the north is highly possible due to the large area of State Forest. There is good access with the highway along the south boundary to provide access to slow a fire.

Image.5 Plantations to the north

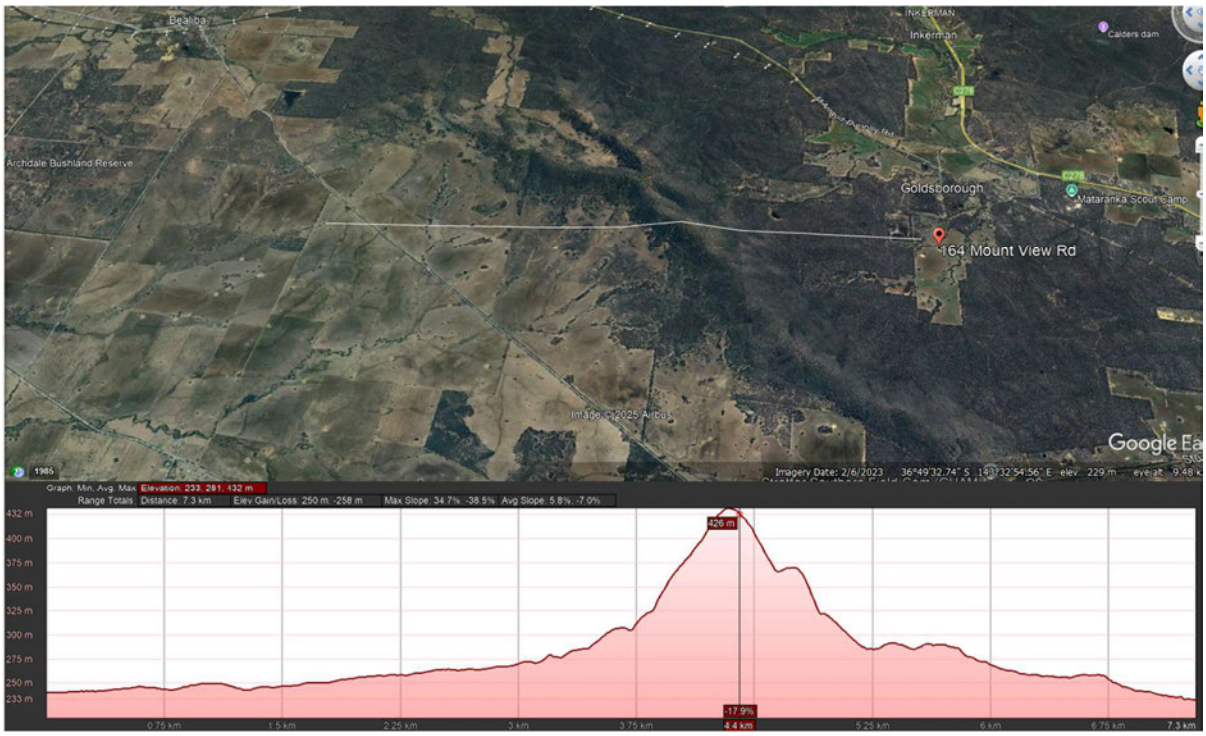


Image.6 Landscape run to the west (7km)

The landscape to the west runs through a large extent of Bealiba-Barp State Forest with a rise of over 200m in height which would subject to site to a high level of ember attack in the event of a westly driven wind. This rise is less than 3km from the site and is clear on Image.6 above. The fuel in the landscape is sufficient to produce a convection fire which would be difficult to access and poses a high risk to the site.

Image. 7 Landscape run to the east (7km)

The landscape to the east runs through a large extent of Bealiba-Barp State Forest; the slope changes in the landscape are minor being less than 20m in height. This forest wraps around the site and has sufficient fuel to create a convection or landscape fire although the run to the east is fragmented with pastures and a wide managed road. This enables back burning and access to stop the fire reaching site that is highly needed as many landowners require access to this one in the event of a bushfire.

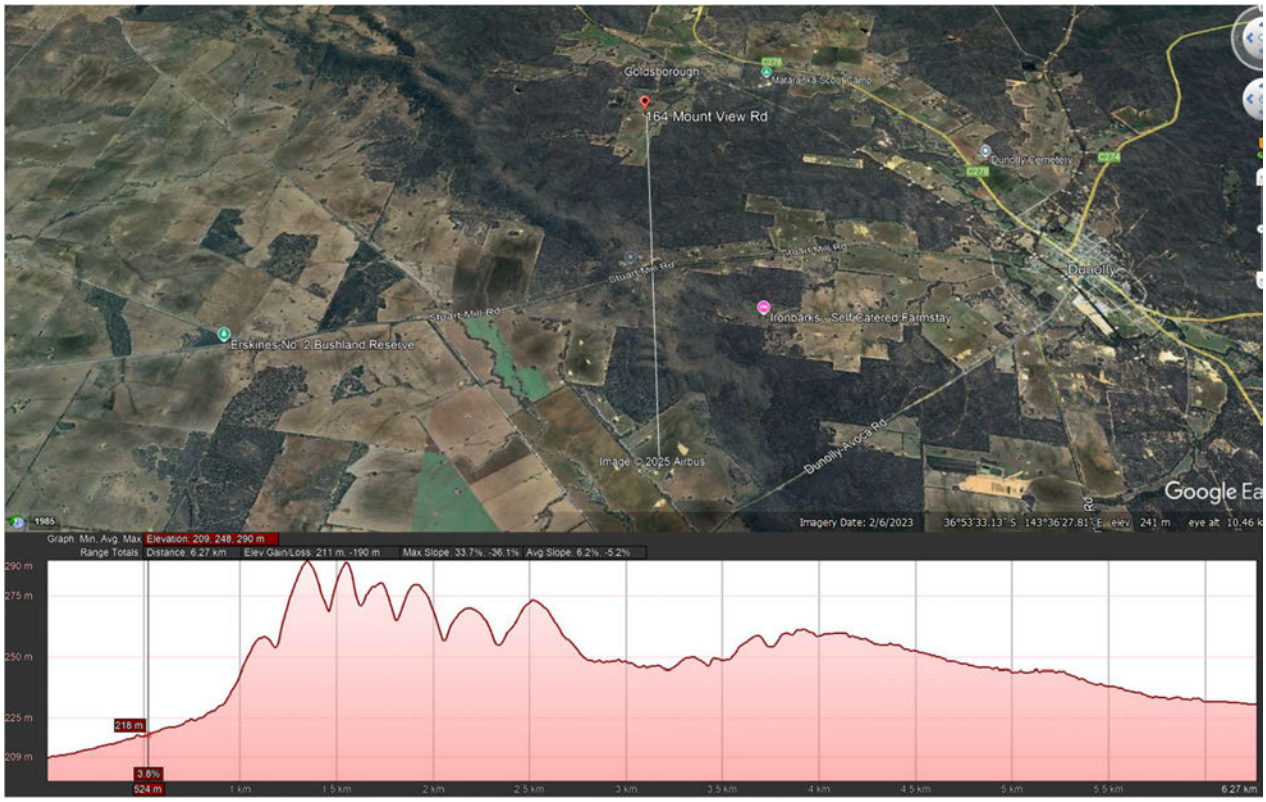


Image. 8 Landscape run to the south (6.3km)

The landscape to the south does have a low rise of elevation just under 100m that if a fire would be subject to a south-west change poses a low risk of embers to the site. This forest wraps around the site and has sufficient fuel to create a convection or landscape fire and has no suitable access for fire fighting so this along with the west poses the highest risk to the site. The house design and construction level will need to elevate a moderate level of ember density.

Image.9 150m radius assessment site

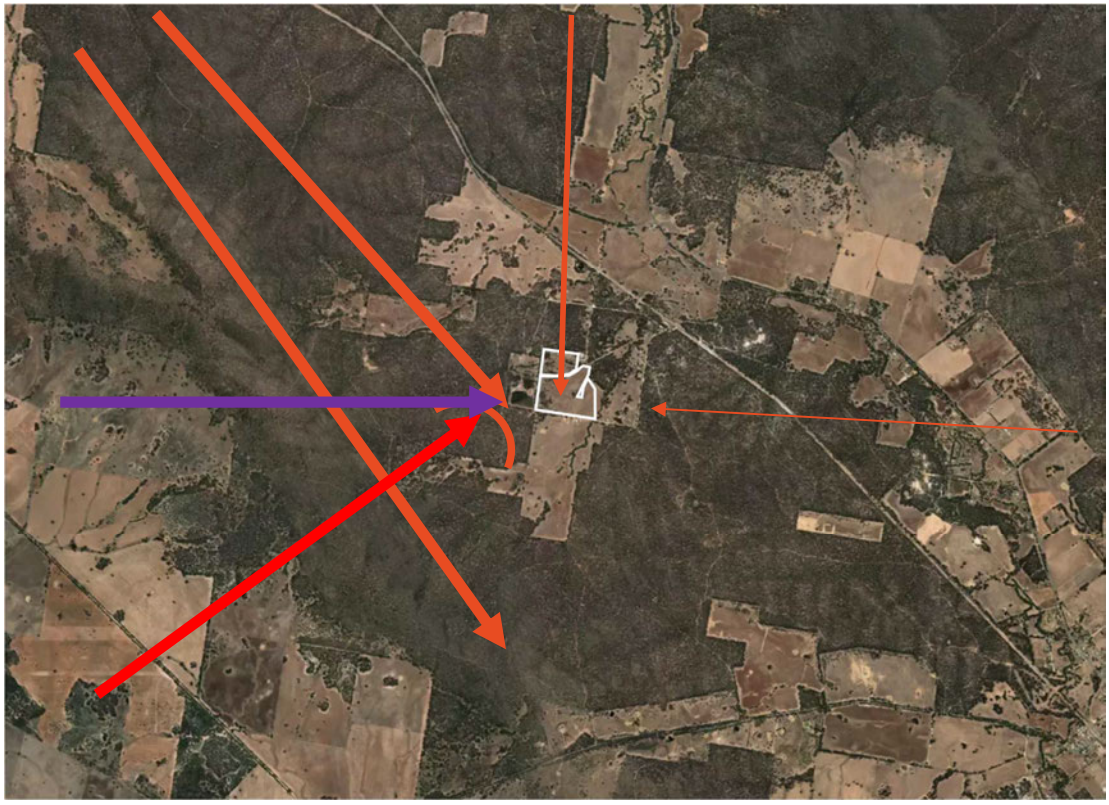


Image.10 Risk in the landscape to site.

The landscape risk is shown above, the thicker the line the higher the risk. Purple is the highest risk from embers as well as from flames.

BUSHFIRE MANAGEMENT STATEMENT

CLAUSE 13.02 BUSHFIRE CLAUSE 13.02-1S BUSHFIRE PLANNING	COMMENTS / RESPONSE
13.02-1S BUSHFIRE PLANNING Bushfire planning, strategies and principles.	
Apply the precautionary principle to planning and decision making when assessing the risk to life, property and community infrastructure from bushfire.	Precautionary principles include consideration of risk to the site with the siting of the dwelling on site is near access and egress where possible. The siting places the dwelling to a clear area to a central location to the south and avoid productive lands to the east of the site.
Prioritise the protection of human life over other policy considerations in planning and decision-making in areas at risk from bushfire.	Human life is given priority in this case and places the dwelling 56.3 from the road but sufficiently set back to reduce the risk of the forest vegetation on site.
Applies best science to identify vegetation, topography and climatic conditions that create a bushfire hazard.	Refer to the site assessment plan attached to this report that will shows all slopes and site conditions (including classifications to surrounding vegetation risk) for this property
Address Landscape risk and consider siting	The landscape risk from embers cannot be reduced with siting but the risk from the radiant heat has been the consideration for the siting.
Ensure biodiversity and environmental objectives are compatible	Biodiversity has been considered as part of this application to avoid remnant vegetation and is placed in a clear area devoid of vegetation.
Ensure easy implementation of mitigation requirements	There is no Mitigation required.
Ensure access and egress are compatible for emergency vehicle access	New access will be created for the dwelling to avoid using the current access through vegetation to reduce the time to egress the site safely.
Clause 44.06 BUSHFIRE MANAGEMENT OVERLAY	**COMMENTS / RESPONSE**
Clause 44.06 BUSHFIRE MANAGEMENT OVERLAY Shown on the planning scheme map as **BMO** with a number (if shown). **Purpose** To implement the Municipal Planning Strategy and the Planning Policy Framework. To ensure that the development of land prioritises the protection of human life and strengthens community resilience to bushfire. To identify areas where the bushfire hazard warrants bushfire protection measures to be implemented. To ensure development is only permitted where the risk to life and property from	This application for a development application in a Farming Zone (FZ) with a Bushfire Management Overlay complies with Clause 44.06. The proposed development can be reduced to an acceptable level to reduce the risk to human life whilst meeting the decision guidelines of the zone.

bushfire can be reduced to an acceptable level.	
Clause 44.06-1 BUSHFIRE MANAGEMENT OBJECTIVES AND APPLICATION OF SCHEDULES A schedule to this overlay must contain a statement of the bushfire management objectives to be achieved for the area affected by the schedule and when the requirements within it apply.	There is no schedule specified for this property in the planning scheme or property report. There is no further information required for this application.
Clause 44.06-2 PERMIT REQUIREMENT **Subdivision** A permit is required to subdivide land. This does not apply if a schedule to this overlay specifically states that a permit is not required. **Buildings and works** A permit is required to construct a building or construct or carry out works associated with the following uses: (refer to Clause 44.06-2 for all of the following uses).	This triggers a permit as part of this application due to a Bushfire Management overlay (BMO) affecting this site and areas with proposed building envelopes. There are no schedules to this overlay that apply to this site.
Clause 44.06-3 APPLICATION REQUIREMENTS Unless a schedule to this overlay specifies different requirements, an application must be accompanied by: • **A bushfire hazard site assessment.** • **A bushfire hazard landscape assessment.** • **A bushfire management statement.**	A bushfire hazard site assessment has been undertaken by **Natural Resource Link Pty Ltd**. The proposed siting has been classified as a **BAL-29** A bushfire hazard site assessment has been provided as part of this report. A Bushfire hazard landscape assessment has been provided as part of this report. (refer to BUSHFIRE LANDSCAPE ASSESSMENT - SITE of this report). This BMS (Bushfire Management Statement) Report has an attached site assessment plan and a BMP (Bushfire Management Plan) which covers all the minimum requirements.
Clause 44.06-4 REQUIREMENTS OF CLAUSE 53.02 An application must meet the requirements of Clause 53.02 unless the application meets all of the requirements specified in a schedule to this overlay. A schedule to this overlay may specify substitute approved measures, additional alternative measures and additional or	This application meets the requirements of **Clause 44.06** and **Clause 53.02**. There is no schedule specified for this property in the planning scheme or property report.

substitute decision guidelines for the purposes of Clause 53.02.	
Clause 44.06-8 DECISION GUIDELINES Before deciding on an application, in addition to the decision guidelines in Clause 53.02 and Clause 65, the responsible authority must consider, as appropriate: • The Municipal Planning Strategy and the Planning Policy Framework. • Any other matters specified in a schedule to this overlay.	This application meets all the requirements in accordance with Clause 44.06 Bushfire Management Overlay.
Clause 53.02 BUSHFIRE PLANNING	**COMMENTS / RESPONSE**
Clause 53.02 BUSHFIRE PLANNING **Purpose** • To implement the Municipal Planning Strategy and the Planning Policy Framework. • To ensure that the development of land prioritises the protection of human life and strengthens community resilience to bushfire. • To ensure that the location, design and construction of development appropriately responds to the bushfire hazard. • To ensure development is only permitted where the risk to life, property and community infrastructure from bushfire can be reduced to an acceptable level. • To specify location, design and construction measures for a single dwelling that reduces the bushfire risk to life and property to an acceptable level.	This application meets all of the relevant Municipal Planning Strategy and the Planning Policy Framework. The development of land prioritises the protection of human life and safety. The proposed location of the siting is constructed as close as possible to facilitate development due to site constraints. The proposed development can be reduced to an acceptable level. Refer to attached drawings for the location of the proposed dwelling, driveway access and **10,000ltr water tanks**. It is the builder's responsibility to construct the building to the required level (**BAL- 29**).
Clause 53.02-1 APPLICATION This clause applies to an application under Clause 44.06 - Bushfire Management Overlay, unless the application meets all of the requirements specified in a schedule to Clause 44.06.	This Report demonstrates the application complies and meets all the requirements to ***53.02-1 Application***. There is no schedule to **Clause 44.06** for this property in accordance with the Planning Property Report.

Clause 53.02-3 applies to an application to construct a single dwelling or construct or carry out works associated with a single dwelling if all of the following requirements are met: Clause 53.02-4 applies to all other applications.	
Clause 53.02-2 OPERATION The provisions of this clause contain: • **Objectives.** An objective describes the outcome that must be achieved in a completed development. • **Approved measures (AM).** An approved measure meets the objective. • **Alternative measures (AltM).** An alternative measure may be considered where the responsible authority is satisfied that the objective can be met. The responsible authority may consider other unspecified alternative measures. • **Decision guidelines.** The decision guidelines set out the matters that the responsible authority must consider before deciding on an application, including whether any proposed alternative measure is appropriate. A schedule to Clause 44.06 may specify substitute approved measures, additional alternative measures and additional or substitute decision guidelines. A substitute approved measure specified in a schedule to Clause 44.06 substitutes the applicable approved measure contained in this clause.	All **Objectives** have been met in this application for the proposed dwelling. All **Approved measures** have been met in this application for the proposed dwelling There are no **Alternative measures** required for this proposal There is no schedule to **Clause 44.06** for this property in the Planning Property Report. There is no schedule to **Clause 44.06** for this property in the property report. This is not applicable as part of this application
Clause 53.02-4 Bushfire protection objectives	
Clause 53.02-4.1 LANDSCAPE, SITING AND DESIGN OBJECTIVES Development is appropriate having regard to the nature of the bushfire risk arising from the surrounding landscape. Development is sited to minimise the risk from bushfire.	All surrounding risks have been considered as part of this application The proposed dwelling is located to minimise risk from Bushfire.

Development is sited to provide safe access for vehicles, including emergency vehicles. Building design minimises vulnerability to bushfire attack. **Approved measures** **AM 2.1 –** The bushfire risk to the development from the landscape beyond the site can be mitigated to an acceptable level. **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. **AM 2.3 –** A building is designed to be responsive to the landscape risk and reduce the impact of bushfire on the building.	Location of access is located to provided safe access for both vehicles and emergency vehicles. Building design and construction will be the responsibility of the designers and builders to comply with this Bushfire Management Statement (BMS), AS3959-2018 Construction of building in bushfire-prone areas, and Clause 53.02. Siting and land management on crown and neighbouring land will further mitigate the landscape risk. Complies with **AM 2.1**. The proposed dwelling does limit roof changes and re-entry corners and is constructed from brick so is designed well for a bushfire area.
Clause 53.02-4.2 Defendable space and construction objective Defendable space and building construction mitigate the effect of flame contact, radiant heat and embers on buildings.	Defendable space does mitigate the effects of radiant heat. The landscape risk of ember density is low, and a BAL 29 will provide a low level of protection. To increase resilience the dwelling will need to ensure that it is built to a **BAL of 29** to mitigate landscape risk. The building is open in the landscape and directly at risk from wind driven embers.
AM 3.1 Approved measures A building used for a dwelling (including an extension or alteration to a dwelling), a dependent person's unit, industry, office or retail premises is provided with defendable space in accordance with: Table 2 Columns 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	Building has a defendable space as per column C Table 2 to provide more resilience due to the setback in the event that the owner was caught in situ during a wildfire.

space provided in accordance with Table 2 to Clause 53.02-5.	
AM 3.2 A building used for accommodation (other than a dwelling or dependent person's unit), a child care centre, an education centre, a hospital, leisure and recreation or a place of assembly is: Provided with defendable space in accordance with Table 3 and Table 6 to Clause 53.02-5 wholly within the title boundaries of the land. Constructed to a bushfire attack level of BAL12.5.	Not applicable
AltM 3.3 Alternative measures Adjoining land may be included as defendable space where there is a reasonable assurance that the land will remain or continue to be managed in that condition as part of the defendable space	Not applicable
AltM 3.4 Defendable space and the bushfire attack level is determined using Method 2 of AS3959:2009 Construction of buildings in bushfire prone areas (Standards Australia) subject to any guidance published by the relevant fire authority.	Not applicable
AltM 3.5 A building used for a dwelling (including an extension or alteration to a dwelling) may provide defendable space to the property boundary where it can be demonstrated that: The lot has access to urban, township or other areas where: – Protection can be provided from the impact of extreme bushfire behaviour. – Fuel is managed in a minimum fuel condition. – There is sufficient distance or shielding to protect people from direct flame contact or harmful levels of radiant heat. Less defendable space and a higher construction standard is appropriate having regard to the bushfire hazard landscape assessment. The dwelling is constructed to a bushfire attack level of BAL FZ. This alternative measure only applies where the requirements of AM 3.1 cannot be met	Not applicable
AltM 3.6 A building used for accommodation (other than a dwelling or dependent person's unit),	Not applicable

child care centre, education centre, hospital, leisure and recreation or place of assembly may provide defendable space in accordance with Table 2 Columns A, B or C and Table 6 to Clause 53.02-5 where it can be demonstrated that: An integrated approach to risk management has been adopted that considers: – The characteristics of the likely future occupants including their age, mobility and capacity to evacuate during a bushfire emergency. – The intended frequency and nature of occupation. – The effectiveness of proposed emergency management arrangements, including a mechanism to secure implementation. Less defendable space and a higher construction standard is appropriate having regard to the bushfire hazard landscape assessment.	
Clause 53.02-4.3 Water supply and access objectives	10,000 Litre tank is proposed and meets the objectives of this clause
AM 4.1 A building used for a dwelling (including an extension or alteration to a dwelling) • A static water supply for firefighting and property protection purposes specified in Table 4 to Clause 53.02-5. • Vehicle access that is designed and constructed as specified in Table 5 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.	Complies
Clause 53.02-5 Tables	
Clause 53.02-5 Tables : Defendable space, construction, water supply, vehicle access, vegetation management and outbuilding construction requirements **Table 2** Defendable space and construction	Complies but will require vegetation management on site to remove native vegetation for defendable space
Table 5 Vehicle access design and construction	Complies
Table 6 Vegetation management requirement	See Appendix.1

SITE ASSESSMENT

The site levels were assessed on site and the classification of vegetation and slopes are shown on Appendix.8

Image.11 Mount view road

Image. 12 Woodland on site

Image. 13 Mount View road outside dwelling location.

Image.14 Farmland to the south.

Image.15 near house site looking east

“

Image 16 existing egress to be retained for the farm use Forest classification

BUSHFIRE HAZARD ASSESSMENT

Classify the vegetation within **150 metres** of the proposed development in accordance with AS3959:2018 Construction of buildings in bushfire-prone areas. Defendable space has been determined as per **Table 2 Defendable space and construction** in Clause 53.02-5.

	Direction (Aspect)			
	W	**S**	**E**	**N**
Vegetation (within 150 metres of boundary)	Excludable / Low Threat ☐ Modified ☐ Forest √ Woodland ☐ Scrub (tall) ☐ Shrubland (short) ☐ Mallee ☐ Rainforest ☐ Grassland ☐	Excludable / Low Threat ☐ Modified ☐ Forest ☐ Woodland √ Scrub (tall) ☐ Shrubland (short) ☐ Mallee ☐ Rainforest ☐ Grassland ☐	Excludable / Low Threat ☐ Modified ☐ Forest ☐ Woodland ☐ Scrub (tall) ☐ Shrubland (short) ☐ Mallee ☐ Rainforest ☐ Grassland √	Excludable / Low Threat ☐ Modified ☐ Forest ☐ Woodland ☐ Scrub (tall) ☐ Shrubland (short) ☐ Mallee ☐ Rainforest ☐ Grassland √
Effective Slope (under the classifiable vegetation within 150 metres of boundary)	Upslope / Flat √ **DOWNSLOPE** >0 to 5 ° ☐ >5 to 10° √ >10° to 15° ☐ >15 to 20° ☐ >20° ☐	Upslope / Flat √ **DOWNSLOPE** >0 to 5 ° ☐ >5 to 10° √ >10° to 15° ☐ >15 to 20° ☐ >20° ☐	Upslope / Flat √ **DOWNSLOPE** >0 to 5 ° ☐ >5 to 10° ☐ >10° to 15° ☐ >15 to 20° ☐ >20° ☐	Upslope / Flat √ **DOWNSLOPE** >0 to 5 ° √ >5 to 10° ☐ >10° to 15° ☐ >15 to 20° ☐ >20° ☐
Defendable space(m) and BAL (Defendable Space from Table 2 Defendable space and construction - Clause 53.02-5)	**BAL 29** **25 m Defendable space required**	**BAL 29** **25 m Defendable space required**	**BAL 29** **25 m Defendable space required**	**BAL 29** **25 m Defendable space required**

Worst bushfire risk scenario is marked in red

CONSTRUCTION LEVEL

A building is to be constructed to the bushfire attack level:

That corresponds to the defendable space provided in accordance with **Table 2 to Clause 53.02-5**. The building will be constructed to **BAL-29**

Any other comments

WATER SUPPLY REQUIREMENT

A building used for a dwelling (including an extension or alteration to a dwelling), a dependent person's unit, industry, office or retail premises is provided with a static water supply for firefighting and property protection purposes as specified in **Table 4 Water supply requirements** in 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.

Lot Size (m^2)	Hydrant Available	Capacity (litres)	Fire Authority Fittings & Access Required	Select Response
Less than 500	Not Applicable	2,500	No	☐
500 – 1000	Yes	5,000	No	☐
500 – 1000	No	10,000	Yes	☐
1001 and above	**Not Applicable**	**10,000**	**Yes**	√
Note: **NO** FIRE HYDRANT is available if it is **NOT** located within 120 metres of the rear of the building.				

Confirm Static Water Supply meets the following requirements	**Fire authority requirements** Unless otherwise agreed in writing by the relevant fire authority, the water supply must: • Be stored in an above ground water tank constructed of concrete or metal. • Have all fixed above ground water pipes and fittings required for firefighting purposes made of corrosive resistant metal. • Include a separate outlet for occupant use. Where a **10,000 litre water supply is required**, fire authority fittings and access must be provided as follows: • Be readily identifiable from the building or appropriate identification signs to the satisfaction of the relevant fire authority. • Be located within 60 metres of the outer edge of the approved building. • The outlet/s of the water tank must be within 4 metres of the accessway and unobstructed. • Incorporate a separate ball or gate valve (British Standard Pipe (BSP 65 millimetre) and coupling (64 millimetre CFA 3 thread per inch male fitting). • Any pipework and fittings must be a minimum of 65 millimetres (excluding the CFA coupling).

Water tank location is shown on the bushfire management plan (BMP) - Appendix. Nine (9)

ACCESS REQUIREMENT

A building used for a dwelling is provided with vehicle access is designed and constructed as specified in **Table 5 Vehicle access design and construction** in Clause 53.02-5. Access is 56.3m.

Column A	Column B
Length of access is less than 30 metres	√ There are no design and construction requirements if fire authority access to water supply is not required under AM 4.1
Length of access is less than 30 metres	√ Where fire authority access to the water supply is required under AM 4.1 fire authority vehicles must be able to get within 4 metres of the water supply outlet
Length of access is greater than 30 metres	The following design and construction requirements apply: √ All weather construction √ A load limit of at least 15 tonnes √ Provide a minimum trafficable width of 3.5 metres √ Be clear of encroachments for at least 0.5 metres on each side and at least 4 metres vertically √ Curves must have a minimum inner radius of 10 metres √ The average grade must be no more than 1 in 7 (14.4%) (8.1°) with a maximum grade of no more than 1 in 5 (20%) (11.3°) for no more than 50 metres. √ Dips must have no more than a 1 in 8 (12.5 per cent) (7.1 degrees) entry and exit angle √ The average grade must be no more than 1 in 7 (14.4%)(8.1°) with a maximum grade of no more than 1 in 5 (20%)(11.3°) for no more than 50 metres

Access Requirements is shown on the bushfire management plan (BMP) - Appendix. Nine (9).

APPENDIX. ONE (1) - VEGETATION MANAGEMENT REQUIREMENTS

Vegetation management requirement

- Grass must be short cropped and maintained during the declared fire danger period.
- All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period.
- Within 10 metres of a building, flammable objects must not be located close to the vulnerable parts of the building.
- Plants greater than 10 centimetres in height must not be placed within 3m 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 sq. metres in area and must be separated by at least 5 metres.
- Trees must not overhang or touch any elements of the building.
- The canopy of trees must be separated by at least 5 metres in the defendable space around the dwelling and 2 metres in the defendable space around an outbuilding.
- There must be a clearance of at least 2 metres between the lowest tree branches and ground level.

- The canopy of trees 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.

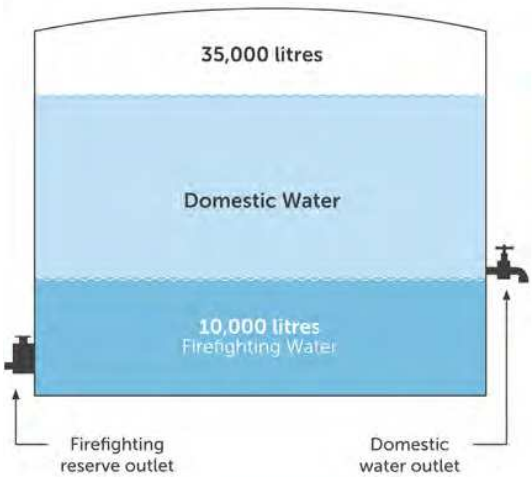
Unless specified in a schedule or otherwise agreed in writing to the satisfaction of the relevant fire authority

APPENDIX. TWO (2) - WATER SUPPLY REQUIREMENTS

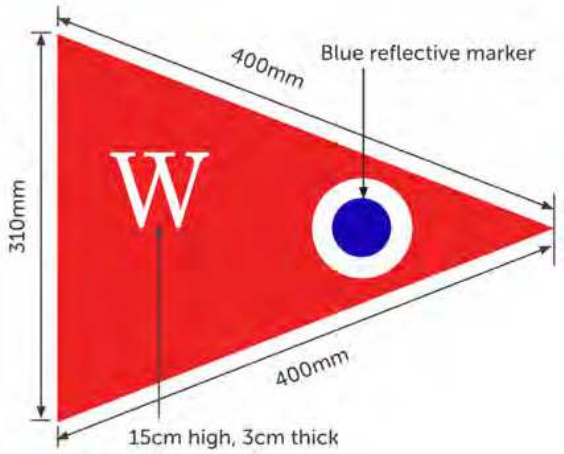
Unless otherwise agreed in writing by the relevant fire authority, the water supply must:

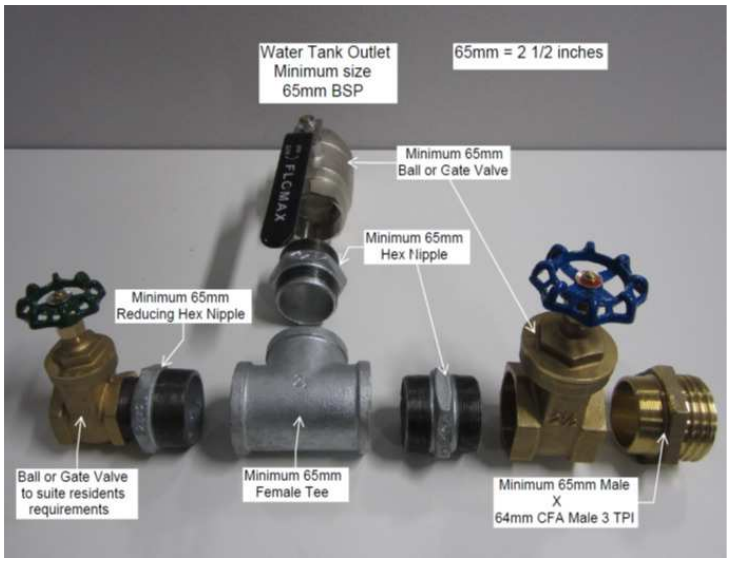
- Be stored in an above ground water tank constructed of concrete or metal.
- Have all fixed above ground water pipes and fittings required for firefighting purposes made of corrosive resistant metal.
- Include a separate outlet for occupant use. Where a 10,000 litre water supply is required, fire authority fittings and access must be provided as follows:
- Be readily identifiable from the building or appropriate identification signage to the satisfaction of the relevant fire authority.
- Be located within 60 metres of the outer edge of the approved building.
- The outlet/s of the water tank must be within 4 metres of the accessway and unobstructed.
- Incorporate a separate ball or gate valve (British Standard Pipe (BSP 65 millimetre) and coupling (64 millimetre CFA 3 thread per inch male fitting).
- Any pipework and fittings must be a minimum of 65 millimetres (excluding the CFA coupling

Shared water tank



Water supply identification





APPENDIX. THREE (3) - ACCESS REQUIREMENTS

Access 30m to 100m

The following design and construction requirements apply:

√ All weather construction

√ A load limit of at least 15 tonnes

√ Provide a minimum trafficable width of 3.5 metres

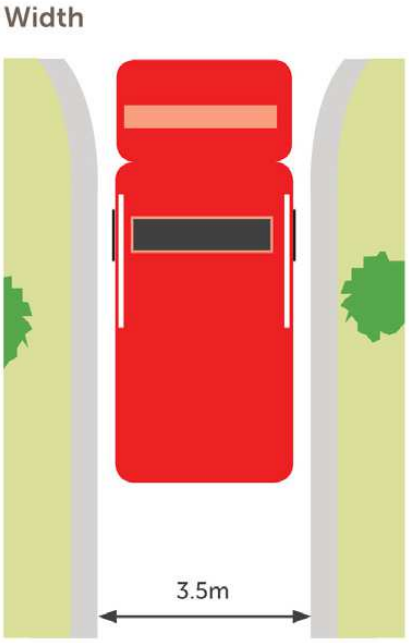
√ Be clear of encroachments for at least 0.5 metres on each side and at least 4 metres vertically

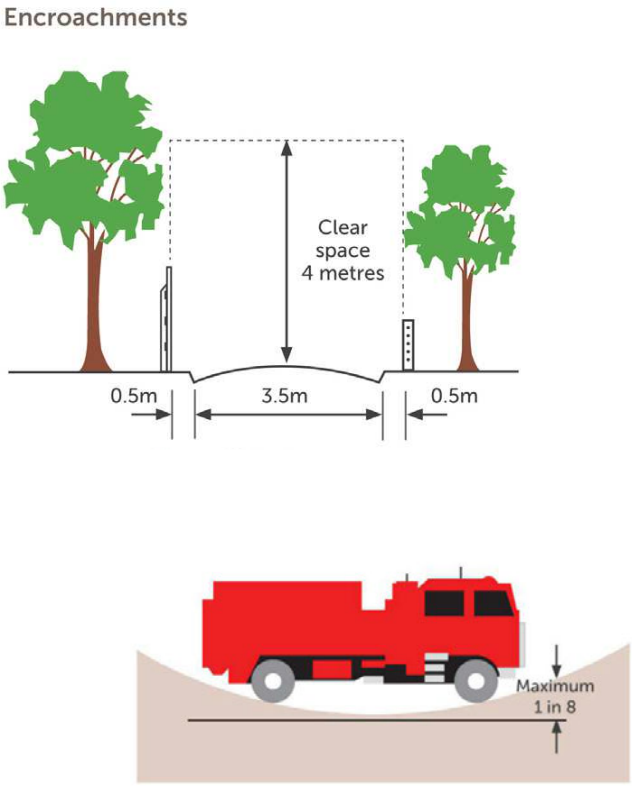
√ Curves must have a minimum inner radius of 10 metres

√ The average grade must be no more than 1 in 7 (14.4%) (8.1°) with a maximum grade of no more than 1 in 5 (20%) (11.3°) for no more than 50 metres.

√ Dips must have no more than a 1 in 8 (12.5 per cent) (7.1 degrees) entry and exit angle

√ The average grade must be no more than 1 in 7 (14.4%)(8.1°) with a maximum grade of no more than 1 in 5 (20%)(11.3°) for no more than 50 metres



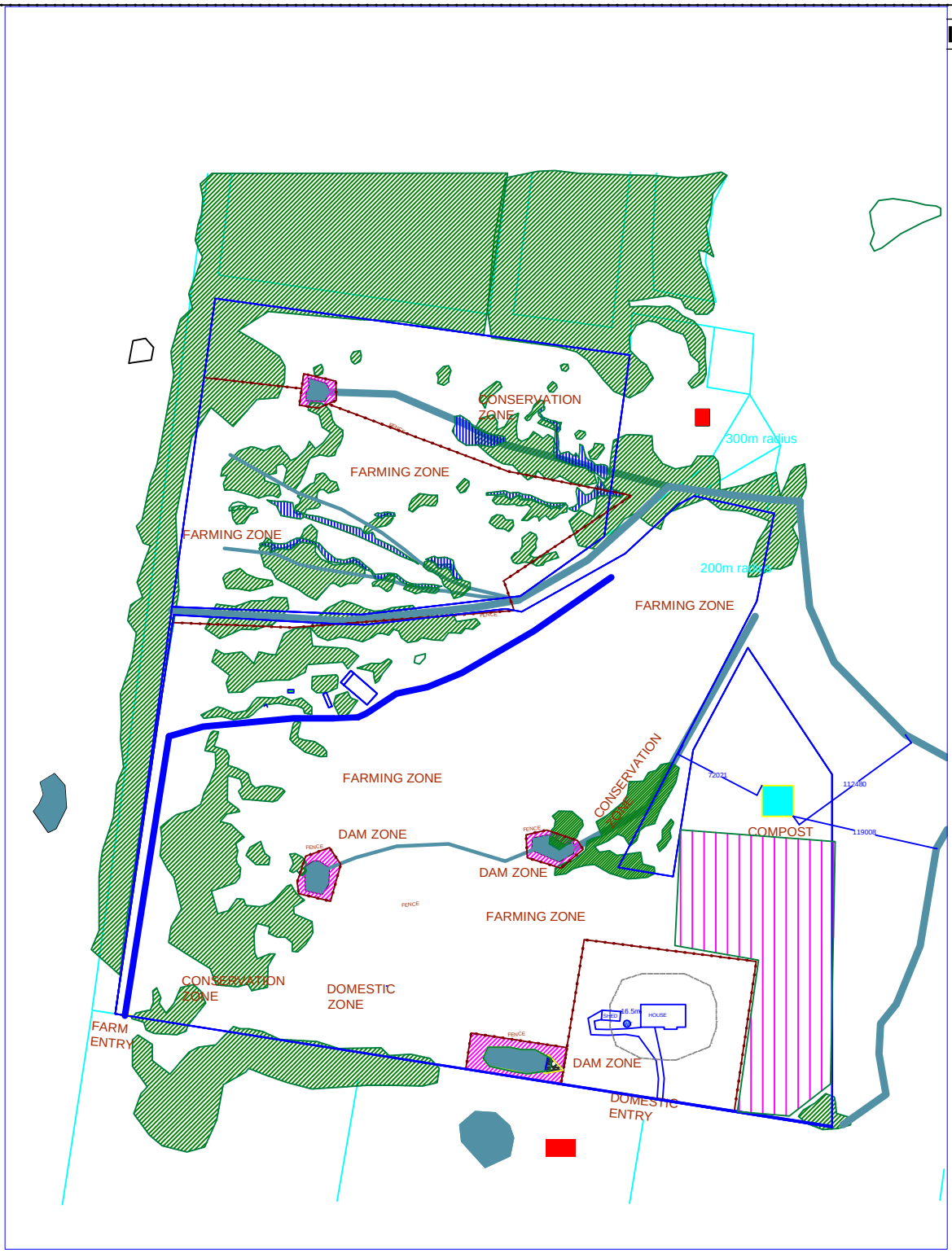


APPENDIX. FOUR (4) - BUSHFIRE ATTACK LEVELS (BAL)

Table 4 - Bushfire Attack Levels (BALs) explained (derived from Standards Australia, 2009).

Bushfire Attack Level (BAL)	Risk Level	Construction elements are expected to be exposed to…	Comment
BAL-12.5	LOW: There is risk of ember attack.	A radiant heat flux not greater than 12.5 kW/m²	At 12.5kW/m² standard float glass could fail and some timbers can ignite with prolonged exposure and piloted ignition.
BAL-19	MODERATE: There is a risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to radiant heat.	A radiant heat flux not greater than 19 kW/m²	At 19kW/m² screened float glass could fail.
BAL-29	HIGH: There is an increased risk of ember attack and burning debris ignited by windborne embers and a likelihood of exposure to an increased level of radiant heat.	A radiant heat flux not greater than 29 kW/m²	At 29kW/m² ignition of most timbers without piloted ignition after 3 minutes exposure. Toughened glass could fail.
BAL-40	VERY HIGH: There is a much increased risk of ember attack and burning debris ignited by windborne embers, a likelihood of exposure to a high level of radiant heat and some likelihood of direct exposure to flames from the fire front.	A radiant heat flux not greater than 40 kW/m²	At 42kW/m² ignition of cotton fabric after 5 seconds exposure (without piloted ignition).
BAL- FZ (i.e. Flame Zone)	EXTREME: There is an extremely high risk of ember attack and a likelihood of exposure to an extreme level of radiant heat and direct exposure to flames from the fire front.	A radiant heat flux greater than 40 kW/m²	At 45kW/m² ignition of timber in 20 seconds (without piloted ignition).

APPENDIX. FIVE (5) - EXISTING PLAN



LEGEND

- EROSION
- EXISTING NATIVE VEGETATION
- PROPOSED CHOOK SHEDS
- DAM ZONE
- FARM ENTRY
- FARM BIOSECURITY SIGN
- DOMESTIC ACCESS
- COMPOST AREA
- CHOOK SHEDS
- FUTURE MARKET GARDEN
- ADJACENT DWELLING

West East South

NORTH

FARM MANAGEMENT PLAN- REV-A-25/07/2025.

NATURAL RESOURCE LINK PTY LTD
54 Frazer Street
Clunes 3370
Life@nrlinks.com.au

DRAWINGS FOR PLANNING PERMIT ONLY
NOT TO BE USED FOR CONSTRUCTION

Note:
The contractor shall verify all dimensions and all underground services at the site before commencing work. The contractor shall verify all levels from the consulting engineer prior to construction.

DO NOT SCALE FROM DRAWINGS

PROJECT: *164 Mount View Road, Goldsborough*

PROJECT NO: *2723*

DATE: APR 2025

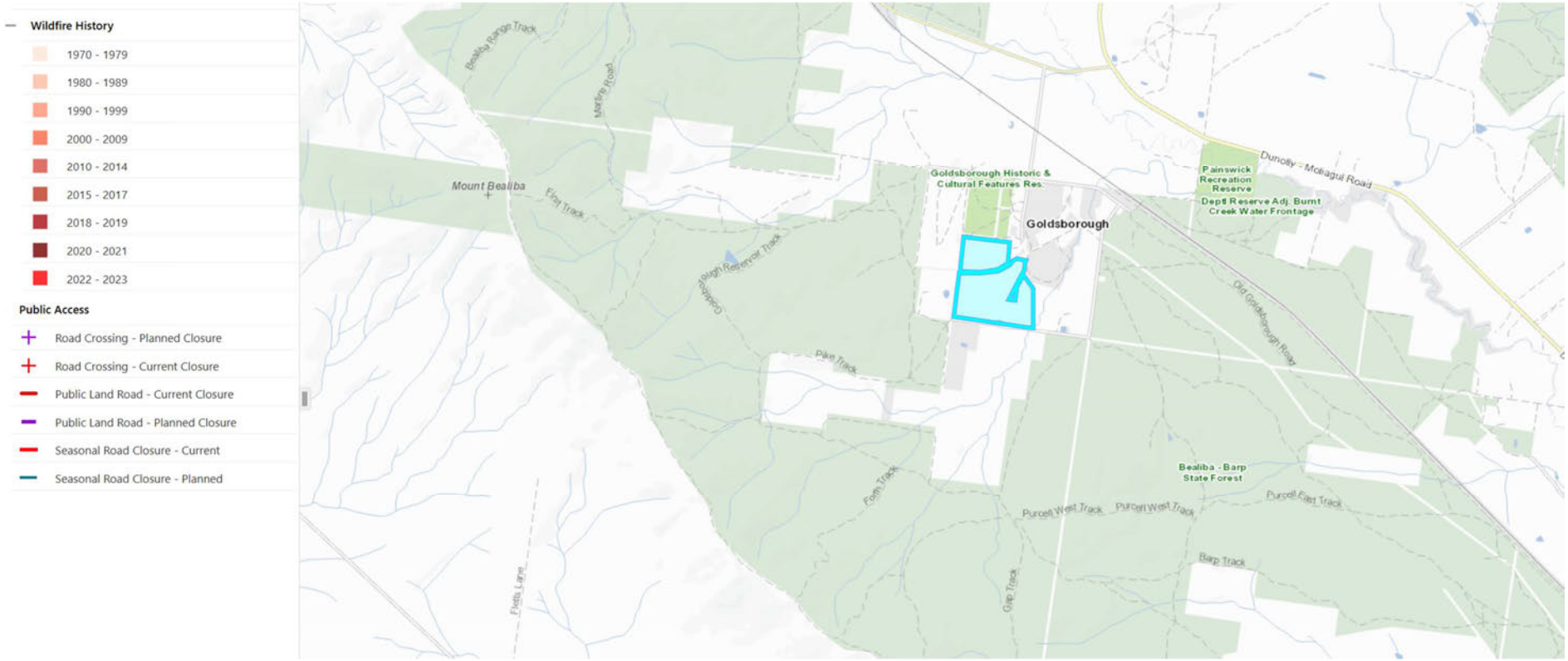
DWG TITLE: *FARM MANAGEMENT*

SCALE: 1:5000 @A4

APPENDIX. SIX (6) -PROPOSED PLAN

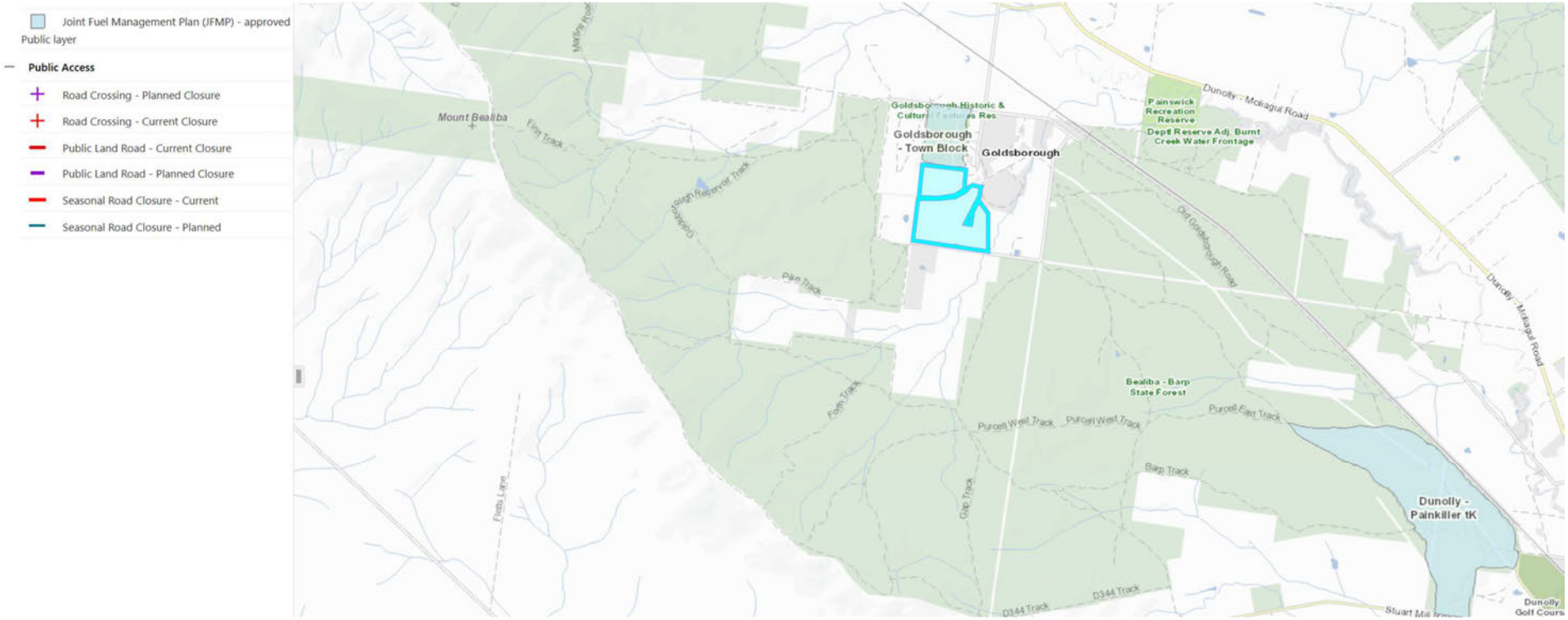
APPENDIX. SEVEN (7) - LANDSCAPE RISK ASSESSMENT

WILDFIRE HISTORY AND PLANNED BURNS HISTORY



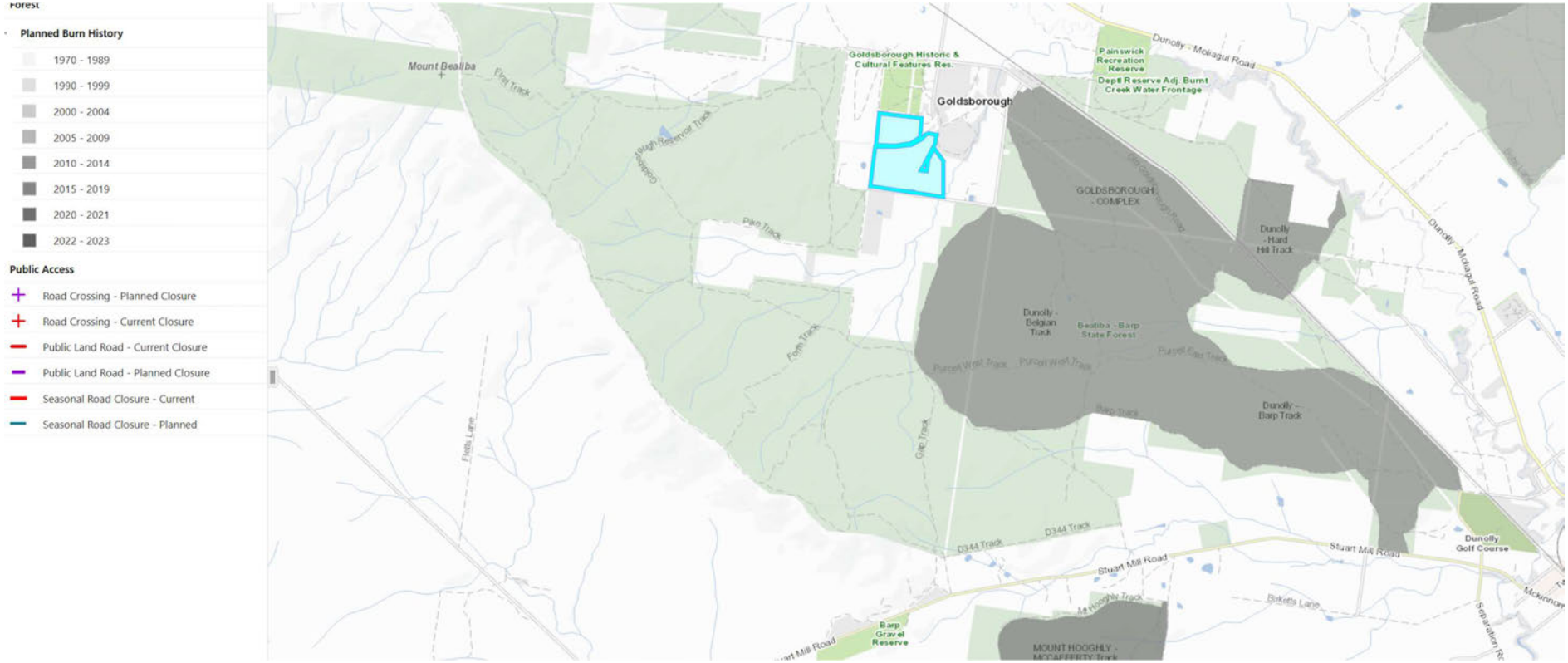
Area has no fires in the vicinity.

JOINT FUEL MANAGEMENT



Landscape has a low level of fuel management it is important that the land to the north is managed as it reduces the risk to this site.

PLANNED BURNS



Landscape is well managed for fuel loads on crown land .

APPENDIX. EIGHT (8) - SITE ASSESSMENT

Note:
The contractor shall verify all dimensions and all underground services at the site before commencing work. The contractor shall verify all levels from the consulting engineer prior to construction.

DO NOT SCALE FROM DRAWINGS

PROJECT: *164 Mount View Road, Goldsborough*

PROJECT NO: *2723*

DATE: APR 2025

DWG TITLE: *SITE ASSESSMENT PLAN*

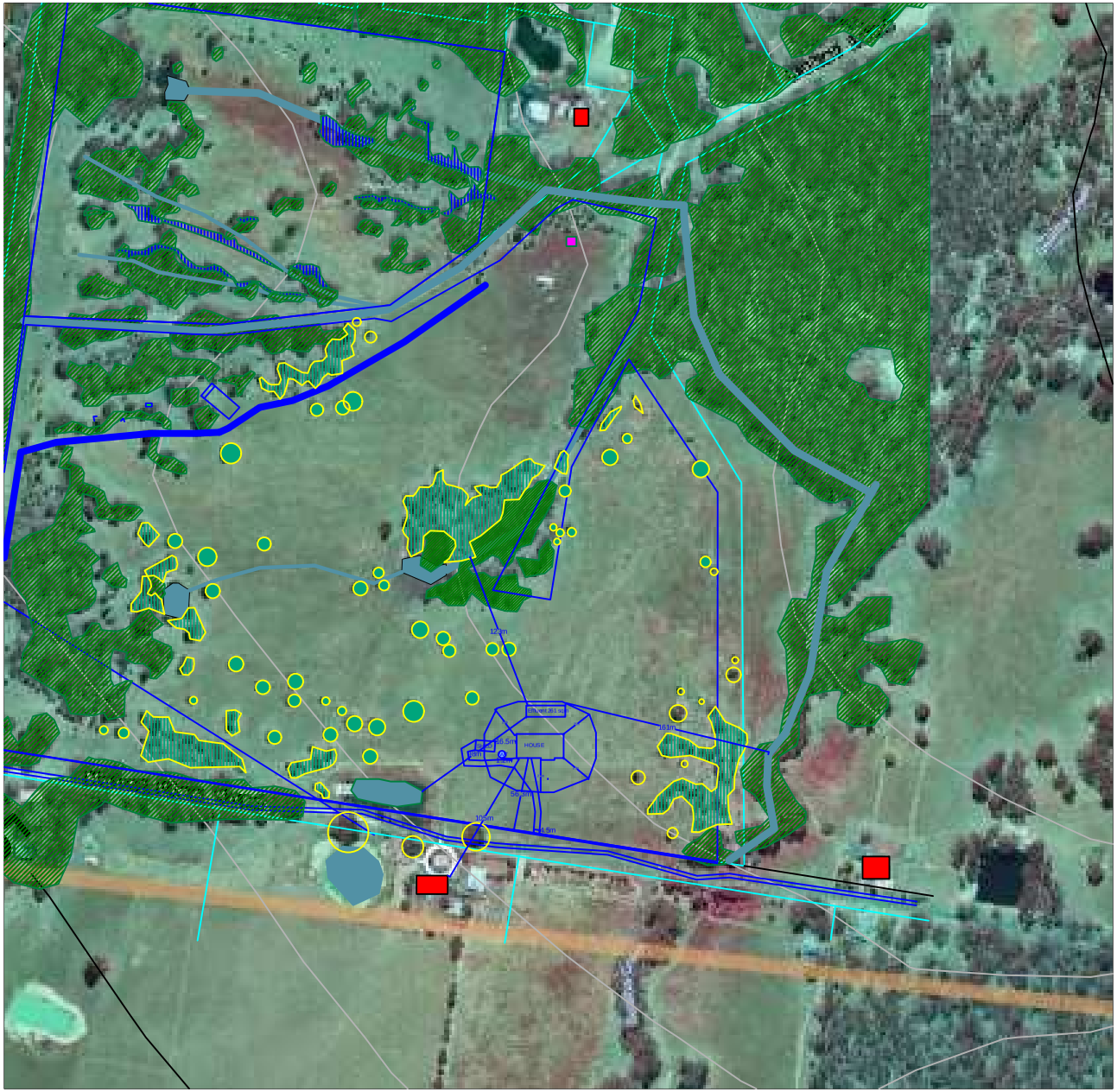
SCALE: 1:5000 @A4

NORTH West East South

DRAWINGS FOR PLANNING PERMIT ONLY NOT TO BE USED FOR CONSTRUCTION

NATURAL RESOURCE LINK PTY LTD
54 Frazer Street
Clunes 3370
julie@nrlinks.com.au

APPENDIX. NINE (9) - BUSHFIRE MANAGEMENT PLAN (BMP)



BUSHFIRE MANAGEMENT PLAN (BMP)-REV-A 23-07-2025

SCALE NTS @A4

a) Defendable Space

Vegetation (and other flammable materials) will be modified and managed as defendable space for a distance of 25m around the proposed building 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 10 centimetres in height must not be placed within 3m 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 sq. metres in area and must be separated by at least 5 metres.
- Trees must not overhang or touch any elements of the building.
- The canopy of trees 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.

b) Construction Standard

The dwelling will be designed and constructed a minimum Bushfire Attack Level of BAL – 29.

c) Water Supply

10000 litres of effective water supply will be provided for fire fighting purposes which meets the following requirements:

- Be stored in an above ground water tank constructed of concrete or metal.
- Have all fixed above ground water pipes and fittings required for firefighting 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 the relevant fire authority.
- Be located within 60 metres of the outer edge of the approved building.
- The outlet/s of the water tank must be within 4 metres of the accessway and unobstructed.
- Incorporate a separate ball or gate valve (British Standard Pipe (BSP 65 millimetre) and coupling (64 millimetre CFA 3 thread per inch male fitting).
- Any pipework and fittings must be a minimum of 65 millimetres (excluding the CFA coupling)

d) Access

Access for fire fighting purposes will be provided which meets the following requirements:

- All weather construction.
- A load limit of at least 15 tonnes.
- Provide a minimum trafficable width of 3.5 metres
- Be clear of encroachments for at least 0.5 metre on each side and at least 4 metres vertically.
- Curves must have a minimum inner radius of 10m.
- The average grade must be no more than 1 in 7 (14.4 per cent) (8.1 degrees) with a maximum of no more than 1 in 5 (20 per cent) (11.3 degrees) for no more than 50m.
- Dips must have no more than a 1 in 8 (12.5 per cent) (7.1 degrees) entry and exit angle.
- Incorporate a turning area for fire fighting vehicles close to the building by one of the following:
- A turning circle with a minimum radius of eight metres.
- A driveway encircling the dwelling
- The provision of vehicle turning heads – such as a T or Y head – which meets the specification of Austroad Design for an 8.8 metre Service Vehicle.

Note:
The contractor shall verify all dimensions and all underground services at the site before commencing work. The contractor shall verify all levels from the consulting engineer prior to construction.

DO NOT SCALE FROM DRAWINGS

PROJECT: *164 Mount View Road, Goldsborough*

PROJECT NO: *2723*

DATE: APR 2025

DWG TITLE: *BUSHFIRE MANAGEMENT PLAN (BMP)*

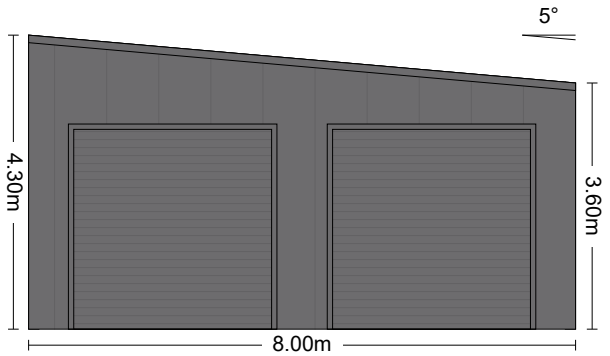
SCALE: NTS @A4

West East NORTH South

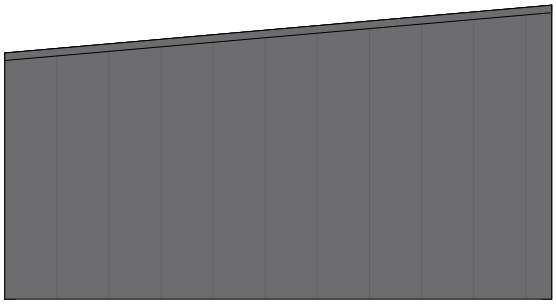
DRAWINGS FOR PLANNING PERMIT ONLY NOT TO BE USED FOR CONSTRUCTION

NATURAL RESOURCE LINK PTY LTD
54 Frazer Street
Clunes 3370
julie@nrlinks.com.au

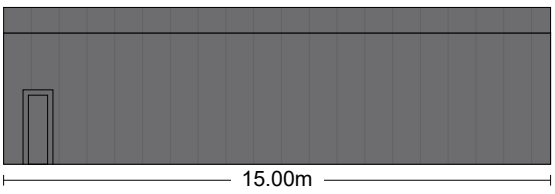
ShedBoss Ballarat				Quotation	
ABN:	55 638 984 713	Phone:	0438 360 409	No:	**426671**
Address:	21 Albert Street Sebastopol VIC 3356	Fax:	03 53 364 700	Date:	22/04/2025
		Lic No:	CDBL-54479	Valid:	7 Days
Email:	sales@shedbossballarat.com.au				
Web:	shedboss.com.au/ballarat/				



FRONT VIEW


REAR VIEW

Shed exterior colorbond Slate Grey colour



FRONT ELEVATION


PLAN VIEW


REAR ELEVATION

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	**PC375113G**
Number of Pages (excluding this cover sheet)	**2**
Document Assembled	**03/08/2024 20:03**

PLAN OF CONSOLIDATION

EDITION 1

PC 375113 G

Location of Land

PARISH: PAINSWICK
TOWNSHIP:
SECTION: B
CROWN ALLOTMENT: 10A, 10B, 10C, 10D, 10F, 11A, & 19.
TITLE REFERENCE:
Vol 11752 Fol 389 Vol 10733 Fol 002
Vol 1282 Fol 247 Vol 5914 Fol 642
Vol 6855 Fol 900 Vol 8274 Fol 675
LAST PLAN REFERENCE:
TP 957268E, TP 413466L, TP 812961A, TP 279810R, TP812923J, TP 812955U.
POSTAL ADDRESS: MOUNTVIEW ROAD
(at time of subdivision) GOLDSBOROUGH 3472
MGA94 CO-ORDINATES: E: 737940 ZONE: 54
(Of approx. centre of land in plan) N: 5920830 GDA94

Council Name: Central Goldfields Shire Council

Council Reference Number: 24580.0164
Planning Permit: planning permit not required
SPEAR Reference Number: S069910B

Certification

This plan is certified under section 6 of the Subdivision Act 1988

Statement of Compliance

This is a statement of compliance issued under section 21 of the Subdivision Act 1988

Public Open Space

A requirement for public open space under section 18 of the Subdivision Act 1988
Has not been made at Certification

Digitally signed by: Miriam Smith for Central Goldfields Shire Council on 31/07/2015

VESTING OF ROADS AND/OR RESERVES

IDENTIFIER	COUNCIL/BODY/PERSON

NOTATIONS

DEPTH LIMITATION: 15·24 METRES, APPLIES TO CROWN ALLOTMENTS 10D, 10F & 19 ONLY.

THIS IS A SPEAR PLAN.

SURVEY:
This plan is not based on survey.

STAGING:
This planis not a staged subdivision.
Planning Permit No.

This survey has been connected to permanent marks No(s).

In Proclaimed Survey Area No.

NOTATIONS

EASEMENT INFORMATION

LEGEND: A - Appurtenant Easement E - Encumbering Easement R - Encumbering Easement (Road)

Easement Reference	Purpose	Width (Metres)	Origin	Land Benefited/In Favour Of
E-1	TRANSMISSION OF ELECTRICITY	SEE DIAGRAM SHEET 2	CROWN GRANT VOL 8274 FOL 675	STATE ELECTRICITY COMMISSION OF VICTORIA

SHAW LAND SURVEYS
CONSULTING LAND SURVEYORS
8 HOPETOUN STREET BENDIGO 3550
PH 03 54430320

SURVEYORS FILE REF: 6378/15

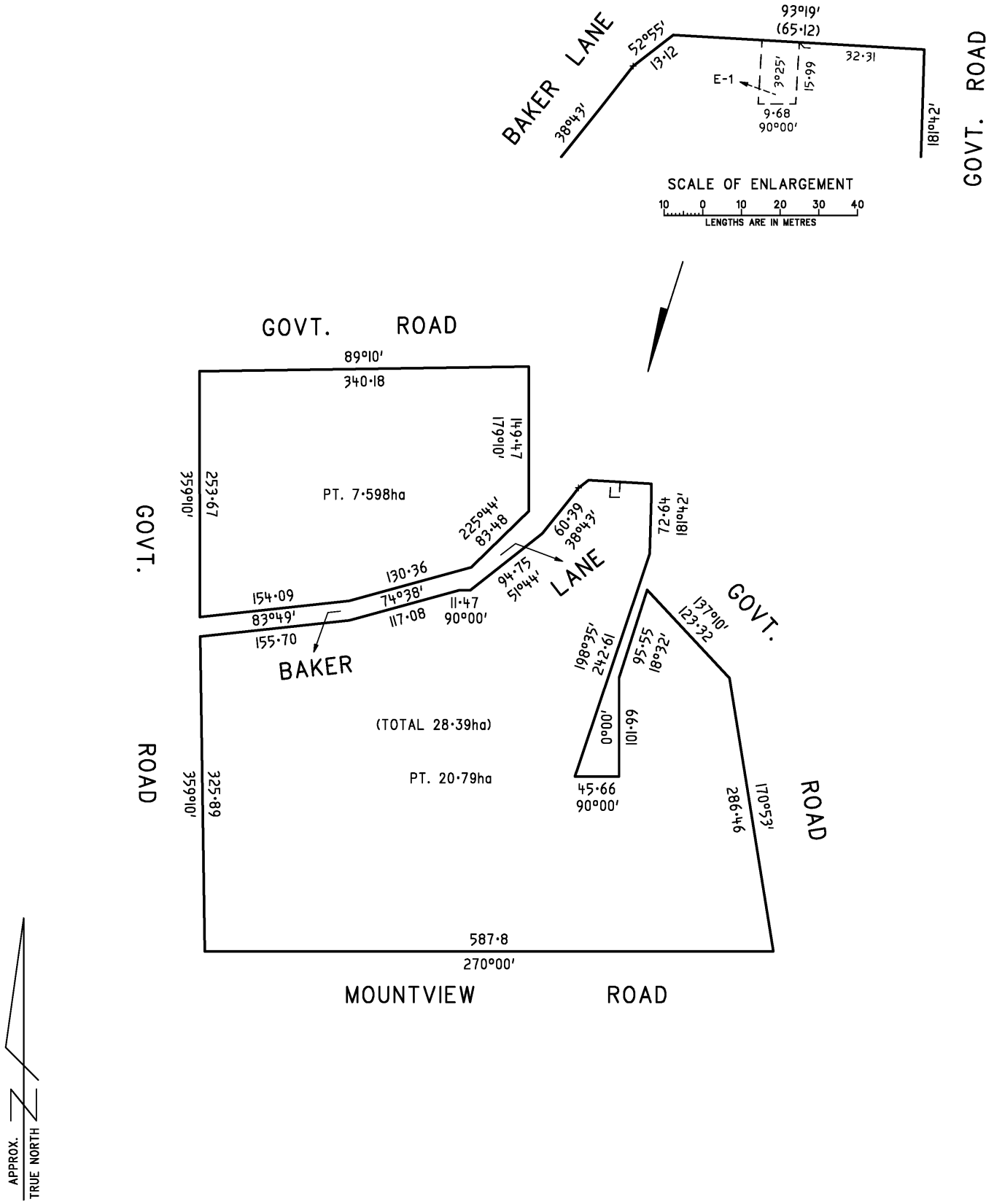
ORIGINAL SHEET SIZE: A3

SHEET 1 OF 2 SHEETS

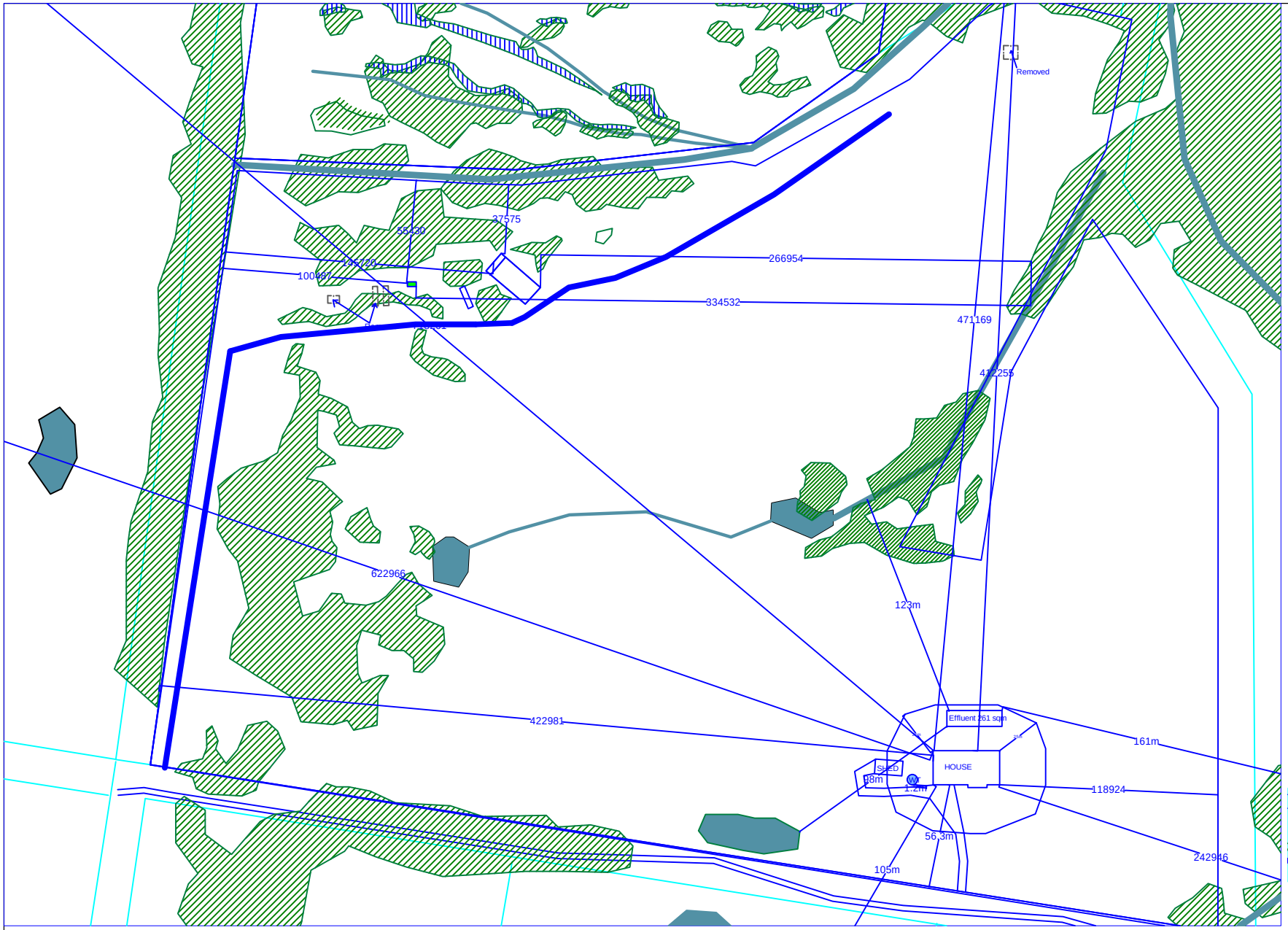
Digitally signed by: Geoffrey John Shaw (Geoff Shaw & Associates), Surveyor's Plan Version (1), 20/08/2015

PLAN REGISTERED
TIME: 5.02 PM DATE: 20/08/2015
RHills Assistant Registrar of Titles

PC 375113 G



SHAW LAND SURVEYS CONSULTING LAND SURVEYORS 8 HOPETOUN STREET BENDIGO 3550 PH 03 54430320	SCALE 1:4000	40 0 40 80 120 160 LENGTHS ARE IN METRES	ORIGINAL SHEET SIZE: A3	SHEET 2 OF 2 SHEETS
	Digitally signed by: Geoffrey John Shaw (Geoff Shaw & Associates), Surveyor's Plan Version (1), 20/08/2015		Digitally signed by: Central Goldfields Shire Council, 31/07/2015, SPEAR Ref: S069910B	



Dwelling on adjacent lot not in the same ownership.

EROSION

TREE COVER

DAM AND WATERWAY

EXISTING ACCESS

CHOOKHOUSE

SMALL SHED (GREEN)

DWELLING BEING CONSTRUCTED ON SITE AND STORAGE CONTAINER REMOVED

PROPOSED PLAN (DIMS)- REV-A 25/07/2025

Note:
The contractor shall verify all dimensions and all underground services at the site before commencing work. The contractor shall verify all levels from the consulting engineer prior to construction.

DO NOT SCALE FROM DRAWINGS

PROJECT: *164 Mount View Road, Goldsborough*

PROJECT NO: *2723*

DATE: APR 2025

DWG TITLE: *PROPOSED PLAN*

SCALE: 1:3000 @A4

NORTH West East South

DRAWINGS FOR PLANNING PERMIT ONLY NOT TO BE USED FOR CONSTRUCTION

NATURAL RESOURCE LINK PTY LTD
54 Frazer Street
Clunes 3370
julie@nrlinks.com.au

WESTERN VICTORIA

SOIL TESTING

164 Mount View Road Goldsborough

Land Capability Assessment for

Bobby Karevski

Report 240430-2A

August 2025

WESTERN VICTORIA
SOIL TESTING

Land Capability Assessment

for

164 Mount View Road, Goldsborough

(Central Goldfields Shire Council)

for

Bobby Karevski

Report 240430-2A

17/08/2025

Prepared by
Benj Beatty BA/Bsc (Hons) MBA MAusIMM MAIG
Western Victoria Soil Testing
ABN 40 372 537 019
5/16 Concept Drive DELACOMBE VIC 3350
0458 609 579
info@wvst.com.au

DISCLAIMER

This investigation has been carried out in goodwill and under the instructions of Bobby Karevski. The investigation was undertaken with the care and skill of competent personnel as defined within the Western Victoria Soil Testing (WVST) quality system. WVST has the appropriate insurances required to undertake such work, which are available upon request.

This document provides both site and soil information and a conceptual design of the proposed development. The document also recommends monitoring and management options for the type of system(s) being recommended. This report should not be seen as a guarantee for the relevant permit to be issued by local council, as the report provides recommendations only for the Central Goldfields Shire Council to assess.

The results from this investigation relate to the specified sites labelled throughout this document and hence the information obtained may need to be extrapolated to the rest of the designated area. Whilst care has been taken throughout this investigation, soil conditions can vary between each individual test site and at depths greater than that drilled during this investigation. Hence, if variations from this report are found during future excavation/construction work, WVST should be notified so it can be assessed and the appropriate advice provided.

WVST's professional opinions contained in this document are subject to modification if additional information is obtained through further investigation, observation or analysis in accordance with future activities.

This document has been prepared for Bobby Karevski and hence no responsibility or liability is being accepted to any third party, where any part of the report is used in either isolation or without consideration of the whole document. This document is not appropriate where there has been a significant change in the project or to the specific needs of the reader.

[redacted]

Benj Beatty BA/BSc (Hons), MPA, MAusIMM, MAIG
Director/Geologist
benj@wvst.com.au

WESTERN VICTORIA
SOIL TESTING

CONTENTS

TABLES

APPENDICES

REFERENCES IN THIS DOCUMENT

EPA Victoria *Guideline for onsite wastewater management (GOWM)*, May 2024
EPA Victoria *Guideline for onsite wastewater effluent dispersal and recycling systems (EDRS)*, May 2024
Joint Australian/New Zealand Standard *AS1547 – 2012 Onsite domestic wastewater management*, February 2012

1 SUMMARY

Bobby Karevski commissioned Western Victoria Soil Testing (WVST) to undertake a Land Capability Assessment (LCA) to assess the suitability and placement of a new wastewater treatment system at 164 Mount View Road, Goldsborough. The property consists of a single land parcel (Plan PC375113) of approximately 28.5ha in total. The development intent is understood to involve the establishment of a 6-bedroom equivalent residence and associated onsite wastewater treatment system.

With the allotment situated within a Farming Zone (FZ), the schedule to the overlay stipulates that all residential development should be connected to both reticulated water and sewerage, if available. In the absence of such a scheme, a 'Land Capability Assessment' (LCA) is required to indicate the soil's suitability and capability to both treat and retain all generated effluent within the allotment's boundaries.

This LCA will provide site and soil information as well as a schematic diagram showing the proposed building location and potential land application area for the disposal of suitably treated effluent at the site. The document will also recommend monitoring and management options for the type of wastewater system(s) being recommended.

The Land Capability Class Rating (LCCR) of the site was determined to be a 5, primarily due to the risk of sodic subsoil and, to a lesser extent, the potential for shallow rock or the watertable to be intersected before 1.5 metres depth. Given the constraints to the site identified by the LCCR, and the location of the property within a declared water catchment area, the following system is recommended:

- A secondary wastewater treatment system or aerated wastewater treatment system (AWTS) connected to a drip irrigation dispersal system with a minimum land application area of 292m^2.

The drip irrigation system should be installed into in situ or imported good quality topsoil with a minimum depth of 250mm, with grass or other suitable vegetation at surface. It is noted that the importation of topsoil may be required. Gypsum should be applied to the receiving soil at a minimum rate of 1kg/m^2.

The selected system should maintain a minimum 20/30/10 effluent quality (BOD < 20mg/L, TSS < 30mg/L and E. Coli < 10cfu/100mg). A manufacturer-accredited maintenance and service contract to ensure regular servicing of the system should be maintained.

The EPA provides a list of approved options for appropriate treatment systems, many of which can achieve the recommended level of performance. Details of the chosen system should be included on the Septic Tank Permit to Install application provide to the Central Goldfields Shire Council. It remains the responsibility of the property owner/plumber to make the final system selection and forward the type of system selected to the Central Goldfields Shire Council for approval prior to installation.

Regardless of the system selected, the disposal areas including the immediate surrounding area should be planted out with shallow rooted grasses and/or indigenous shrubs to help uptake the applied effluent via evaporation/transpiration techniques. While shallow diversion drains are required to redirect surface waters around all building & disposal localities, strict adherence to the maintenance and monitoring of the installed system is also an essential part of the ongoing treatment and disposal program.

2 PROPOSED DEVELOPMENT

Site Address:	164 Mount View Road, Goldsborough
Allotment Size:	Single land parcel (Plan PC375113) of approximately 28.5ha in total
Proposed development:	The establishment of a 6-bedroom equivalent residence and associated onsite wastewater treatment system
Council:	Central Goldfields Shire Council (Property No. 24580.0164)
Zones and Overlays:	Farming Zone (FZ) Vegetation Protection Overlay (VPO1) (part) Aboriginal Cultural Heritage (part) Bushfire Management Overlay (BMO) Designated Bushfire Prone Area
Catchment Area:	The site is within the Loddon River (Laanecoorie) proclaimed catchment area
Infrastructure:	Mains power is available
Water Supply:	Mains water is not available
Sewer:	Reticulated sewerage is not available

3 LOCATION AND SITE FEATURES

The proposed development is the establishment of a new 4 bedroom plus study and theatre residence (6-bedroom equivalent residence) and associated onsite wastewater treatment system. A locality map within planning documents is provided in the Appendices to show the location of the site. An aerial photograph has also been provided to show the area under investigation.

Situated within the Farming Zone (FZ), the property is currently vacant and generally consists of pasture with many small to large trees (generally eucalyptus or other natives) scattered across the site, particularly along the western boundary of the property.

The Vegetation Protection Overlay (VPO1) is associated with forested areas to the north of the site and partly covers areas along the northern boundary of the property. It is noted the proposed development area is located approximately 400 metres to the southwest of the extent of the VPO1.

The property has a slight fall (<3%) to the northeast in the area of the proposed development. Bealiba Creek is located more than 350 metres to the east of the proposed development area. There is an Aboriginal Cultural Heritage zone associated with Bealiba Creek which does not extend to the proposed development site.

Climate:	On average, the Goldsborough region experiences warm to hot summers and cool winters, with gentle to moderate winds all year round, tending to be from the south or west. The average rainfall may meet or exceed average evaporation for up to 4 months of the year, which normally coincides with May to August. The area has an average rainfall of approx. 495mm and an average evaporation of approx. 1,405mm (Bealiba – 81002; Moliagul – 81090; Dunolly - 81085).
Exposure:	The site exhibits generally good sun and wind exposure, with few trees in the proposed dispersal area to cause shading.
Vegetation:	The property consists generally of pasture with native trees, generally lining the western boundary of the property.
Erosion:	There were no signs of erosion having occurred on site.
Groundwater:	During this investigation, 3 boreholes were drilled to depths of up to 1.1 metres with no groundwater seepage encountered. A Groundwater Report was obtained from the Victorian Department of Environment, Land, Water & Planning (DELWP) which indicated that the water level below ground level (BGL) is likely <5 metres in the proposed development area.
Bores:	A review of known bores around the locality was conducted using the online mapping tool *Visualising Victoria's Groundwater*. No waterbores were identified at or within 100 metres of the proposed development area.
Dam:	There are three farm dams located within 200 metres of the proposed development area, with one to the northwest and two to the southeast (including one in a neighbouring property). It is noted that, due to the slope of the site, surface runoff over the proposed dispersal area is unlikely to flow into any of these dams.
Drainage:	Currently, there is no formal drainage implemented upon the allotment. Stormwater in the area of the dispersal field is seen to runoff the site's surface following the natural slope.

4 SOIL INFORMATION

The local geology of the property was determined using the Victorian Government Department of Environment, Land, Water & Planning (DELWP) *Geovic* online mapping tool, which showed the likely formations of the site:

- **'Qc1' unnamed colluvial deposits** – Quaternary; sheetwash and channel deposits; diamictite, gravel, sand, silt, clay, variably sorted, generally unconsolidated; *overlying*
- **'Ocl' Castlemaine Group** – Ordovician; deep marine deposits; sandstone, siltstone, saprolite.

The soil investigation was carried out on the 27th August 2024 to ascertain the soil's suitability for onsite wastewater disposal practices. The investigation was undertaken in conjunction with an investigation for the purposes of ascertaining building foundation parameters. Three boreholes were drilled for the purposes of this report (BH2, BH4 & BH5), while two additional boreholes (BH1 & BH3) were drilled solely for the purpose of the foundation investigation. Due to wet surface conditions limiting access to the development area, the boreholes were drilled using a powered hand auger, with total borehole depths for the LCA investigation being between 0.7 to 1.1 metres.

The boreholes indicated that the soil profile across the site is relatively uniform and adheres to the 'Qc1' and 'Ocl' formations as described above, being approximately 0.1 to 0.2 metres of sandy silt topsoil overlying sandy silty clays. BH2 and BH5 terminated on very stiff clays or saprolite, while BH4 terminated due to the intersection of an old tree root.

No outcropping rock was noted across or near the proposed development area. No groundwater infiltration was observed in any borehole.

There were some minor variations across the boreholes with regards to colour and encountered depth profiles, therefore reference should be made to the borehole logs within the Appendices for a full description of subsurface conditions at each location.

A composite sample of the receiving soil was taken for laboratory testing in BH4 & BH5. The sample comprised of the expected receiving soil material from below the topsoil, with the results summarised in *Table 1* & *Table 2* below. The laboratory reports with full results are available in the Appendices.

Soil property	BH4/BH5
Overall soil depth (mm)	100-1100
Water table depth (mm)	>1100
Plasticity (Liquid limit %)[1]	35
Plasticity Index (%)[1]	23
Shrinkage (%)[1]	10.0
Emerson Class	2
Salinity (dS/m)	0.170
pH	8.4

Table 1 – Summary of results on receiving soil, determined from the investigation.
These properties were determined using Australian Standard (AS) test methods.
[1] Plasticity and shrinkage is a characteristic of the clay fraction of the soil

Soil property	BH4/BH5
% Gravel	2
% Coarse Sand	2
% Medium Sand	2
% Fine Sand	25
% Silt	41
% Clay	28

Table 2 – Summary of soil fractions determined from the investigation.
These properties were determined using Australian Standard (AS) test methods.

From the soil fraction properties and material assessment during the investigation, the receiving soil profile underlying the topsoil at the site is deemed to be a **Soil Category 3 weakly structured loam or clay loam** (*GOWM / AS1547 – 2012*).

Therefore, the following design loading rates and design irrigation rates (*Table 3*) are deemed to be applicable for the suitable disposal of effluent at the site onto the receiving Category 3 soils:

Application (disposal) method	DLR/DIR (mm/day)
Conventional trenches (primary treatment)	10
Conventional trenches (secondary treatment)	30
Evapotranspiration (ETA) beds and trenches	Not recommended
Drip or spray irrigation (secondary treated only)	4
Low pressure effluent distribution (LPED) subsurface irrigation	3.5
Mounds	16

Table 3 – Design load rates (DLR) and design irrigation rates (DIR) for dispersal methods, from *Table L1, Table M1* and *Table N1* of *AS1547 – 2012,* for moderately structured Category 3 soils.

5 LAND CAPABILITY CLASS RATING (LCCR)

Land Features	Land Capability Class Rating					Individual Rating
	1	2	3	4	5	
General Characteristics						
Site drainage	Very slow	Slow	Moderate	Rapid	Very rapid	2
Runoff[1]	None	Low	Moderate	High	Very high	3
Flooding (years)	Never	–	<1 in 100	<1 in 30	<1 in 20	3
Proximity to watercourses	>100m	–	–	–	<100m	1
Slope[1] **(%)**	0 – 2	2 – 8	8 – 12	12 – 20	>20	1-2
Landslip	No present or past failures	–	–	–	Present or past failures	1
Water table (m)	>5	5 – 2.5	2.5 – 2.0	2.0 – 1.5	<1.5	2-4
Rock outcrop[1] **(>200mm)**	None	<10%	10 – 20%	20 – 50%	>50%	1
Erosion Potential	None	Minor	Moderate	High	Severe	1
Exposure	High sun and wind	–	Moderate	Low sun and wind	–	1
Landform	Hill crest, convex side	–	Concave side slopes	–	Floodplain	3
Vegetation	Turf / pasture	–	–	–	Dense forest, little understorey	1
Rainfall (mm/year)	<450	450 – 650	650 – 750	750 – 1000	>1000	2
Pan evaporation (mm/year)	>1500	1250 – 1500	1000 – 1250	–	<1000	2
Fill[1]	No fill	–	Fill present	–	–	1

Table 4 – Land capability class rating; general characteristics.

[1] Relevant to the site in the proposed dispersal areas.

Land Features	Land Capability Class Rating					Individual Rating
	1	**2**	**3**	4	5	
Soil Profile Characteristics						
Profile depth (m)	> 2.0	1.5 – 2.0	–	1.0 – 1.5	< 1.0	2-4
Soil structure[1]	High	Moderate	Weak	Massive	Single grain	3
Mottling	None	–	–	–	Extensive	3
Shrinkage[1,2] **(%)**	<4	4 – 12	12 – 20	>20	–	2
Emerson Class[1, 2]	4, 6, 8	5	7	2, 3	1	4
EC (ds/m)[1]	<0.3	0.3 – 0.8	0.8 – 2.0	2.0 – 4.0	>4.0	1
pH	6 – 8	–	4.5 – 6.0	–	<4.5 or >8.0	5
Sodic soil[3]	Low	–	Moderate	–	High	3-5
Gravel Fraction[1] **(%)**	<10	10 – 20	20 – 40	–	>40	1
				Overall Site Rating		**5**

Table 5 – Land capability class rating: receiving soil characteristics.

[1] Relevant to soil layer(s) at disposal location.

[2] Sand material with little to no clays has equivalent Emerson Class of 8 (no slaking, no swelling) and minimal shrinkage.

[3] Sodic soil risk is determined through geological maps, soil structure, dispersion, Emerson Class and EC data.

The Land Capability Class Rating (LCCR) of the site has been determined to be a 5, primarily due to the risk of sodic subsoil and, to a lesser extent, the potential for shallow rock or the watertable to be intersected before 1.5 metres depth.

The Emerson Class and pH of the receiving soil, in conjunction with available risk mapping, indicates that sodic subsoil/sub-soil dispersibility may be a risk at the site. From *Table K2* of *AS1547 – 2012*, all land application systems are potentially useable with sodic soils, but sub-surface irrigation systems which apply effluent to the topsoil rather than the subsoil are preferred, and gypsum should be applied to the underlying receiving soil at a minimum rate of 1 kg/m^2.

Also as per *Table K2* of *AS1547 – 2012*, most dispersal systems can be used in shallow soil or shallow watertable sites, as long as a minimum depth of 0.6 metres from the base of the system to the top of the rock/watertable is available. Based on the soil profiles identified during the investigation, this depth is achievable at the site.

6 ONSITE WASTEWATER DISPOSAL

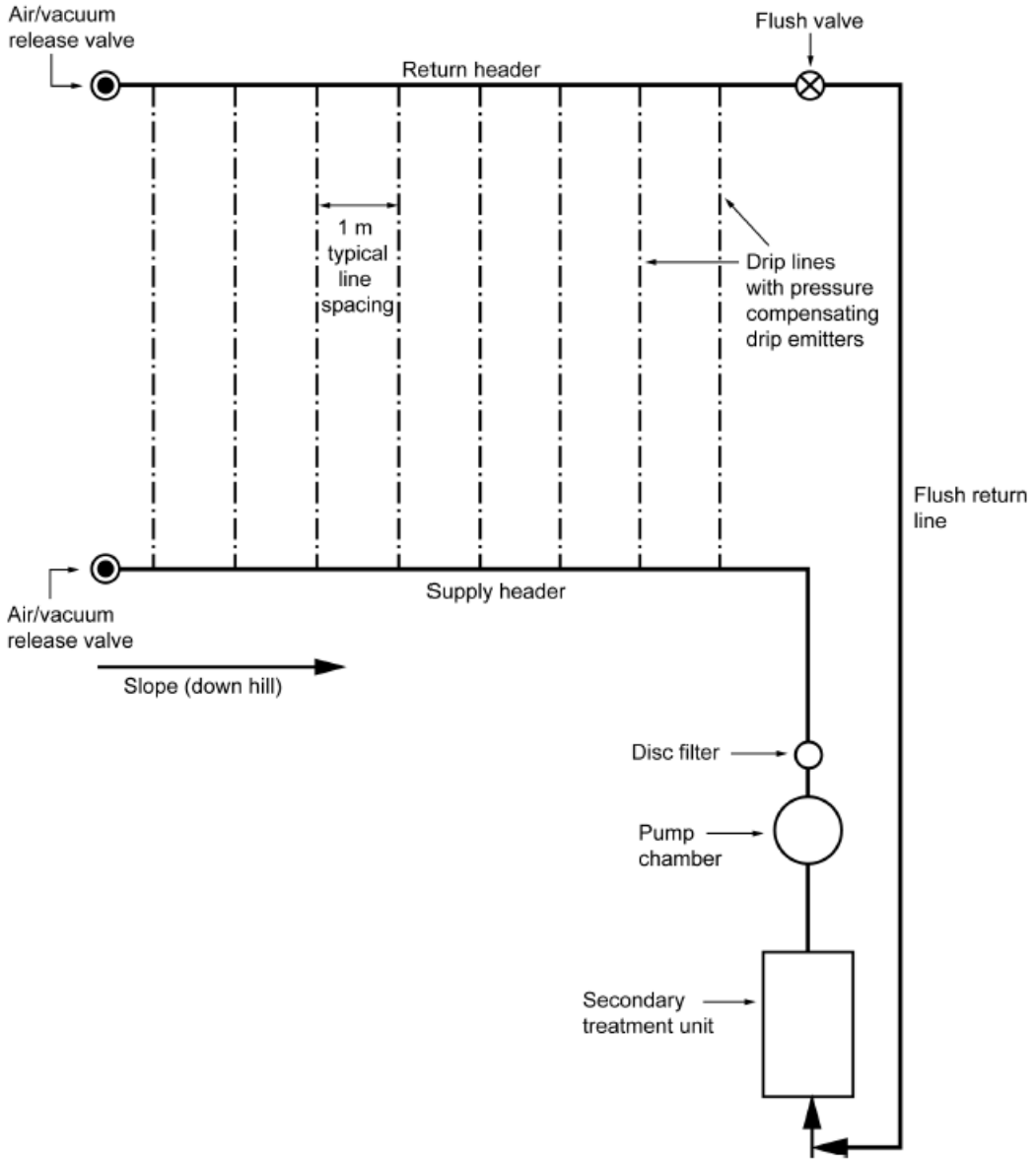
This LCA has been prepared to accompany a permit application to the Central Goldfields Shire Council in review of an onsite wastewater treatment system for a 6-bedroom equivalent residence.

Given the constraints to the site identified by the LCCR and the location of the property within a declared water catchment area, the following system is recommended:

- A secondary wastewater treatment system or aerated wastewater treatment system (AWTS) connected to a drip irrigation dispersal system.

A minimum 20/30/10 effluent quality (BOD < 20mg/L, TSS < 30mg/L and E. Coli < 10cfu/100mg) should be maintained by the selected treatment system. A manufacturer-accredited maintenance and service contract to ensure regular servicing of the system should be implemented.

As per *M3.1* of *AS1547 – 2012,* the drip irrigation system should be installed into in situ or imported good quality topsoil with a minimum depth of 250mm, with grass or other suitable vegetation at surface. It is noted that the importation of topsoil may be required.



Example drip irrigation system, from *AS1547 – 2012 Figure M1.*

7 SIZING OF THE WASTEWATER SYSTEM

The design capacity of the treatment system should cater for the expected peak daily load of the proposed development. As per *EPA GOWM*, the daily load is estimated based on the number of occupants (potential occupancy) and how efficiently water is used within the development (based on water fixtures). Subsequently, the daily wastewater volume generated has been determined using the 'Minimum Daily Wastewater Flow Rates & Organic Loading Rates' as listed within both *AS1547 – 2012* and *EPA GOWM.*

WVST has provided a system sizing as suited to a 6-bedroom equivalent residence which will be connected to tank water supplies. The potential wastewater volume generated has been based upon typical values of 120L/person/day and 60g BOD/person/day for a building fitted with full water reduction fixtures and fittings, with full water reduction being defined as minimum WELS rating of 3 stars for appliances and 4 stars for fixtures and fittings.

Following *EPA GOWM* and *AS1547 – 2012*, where the design occupancy is based on the number of bedrooms + 1, the development is therefore envisaged to generate maximum hydraulic and organic loadings of 840L/day (up to 480g BOD/day).

As per *AS1547 – 2012 Table J1*, the minimum operational capacity for an all-waste septic tank for a 6-bedroom equivalent residence is recommended as 4,500L.

It is noted that the selected wastewater system should also have appropriate capacity for testing wastewater flow and sufficient storage for build-up of solids before removal. Systems are also required to:

- Hold normal flow of domestic wastes for a range of population equivalents.
- Allow for normal peak flows
- Allow for short-term surge flows (for unusual or excess wastewater production)
- Allow for sludge and scum build up.

EPA GOWM provides a number of potential strategies to reduce wastewater generation, including but not limited to:

- Installation of WELS rated water efficient fittings (minimum 3 stars for appliances, and 4 stars for all fittings and fixtures)
- Consider not installing high water use fixtures such as spas and baths.
- Consider the installation of a dry composting toilet.

8 SIZING AND LOCATION OF THE DISPOSAL FIELDS

There are multiple methodologies available to determine the size of the disposal fields required for the wastewater treatment system. In line with the development intention for the site, WVST has used a water balance analysis as the basis to determine the minimum area required for suitable effluent land application area (LAA), verified by application area calculations provided by *AS1547 – 2012*.

WATER BALANCE : DRIP IRRIGATION

WVST used a water balance equation (provided in the Appendices) to determine the required distribution area for the LAA, in accordance with the area's climate statistics. Available climate data from the *Bureau of Meteorology* (station Bealiba – 81002; Moliagul – 81090; Dunolly - 81085) shows that mean monthly rainfall for the region is likely to meet or exceed average evaporation about 4 months of the year (typically from May to August).

When using the water balance equation, the minimum disposal area required for zero winter storage (assuming a DIR of 4mm/day, as per *Table M1* of *AS1547 – 2012*) is **292m²**.

AS1547 – 2012 : DRIP IRRIGATION

The above disposal area was verified to ensure accordance with recommended design irrigation rates provided by *AS1547 – 2012* and *EPA GOWM*. Following *Section M* of *AS1547 – 2012,* the required dispersal areas for irrigation-type systems can be determined as:

$$\mathrm{A} = \frac{\mathrm{Q}}{\mathrm{DIR}} \quad \textit{rearranged to} \quad DIR = \frac{\mathrm{Q}}{\mathrm{A}}$$

Where: A = dispersal area (m^2)
DIR = design irrigation rate (mm/day)
Q = design daily flow rate (L/day) = 840L/day

For a drip irrigation system where the water balance has determined an application area of 261m^2:

$$DIR = \frac{840}{292} = 2.9\mathrm{mm/day}$$

From *AS1547 – 2012 Table M1*, a design irrigation rate (DIR) of up to 4mm/day for secondary treated effluent disposal in drip irrigation systems in moderately structured Category 3 soils can be used, therefore the above application meets this requirement.

LOCATION OF THE DISPOSAL FIELD

EPA GOWM provides a number of setback distances (buffers) for the disposal field to help reduce the risk of human contact, protect sensitive environmental areas and maintain public amenity. For secondary treated sewerage systems, these can be summarised as:

- 100 metres up-slope from potable waterways.
- 30 metres upslope from non-potable waterways and domestic or stock dams.
- 3 metres up-slope of a building and 3 metres down-slope of a building.
- 3 metres up-slope of an adjacent lot and 3 metres down-slope of an adjacent lot.
- 20 metres from groundwater bores.
- 1.5 metres from base of trench to seasonal high-water table.

For this site, these EPA setbacks are achievable.

While a detailed design of the system is beyond the scope of this report, the schematic diagrams provided in the Appendices show the available area for the wastewater disposal field and a potential drip irrigation land application area for the dispersal of secondary treated effluent at the site. The above setbacks should be adhered to during final positioning of the dispersal field.

9 MANAGEMENT AND MAINTENANCE PROTOCOLS

Maintenance and monitoring of the wastewater treatment system is to be carried out in accordance with the certificate of approval and Central Goldfields Shire Council's permit conditions. In addition, for the long-term benefit of any wastewater treatment system there are a number of requirements for the owner to follow, namely:

- Minimise domestic water use.
- Minimise the use of non-biodegradable detergents.
- Use biodegradable soaps and low-phosphorus detergents.
- Restrict the use of germicides, ie. disinfectants.
- Minimise the discharge of fats, grease or chemicals into the system.
- Monitor quality of groundwater (if applicable).
- No sanitary or other hygiene products should be put in the system.
- Follow any other specific instructions provided by the manufacturers of the tank.

The following should also be considered for any disposal area at this site:

- Should be well exposed to the sun and wind.
- Alternate dispersal between different parts of the disposal field.
- Should contain plant vegetation requiring high nutrient plants - a list of potential plants for the disposal field is provided in the Appendices.
- A dense cover of appropriate evergreen species will be required to assist with water and nutrient uptake, particularly in the wet periods.
- Regularly harvest (mow) vegetation/grasses to maximize their uptake of water and nutrients.
- In dry times, to ensure the viability of the vegetation on and around the disposal field, it may be necessary to water them occasionally.

- Areas along the perimeter and below the disposal field should be vegetated with trees and shrubs.
- There should be restricted access to the disposal fields for vehicles, visitors, pets and children, noting that a fully fenced off area may be required in some cases.
- No permanent structures are to be erected over the reserve disposal area (where required).
- Ensure the area is level by filling depressions with good topsoil (not clay).
- While the disposal areas can be positioned to fit in with a landscape type design, it is easier to manage if they are all in one allocated area.

10 OTHER ON-GOING MANAGEMENT, MAINTENANCE AND REPORTING PROTOCOLS

It is the responsibility of the landowner to manage and maintain the complete domestic wastewater system, including the disposal fields. It is important that the owner compiles all services and actions conducted on the selected system and the disposal field and makes them readily available to the Central Goldfields Shire Council, when requested.

If either the system or the disposal field fails, it is important that a qualified person, ie. plumber, be called out quickly to limit any damage. The Central Goldfields Shire Council should also be contacted at the earliest possible convenience to assess any potential health issues that may have occurred due to the failure.

If or where no mains water is available, provisions should still be made at the planning stage to collect as much water from roof catchments via water tanks as possible. Furthermore, all proposed buildings should have their structure designed to maximise their water catchment potential, and typically have water tanks with a volume that can sustain the dwelling for the summer months. It is recommended that a separate tank be considered for non-potable requirements such as fire prevention and watering purposes during drier times.

11 CONCLUSION

The Land Capability Class Rating (LCCR) of the site was determined to be a 5, primarily due to the risk of sodic subsoil and, to a lesser extent, the potential for shallow rock or the watertable to be intersected before 1.5 metres depth. Given the constraints to the site identified by the LCCR, and the location of the property within a declared water catchment area, the following system is recommended:

- A secondary wastewater treatment system or aerated wastewater treatment system (AWTS) connected to a drip irrigation dispersal system with a minimum land application area of 292m^2.

The drip irrigation system should be installed into in situ or imported good quality topsoil with a minimum depth of 250mm, with grass or other suitable vegetation at surface. It is noted that the importation of topsoil may be required. Gypsum should be applied to the receiving soil at a minimum rate of 1kg/m^2.

The selected system should maintain a minimum 20/30/10 effluent quality (BOD < 20mg/L, TSS < 30mg/L and E. Coli < 10cfu/100mg). A manufacturer-accredited maintenance and service contract to ensure regular servicing of the system should be maintained.

The EPA provides a list of approved options for appropriate treatment systems, many of which can achieve the recommended level of performance. Details of the chosen system should be included on the Septic Tank Permit to Install application provide to the Central Goldfields Shire Council.

It remains the responsibility of the property owner/plumber to make the final selection of the treatment systems and forward this information to Central Goldfields Shire Council for approval prior to installation.

Strict adherence to the maintenance and monitoring of the installed system is also an essential part of the ongoing wastewater treatment and disposal program.

[redacted]

Benj Beatty BA/BSc (Hons), MPA, MAusIMM, MAIG
Director / Geologist

DISTRIBUTION

Electronic copies

Bobby Karevski (Site owner) bokarevski@abngroup.com.au
Benj Beatty (Western Victoria Soil Testing) benj@wvst.com.au
This document was prepared for the sole use of the Bobby Karevski and the regulatory agencies directly involved in this project. No third party should rely upon any of the information contained in this document without the prior consent of Western Victoria Soil Testing.

APPENDIX A – MAPS

PROPERTY REPORT

Energy, Environment and Climate Action

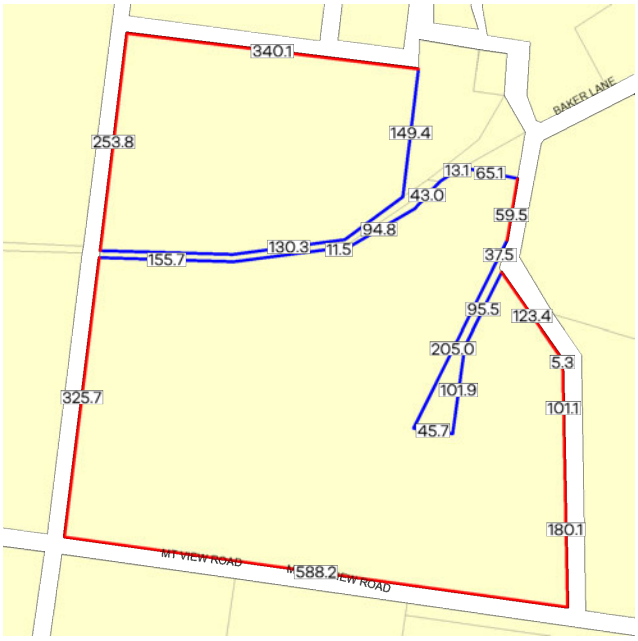
From www.land.vic.gov.au at 26 October 2024 11:04 AM

PROPERTY DETAILS

Address:	**164 MOUNT VIEW ROAD GOLDSBOROUGH 3472**
Lot and Plan Number:	**Plan PC375113**
Standard Parcel Identifier (SPI):	**PC375113**
Local Government Area (Council):	**CENTRAL GOLDFIELDS** www.centralgoldfields.vic.gov.au
Council Property Number:	**24580.0164**
Directory Reference:	**Vicroads 43 C7**

SITE DIMENSIONS

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



Area: 284685 sq. m (28.47 ha)
Perimeter: 3511 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.

5 overlapping dimension labels are not being displayed

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 at Title and Property Certificates

UTILITIES

Rural Water Corporation:	**Goulburn-Murray Water**
Urban Water Corporation:	**Coliban Water**
Melbourne Water:	**Outside drainage boundary**
Power Distributor:	**POWERCOR**

STATE ELECTORATES

Legislative Council:	**WESTERN VICTORIA**
Legislative Assembly:	**RIPON**

PLANNING INFORMATION

Property Planning details have been removed from the Property Reports to avoid duplication with the Planning Property Reports from the Department of Transport and Planning which are the authoritative source for all Property Planning information.

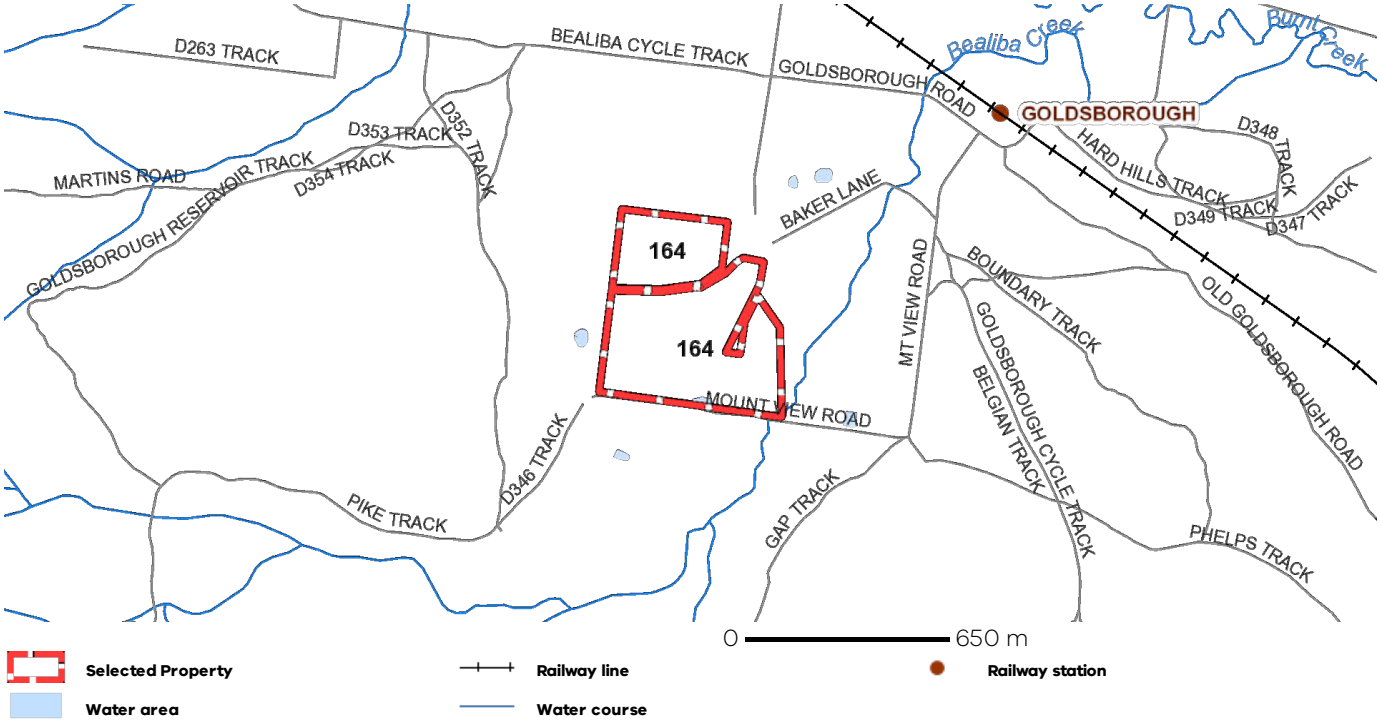
The Planning Property Report for this property can found here - Planning Property Report

Planning Property Reports can be found via these two links
Vicplan https://mapshare.vic.gov.au/vicplan/
Property and parcel search https://www.land.vic.gov.au/property-and-parcel-search

PROPERTY REPORT

Energy, Environment and Climate Action

Area Map



PLANNING PROPERTY REPORT

Environment, Land, Water and Planning

From www.planning.vic.gov.au at 26 October 2024 11:04 AM

PROPERTY DETAILS

Address:	**164 MOUNT VIEW ROAD GOLDSBOROUGH 3472**
Lot and Plan Number:	**Plan PC375113**
Standard Parcel Identifier (SPI):	**PC375113**
Local Government Area (Council):	**CENTRAL GOLDFIELDS** www.centralgoldfields.vic.gov.au
Council Property Number:	**24580.0164**
Planning Scheme:	**Central Goldfields** Planning Scheme - Central Goldfields
Directory Reference:	**Vicroads 43 C7**

UTILITIES

Rural Water Corporation:	**Goulburn-Murray Water**
Urban Water Corporation:	**Coliban Water**
Melbourne Water:	**Outside drainage boundary**
Power Distributor:	**POWERCOR**

STATE ELECTORATES

Legislative Council:	**WESTERN VICTORIA**
Legislative Assembly:	**RIPON**

OTHER

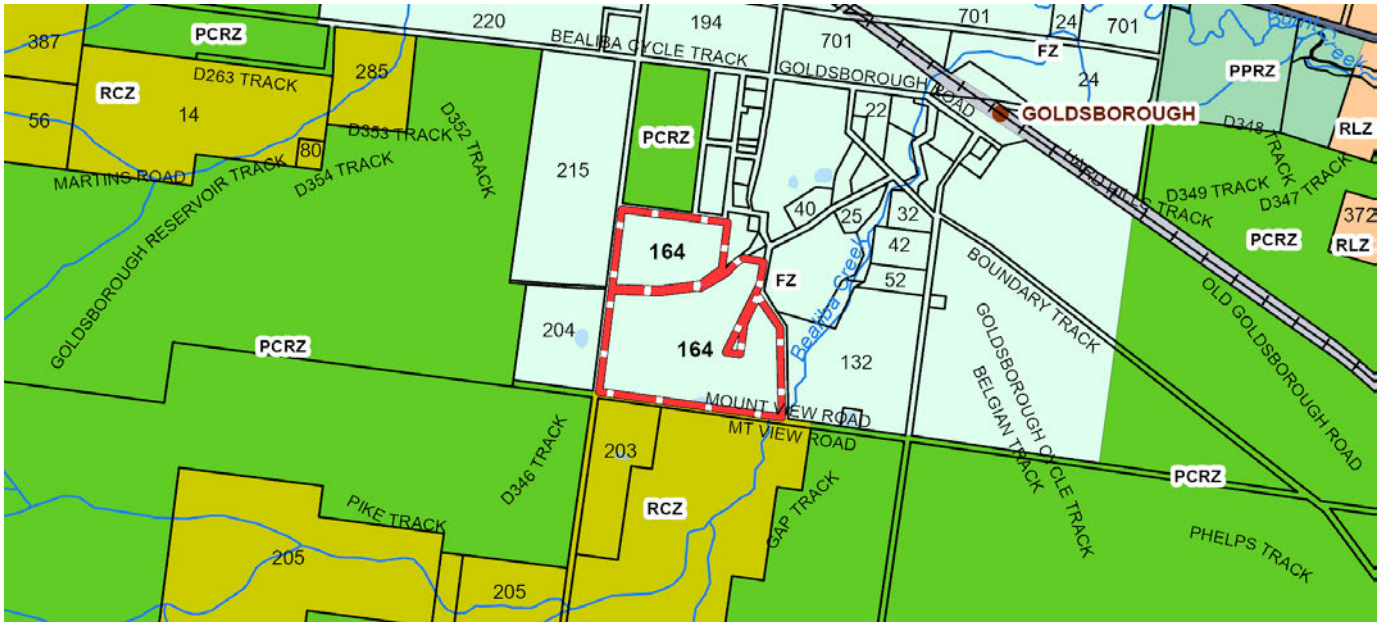
Registered Aboriginal Party: **Dja Dja Wurrung Clans Aboriginal Corporation**

View location in VicPlan

Planning Zones

FARMING ZONE (FZ) (CENTRAL GOLDFIELDS)

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

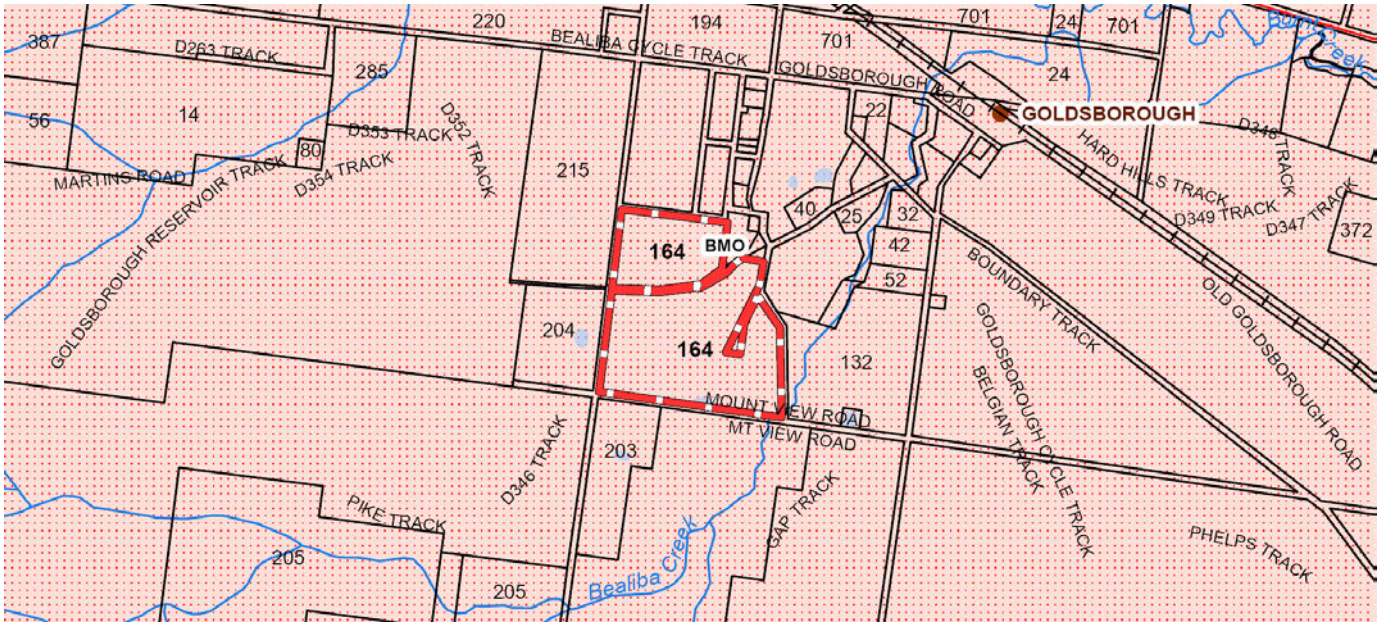


FZ - Farming	PCRZ - Public Conservation and Resource	PPRZ - Public Park and Recreation
RCZ - Rural Conservation	RLZ - Rural Living	TRZ1 - State Transport Infrastructure
TRZ2 - Principal Road Network	Railway line	Railway station
Water area	Water course	

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

Planning Overlays

BUSHFIRE MANAGEMENT OVERLAY (BMO) (CENTRAL GOLDFIELDS)



BMO - Bushfire Management Overlay

Water area

Railway line

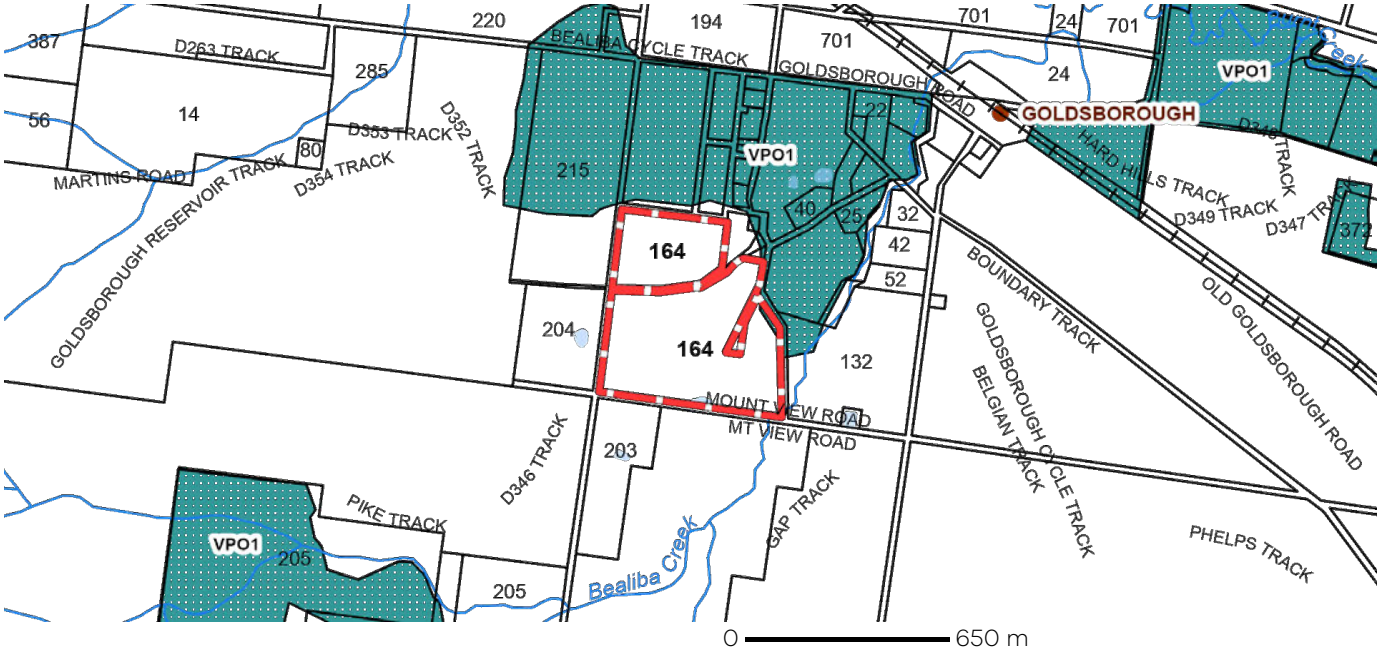
Water course

Railway station

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

VEGETATION PROTECTION OVERLAY (VPO) (CENTRAL GOLDFIELDS)

VEGETATION PROTECTION OVERLAY - SCHEDULE 1 (VPO1) (CENTRAL GOLDFIELDS)



VPO - Vegetation Protection Overlay

Water area

Railway line

Water course

Railway station

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

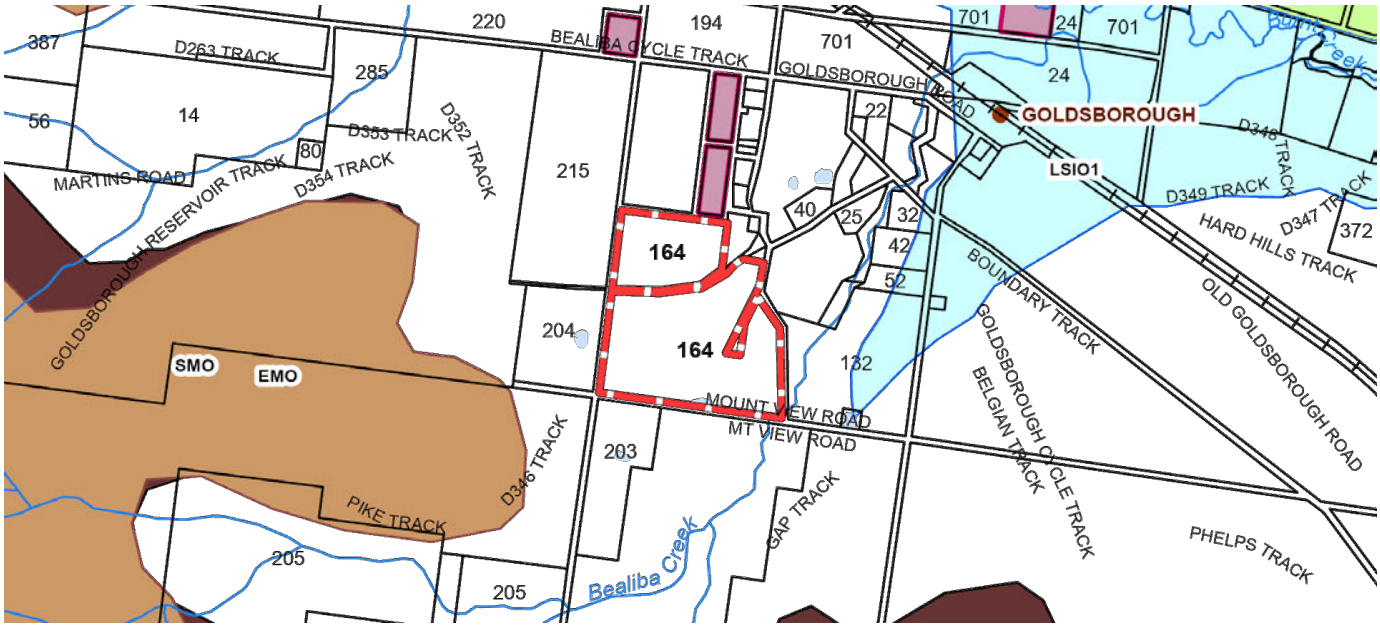
PLANNING PROPERTY REPORT

Planning Overlays

OTHER OVERLAYS

Other overlays in the vicinity not directly affecting this land

EROSION MANAGEMENT OVERLAY (EMO) (CENTRAL GOLDFIELDS)
ENVIRONMENTAL SIGNIFICANCE OVERLAY (ESO) (LODDON)
HERITAGE OVERLAY (HO) (CENTRAL GOLDFIELDS)
LAND SUBJECT TO INUNDATION OVERLAY (LSIO) (CENTRAL GOLDFIELDS)
LAND SUBJECT TO INUNDATION OVERLAY (LSIO) (LODDON)
SALINITY MANAGEMENT OVERLAY (SMO) (CENTRAL GOLDFIELDS)



EMO - Erosion Management Overlay
ESO - Environmental Significance Overlay
HO - Heritage Overlay
LSIO - Land Subject to Inundation Overlay
SMO - Salinity Management Overlay
Railway line
Railway station
Water area
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

Areas of Aboriginal Cultural Heritage Sensitivity

All or part of this property is an 'area of cultural heritage sensitivity'.

'Areas of cultural heritage sensitivity' are defined under the Aboriginal Heritage Regulations 2018, and include registered Aboriginal cultural heritage places and land form types that are generally regarded as more likely to contain Aboriginal cultural heritage.

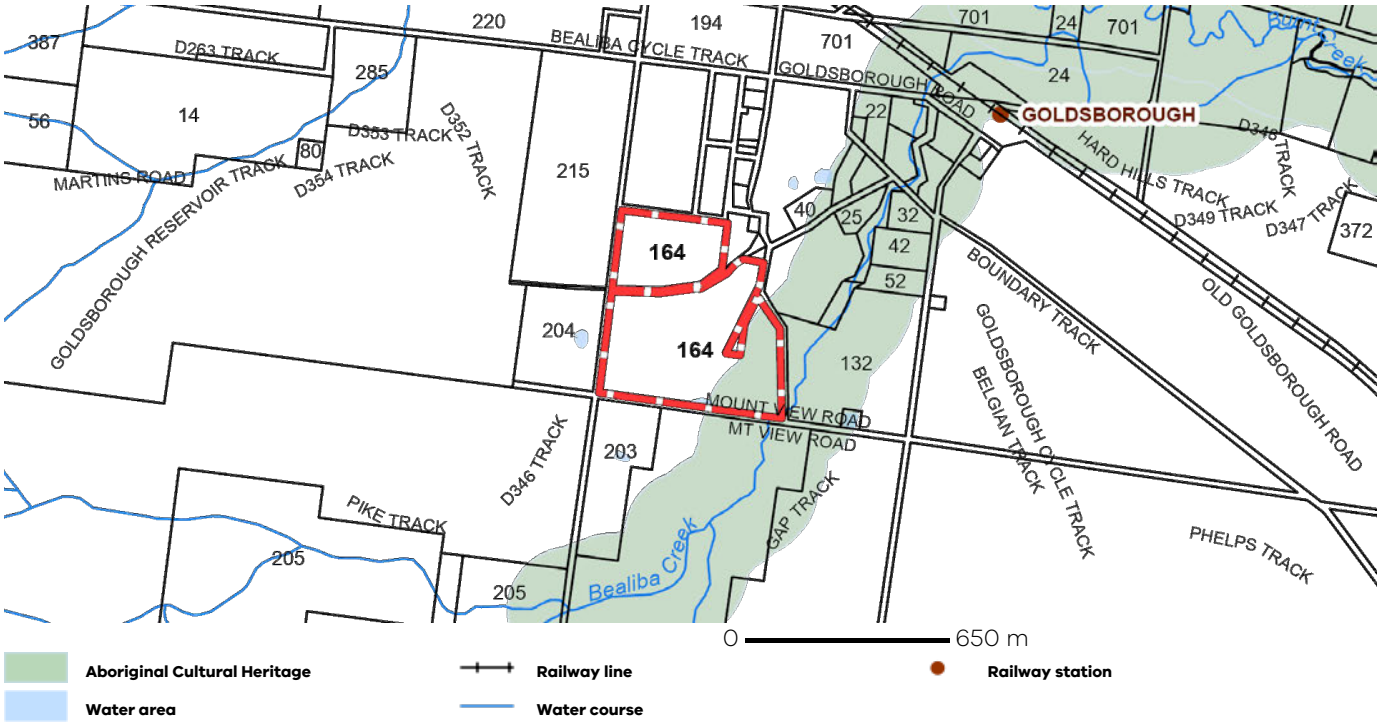
Under the Aboriginal Heritage Regulations 2018, 'areas of cultural heritage sensitivity' are one part of a two part trigger which require a 'cultural heritage management plan' be prepared where a listed 'high impact activity' is proposed.

If a significant land use change is proposed (for example, a subdivision into 3 or more lots), a cultural heritage management plan may be triggered. One or two dwellings, works ancillary to a dwelling, services to a dwelling, alteration of buildings and minor works are examples of works exempt from this requirement.

Under the Aboriginal Heritage Act 2006, where a cultural heritage management plan is required, planning permits, licences and work authorities cannot be issued unless the cultural heritage management plan has been approved for the activity.

For further information about whether a Cultural Heritage Management Plan is required go to http://www.aav.nrms.net.au/aavQuestion1.aspx

More information, including links to both the Aboriginal Heritage Act 2006 and the Aboriginal Heritage Regulations 2018, can also be found here - https://www.aboriginalvictoria.vic.gov.au/aboriginal-heritage-legislation



PLANNING PROPERTY REPORT

Further Planning Information

Planning scheme data last updated on 24 October 2024.

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.maps.vic.gov.au/vicplan

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

PLANNING PROPERTY REPORT

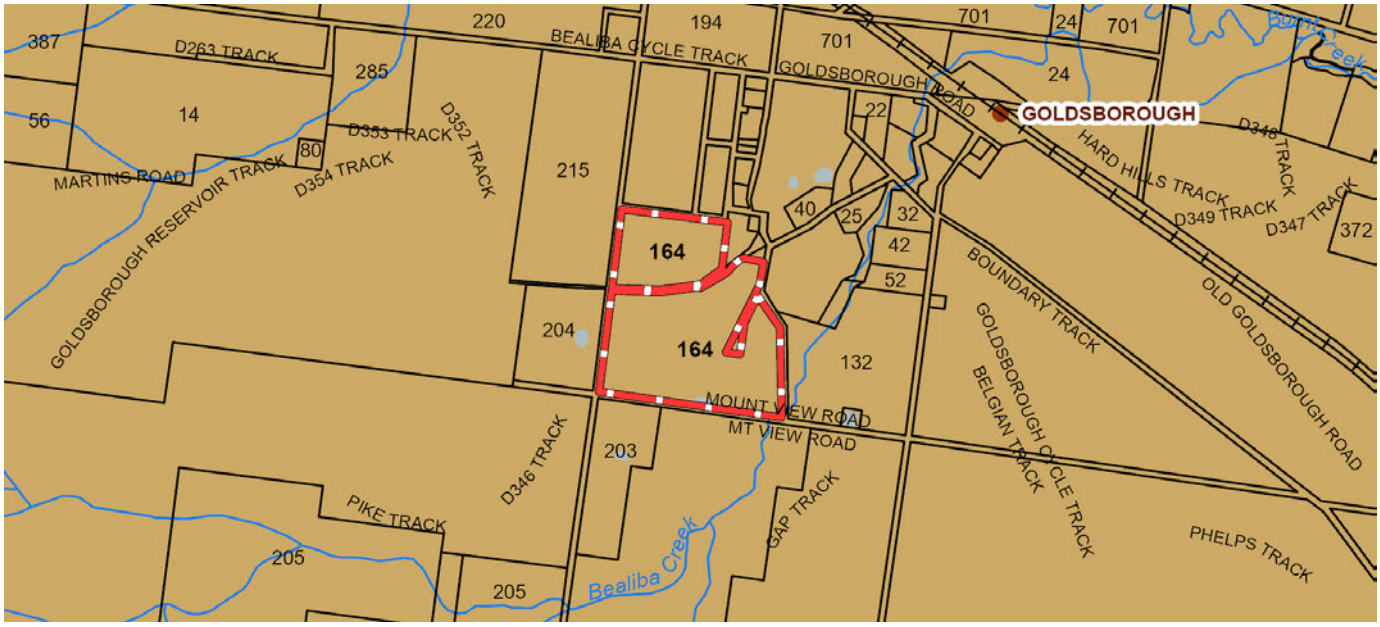
Environment, Land, Water and Planning

Designated Bushfire Prone Areas

This property is in a designated bushfire prone area. Special bushfire construction requirements apply to the part of the property mapped as a designated bushfire prone area (BPA). Planning provisions may apply.

Where part of the property is mapped as BPA, if no part of the building envelope or footprint falls within the BPA area, the BPA construction requirements do not apply.

Note: the relevant building surveyor determines the need for compliance with the bushfire construction requirements.



Designated BPA are determined by the Minister for Planning following a detailed review process. The Building Regulations 2018, through adoption of the Building Code of Australia, apply bushfire protection standards for building works in designated BPA.

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

Create a BPA definition plan in VicPlan to measure the BPA.

Information for lot owners building in the BPA is available at https://www.planning.vic.gov.au.

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)

Groundwater Resource Report

Groundwater catchment: Loddon **VICGRID94 Easting: 2381053 Northing: 2517992**

Depth to water table: < 5m **Water table salinity (mg/L): 3501 - 7000**

Groundwater layers (Aquifers and Aquitards)	Depth below surface (m)	Groundwater salinity (mg/L)
UTQA Upper Tertiary / Quaternary Aquifer layered clay, sands and silt	0 - 8	1001 - 3500
BSE Mesozoic and Palaeozoic Bedrock (basement) sedimentary (fractured rock): Sandstone, siltstone, mudstone, shale. Igneous (fractured rock): includes volcanics, granites, granodiorites.	8 - 208	1001 - 3500

Groundwater management unit (GMU)	Depth below surface (m)	PCV (ML/yr)
LODDON HIGHLANDS WSPA	ALL	20,697

For further information about this report contact:
Department of Environment, Land, Water & Planning
Email: ground.water@delwp.vic.gov.au

For further information on groundwater licensing in this area contact:
Goulburn Murray Water
Phone: 1800 013 357
Email: reception@g-mwater.com.au
Website: http://www.g-mwater.com.au/water-resources/ground-water

Printed: 26 October 2024
Date Updated: 11 January 2019

VICTORIA State Government | Environment, Land, Water and Planning

How to read this report

Introduction

Groundwater is part of the water cycle. When rain or snow falls on land, some of it evaporates, some flows to streams and rivers, and some seeps into the soil. Some of the water in the soil is used by plants but some continues to move down through the soil and rock until all the pores and cracks are full of water. This is known as the water table and this water is called groundwater.

Groundwater is a finite resource that, like surface water, is allocated under the Water Act (1989). A Bore Construction Licence is required to drill for groundwater including for domestic and stock purposes. Taking and using groundwater for commercial or irrigation purposes requires an additional licence.

Purpose of this report

This report has been prepared to provide potential groundwater users with basic information about groundwater beneath their property. This includes the different geological layers, the depths of the layers and the salinity of groundwater in the layers. Information on the groundwater management units (GMU) and any associated caps on the volume that can be licensed (the PCV) are also provided.

Definitions and context

Term	Description
Groundwater Catchment	An identified area of the State within which groundwater resources are connected.
Easting / Northing	The VICGRID 94 coordinates of the spot that was selected on the interactive map.
Groundwater Salinity	Indicates the possible concentration of salts within the groundwater. The salt content indicates the possible uses of the water (see the Beneficial Use Table below). Fertilisers and other contaminants can also enter groundwater and affect its use. It is up to you to make sure that the groundwater you use is suitable for your purpose.
Aquifer	An aquifer is a layer of soil or rock which stores usable volumes of groundwater. Aquifers are generally limestones, gravels and sands, as well as some fractured rocks where the cracks in the rock are open and connected (some basalts, sandstones and limestones). How much water can be pumped from an aquifer depends on how much water is stored in pores and cracks, how well connected the pores and cracks are, and how thick the layer is. It is more likely that volumes of water for irrigation and urban water supply will come from gravels, sands, limestones and basalts that are at least 30 metres thick. Low volumes of water for domestic and stock use are likely from any aquifer greater than 10 metres thick. The advice above is a guide only, as the amount of water available can be highly variable. Actual pumping volumes can only be determined from drilling, appropriate construction and testing of a bore.
Aquitard	An aquitard is a layer of rock or soil that does not allow water to move through it easily, limiting its capacity to supply water. Aquitards are generally silts, clays and fractured rocks (where there are few cracks in the rock or the cracks are poorly connected).
Groundwater Management Unit (GMU)	A collective term for groundwater management areas (GMAs) and water supply protection areas (WSPAs). GMAs and WSPAs are defined areas and depths below the surface where rules for groundwater use may apply. WSPAs often have caps on groundwater use and plans describing how the resource is managed. GMAs usually have caps on groundwater use and may have local plans and rules. All other areas are managed directly through the Water Act (1989). Always check with your local Rural Water Corporation to be sure that the information on the GMU is correct for your specific location.
Permissible Consumptive Volume (PCV)	A cap that is set under the Water Act (1989) declaring the total volume of groundwater that may be taken from the area. Once the PCV is reached, no additional extraction can be licensed for use within the area unless traded from another groundwater licence holder.
Depth to Water Table	This is an indication of the depth at which groundwater might first be encountered when drilling a bore. The depth can vary from year to year, and from place to place and may vary significantly from that indicated in this report.

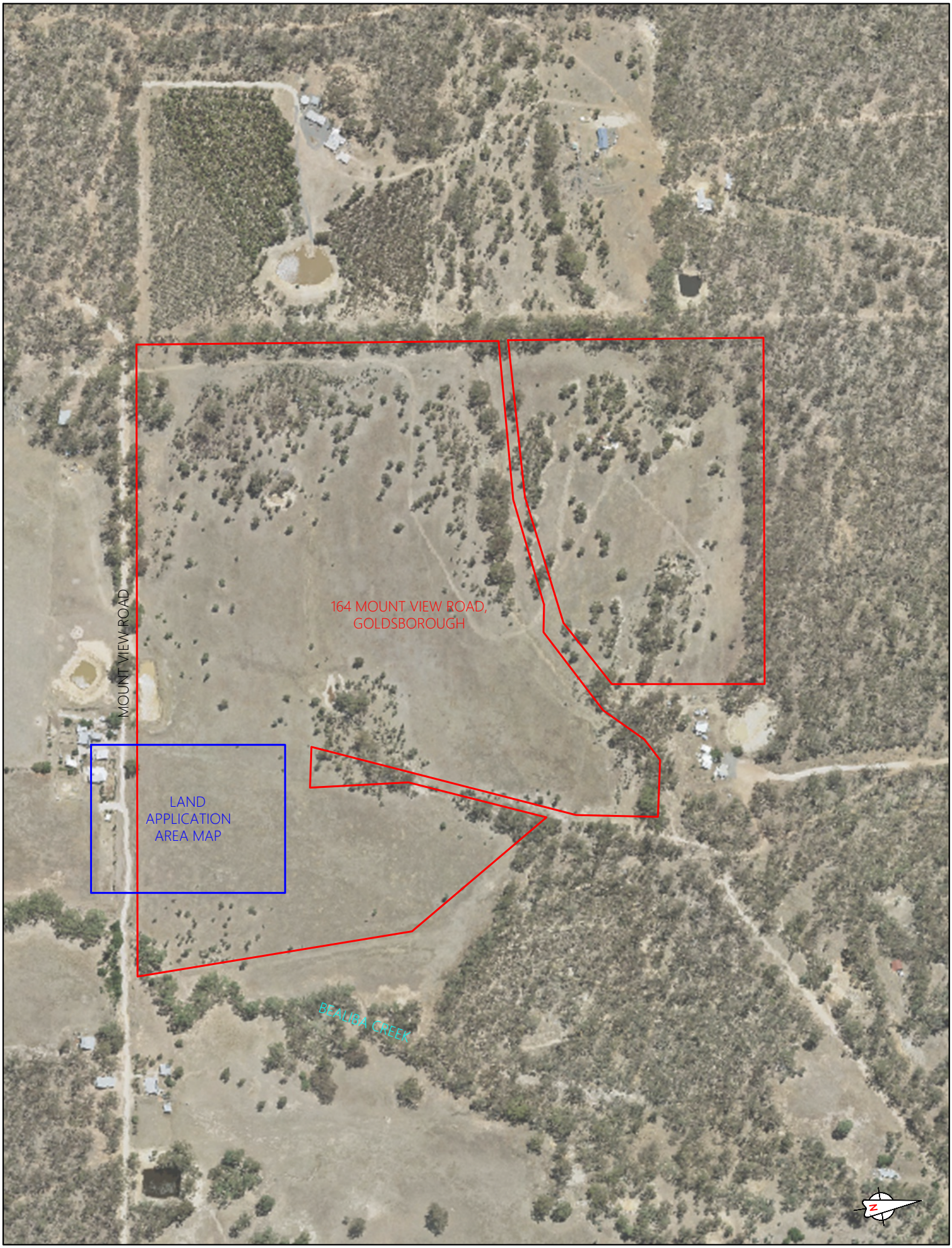
Beneficial Use Table

Salinity range (mg/L TDS)	Beneficial use as described by State Environment Protection Policy (Groundwaters of Victoria) s160							
	Potable water - preferred	Potable water - acceptable	Potable mineral water	Irrigation	Stock water	Industry	Ecosystem protection	Buildings and structures
<500	✓	✓	✓	✓	✓	✓	✓	✓
501-1000		✓	✓	✓	✓	✓	✓	✓
1001-3500			✓	✓	✓	✓	✓	✓
3501-13000					✓	✓	✓	✓
13001+						✓	✓	✓

Printed: 26 October 2024

Date Updated: 11 January 2019

VICTORIA State Government | Environment, Land, Water and Planning



WESTERN VICTORIA
SOIL TESTING

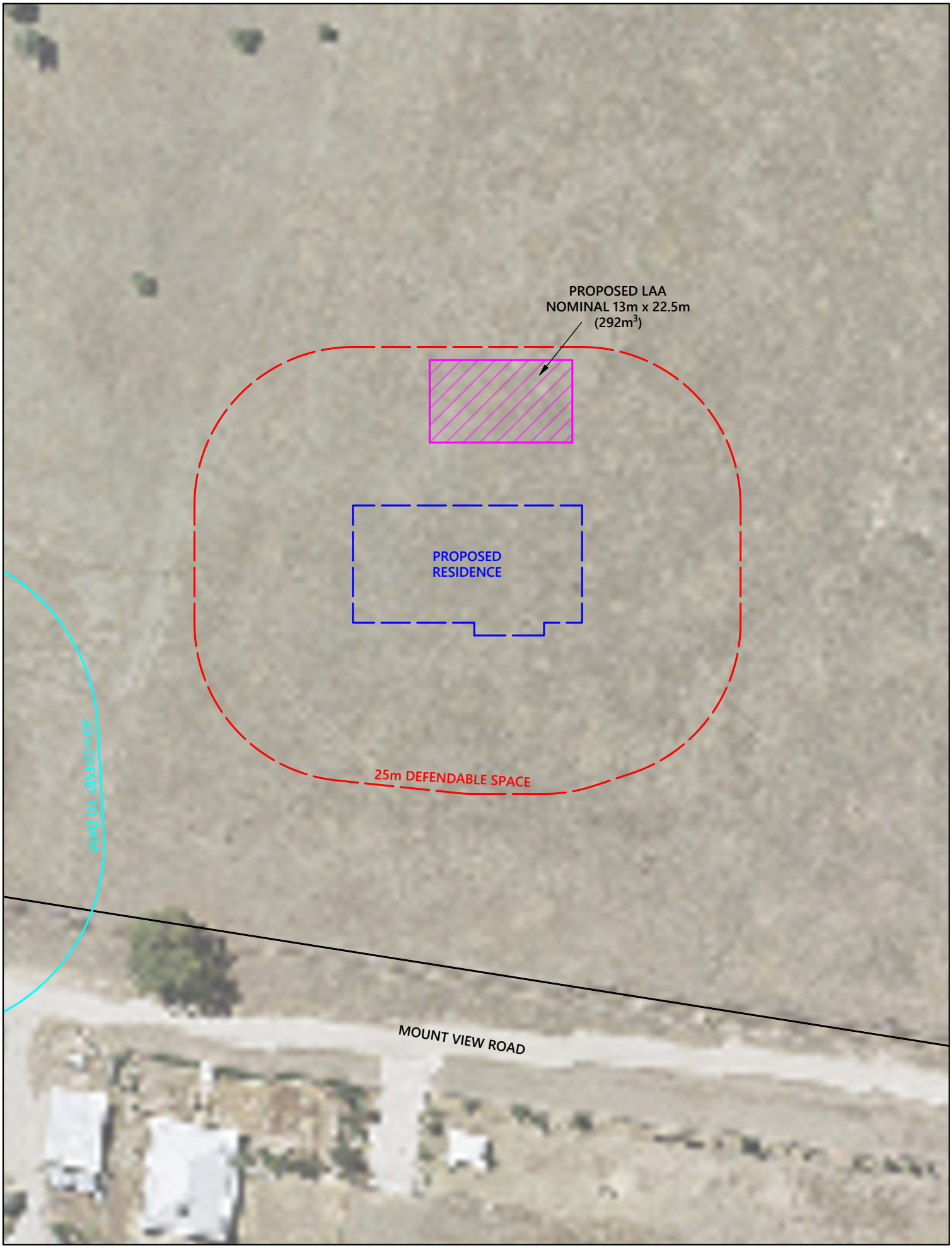
PROPERTY OVERVIEW

APPROXIMATE LOCATIONS
NOT TO SCALE

CLIENT: BOBBY KAREVSKI
PROJECT: 164 MOUNT VIEW ROAD
GOLDSBOROUGH

WVST REF: 240430-2A
CLIENT REF:

DRAWN BY: BAB
DATE: 17 AUGUST 2025



WESTERN VICTORIA
SOIL TESTING

PROPOSED LAA

APPROXIMATE LOCATIONS
SCALE 1:750

CLIENT: BOBBY KAREVSKI
PROJECT: 164 MOUNT VIEW ROAD
GOLDSBOROUGH

WVST REF: 240430-2A
CLIENT REF:

DRAWN BY: BAB
DATE: 17 AUGUST 2025

APPENDIX B – BOREHOLE LOGS

WESTERN VICTORIA SOIL TESTING

Client:	Bobby Karevski		Date drilled:	27/8/24
Project:	164 Mount View Road, Goldsborough		Report number:	240430-2
Method:	Powered hand auger		Borehole log no:	2
Depth (mm)	Structure	Material Description		Testing
0 – 100	Topsoil	Sandy Clayey SILT, brown, soft, very moist, fine sand		
100 – 200	Soil profile	Sandy Silty CLAY, low plasticity, mottled pale brown, grey & orange, firm, moist, fine to medium sand, some fine to coarse gravel		
200 – 300				
300 – 400		Sandy Silty CLAY, low plasticity, orange/brown, stiff to very stiff, moist to slightly moist, fine sand, trace fine to medium quartz gravel		
400 – 500				
500 – 600				
600 – 700				
700 – 800				
800 – 900				
900 – 1000				
1000 – 1100		*Hand auger refusal @ 1.1 metres on very stiff clay*		

Client:	Bobby Karevski		Date drilled:	27/8/24
Project:	164 Mount View Road, Goldsborough		Report number:	240430-2
Method:	Powered hand auger		Borehole log no:	4
Depth (mm)	Structure	Material Description		Testing
0 – 100	Soil profile	Sandy Silty CLAY, low plasticity, mottled pale brown, grey & orange, firm to stiff, slightly moist, fine to medium sand, some fine to coarse gravel		
100 – 200				
200 – 300		Sandy Silty CLAY, low plasticity, orange/brown, very stiff, slightly moist to dry, fine sand, trace fine to medium quartz gravel		Sample BH4/BH5
300 – 400				
400 – 500				
500 – 600				
600 – 700		*Hand auger refusal @ 0.7 metres on old tree root*		

Client:	Bobby Karevski		Date drilled:	27/8/24
Project:	164 Mount View Road, Goldsborough		Report number:	240430-2
Method:	Powered hand auger		Borehole log no:	5
Depth (mm)	Structure	Material Description		Testing
0 – 100	Topsoil	Sandy Clayey SILT, brown, soft, very moist, fine sand		
100 – 200	Soil profile	Sandy Silty CLAY, low plasticity, mottled pale brown, grey & orange, firm, moist, fine to medium sand, some fine to coarse gravel		
200 – 300				
300 – 400		Sandy Silty CLAY, low plasticity, orange/brown, stiff to very stiff, moist to slightly moist, fine sand, trace fine to medium quartz gravel		Sample BH4/BH5
400 – 500				
500 – 600				
600 – 700				
700 – 800				
800 – 900				
900 – 1000				
1000 – 1100		*Hand auger refusal @ 1.1 metres on very stiff clay*		

APPENDIX C – SITE PHOTOGRAPHS

Site of potential LAA at time of investigation, looking east.

Site of potential LAA at time of investigation, looking north.

Site of potential LAA at time of investigation, looking west.

Site of potential LAA at time of investigation, looking south.

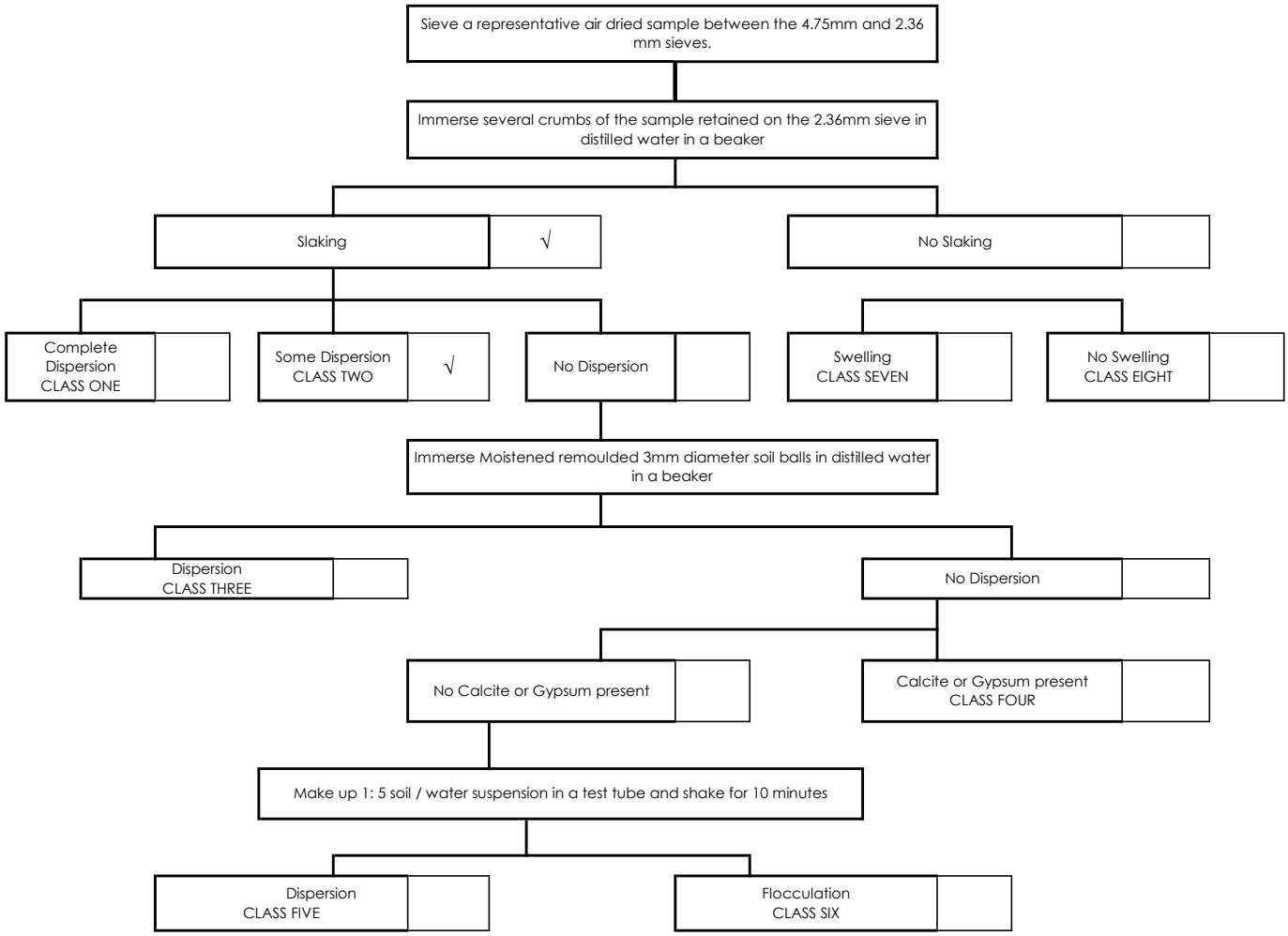
APPENDIX D – NATA ACCREDITED TEST REPORTS

GEOTEST Civil Services

78 Mornington Street
NORTH GEELONG VIC
Ph : 52771900

REPORT OF DETERMINATION OF EMERSON CLASS NUMBER OF A SOIL

AS 1289.3.8.1



EMERSON CLASS NUMBER : 2

Lab Number : 7542/24/706			
Client : Western Victoria Soil Testing, 20 Boak Ave Mt Helen VIC		Project : Lab testing - Goldsborough Your Ref : 240430-2	
Sampled By :	Client	Date Sampled :	30/08/2024
Sampling Method	Sampled by Client, tested as presented		
Date Tested : 3/09/2024	Material : Clay ex BH 4 / 5		
Start Time : 2:25 PM	Finish Time : 2:35 PM	Water Type & temperature : Distilled, 15oC	
Tested By JL	Checked By : RB		

NOTES

Class One : show strong dispersing reaction, ie covers nearly whole bottom of beaker
Class Two : Moderate to slight reaction spreading in thin streaks on bottom of beaker
Class Three : Soil remoulded at Plastic Limit disperses in water
Class Four : Remoulded soil does not disperse in water, Calcium Carbonate or Calcium Sulphate is present
Class Five : Does not disperse and the 1:5 soil/water suspension remains dispersed after 5 minutes
Class Six : Does not disperse and the 1:5 soil/water suspension begins to floculate within 5 minutes
Class Seven : Crumbs of soil remain coherent in water and swells
Class Eight : Crumbs of soil remain coherent and do not swell

NATA

NATA Registered Testing Facility. Accreditation No 10664.
Accredited for compliance with ISO/IEC 17025 - Testing

Authorised Signatory :

4/09/2024
Date :

form : LW EMERSON 1/5/23

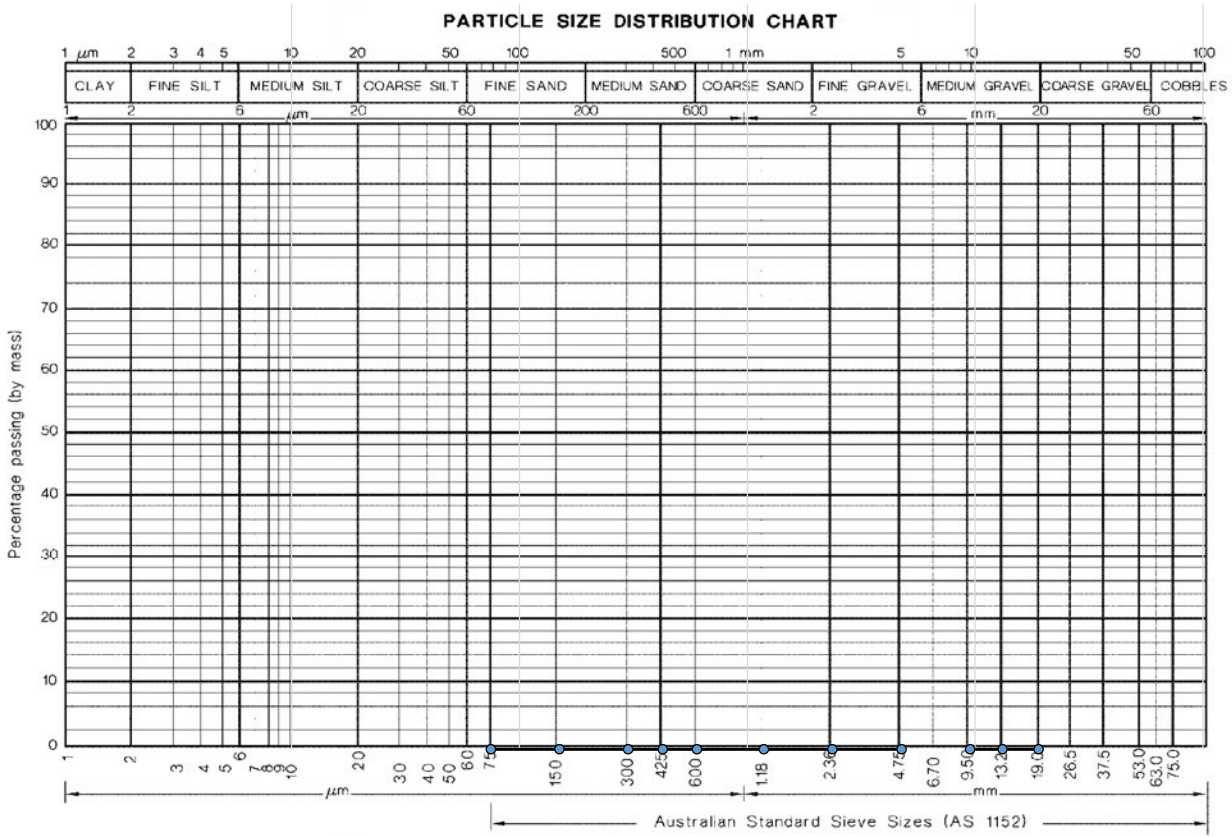
GEOTEST Civil Services

78 Mornington Street
NORTH GEELONG VIC 3215
Ph : 52771900 Fax 52771922

REPORT OF SOIL CLASSIFICATION

Client :	Western Victoria Soil Testing, 20 Boak Ave Mt Helen VIC	Project:		Lab testing : Landsborough	
Lab Reference No :	7542/24/706	Date Sampled:	30/08/2024	Sampled by :	Client

Sample No.		**1**
Location		Ex BH 4 / 5
Material		Clay
Particle Size Distribution (AS1289.3.6.1)		
A.S Sieve (mm)	**75.0**	
	53.0	
	37.5	
	26.5	
	19.0	
	13.2	
	9.5	Not tested by this method
	6.7	
	4.75	
	2.36	
	1.18	
	0.6	
	0.425	
	0.3	
	0.15	
	0.075	
Plasticity Tests		
AS 1289 3.1.2 Liquid Limit %		35
AS 1289 3.2.1 Plastic Limit %		12
AS 1289 3.3.1 Plasticity Index %		**23**
AS 1289 3.4.1 Linear Shrinkage %		10.0
linear shrinkage status		na



Sampling Method : *Sampled by Client method not known. Results relate to testing performed only.*

linear shrinkage status *curling (cl) / crumbling (cb) / neither (na)*

All samples are oven dried and dry sieved

[redacted]

NATA Accredited Testing Facility. Accreditation Number 10644.
Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: R.Bennett

Date Issued : 12/09/2024

GEOTEST
Civil Services

78 Mornington Street
NORTH GEELONG VIC
Ph : 52771900 FAX : 52771922

REPORT OF DETERMINATION OF pH OF A SOIL

AS1289.2.1.1, AS1289.4.3.1

Sample pH:	**8.4**
Conductivity (uS/cm)	**170.0**
Sample Moisture Content (%)	**10.0**

Lab Number : 7542/24/706			
Client : Western Victoria Soil Testing, 20 Boak Ave Mt Helen VIC		Project : Lab testing ex Goldsborough Your Ref : 240430-2	
Sampled By : Client		Date Sampled : 30/08/2024	
Sampling Method : Tested as presented		Preparation Method : AS1289.1.1	
Date Tested : 2/09/2024		Material : Clay ex BH 4/5	
Date received : 30/08/2024		Water Type & temperature :	Distilled , 25oC

Testing performed by Eurofins, Report 1134591-S, Issued 3/9/24

NATA ACCREDITED FOR TECHNICAL COMPETENCE

NATA Accredited Testing Facility. Accreditation Number 10644. Accredited for compliance with ISO/IEC 17025 - Testing

[redacted]

5/09/2024
Date :

CHADWICK GEOTECHNICS

QUALITY OF MATERIALS REPORT

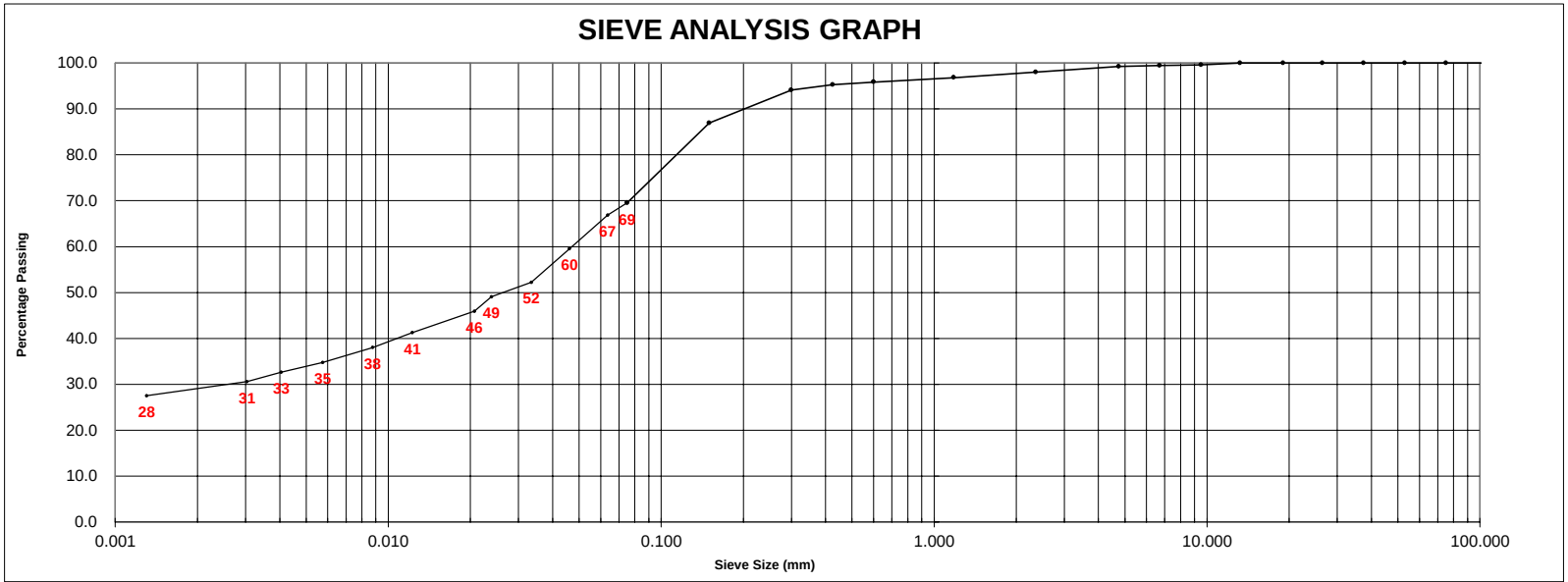
Customer: Geotest Civil Services
Customer Address: PO Box 5298, Geelong North VIC
Project: GCS - WVST Goldhurst
Location: -
Customer Order No.: 7542/24/706

Report Number: **QOM-S24DS-06149**
Report Date: 25/09/2024
CG Job No: 1096559
Sieve Analysis Test Method: AS 1289.3.6.1
AS1289 3.6.3
Page: 1 of 1

Testing performed and reported at our Dandenong South Laboratory 12712

Sample No.:	**S24DS-06149**
ID No.:	-
Lot No:	-
Date Sampled:	30/08/2024
Date Tested:	9/09/2024
Sampling Method:	As Received
Material Source:	In-Situ
Material Description:	Sandy CLAY trace gravel, red-brown, low plasticity
Sample Location:	240430-2 BH4/5
Sample Preparation Method:	As Received
Loss in pre-treatment (%)	-
Moisture Content (%) AS 1289 2.1.1	11.7
Particle Density g/cm^3 AS 1289.3.5.1	2.70
Liquid Limit (%) AS 1289.3.1.2	-
Plastic Limit (%) AS 1289.3.2.1	
Plasticity Index AS 1289.3.3.1	-
Linear Shrinkage (%) AS 1289.3.4.1	-
Cracking, Curling, Crumbling (1,2,3)	
P.I. x % Passing 0.425mm	-
L.S. x % Passing 0.425mm	-
Ratio of % Passing (0.075/0.425)	0.73

SIEVE ANALYSIS GRAPH



75.00	53.00	37.50	26.50	19.00	13.20	9.50	6.70	4.75	2.36	1.180	0.600	0.425	0.300	0.150	0.075	0.064	0.046	0.033	0.024	0.021	0.012	0.009	0.006	0.004	0.003	0.001
					100	100	99	99	98	97	96	95	94	87	69	67	60	52	49	46	41	38	35	33	31	28

Soil Classification in accordance with AS1726 (Tables 9 & 10) -

Remarks:
Dispersion Method: mechanical Hydrometer: grams per litre

Accredited for compliance with ISO/IEC 17025 - Testing
Corporate Accreditation No. 12719

This report shall not be reproduced expect in full. Reported results are related only to the item(s) tested.

APPROVED SIGNATORY

S Indiketiya

Head Office
25 Metcalf Street
DANDENONG SOUTH VIC
3175

Ph: +61 3 8796 7900

Form No: CG.349.009
Issue Date: 28/08/2024

APPENDIX E – WATER BALANCE

Victorian Land Capability Assessment Framework

Please read the attached notes before using this spreadsheet

Irrigation area sizing using Nominated Area Water Balance & Storage Calculations

Site Address:	**164 Mount View Road, Goldsborough**		
Date:	17/08/2025	**Assessor:**	Western Victoria Soil Testing

INPUT DATA

Design Wastewater Flow	Q	840	L/day	Based on maximum potential occupancy and derived from Table 4 in the EPA Code of Practice (2016)
Design Irrigation Rate	DIR	4.0	mm/day	Based on soil texture class/permeability and derived from Table 9 in the EPA Code of Practice (2016)
Nominated Land Application Area	L	292	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	1.0	unitless	Proportion of rainfall that remains onsite and infiltrates, allowing for any runoff
Mean Monthly Rainfall Data		Bealiba - 81002 Moliagul - 81090 Dunolly - 81085		BoM Station and number
Mean Monthly Pan Evaporation Data		BoM climate data		Evaporation data extracted from http://www.bom.gov.au/jsp/ncc/climate_averages/evaporation/index.jsp

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	32.8	27.7	29.3	34.6	48.5	51.2	51.1	53.2	49.9	46.7	39.2	32.9	**497**
Evaporation	E		mm/month	235	204	156	93	50	29	32	48	70	116	162	212	**1407**
Crop Factor	C		unitless	0.80	0.80	0.70	0.70	0.60	0.60	0.60	0.60	0.70	0.70	0.80	0.80	
OUTPUTS																
Evapotranspiration	ET	ExC	mm/month	188	163	110	65	30	18	19	29	49	81	130	170	**1050.087**
Percolation	B	DIRxD	mm/month	124.0	112	124.0	120.0	124.0	120.0	124.0	124.0	120.0	124.0	120.0	124.0	**1460.0**
Outputs		ET+B	mm/month	311.7	275.048	233.5	185.0	153.9	137.5	143.0	152.7	169.3	205.0	249.6	293.9	**2510.1**
INPUTS																
Retained Rainfall	RR	RxRF	mm/month	32.8	27.7	29.3	34.6	48.5	51.2	51.1	53.2	49.9	46.7	39.2	32.9	**497.1**
Applied Effluent	W	(QxD)/L	mm/month	89.2	80.5	89.2	86.3	89.2	86.3	89.2	89.2	86.3	89.2	86.3	89.2	**1050.0**
Inputs		RR+W	mm/month	122.0	108.2	118.5	120.9	137.7	137.5	140.3	142.4	136.2	135.9	125.5	122.1	**1547.1**
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	-189.7	-166.8	-115.1	-64.1	-16.2	0.0	-2.7	-10.3	-33.1	-69.1	-124.1	-171.8	
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 STORAGE			m^2	93	95	127	168	247	292	283	262	211	164	120	100	

MINIMUM AREA REQUIRED FOR ZERO STORAGE: 292.0 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

APPENDIX F – POTENTIAL PLANTS FOR THE DISPOSAL FIELD

Distribution pipes of effluent systems are not generally subject to root blockage if constructed as recommended by the Code of Practice. The following list, although not exhaustive, is included as a guide to species that have been found from industry experience to be satisfactory.

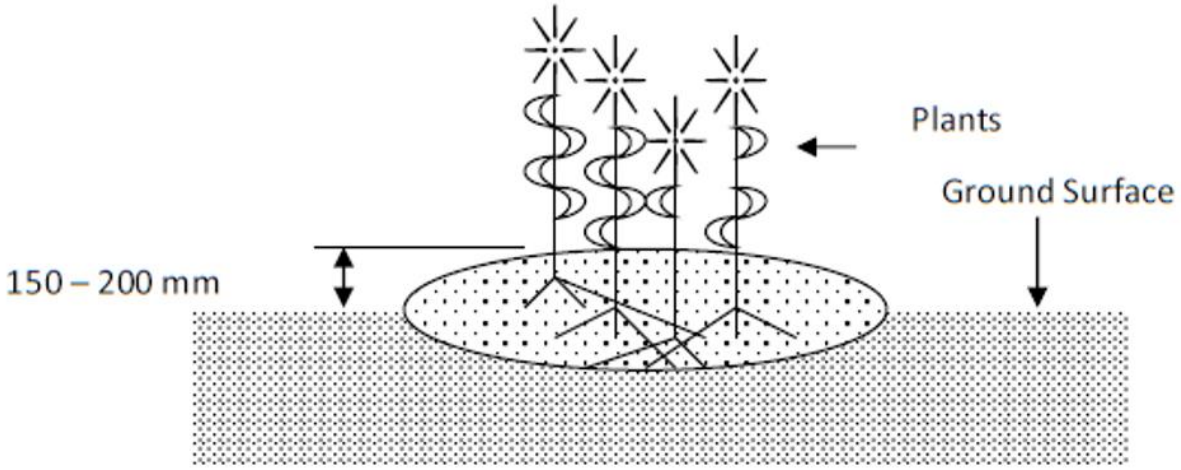
Botanical names	Common names
Phragmites australis	Common Reed
Canna x generalis	Canna Lily
	Calla Lily
	Ginger Lily
Acacia howittii	Sticky Wattle
Callistemon citrinus	Crimson Bottlebrush
Callistemon macropunctatus	Scarlet Bottlebrush
Leptospermum lanigerum	Wooley Tea-tree
Melaleuca decussata	Cross Honey Myrtle
Melaleuca ericifolia	Swamp Paperbark
Melaleuca halmaturorum	Salt Paperbark
Tamarix juniperina	Flowering Tamarisk
Eleocharis acuta	Cannas
	Common Spike-rush
	Buffalo/Kikuyu
	Geranium
	Hydrangeas
	Tall Wheat Grass
	Strawberry Clover
	White Clover
	Perennial Rye
	Bougainvillea

Note: Care should be taken when locating trees to ensure they do not shade the system unless they draw from it.

Contact your local garden nursery for water tolerant plants or refer to gardening books such as:

- *Grow What Where*, The Australian Plant Study Group, Viking O'Neill (Penguin Books, 1990)
- *Gardening with Australian Plants,* Roger Eliot (Lothian Publishing, 1990)

Planting in damp conditions



Tree planting near disposal fields and drains

Bushes, shrubs and trees should generally not be permitted to grow directly over absorption trenches or sand filters to minimise problems should the systems need to be dug up for maintenance. Where trees are near drainage lines, difficulties with roots entering the drains can be anticipated. Plants listed below should not be planted near drains (within 8 metres) due to the risk of pipe blockage.

Botanical names	Common names
Eucalyptus camaldulensis	River Red Gum
Eucalyptus citiododra	Lemon-scented Gum
Fraxinus raywoodi	Claret Ash
Eucalyptus cladocalyx	Sugar Gum
Plananus (all species)	Plane Trees
Populus nigra, etc.	Poplar
Salix babylonica, etc.	Weeping Willow

The following plants are generally satisfactory for planting up to within 2 metres of any drain or drainage area.

Botanical names	Common names
Acacia lonifolia	Sallow Wattle
Callistemon viminalis	Weeping Bottlebrush
Callistemon lilacinus	Lilac Bottlebrush
Eucaluptus preissiana	Bell-fruit Mallee
Viminaria juncea	Native Broom

ADDRESS: 164 MOUNT VIEW ROAD, GOLDSBOROUGH

LOT AND PLAN NUMBER:(PC 375113)

CLIENT: Bobby Korevski and Rikki Moroni

LOCAL GOVERNMENT: CENTRAL GOLDFIELDS SHIRE

JOB NO: 2723

"Sodic soils often exhibit poor soil surface structure which can result in poor plant emergence, waterlogging and ponding, and are often difficult to work when wet or dry. Some surface soils may disperse and seal when wet and become hard setting and crusty when dry."

Agriculture Victoria 1996-2025

NR LINKS
Your Planning & Permit Consultants

Land class 5

Land/Farm Management Plan for the use and development of land based on comprehensive and sustainable land management practices and infrastructure provision.

Project: 2723

Julie Lee is a rural planner that is qualified in many areas such as Bushfire Planning, Town Planning, Agroecology (Regenerative Agriculture), Conservation and Land Management, Coastal and Water Management, Horticulture and is a sessional lecturer to the Victorian Planning Institute in Integrated Land Management for Farming zone and Biodiversity.

Natural Resource Link Pty Ltd

ACN 609 952 025

ABN 83 609 952025

P.O. Box 61, Clunes, Vic, 3370

[redacted]

Email: julie@nrlinks.com.au

REV	DATE	DETAILS
	2/5/2025	FINAL
A	23/7/2025	Revise house location and zones

Disclaimer

Natural Resource Link Pty Ltd does not accept any liability for an error, omission or loss or other consequence that may arise from relying on this report. The soil health visual inspection for this report follows the methodology for visual soil inspections by G. Shepherd, Soil Scientist (BioAgrinomics.com New Zealand) Soil testing is by EAL Environmental Analysis Laboratory at
Southern Cross University and the review of the results including general recommendation for crops or pasture in this report are general in nature and reflect a brief look of the soils for the planning permit only and the choice of pasture species and ongoing testing of soils will need to be undertaken by an Agronomist.

Contents

Images

Executive Summary

Regenerative Agriculture practices that will be recommended in this report look to increase soil health.
"Soil health has been defined as the ability of soil to continue to function as a vital living system within ecosystem and land-use boundaries, thereby sustaining biological productivity, maintaining air and water quality, and promoting plant, animal, and human health." Doran, J.W. Soil health and global sustainability: Translating science into practice. Agric. Ecosyst. Environ. 2002, 88, 119–127.

The owner bought the site to undertake honey production as the site contains many *Eucalyptus melliodora* that produces a commercially suited honey taste. The site has a chook house and enclosed yard from which the owner collects eggs and the enclosure protects the chooks (Isa Brow and Australorps) from predation. Currently the owners attend the site every 2-3 days to check on stock and a neighbour checks the stock in the meantime.
The site has a history of low-level grazing, and the remnant vegetation contains many old trees that are significant for biodiversity. There have been some areas where irrigated pastures have been established on site by the previous owner.
The site has constraints due to the soil type due to its sodicity, remnant vegetation, low fertility and dispersiveness leading to erosion.

The site is 28.39ha in size and the remnant vegetation mapped on site according to Naturekit to be EVC 175 Grassy Woodland which is Vulnerable in the Goldfields Bioregion.
Vulnerable is defined as :

Status code: V

10 to 30% pre-European extent remains; OR Combination of depletion, degradation, current threats and rarity is comparable overall to the above:

- greater than 30% and up to 50% pre-European extent remains and moderately degraded over a majority of this area; or
- greater than 50% pre-European extent remains and severely degraded over a majority of this area; or
- naturally restricted EVC where greater than 30% pre-European extent remains and moderately degraded over a majority of this area; or
- rare EVC cleared and/or moderately degraded over a minority of former area.

Image.1 Definition of Vulnerable (Source: Department of Energy, Environment and Climate Change, 2025)

This application poses protection and management of the remnant vegetation on site with a conservation zone, undertaking an agricultural use that is unlikely to cause land use conflicts and is within the capacity of the site. This report will look at risk to the soil and how this can be improved. The remainder of the site will be for Agriculture with a small area for a Domestic Zone and how risks such as Biosecurity is managed.

Image.2 Landscape perspective (Source Landchecker nd)

The landscape displays a mix of open pasture and fragmented and patchy remnant vegetation that is well serviced by the council, maintained all weather roads and has a mix of developed and undeveloped lots. The amenity of the area is historically the dwellings are located along the roadside with more recent applications to hide the dwelling from the road.

The area is serviced by power along the road network and services 165 Mount View Road but does not have access to potable water, most lots undertake predominantly grazing due to soil restrictions and are lifestyle properties with or without Agriculture.

It is interesting that the area within the now State Park was cleared due to the soil in the area; below is an image of the Sodosol which has a higher capacity for grazing than the surrounding soils that are the weaker structured Lancefieldian part of the Castlemaine Group

Image.3 Adapted from Spatial Data (Department of Energy, Environment and Climate Action,nd)

Introduction

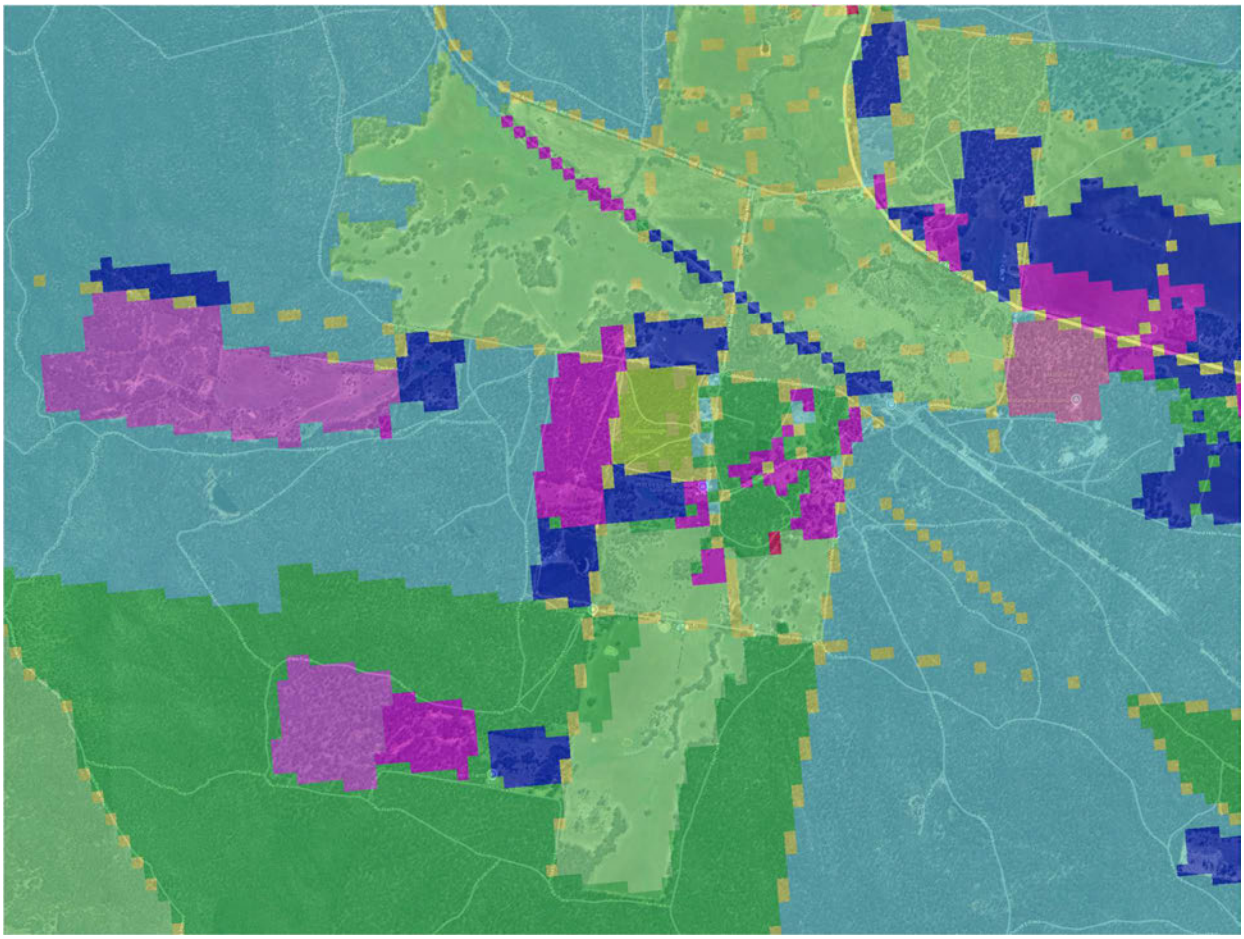


Image.4 Lot to the centre of the picture (Source Department of Energy, Environment and Climate Action,nd - VLIUS 2018)

The image above looks to the land use in the area; this site is mapped as pale green to the south which is listed as 320 Grazing on modified pastures and Dark Blue is 5.4.2 Rural Residential with agriculture

The other uses are:

Magenta is 5.4.1 Rural Residential without agriculture

Pale Pink is 3.64 having no defined use

Dark Blue is 5.4.2 Rural Residential with agriculture

Yellow is 1.1.4 Natural feature protection

Green is 1.1.7 Nature conservation

Pale Blue is 2.2.0 Productive native forests.

Land use is based on best practice soil health, capacity of soil, protection of biodiversity and ameliorating climate change and is consistent with the Farming Zone

- List the Farm Management Plan
    - A site plan showing:
    - Buildings
    - Different zones
    - All paddocks and required fencing.
    - Water storage
    - Regeneration/ restoration
    - Remnant Vegetation
    - Existing weeds and sightings or scats of pest animals
    - Waterways, drainage lines, dams
    - Access points
    - Development and infrastructure
    - Land degradation.
- A weed and or pest management strategy including:
    - Scientific and common names.
    - Image, description, lifecycle, legal status, reproductive methods, distribution and control options.
    - Timing and frequency of control
    - Monitoring timing

1. A written summary detailing the management restrictions that are applicable to each zone.
2. Amelioration of soil risks and improvements to soil health can be undertaken on a sustainable basis.

The site was inspected on 7 March 2025.

Report methodology

- Planning scheme online maps (DWELP 2023) for zoning, applicable overlays for the site
- Aerial photography- Landchecker, Vic Map, Lassi, Google Earth to review the current and historical use of the site.
- Naturekit to review the current and historic EVC, Bioregional conservation status and Bioregion data.
- NVR Map for applicable condition scores
- Victorian Resources Online (Department of Agriculture 2024) for soil, land use, geology and historic land capability reports.
- Catchment Management Authority that is applicable to the site for contours, geology, flood information.
- Bureau of Metrology for climate data
- Rowe et al Jan 1981, Guidelines for Land Capability Assessment.
- Spatial data mart for applicable GIS data
- Soil test via EAL Laboratories, Lismore, NSW

- Visualising Vic Ground Water for ground water salinity and depth of ground water
- CeRDI portal for additional information (Federation University)
- Map Share for catchment information, fire history.
- Earthshare Resource Maps
- GeoVic for land tenure/mining. Geology
- Atlas of Living Australia for data on flora and fauna
- Victoria's Climate Tool
- Flora of Vic for Flora Details

Pictures of site

Image.5 *Eucalyptus melliodora* around the central dam on site.

Image.6 Original large old growth trees near the dam showing the semi-mature to mature recruitment in the back ground.

Image.7 Hollows in old growth trees central dam

Image.8 loss of topsoil around dam possibly from grazing- eutrophication

Image.9 Drainage line north of central dam

Image.10 North-east corner showing recruitment from just two old growth trees (Eucalyptus leucoxylon).

Image 11 Large old growth Eucalyptus melliodora (north-east corner)

Image.12 Old shed to north of site to be demolished

Image.13 Front of old shed to be demolished with water tank and fencing possibly for stock.

Image.14 erosion to north waterway bordering the site looking east.

Image 15 erosion to north waterway bordering the site looking west.

Image.16 Dam to the south (front) boundary- water turbid (cloudy)

Image.17 Erosion from breeching the surface (driving when soil is wet)

Image.18 Dam north-west corner (Algae infestation)

Image.19 Storage containers on site and machinery (Chook shed in background)

Image.20 Small second dwelling being constructed on site (temporary not staying)

Image.21 Chook run and house (east side)

Image.22 Chook shed (north side) rear

Image.23 Small shed for animal feed and supplies to be moved

Background on the property owners and their aims

The owner on site wishes to produce to continue to care, raise and breed the chickens (husbandry nested under Agriculture in Clause 73.04-2 < 100 Chickens) and to sell eggs to local farmers markets and friends. The Honey Production (Apiculture which is nested under Agriculture in Clause 73.04-2). There is an area to the south-west that was prepared by the previous owner to grow a crop and this area will be used for a market garden depending on drought periods and whether the client decides to undertake this

Image 24. Possible market garden area to the east side of this image.

Current and historic land use

The site shows a continual grazing use with loss of cover probably due to dry periods and recruitment of native vegetation.

Image.25 Site in September 2007 (Source Google Earth 9.2 2018

Site shows more cover in Spring and much less remnant vegetation cover.

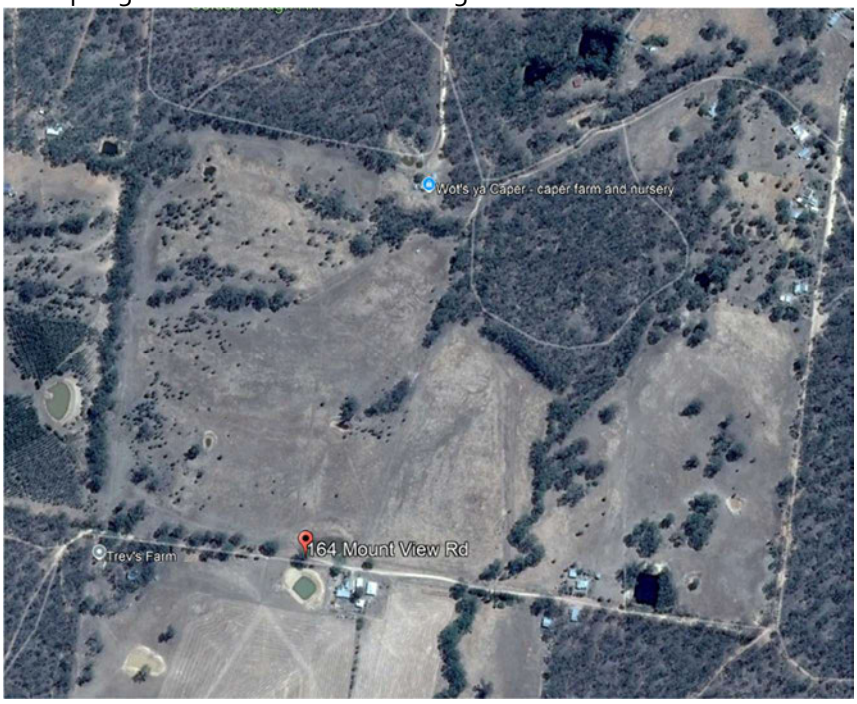


Image.26 Site in January 2014 (Source Google Earth 9.2 2018)

The site shows the recruitment of remnant vegetation around the large old growth trees on site .

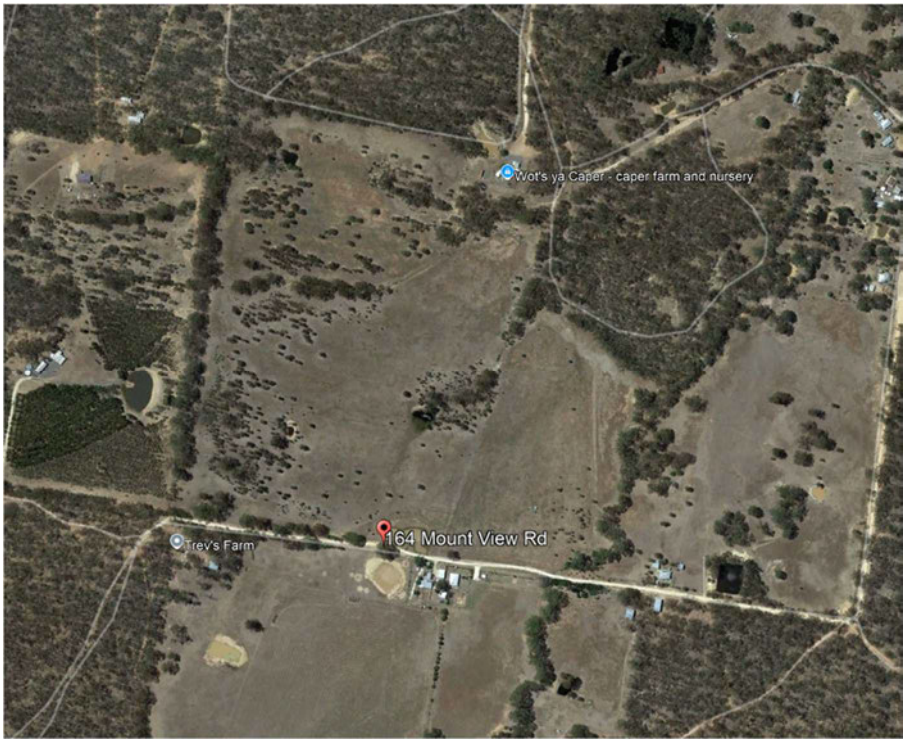


Image.27 Site in Dec 2017 (Source Google Earth 9.2 2018)

Recruitment is developing into semi mature trees and there is little sign of erosion.

Image.28 Site in Feb 2019 (Source Google Earth 9.2 2018)

In the south-west corner the establishment of irrigation was prepared the owner was looking for approval to grow medical marijuana.

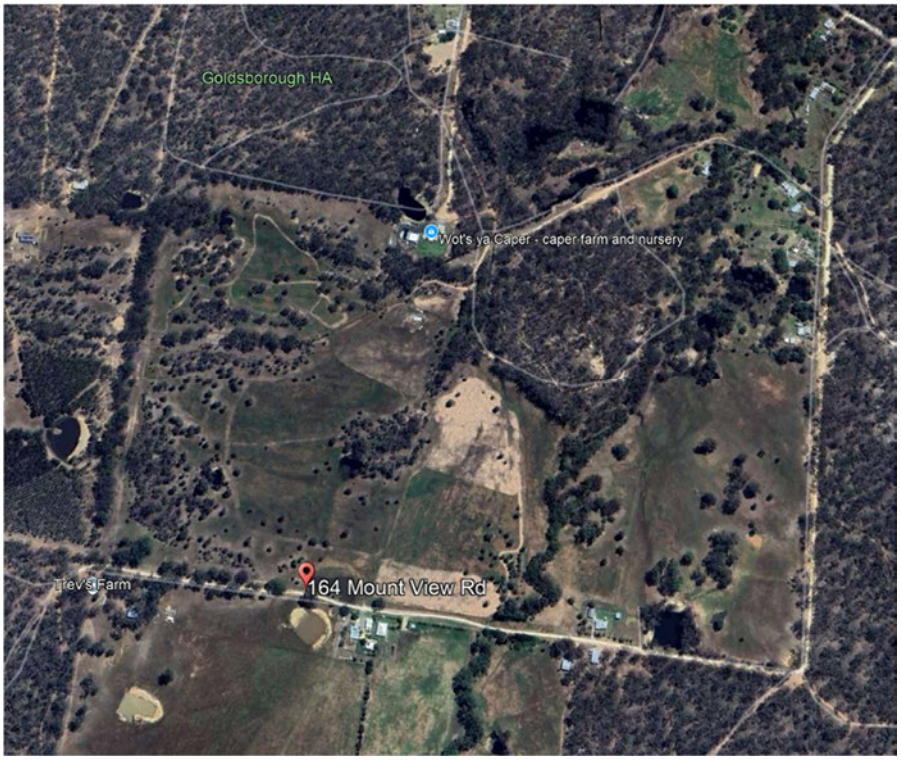


Image. 29 Site Nov 2022 southwest corner ploughed for a crop. (Source Google Earth 9.2 2018)

Image. 30 Oct 2024. (Source Google Earth 9.2 2018)

The site over a period from 2007 where the site was managed by traditional farming there has been an increase of around 500% increase in remnant trees since the site was not cropped.

Development objective.

To take a snapshot of the land including topography, landforms, restrictions, risks, features, capacity of the soil and soil health. To develop a plan that respects the nature of the land and a use that is within the capacity of the soil. To explain why the site requires development for monitoring, undertaking works and for security of stock. The report demonstrates how all objectives of the planning scheme can be met to ensure a good planning outcome that delivers social, economic and environmental outcomes to best practice.

Proposed Use

The proposed use is to retain all remnant vegetation and keep bees on site to produce honey and to undertake a non-intensive level of chickens to produce eggs for sale at local markets and to friends and family. To manage the remnant areas for their biodiversity and to protect areas of erosion on site to ameliorate the erosion risk.

Code of Practice

Biosecurity

The Biosecurity form and signs are in the appendix. Entry is marked to the farm with a warning sign and parking is provided and no entry to the farm is allowed until advised directly by the Livestock Manager. These signs can be downloaded from https://www.farmbiosecurity.com.au/toolkit/gate-signs/ and also details where the signs can be purchased from.

Image 31 Biosecurity sign for farm entry (Source: Farm Biosecurity nd)

Mortality Management

Trench burial is the most suitable form of on-farm burial. Trench burial involves excavating a trench (or pit), into the ground, placing carcasses and other materials in the unlined pit and covering the materials (backfilling) with excavated earth. Typically, this takes place on the farm where animals are from.

Depending on your property and the number of livestock to be buried, multiple trenches may be needed in safe, spaced-out locations (see below for specific details on the typical size, design and spacing of trenches).

To determine where a burial pit might be dug in an EAD event, a site-specific risk assessment must be undertaken. This will determine if and where on-farm burial can be done safely to manage the risks,

particularly to surface and groundwater, and to manage the risk to the surrounding amenity.

The following criteria have been developed to assist you in mapping out any areas on your property that might be suitable for trench burial of carcasses. They are the same elements that Agriculture Victoria staff will consider when undertaking the risk assessment process in an EAD event.

To minimise the risks associated with on-farm disposal of animal carcasses and other wastes, ideally a burial pit should be located:

- at least 200 metres from any groundwater supply (stock and domestic bore)
- at least 2 metres above the water table level (measured from the bottom of the pit)
- at least 200 metres from any surface water (creek, river, lake or spring), excluding dams that are not seeping into groundwater or flowing offsite
- away from surface water drainage features, low points or areas at risk of erosion
- on clay soil of low permeability and good stability
- away from underground and above-ground infrastructure (such as powerlines, telephone and fibre optic lines, gas lines, waterpipes or sewerage)
- above the one in 100-year flood level
- at least 200 metres from another burial area
- on elevated land but with a slope of less than 5% (preferably less than 2%)
- away from conservation areas and areas of cultural sensitivity
- at least 200 metres from the boundary of neighbouring privately owned land
- at least 300 metres from any sensitive use (such as a neighbouring house)
- out of view of the public (by either being far away from public areas or by screening).

Health and safety

- The land manager will need to ensure that all staff and family members are properly trained in all aspects of first aid, chemical handling and storage , animal husbandry, milking procedures and all farm machinery and implements.

Fire Safety

- Fire safety is important as the site is in a High Bushfire Prone area and can be subject to a landscape fire. driven by winds with embers driven by winds.
- Maintaining the area around the chook sheds will minimise the ability of a fire to reach the chook sheds. Leaf litter and fine fuels need to be cleared from under trees for a radius of 20m around each chook shed.

Manure and shed waste management

- The waste from the chook sheds can be composted on a non permeable pad with bund sides to avoid any liquid discharging onto the soil. This area is nominated on the Farm Management Plan to demonstrate the ability to reach setbacks to sensitive areas such as existing dwellings.
- This area is over 300m from the nearest adjacent dwelling.

Permissions

The business requires registration as a business and may need an ABN number and the owner is arranging a PIC number from Agriculture Victoria.
There are no EPA approvals required as there are no laws on the setbacks of compost spreading and the effluent and manure pad are at least 100m from any waterway.
The business will need to abide by the following codes of practice:

- Apiary Code of practice the current code is May 2011, (Source: The State of Victoria Department of Planning and Community Development May 2011)
- Code of accepted farming practice for the welfare of Poultry.(Source: Agriculture Victoria, 2025)

The business must register with the Department of Primary Industries, which is now the Department of Agriculture (PIC) if there is more than 1 beehive on site. This is a requirement of the Livestock Disease Control Act 1994. This site is 36ha and there is no limit to the number of hives that can be housed on site and water must always be available in a shady area for the bees. (Source: The State of Victoria Department of Planning and Community Development May 2011)

Image.32 Beehives on site April 2025

Power is available near to the site and the owners will either extend this or rely on alternative power and water sources.

Utilities

The site has capacity to be provided by electricity along Mount View Road adjacent to 165 Mount View

Road or will rely on an alternative supply to be determined.
The farm will have access where the Biosecurity signs will be placed on the existing entrance which will be the Farm access. Separate access to the dwelling is required to assist with biosecurity; meaning visitors do not enter the main part of the farm this will be located near the dwelling.

Business

Labour skill requirements

The labor skills on site are provided primarily by the owner and family members only

Financial projections/Budgets

Expenses and Income

Shed $53,000
House $280,000
Driveway to house $2000
New Fences $4000
Regeneration- around dams ($500)
Compost area $1000
Septic tank $ 17000
New crossover for new entry $4500
Water Tanks to all roof areas $20,000
Stock feed per annum $5000

Income is based on production of 80% of chickens laying per day over 52 weeks @$5.00 per dozen
$ 1730.00 pa
Honey is based on previous sales at annually $ 1200.00

Note farm machinery such as tractors and implements for cropping and two chook sheds have already been purchased along with ancillary feed and watering systems, electric fencing.

Time frame for farm business

The time frame is this is an existing business that is being conducted remotely by the owners at great expense as they travel many times a week from Heathcote. Two of the neighbours are checking routinely on stock until the owners can live on site.

Biodiversity

Vegetation

The site is mapped to contain remnant vegetation with EVC 175 Grassy Woodland in the Goldfield Bioregion with a Bioregional Conservation Status of Vulnerable. Historic photos have shown since the site has not been subject to intensive farming practices the remnant area has greatly increased on site. The site inspection was in the middle of a drought period and there was strong evidence of recruitment on site.

Image.33 Ground cover on site

Image.34 *Eucalyptus leucoxylon* on site with *Cassina sp* substratum in the rear. (remnant)

Image.35 Rare shrub *Acacia paradoxa* on site- remnant

Image.36 *Eucalyptus leucoxylon* large old growth trees on site

Image.37 *Einadia nutans* (*Chenopodium nutans*) remnant species

Image.38 Remnants of grazed (Kangaroo) of Poa species.

Image.39 *Hakea newbeyana* (planted not remnant)

]

Image.40 *Vittadinia gracilis* (remnant)

The Pre 1750 EVC's on site (Ecological Vegetation Classes) can be used to source suitable species for regeneration, windbreaks and shade trees.

Image 41 Pre 1750 EVC (Source: Department of Energy, Environment and Climate Action, 2023)

A copy of the applicable EVC from the VVP Bioregion are included for reference in Appendix.5
…

Landscape

Property Characteristics

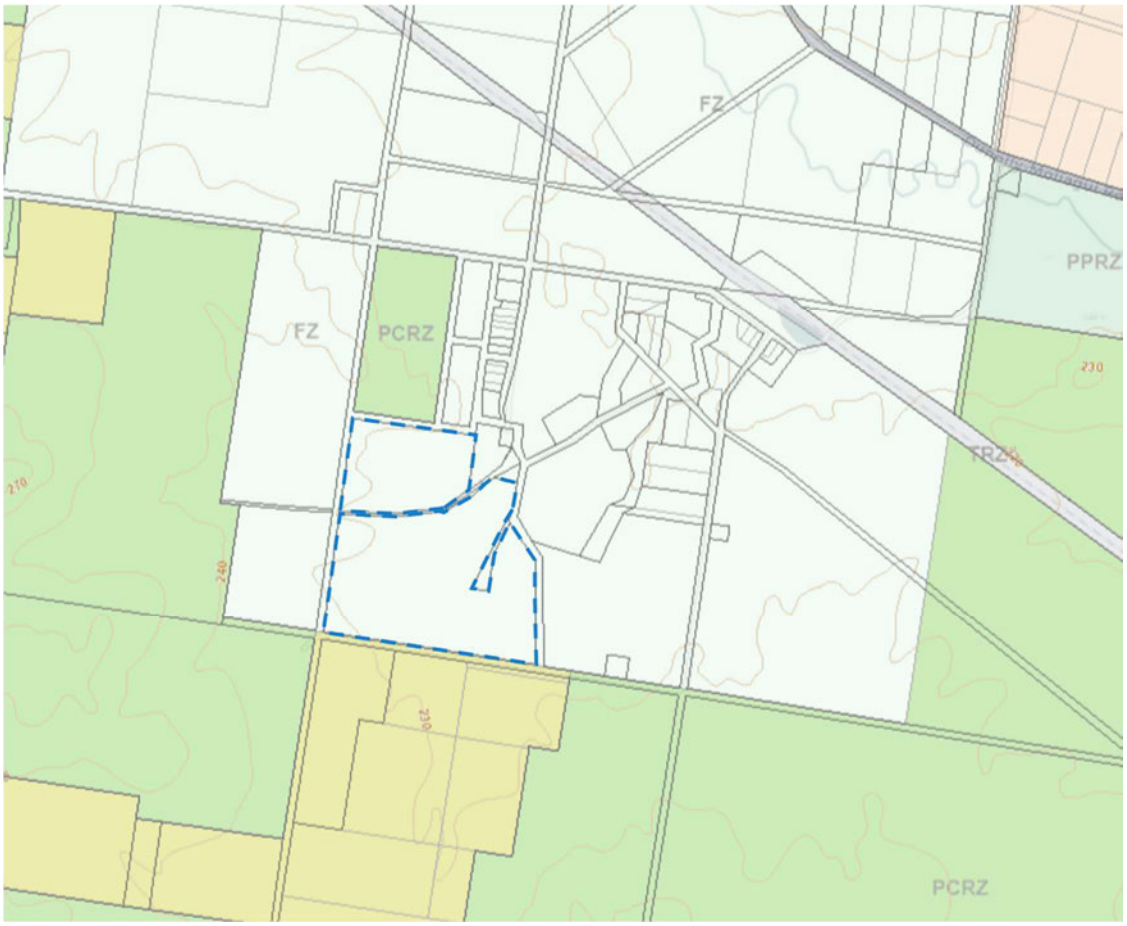


Image.42 Zoning in the landscape. (Source: Department of Transport and Planning, Version 2.5.1 *Vic Plan*)

The site is within the Farming Zone with surrounding zones of Public Conservation and Rural Conservation Zone with most farming parcels either being small historic township sized lots or lots over 20+ ha in size.

Amenity measures and management

The proposed use is already a feature in the landscape and unlikely to contribute a detriment to any existing uses. No large buildings or clearing of vegetation is proposed that would contribute to a change in the amenity as seen from the Mount View Road. The house is a sympathetic single level house (modern) but similar to existing houses in the area.

Setbacks

The proposed dwelling has a front setback of 70m; the side setback to the nearest west boundary is 187m and to the north (rear) boundary is 499m and to the side boundary (East) is 351 m.

The closest dwelling is not in the same ownership:
215 Goldsborough Road (NW) is 718m
204 Mount View Road (W) is 622.9m
165 Mount View Road (SE) is 105m
134 Queens Birthday Mine Road (NE) is 471m
132 Mount View Road (E) is 118.9m

Separation

Setbacks to sensitive use such as high-density residential development (township) is 48km to the South-east (Dunolly) There are no open mines or windfarms visible in the landscape within a 1km radius.

Landform, Geology and Topographic features

Land system

The site has one landform 2.1 Gs 4-2 (2.1 HsP4-2) being a red diplex soil with the following Soil risks:

Compaction	3
Leaching	4
Mass Movement	1
Salinisation	2
Water erosion	3
Water logging	1
Wind erosion	1

noted on site.

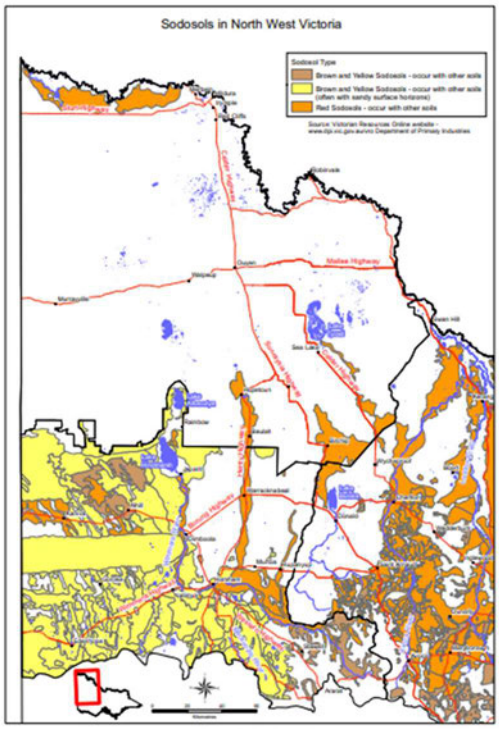


Image.43 Red Sodosols are the typical soil around Maryborough. (Grains Research and development Corporation, July 2013)

The landforms exhibit similar restrictions such as compaction, leaching and water erosion properties. These properties restrict what can occur on site and how the land is managed to be sustainable.
It is recommended that traffic routes are established on site such as the existing access and surfaced

with rock. This will assist with the retention of surface crusts and avoid the commencement of erosion as

Image.44 Erosion on site from driving on wet soils with no trafficable surface.

"Subsoil management considerations Management strategies for all soils should aim to:
Less frequent tillage, using less aggressive implements and working the soil at optimum moisture content can all assist in maintaining soil aggregation and porosity as well as reducing the breakdown of organic matter.

The subsoil is mainly very strongly alkaline, which indicates that in this zone phosphorus and trace elements such as iron, manganese, zinc and copper may be poorly available for plants. Boron toxicity can also occur in strongly alkaline soils.

Image.45 Leaf litter cleaning around chook sheds

The level of soluble salts becomes high in the deeper subsoil (from 50 cm depth) and this is likely to restrict the growth of deeper-rooted salt sensitive species." (Source: Grains Research and development Corporation, July 2013)

It is best to retain leaf litter where possible to increase organic matter; except around the chook sheds.

Water

Groundwater

The site has shallow ground water less than 5m to more than half of the site with the remainder being 5-10m deep along the entire west side of the site as demonstrated in Image.46

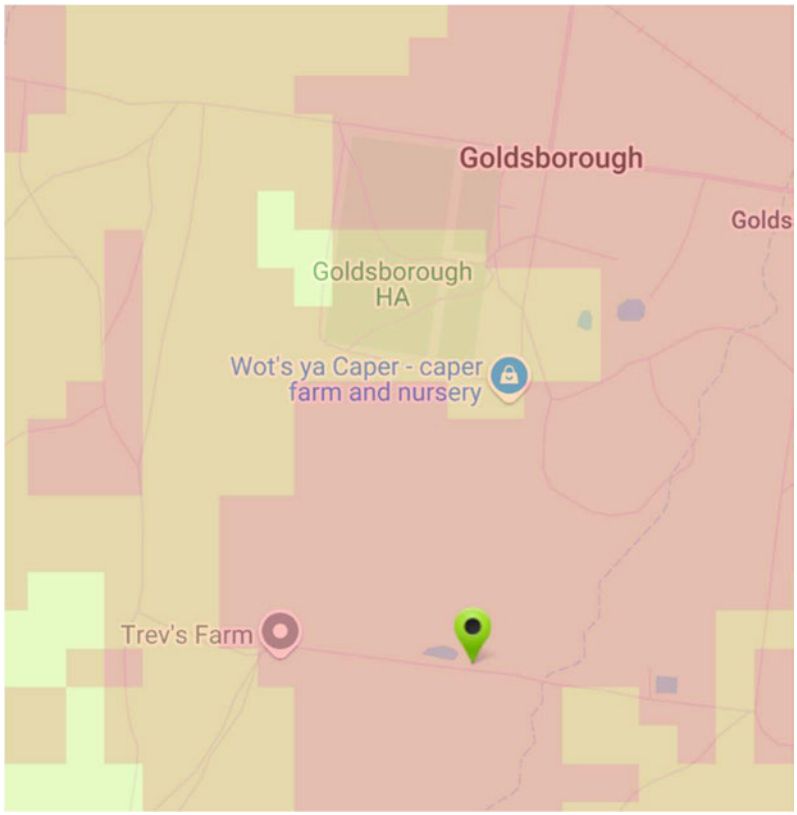


Image.46 Ground water depth on site (Source Visualising Victoria's Groundwater." (internet data portal).)

This portal notes that the ground water salinity is moderate being 1000-3500mg/L. The site is not suitable to place a bore down for Agricultural use without treating the water prior to use.

Pest plants

There are very few weeds evident due to the time of the year and the current drought

Image. 47 Rosa sp.

Pest animals

Rabbit scats were evident on the site and their control is integral to mitigating erosion. Rabbits scratch the surface when constructing burrows that leads water to come in contact with the dispersive subsurface soil leading to erosion.

Soils

The soil is mapped to be Rg/Us1 (Source: Cerdi 2025) (Reference in Appendix.6)which in review of the Land Inventory of the Loddon River Catchment, Feb 1988- Source: Land Protection Division-Department of Conservation, Forests and Lands Victoria, Feb 1988)
This soil type is a sedimentary soil and this site is the dominant soil a red duplex, which is poorly structured with hard setting topsoil over frequently weathered bedrock.

The reference soil pit (Source: Victorian Resources Online, 23 March 2020) note the soil is a sandy clay loam with weak structure and this was evident across the site. There was evidence of gravel quartz on the surface in parts of the site an example below.

Image.48 quartz on site

The site survey noted that the topsoil was slightly more bleached than the reference site as shown in the reference site profile (left) and the soil on site (right)

Image 49 Soil profile comparison to site pit

The management of these soils is to increase soil organic matter so composting the chicken litter with other brown compost will assist to improve these soils. Due to low salinity calcium is an issue so any grazing on site should be only conducted after soil testing and soil mediation completed and calcium blocks on site are critical to stock health.

Tilling breaks down what little organic matter is in the soil, so cropping is not a sustainable option for these soils unless the soil structure is improved. These soils on site show a very shallow topsoil level with organic matter and these soils have very little water holding capacity and that is why the soils are so void of vegetation during summer. Retaining all organic matter under the remnant vegetation is imperative to increasing organic matter in the soil so leaves should never be raked up and burnt which can often be practiced.

Image.50 Organic matter under vegetation.

Agricultural Land Class-Victoria

A land Class 5 as per Rowe et al 1981 for grazing (500-625 mm p.a) with no capacity for grazing at present.
The capacity for Agriculture is not limited to the soils, slopes and rock but now takes in access to potable water and markets. These soils have the capacity to be improved to increased soil health over time.
This assessment would class the soils as Land Class 5 and the availability would raise the capacity to Class 4 with increasing organic matter from the chook sheds. Albeit this is a long process and the proposed use does not rely on soil health.

High quality Productive Agricultural Land

"High quality productive Agriculture land is defined as follows:
"Adequately drained but can still hold sufficient moisture as well as nutrients (important for biomass production but also for minimizing off site effects. This generally implies well- developed and favourable structural friability.
Deep enough to provide plant support with few restrictions to root and water movement down the soil profile.
Able to adequately cope with traffic (i.e are reasonably resilient to physical disturbance).
(Source: Agriculture Victoria (October 2018)

The current assessment of high-quality agricultural land is restricted to Land Class 1 and 2 that have more capacity for Agriculture and in some cases Land Class 3 that has access to potable water.

The proposed dwelling area does not constitute a loss of productive Agricultural soil, and the domestic area is confined to a small area on site. Controlling this access to one area avoids visitors driving on site and potentially contaminating the farm. The existing access will be retained for the farm with the appropriate signage for Biosecurity.

Management

Weed control methods per species on site.

Briar Rose

Sweet briar rose are spiny perennial shrubs which form dense impenetrable thickets. They are unpalatable to stock, out-compete native vegetation and also provide ideal harbour for foxes and rabbits. Dog rose is a multi stemmed perennial shrub between 3 metres tall at maturity. The flower of Sweet briar rose vary from white to pink and measuring from 25-40mm.	**Germination:** All year **Flowering:** September to January **Fruiting:** October to February	Noxious weed	Spread by birds are the main vector for dispersal of Sweet briar rose seed and occasionally other fruit eating animals e.g. foxes

Distribution across the site

Sweet briar rose has the potential to invade native bushland resulting in a reduction of biodiversity through competition.

Control options within the site

Hand removal or slashing; heavy infestations can be controlled by goats. Metsulfuron methyl is currently registered for the control of Sweet briar rose.

How to improve the soils
Tillage management

Tillage management is imperative to the soil health as reducing tillage or no till will benefit soil microbial health and retain structure in the soils that will build over time. No-tillage or zero tillage is a farming system in which seeds are directly placed into untilled soil which has retained the previous crop residues.
Preparing for planting after a cover crop; the cover crop on this site will be grazed down and left stubble is pushed down.
Large areas of the farm will grow cover crops and allow the organic material to be manually or mechanically pushed down and allow this to rot back into the soil. This can only occur when the levels of nitrogen have been increased with compost as the lack of nitrogen will cause nitrogen draw down or the material will not rot back sufficiently into the soil.
It is recommended that the farm be partitioned into pastures where compost can be applied, then have a cover crop then let the cover crop die down into the soil. These practices are rotated between the pastures with at least one paddock being improved, one resting and one potentially being grazed.

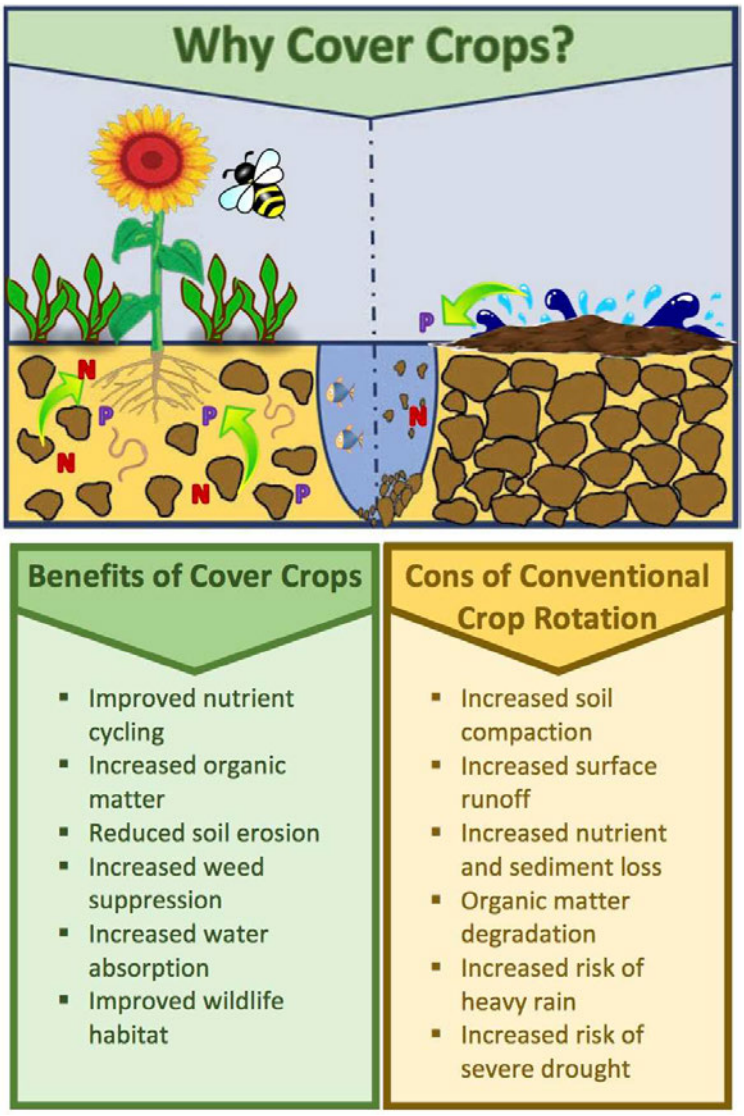


Image.51 Benefits of cover crops on pastures (Source: Lower Fox Demonstration Farms, 2024)

Composting

Composting is a balance of plant (both green and brown) and animal materials.

Green Compost example is Pig and chicken (animal) manure with young soft non woody cover crops and cycles nutrients and provides essential bacteria to the soils.

Image.52 Green compost example (Source: Pet Poo Skiddoo, 2024)

Brown compost example is Lignified brown plant material, mature cover crops and manures with bedding. Dry dead plant materials. Brown compost adds fungal life and builds organic matter in soils.

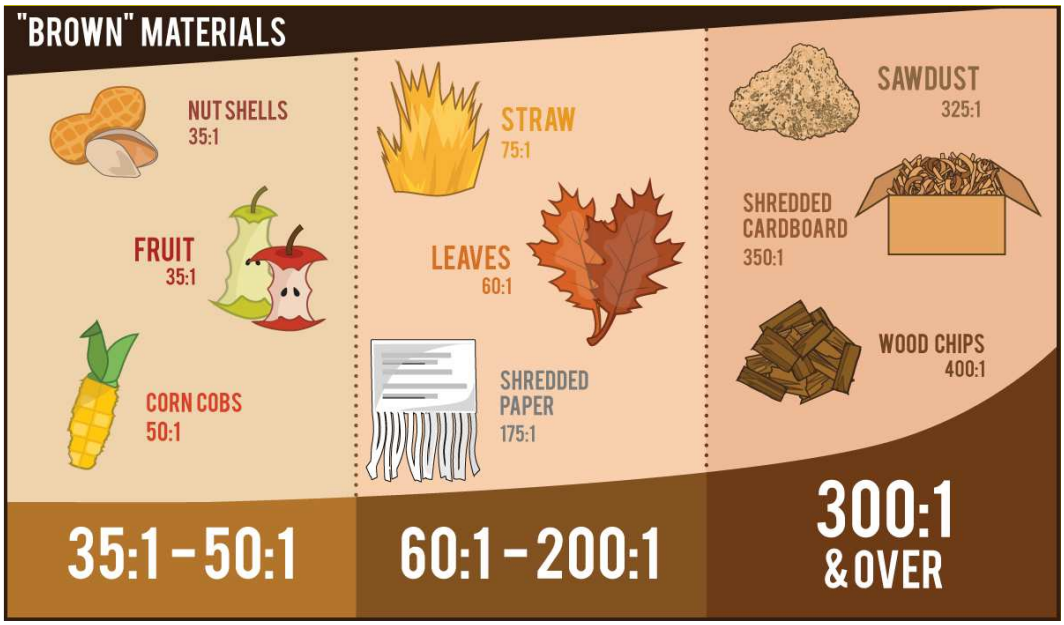


Image.53 Brown compost example (Source: Pet Poo Skiddoo, 2024)

Compost can be produced quickly over 14 days from a mix of 3:1 Brown to Green in windrows and turned every 3 days over a 14-day period. This compost will be a higher bacterial base than a compost developed over a longer period. Soil borne bacteria and fungi assist the market garden by supressing diseases and restore the ecological balance/

Reduced Application and reliance on synthetic fertilisers.

Nitrogen fertilisers contribute to 5% of greenhouse emission and also to eutrophication of waterways. To reduce the CO_2 emissions improving soil health is imperative to increasing the soil health naturally

and sustaining those levels with long term monitoring and regenerative practices.

Cover crops and diversity.

Maintaining cover always benefits the soils and cover should look to always retain at least a 90% cover on the farm. Diversity of species in cover crops that are chosen to grow when the main crop has finished to ensure that there is always growth in the soils at all times of the year.

This is one of the most essential techniques for this site.

Cover crops on this site will be sown in conjunction with an Agronomist who can select a diverse species mix to inter sow between the finished market garden crop. It is essential there are nitrogen fixers and deeper-rooted perennials in the mix.

Combining the cover crop with the residue has been shown to stimulate microbial diversity and function and is the driver in nutrient release especially in sandy soils, with long term positive impacts on yield. (Source: Dos Santos Cordeiro, C.F.; Echer, F.R.; Araujo, F.F. 2021)

Improve Water- Nutrient retention.

The sandy soils on this site are notorious for low water and nutrient retention and as the soils improve on site the ability to hold water and nutrients will improve. It is essential when improving light soils with low fertility that the owner will need to watch for water being repelled. This will be due to a too high application of organic matter that can be broken down into the soil and the soil has become hydrophobic. The owner would then need to apply a much lower rate next time and use a surfactant to those areas that are repelling water to increase filtration.
Like any application, too dry compost will draw moisture out of the soil and can lead to the soils becoming hydrophobic. Compost needs to be a blend of dry and green compost along with manures.

> "A variety of factors influence soil water holding capacity, including soil bulk density, infiltration rate, and crop residues. Soil aggregation, porosity, and infiltration rates can be improved by soil fauna and retaining residues on the soil surface.(Source: Parr, J.; Bertrand, A. Water Infiltration into Soils. Adv. Agron. 1960, 12, 311–363")

Dam Management

Dams on farms are critical to many process on the farm and for wildlife, stock and ecology.
Water quality is enhanced when the dam is fenced and vegetation is increased into the area this leads to lower levels of nitrogen and turbidity (cloudy Water) without this: dams will have algae outbreaks making the water unpalatable to stock or leading to disease and other health issues.
Enhanced water quality supports a large range of aquatic animals.

> "Enhanced dams have significantly lower *coli* counts and fewer thermotolerant (faecal) coliforms. 65% of unfenced dams actually had coliform counts that exceeded guidelines for water quality for stock." (Source: Australian National University, 2025)

Image 54. Piping water from the dam for stock or wildlife is essential (Source: Australian National University, 2025)

Farm dams are important for biodiversity, particularly bird species such as wood ducks and many migratory birds and are habitat for rare and threatened birds such as the Diamond Firetail that are on the EPBC Act (list in Appendix.8)
Farm dams are also home to amphibious species and a list of those recorded in the area is included in Appendix.9

	Common Name	Scientific Name	Records
1.	Common Froglet	*Crinia signifera*	39
2.	Eastern Sign-bearing Froglet	*Crinia parinsignifera*	27
3.	Spotted Marsh Frog	*Limnodynastes tasmaniensis*	23
4.	Brown Toadlet	*Pseudophryne bibronii*	19
5.	Eastern Banjo Frog	*Limnodynastes dumerilii*	8
6.	Sudell's Frog	*Neobatrachus sudellae*	5
7.	Brown Tree Frog	*Litoria ewingii*	4
8.	Pobblebonk Frog	*Limnodynastes dumerilii dumerilii*	2
9.	Striped Marsh Frog	*Limnodynastes peronii*	2
10.	Painted Frog	*Neobatrachus pictus*	2
11.	Peron's Tree Frog	*Litoria peronii*	1

Image.55 Amphibians within a 5km radius (Source Atlas of Living Australia nd)

Large old growth trees-grazing protection.

The old large growth trees have been shown to contribute to healthy regeneration of the site and there are many of these on site. These need to be fenced and contained where possible into a Conservation Zone.

Image.56 Large old growth trees near central dam.

Zones

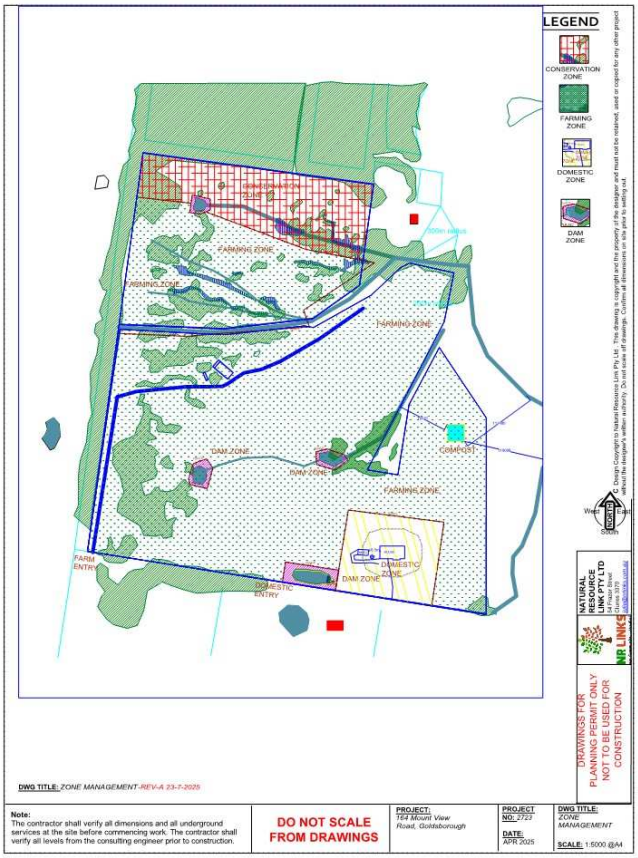


Image.57 Zone Plan

Domestic Zone- no restrictions (1.69HA)

All buildings, structures and works are to be contained within this zone. All domestic activity including the effluent are to be limited to this area and any domestic animals contained in this zone using internal fencing. This is the only zone where domestic vehicle access is allowed.

.

Driveways and vehicles access to be all weather permeable surfaces to control run off.

All weeds are to be monitored for and removed on a regular basis to ensure that they do not spread to other areas.

No weed species or environmental weeds to be planted in the garden to ensure they do not spread to other sensitive areas.

Farming Zone- (Balance of site)

The objective of the farming area is agriculture.
Management objectives apply to this area:

- Fencing must be maintained in good order and repaired immediately if necessary.
- Area to be mostly fenced in accordance with the Farm Management Plan to ensure areas are protected from stock.
- Weeds must be monitored and maintained as they emerge.
- 90% cover to be maintained as possible
- On going composting of soils and review of soil health by an Agronomist.
- Any other works as nominated by a consultant Agronomist.
- Leaf Litter and fine fuels to be removed for a 20m radius around all stock sheds and maintained all year.
- Minimise traffic to specified routes to ameliorate compaction of soils.

Conservation Zone- encompasses natural remnant areas with erosion (5.5ha)

- The objective of the biodiversity zone is for the protection from soil disturbance from grazing and large old growth trees.
- Fencing must be maintained in good order and repaired immediately if necessary if there is grazing agriculture on the land
- There is no stockpiling/storage, soil disturbance or any vehicles within 30m of all drainage and waterways in the zone.
- All drainage crossings to be have a trafficable surface to ameliorate any erosion.
- The landowner must maintain and protect all large scattered trees to ensure that continued regeneration can occur around the base.
- Landowner must maintain and protect all whether live or dead native vegetation and allow for natural regeneration.
- Weeds must be monitored and maintained as they emerge.
- Cover to be always maintained where possible including all fine fuels and leaf litter.
- The landowner must monitor for pest animals and obtain professional advice for the control especially where they are having an impact on soils and native vegetation.
- No removal of material for firewood allow all debris to be able to improve soil organic matter.

Farming Zone – Dams (0.5ha)

The objective of the dams is to protect water quality and erosion from stock and wildlife; areas around the dams have erosion. Fencing and increasing vegetation to these areas is critical in ameliorating erosion whilst protecting water quality from blue green algae that was evident on the site review.

- Fencing must be checked and maintained to keep domestic and wildlife from the perimeter of the dam
- Water for wildlife can be pumped from the dam in dry periods into suitable containers near the dam.
- The large dam with its bund wall has no spillway and this needs to be installed to mitigate the risk of erosion. This is marked on the farm management plan

- All dam to have fencing installed to a minimum 10m radius from the high-water edge of dam (its holding capacity

Graminoids for the dam regeneration areas.

The graminoids (grass-like plants) around the dam along with other aquatic species will filter sediment from entering the waterway and cause cloudy or algae infestation that are evident in some of the dams on site. In appendix 4 I have included a handout on farm dams and marked species in the list that are common in the central goldfields that the owner will be able to purchase from an Indigenous nursery.
I recommend Goldfields Revegetation Nursery, 230 Tannery Road, Mandurang, Vic, 3551 and it is best to pre order the plants ahead of planting.

References.

Agriculture Victoria 1996-2025 *Sodosols*, https://vro.agriculture.vic.gov.au/dpi/vro/wimregn.nsf/pages/natres_soil_sodosols#:~:text=Soil%20Management%20Issues&text=Sodic%20soils%20often%20exhibit%20poor,hardsetting%20and%20crusty%20when%20dry

Agriculture Victoria (October 2018, Assessment of Agricultural Land Capability in Melbourne's Green Wedge and Peri-urban Areas, https://www.vgls.vic.gov.au/client/en_AU/vgls/search/detailnonmodal/ent:$002f$002fSD_ASSET$002fo$002fSD_ASSET:1299976/ada?qu=Surface+texture.&d=ent%3A%2F%2FSD_ASSET%2Fo%2FSD_ASSET%3A1299976%7EASSET%7E297&ps=300&h=8

Agriculture Victoria, 2025, Code of accepted farming practice for the welfare of poultry, https://agriculture.vic.gov.au/livestock-and-animals/animal-welfare-victoria/pocta-act-1986/victorian-codes-of-practice-for-animal-welfare/code-of-accepted-farming-practice-for-the-welfare-of-poultry

Atlas of Living Australia nd, Open access to Australias Biodiversity data, https://www.ala.org.au/

Australian National University, 2025, Sustainable Farms, https://www.sustainablefarms.org.au/on-the-farm/farm-dams/.

Cerdi 2025, Visualising Australias Soils, https://data.soilcrc.com.au/map

Department of Energy, Environment and Climate Action,nd, *Datashare*, https://datashare.maps.vic.gov.au/

Department of Energy, Environment and Climate Change, 2025,*Bioregion and EVC Benchmarks*, https://www.environment.vic.gov.au/biodiversity/bioregions-and-evc-benchmarks

Doran, J.W. Soil health and global sustainability: *Translating science into practice*. Agric. Ecosyst. Environ. 2002, 88, 119–127.

Dos Santos Cordeiro, C.F.; Echer, F.R.; Araujo, F.F. Cover crops impact crops yields by improving microbiological activity and fertility in sandy soil. J. Soil Sci. Plant Nutr. 2021, 21, 1968–1977.)

grazing, https://www.premier1supplies.com/sheep-guide/2016/09/pasture-configurations-for-rotational-grazing/)

Google Earth 9.2 2018, 164 Mount View Road, Goldsborough, 36°49\'43.22\"S, 143°40.2\'27\"E, elevation 26M. 2D map, viewed 18 April 2018, http://www.google.com/earth/index.htm

Grains Research and development Corporation, July 2013, Managing Soil Organic Matter: A Practical Guide, Kingston, ACT.

Landchecker, nd,Landchecker, https://app.landchecker.com.au/property/VIC-422611073/info

Land Protection Division-Department of Conservation, Forests and Lands Victoria, Feb 1988, Land Inventory of the Loddon River Catchment, https://vro.agriculture.vic.gov.au/dpi/vro/nthcenregn.nsf/pages/nthcen_landform_geo_loddon_land

Lower Fox Demonstration Farms, 2024, Permanent Soil Cover: Cover Crops. https://fyi.extension.wisc.edu/foxdemofarms/conservation-agriculture/permanent-soil-cover-cover-crops/

Parr, J.; Bertrand, A. Water Infiltration into Soils. Adv. Agron. 1960, 12, 311–363")

Pet Poo Skiddoo, 2024, A brown to Green Ratio is not the same as a carbon-to-nitrogen ratio. https://petpooskiddoo.com/blog/common-misconceptions-browns-greens-composting/)

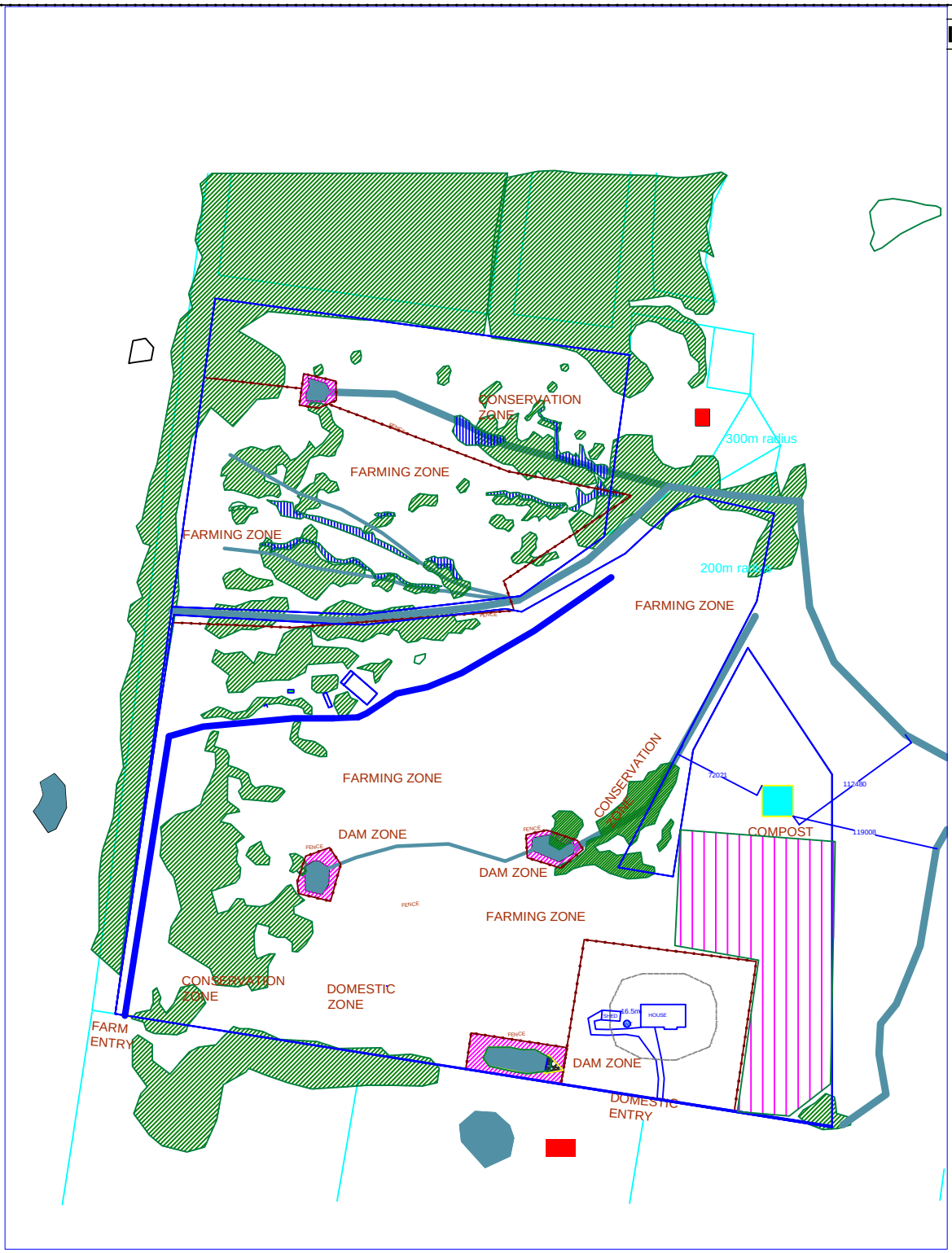
The State of Victoria Department of Planning and Community Development May 2011, Apiary Code of Practice, https://vgls.sdp.sirsidynix.net.au/client/search/asset/1145118.

Victorian Resources Online, 23 March 2020,Site LP111, https://vro.agriculture.vic.gov.au/dpi/vro/nthcenregn.nsf/pages/nc_lwm_bet_soil_lp111

Visualising Victoria's Groundwater." (internet data portal). Centre for eResearch and Digital Innovation, Federation University Australia, Mt Helen, Ballarat, Victoria. Retrieved 16/04/2025,

from: https://www.vvg.org.au.

Appendix.1 Existing Plan



LEGEND

- EROSION
- EXISTING NATIVE VEGETATION
- PROPOSED CHOOK SHEDS
- DAM ZONE
- FARM ENTRY
- FARM BIOSECURITY SIGN
- DOMESTIC ACCESS
- COMPOST AREA
- CHOOK SHEDS
- FUTURE MARKET GARDEN
- ADJACENT DWELLING

West East South

NORTH

FARM MANAGEMENT PLAN- REV-A-25/07/2025.

NATURAL RESOURCE LINK PTY LTD
54 Frazer Street
Clunes 3370
Life@nrlinks.com.au

DRAWINGS FOR PLANNING PERMIT ONLY
NOT TO BE USED FOR CONSTRUCTION

Note:
The contractor shall verify all dimensions and all underground services at the site before commencing work. The contractor shall verify all levels from the consulting engineer prior to construction.

DO NOT SCALE FROM DRAWINGS

PROJECT: *164 Mount View Road, Goldsborough*

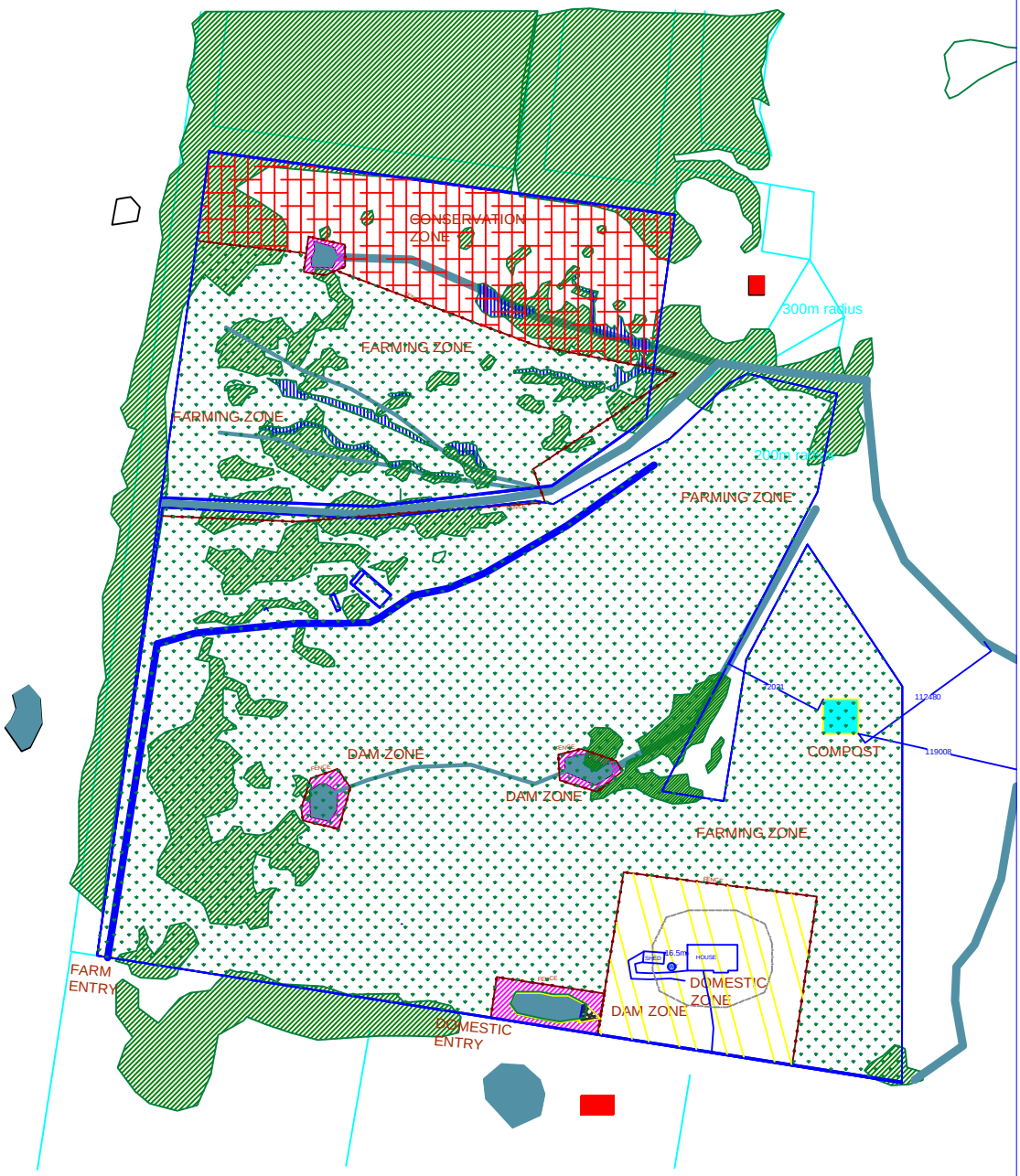
PROJECT NO: *2723*

DATE: APR 2025

DWG TITLE: *FARM MANAGEMENT*

SCALE: 1:5000 @A4

Appendix.2 Zone and Fence Plan



LEGEND

CONSERVATION ZONE

FARMING ZONE

DOMESTIC ZONE

DAM ZONE

West East NORTH South

NATURAL RESOURCE LINK PTY LTD
54 Frazer Street
Clunes 3370
Lyle@nrlinks.com.au

NR LINKS

DRAWINGS FOR PLANNING PERMIT ONLY
NOT TO BE USED FOR CONSTRUCTION

DWG TITLE: *ZONE MANAGEMENT-REV-A 23-7-2025*

Note:
The contractor shall verify all dimensions and all underground services at the site before commencing work. The contractor shall verify all levels from the consulting engineer prior to construction.

DO NOT SCALE FROM DRAWINGS

PROJECT: *164 Mount View Road, Goldsborough*

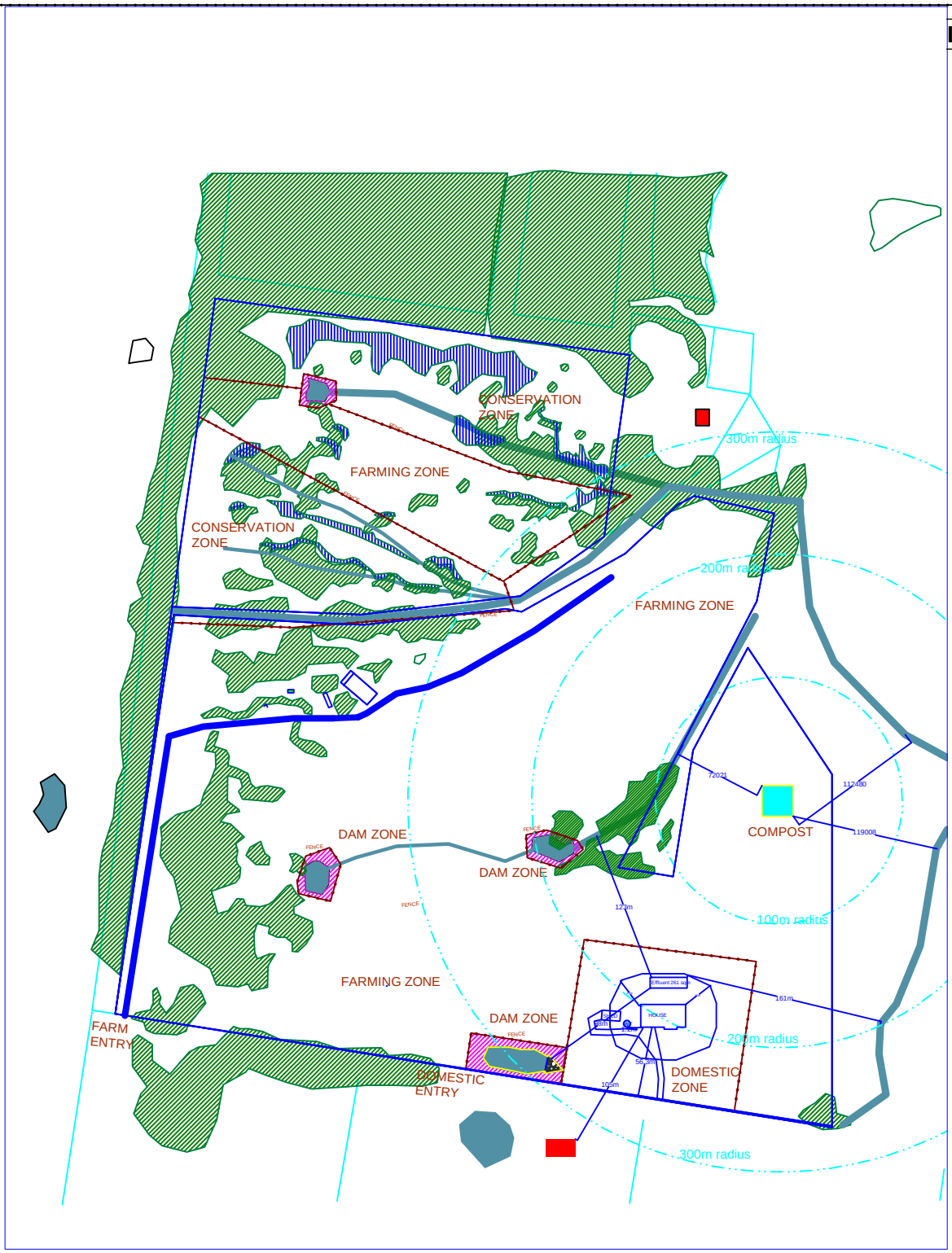
PROJECT NO: *2723*

DATE: APR 2025

DWG TITLE: *ZONE MANAGEMENT*

SCALE: 1:5000 @A4

Appendix.3 Farm Management Plan



LEGEND

- EROSION
- EXISTING NATIVE VEGETATION
- PROPOSED CHOOK SHEDS
- DAM ZONE
- FARM ENTRY
- FARM BIOSECURITY SIGN
- DOMESTIC ACCESS
- COMPOST AREA
- CHOOK SHEDS
- ADJACENT DWELLING

West East South NORTH

FARM MANAGEMENT-COMPOST- REV-A-27/5/2025

NATURAL RESOURCE LINK PTY LTD
54 Frazer Street
Clunes 3370
Life@nrlinks.com.au

DRAWINGS FOR PLANNING PERMIT ONLY
NOT TO BE USED FOR CONSTRUCTION

Note:
The contractor shall verify all dimensions and all underground services at the site before commencing work. The contractor shall verify all levels from the consulting engineer prior to construction.

DO NOT SCALE FROM DRAWINGS

PROJECT: *164 Mount View Road, Goldsborough*

PROJECT NO: *2723*

DATE: APR 2025

DWG TITLE: *FARM MANAGEMENT*

SCALE: 1:5000 @A4

Appendix.4 Plant List Dam and practice note

Enhancing farm dams

What to plant in and around your dam

Native vegetation in and around a farm dam has many benefits for water quality, farm productivity and biodiversity. This brochure provides guidance on the types of plants suitable for revegetating dams, and includes lists of recommended plants.

NSW GOVERNMENT | Local Land Services

SUSTAINABLE FARMS

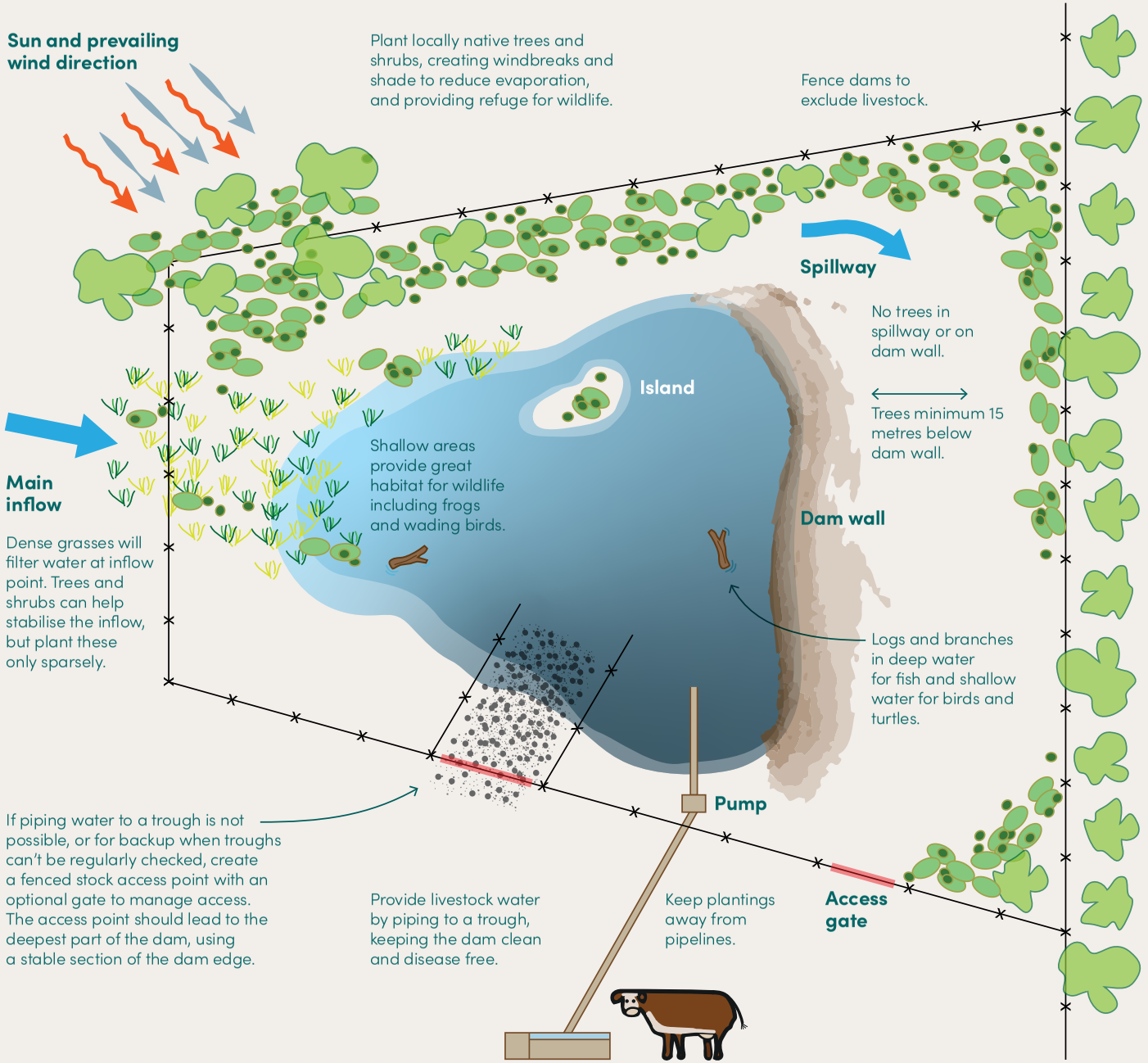
How to use this guide

This guide provides lists of plants suitable for the different zones of a farm dam — inflow, margins, shallow and deep water, dam wall and spillway. Strategically planting just a few plants from each list will contribute to a healthy dam.

This guide focuses on grasses, herbs, sedges and aquatic plants — it does not include shrubs or trees for planting further back from the dam edge. Draw on the expertise of your local Landcare, Local Land Services or Catchment Management Authority for more information on shrubs and trees native to your region.

We have developed this guide for regions within the Sustainable Farms project area (see map on back cover), which encompasses the NSW South West Slopes, Central West, Murray-Riverina and North East Victoria. The plants listed are generally available at native plant nurseries. Local availability may vary, but the guide provides a range of options to choose from.

Plan of a farm dam showing key features



Bird's-eye view of a dam showing dam zones and vegetation types.

Illustration modified from Frankenberg, J., Enhancing Farm Dams, Ch. 11 in Stelling, F. (ed), 1998, *South West Slopes Revegetation Guide*.

Why is vegetation in and around dams important?

- Vegetation on the edge of dams contributes to slowing wind speeds, which is a major factor in higher evaporation rates and bank erosion.
- Ground cover plants in the dam inflow zone slow water, reducing erosion and silting of the dam, and filtering nutrients and other pollutants from the water before it reaches the dam body.
- In the dam margins, plants that tolerate alternating periods of inundation and dry help reduce soil erosion, filter water pollutants and reduce evaporation, improving water retention in times of drought.
- Floating plants create shade in the dam water and help keep water temperatures lower.
- Tall trees set back from the dam edge help cast shade over the dam, reducing evaporation and providing good conditions for wildlife.

Vegetation in and around a dam is key to good farm dam management and will improve water quality and retention. Healthy, well-vegetated dams provide habitat for invertebrates, fish, frogs, turtles and birds. In turn, these animals help improve the function of a dam by cycling nutrients from the dam into the wider landscape, and by modulating sediment, nutrient, salts and algal levels within the dam.

The first step towards a well-vegetated dam is to exclude stock to enable vegetation to regrow. Stock exclusion has the added benefit of preventing pugging, bank erosion and water pollution, all of which can degrade the dam's water quality. Stock water can be piped to a trough. If troughs are not an option or to provide backup in case of pump or trough failure, a fenced hardened access point can enable stock to drink from the dam without damaging the rest of the dam area.

Vegetation will begin to regrow from the existing seedbank as soon as a dam is fenced and grazing pressure removed, while strategic planting or seeding in selected areas will enhance the diversity and structure of the vegetation. In particular, wetland and riparian vegetation may need a helping hand to colonise if a dam is isolated from other water bodies in the landscape. If plant availability is limited, it is better to plant densely in a selected area rather than a few plants across a large area.

Planting or seeding native plants will also enhance biodiversity, including by creating structural diversity in the vegetation (e.g. a mix of ground covers, reeds and shrubs, which are important for different species including frogs and waterbirds), and providing food and habitat for native wildlife, including pollinators and other beneficial insects.

Fencing a dam to limit stock access (right) prevents pugging, bank erosion and water pollution (far right). Stock water can instead be piped to a trough, or a hardened access point can be installed, enabling stock to drink from a limited area of the dam.

Zones of a dam

1. Inflow

Plant grasses, sedges, rushes and small shrubs

Most of the water in a dam will generally flow into the dam from one area – the inflow zone. A well-vegetated, fenced inflow zone with dense ground cover is one of the most important factors to keeping dam water clean. Plants in the inflow zone help filter sediment and absorb nutrients from paddock run-off, minimising the risk of toxic algal blooms caused by high nutrient levels. A long or wide inflow zone will provide more space for this nutrient absorption to take place.

The inflow zone should have a dense ground cover comprising a mix of grasses, sedges and low shrubs. Existing grass and forb species can perform this role. Exotic species may be part of the groundcover mix initially, but weeds should be discouraged as they can harbour pest species and leave large bare areas after dying off. With grazing pressure removed, this area should naturally transition to a perennially dominated species mix over time. Planting native grasses and forbs (e.g. kangaroo grass, weeping grass, tussock grass and billy buttons) will help improve biodiversity and drought resilience.

Some species listed for planting in the inflow zone will perform well in seasonally wet events but may be dormant in dry periods. Planting a mix of wet- and dry-loving species will ensure vegetation cover throughout the year. Extraordinary flooding events sometimes occur after drought, so having a rich species mix will provide cover, reduce flooding erosion and help keep the dam water clean.

2. Margins

Plant ground covers, herbs, sedges, reeds and rushes

Dam margins are the area between the high-water mark and the water line. They are typically inundated after big rain events, then dry out between rains. The margins can host a different set of plants to the main inflow zone and provide excellent habitat at the aquatic/terrestrial interface for frogs, dragonflies and birds such as crakes and rails.

Reeds and rushes on dam margins will help trap soil and other particulate matter and prevent them polluting the dam. Vegetation in this area also plays an important role in preventing erosion from wave action generated by wind, and thus helps reduce evaporation and turbidity.

Rushes such as *Juncus* will sometimes colonise a dam margin naturally, but planting can speed up the process and provides the opportunity to introduce plants that won't recolonise readily, such as the stream clubrush.

3. Shallow water

Plant sedges and semi-aquatic plants

The shallow zone, between the dam margins and deep water, is highly variable depending on inflows. Many of the plants that grow in this zone are emergent species that can cope with inundation for relatively long periods.

In some dams, shallow water regions are subject to regular cycles of flooding and drying, and are similar to dam margins and spillways. In other dams, there will be a more expansive shallow ephemeral area that is not restricted to a narrow edge strip. The exposed mud, flooded meadows and vegetated shallows that exist in shallow areas are important for many plant and animal species.

Shallow areas can be created or enlarged in a number of ways, including through extending the dam to create a larger shallow area below the inflow. Purpose-built sediment traps (smaller dams built in the main inflow area to catch sediment) are another example. When well-vegetated, these areas play an essential role in catching and filtering sediments from inflow and can provide excellent habitat for native wildlife.

4. Deep water

Plant aquatic species

Most dams will have a deep section where water persists longest during dry times, and stays cooler during summer. Floating plants such as *Azolla* create shade in dam water and provide a cooling effect. However, high nutrient levels can drive excessive growth of these plants in some dams, leading to low oxygen levels in the water and creating inhospitable conditions for other life in the dam. This can be relieved by providing shade on the surface of the dam, preferably by trees planted a suitable distance away from the water's edge. *Azolla* can also be periodically harvested by dragging a rope across the surface of the dam.

5. Dam wall

Plant tough perennial grasses

Plant spreading ground covers, perennial species or small shrubs with outward-extending fibrous roots to help keep the wall stable. Dam wall vegetation needs to be low to allow for structural dam inspection (checking for slumping or cracks in the dam wall) and shallow-rooted to avoid root damage to the wall. Don't plant trees or deep-rooted shrubs.

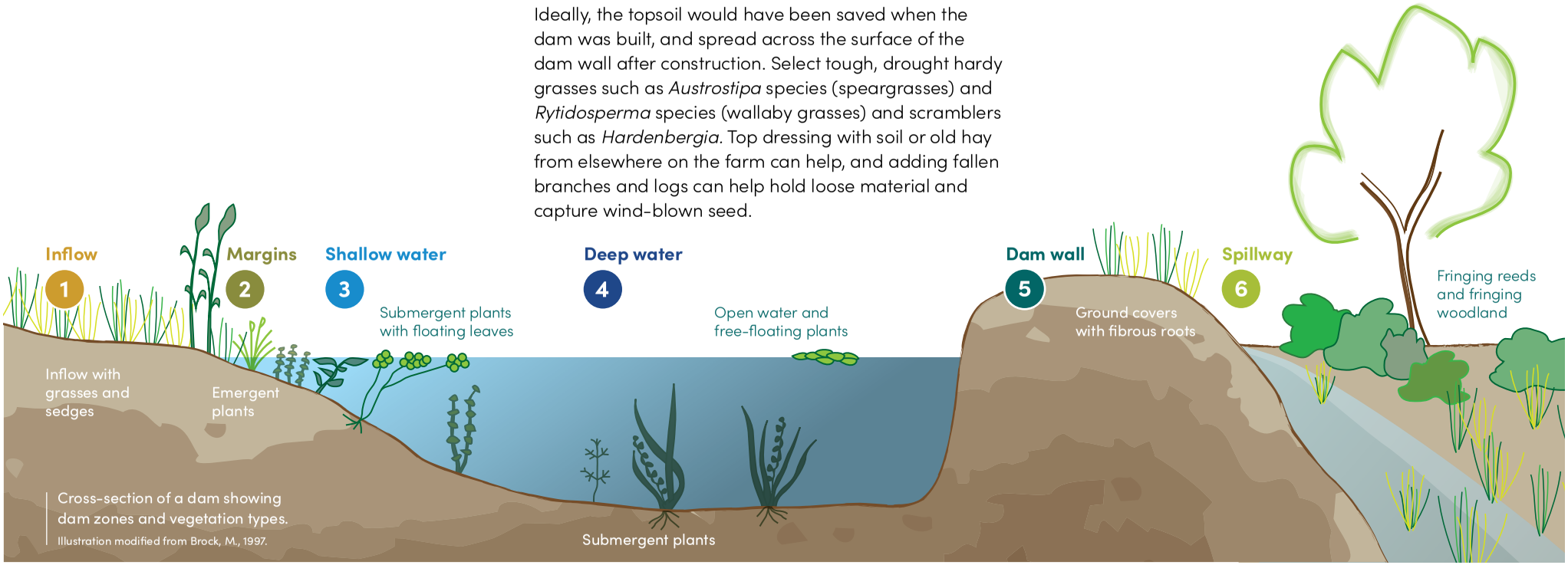
Dam walls can be challenging to vegetate. They are made of compacted clay, and unless a layer of topsoil is present, it is difficult for plants to get a toehold. This is particularly the case if the dam wall is steep, in which case constructing a physical barrier to minimise erosion is a good idea.

Ideally, the topsoil would have been saved when the dam was built, and spread across the surface of the dam wall after construction. Select tough, drought hardy grasses such as *Austrostipa* species (speargrasses) and *Rytidosperma* species (wallaby grasses) and scramblers such as *Hardenbergia*. Top dressing with soil or old hay from elsewhere on the farm can help, and adding fallen branches and logs can help hold loose material and capture wind-blown seed.

6. Spillway

Plant grasses, sedges and mat-forming herbs

Spillways carry water away from the dam during overflow events, and should have 100% vegetation cover to avoid erosion. The spillway will be frequently dry and seasonally inundated, and is best suited to deep-rooted perennial grasses, rushes and sedges. Avoid trees, shrubs and other plants that may shade out the ground cover or block the flow of water.



Cross-section of a dam showing dam zones and vegetation types.
Illustration modified from Brock, M., 1997.

Zones of a dam

Islands

Islands can be created when a dam is built, or added later as floating islands. Islands provide valuable habitat for animals, especially birds and turtles which use them as safe nesting sites. Solid earth dam islands can be planted in the same way as dam margins and dam walls but can also have shrubs or small trees planted at higher points. The addition of logs and breeding boxes will attract frogs, fish and birds to the dam.

Floating islands are unattached islands that can be constructed from a wide range of materials including PVC pipes and wooden pallets, using plastic drums for floatation. When planted with rushes and aquatic plants, they form rafts of water plants that produce a large root mass, useful for encouraging microbial communities which enhance water quality. The plants and their associated microorganisms can help reduce contaminants or excess nutrients such as phosphorus through the process of phytoremediation. They also provide habitat for fish, turtles, frogs, nesting birds and rakali (native water rats), and create shade in deeper areas of the dam.

Floating islands need to be maintained, repaired or replaced regularly. If using plastics, select tough, long-lasting plastics. Natural materials are preferable as they do not create pollutants, but they have a shorter lifespan.

Plant selection for floating islands can include shallow and deep water species.

Surrounding terrestrial vegetation

Terrestrial vegetation around a dam plays a vital role by sheltering the dam surface and providing habitat for wildlife. Planting a few trees at least 5m from the dam edge provides shelter from sun and wind, helping reduce evaporation. Trees and shrubs, particularly dense shrubs, also provide habitat and refuge for birds and other wildlife. Additionally, vegetation cover around the dam further helps to reduce the risk of erosion.

Avoid planting woody vegetation in the inflow area or close to the dam wall. In general, take care not to plant too many trees, as excessive shade can limit the growth of the groundcovers that are essential for stabilising the soil. Leaving an area around the dam free of trees also provides waterbirds with a clear flight path to land and take off from the water.

This guide does not include a list of tree or shrub species suitable for farm dam surrounds, as you should choose species that are indigenous to your location, and your choice of plants may also be guided by other factors such as planting for pollinators or establishing a native shelterbelt. Consult your local NSW Local Land Services office or Victorian Catchment Management Authority, native plant nursery or Landcare facilitator for advice on trees and shrubs appropriate for your property.

A family of grey teal take advantage of an "island" in a farm dam.
Photo: David Smith.

Plant lists

Key to plant lists:
‡ Tolerates low to moderate levels of salinity.
* Can become dominant under high nutrient and/or warm water conditions. Avoid introducing to small dams.

The plant lists are suitable for reference in the Sustainable Farms project area (see map on back of booklet).

Fringing terrestrial species

These plants grow on land, but some species, including many of those listed, can withstand temporary inundation.


Swamp isotome *(Isotoma fluviatilis)*


Spiny-headed mat-rush, basket grass *(Lomandra longifolia)*


Purple loosestrife *(Lythrum salicaria)*


Kangaroo grass *(Themeda triandra)*

Common name(s)	Scientific name	Dam zone						Waterlogging tolerance	Natural habitat	Plant type
		Inflow	Margins	Shallow water	Deep water	Dam wall	Spillway			
Common swamp wallaby grass	*Amphibromus nervosus*	●	●				●	Moderate	Drainage zones, riparian	Perennial grass
Purple wiregrass	*Aristida ramosa*					●		None	Grassland	Perennial grass
Speargrasses	*Austrostipa* spp.					●		None	Grassland	Perennial grass
Redleg grass	*Bothriochloa macra*					●		None	Grassland	Perennial grass
Tall sedge	*Carex appressa*	●	●				●	Moderate	Drainage zones, riparian	Perennial sedge
Plains sedge	*Carex bichenoviana*	●					●	Low	Drainage zones	Perennial sedge
Knob sedge	*Carex inversa*	●					●	Low	Grassland, drainage zones	Perennial sedge
Poong'ort, hollow sedge	*Carex tereticaulis*	●	●				●	Low	Drainage zones, riparian	Perennial sedge
Swamp goodenia	*Goodenia ovata*		●				●	Moderate	Grassland, drainage zones	Perennial mat-forming herb
Variable raspwort	*Haloragis heterophylla*	●					●	Moderate	Grassland, drainage zones	Perennial mat-forming herb
False sarsparilla	*Hardenbergia violacea*					●		None	Grassland, woodland	Perennial scrambling herb
Pennywort	*Hydrocotyle tripartita*	●	●				●	Low	Drainage zones, riparian	Perennial creeping herb
Swamp isotome	*Isotoma fluviatilis*	●	●				●	Low	Grassland, drainage zones	Perennial mat-forming herb
Austral rush	*Juncus australis*	●					●	Low	Grassland, drainage zones	Perennial rush
Sea rush	*Juncus kraussii*	●	●				●	Moderate	Drainage zones, riparian	Perennial rush ‡
Matted pratia	*Lobelia pedunculata*	●	●				●	Low	Grassland, drainage zones	Perennial mat-forming herb
Spiny-headed mat-rush, basket grass	*Lomandra longifolia*	●	●				●	Low	Woodland, grassland, drainage zones	Perennial tufted herb
Woodruff	*Luzula densiflora*	●					●	Low	Grassland, drainage zones	Perennial rush
Lesser loosestrife	*Lythrum hyssopifolia*	●	●				●	Low	Drainage zones, riparian	Annual erect herb
Purple loosestrife	*Lythrum salicaria*	●	●				●	Low	Drainage zones, riparian	Perennial erect herb
Weeping grass	*Microlaena stipoides*	●				●	●	Periodic only	Grassland, drainage zones	Perennial grass.
Creeping knotweed	*Persicaria prostrata*	●	●				●	Low	Grassland, drainage zones	Perennial mat-forming herb
Tussock grass, river tussock grass	*Poa labillardierei*	●	●				●	Low	Grassland, drainage zones	Perennial grass
Snow grass	*Poa sieberiana*					●		None	Grassland	Perennial grass
Large river buttercup	*Ranunculus papulentus*	●	●				●	Moderate	Riparian	Perennial herb ‡
Wallaby grasses	*Rytidosperma* spp.					●		None	Grassland	Perennial grass
Fluke bogsedge, common bogsedge	*Schoenus apogon*	●					●	Moderate	Grassland, drainage zones	Annual or perennial Sedge
Kangaroo grass	*Themeda triandra*	●				●	●	Low	Grassland, drainage zones	Perennial grass ‡

Key to plant lists:
‡ Tolerates low to moderate levels of salinity.
* Can become dominant under high nutrient and/or warm water conditions. Avoid introducing to small dams.

The plant lists are suitable for reference in the Sustainable Farms project area (see map on back of booklet).

Emergent species

These plants grow in water and in damp soil at the margins of water, but can cope with drying out. All are naturally found in riparian and drainage areas.


Stream clubrush
(Bolboschoenus fluviatilis)


Common rush
(Juncus usitatus)


Pondweed
(Potamogeton sulcatus)


Water plantain
(Alisma plantago-aquatica)

Common name(s)	Scientific name	Dam zone						Waterlogging tolerance	Suitable water depths (m)	Plant type
		Inflow	Margins	Shallow water	Deep water	Dam wall	Spillway			
Water plantain	*Alisma plantago-aquatica*		●	●				High	0–0.2	Annual or perennial erect herb
Jointed twigrush	*Baumea articulata*		●	●				High	0–1	Perennial sedge ‡
Soft Twig-rush	*Baumea rubiginosa*		●	●				High	0–0.3	Perennial sedge ‡
Sea clubrush	*Bolboschoenus caldwellii*		●	●				High	0–0.3	Perennial sedge ‡
Stream clubrush	*Bolboschoenus fluviatilis*		●	●				High	0–0.3	Perennial sedge ‡
Tassel sedge	*Carex fascicularis*		●	●				High	0–0.3	Perennial sedge
Tufted sedge	*Carex gaudichaudiana*		●	●				High	0–0.3	Perennial sedge
Water ribbons	*Cycnogeton (Triglochin) procerum*			●	●			High	1–2	Perennial aquatic herb
Giant Sedge, Tall Flat-sedge	*Cyperus exaltatus*		●	●				High	0–0.3	Perennial sedge
Leafy Flat-sedge	*Cyperus lucidus*		●	●				High	0–0.2	Perennial sedge
Star fruit	*Damasonium minus*		●	●				High	0–0.2	Annual or perennial erect herb
Common spikerush	*Eleocharis acuta*		●	●				High	0–0.3	Perennial sedge
Tall spikerush	*Eleocharis sphacelata*			●	●			High	0–5	Perennial sedge
Knobby clubrush	*Ficinia nodosa*		●	●				Moderate	0–0.3	Perennial sedge ‡
Nodding clubrush	*Isolepis cernua*	●	●				●	Moderate	0–0.1	Perennial sedge ‡
Common rush	*Juncus pallidus*	●	●				●	Moderate	0–0.2	Perennial rush
Erect Marsh-flower	*Liparophyllum exaltatum*		●	●				High	0–0.5	Perennial aquatic herb
Button rush	*Lipocarpha microcephala*	●	●				●	Low	0–0.2	Annual sedge
Slender knotweed	*Persicaria decipiens*		●	●				High	0–0.5	Perennial semi-aquatic herb
Pondweed	*Potamogeton cheesmanii*		●	●	●			High	2	Perennial aquatic herb
Pondweed	*Potamogeton sulcatus*		●	●	●			High	3	Perennial aquatic herb *
River clubsedge	*Schoenoplectus tabernaemontani (validus)*		●	●				High	0–1	Perennial sedge ‡
Sharp clubsedge	*Schoenoplectus mucronatus*		●	●				High	0–0.5	Perennial sedge ‡
Floating Bur-reed	*Sparganium subglobosum*		●	●				High	0–0.5	Perennial sedge
Narrow-leaved Cumbungi, Bulrush	*Typha domingensis*		●	●				High	0–0.5	Perennial rush ‡ *

Semi-aquatic species

These plants can grow submerged or partly submerged in water.


Small mud-mat
(Glossostigma elatinoides)


Austral brooklime
(Gratiola peruviana)


Common reed
(Phragmites australis)


Small river buttercup
(Ranunculus amphitrichus)

Common name(s)	Scientific name	Dam zone						Waterlogging tolerance	Suitable water depths (m)	Plant type
		Inflow	Margins	Shallow water	Deep water	Dam wall	Spillway			
Waterwort	*Elatine gratioloides*		●	●				High	0–0.3	Annual mat-forming herb
Small mud-mat	*Glossostigma elatinoides*	●	●				●	Low	0–4	Perennial mat-forming herb ‡
Australian sweet-grass	*Glyceria australis*		●	●				Moderate	0–0.1	Perennial grass
Austral brooklime	*Gratiola peruviana*		●	●				Moderate	0–0.2	Perennial mat-forming herb
Common reed	*Phragmites australis*		●	●	●			High	0–4	Perennial grass ‡ *
Small river buttercup	*Ranunculus amphitrichus*		●	●				High	0–0.1	Perennial herb ‡
River buttercup	*Ranunculus inundatus*		●	●				High	0–0.1	Perennial herb

Aquatic species

Aquatic plants grow fully submerged in water. All are commonly found in riparian areas. In dry conditions, some can persist as semi-aquatic plants.


Common duckweed
(Lemna disperma [minor])


Watermilfoil
(Myriophyllum crispatum)


Nardoo
(Marsilea drummondii)


Swamp lily
(Ottelia ovalifolia)

Common name(s)	Scientific name	Dam zone						Suitable water depths (m)	Plant type
		Inflow	Margins	Shallow water	Deep water	Dam wall	Spillway		
Watershield	*Brasenia schreberi*			●	●			0.3–2	Perennial herb
Common duckweed	*Lemna disperma (minor)*			●	●			0.2–10	Annual herb ‡
Nardoo	*Marsilea drummondii*			●	●			0–1	Perennial fern. Nardoo is toxic to stock so only plant in fenced dams.
Coarse watermilfoil	*Myriophyllum caput-medusae*		●	●	●			0–2	Perennial and semi-aquatic herb
Watermilfoil	*Myriophyllum crispatum*		●	●				0–0.5	Perennial and semi-aquatic herb
Red watermilfoil	*Myriophyllum verrucosum*		●	●	●			0–1.5	Perennial and semi-aquatic herb ‡
Wavy marshwort	*Nymphoides crenata*			●	●			0.05–1.5	Perennial herb
Entire marshwort	*Nymphoides montana*			●	●			0.05–2	Perennial herb
Swamp lily	*Ottelia ovalifolia*			●	●			0.2–1	Annual or perennial herb
Ferny Azolla	*Azolla pinnata*			●	●			0–5	Perennial fern *

Planting notes

Most dams that have previously been grazed will begin to recover and show vegetation growth after being fenced, but this can take longer if the seed bank is depleted, so planting can speed things up.

Once dam plants are established, they usually seed prolifically so even if dams shrink or dry out in droughts, rain will enable germination of the seed bed or the regrowth of dormant underground stems. Birds and wind also spread seed so novel species may appear. Over time, the mix of species will stabilise to suit the particular ecology of the dam.

Some broad considerations to keep in mind when choosing plants for your dam:

- **Minimise erosion** by planting species that provide good groundcover (e.g. watermilfoils, small mudmat, pennywort and grasses) to help protect the dam margins, inflow and spillway.
- **Minimise the dam's exposure to sun and wind** by planting larger trees set well back from the dam edge, reeds and rushes in shallow parts of the dam, and floating plants that cover some, but not all, of the dam surface. This will help reduce evaporation rates and keep the water cooler for longer.
- **Dams with salty water** should still be vegetated, but choose plants that are salt tolerant — indicated on the planting guides by ‡.
- **Plant for diverse vegetation structure.** Trees and large shrubs should be the smallest component of any dam planting plan, and should be planted well back from the dam edge to avoid shading out groundcover plants or damaging the dam walls. The vast bulk of planted species should be groundcovers and emergent species that will help stabilise the dam edge and provide excellent habitat for invertebrates and frogs.
- **Choose species that fit the size of the dam.** Avoid species like bulrushes and common reeds (indicated by * in the planting guide) in small dams where they will outcompete other species and use a lot of water. If these are already in your dam and are not dominating other plants, it is fine to leave them there.

Managing exotic plants

The recommended plant list includes only native species, as they generally provide better habitat for wildlife. However, some exotic species such as *Phalaris* and other agricultural grasses may be prolific in the landscape and will be the first to recolonise the area around a fenced dam. In this case, broadscale removal of exotic groundcovers is not recommended in the first instance, since these species will help perform the important functions of stabilising the soil, capturing pollutants and reducing exposure to wind.

Instead, a more targeted approach to managing exotic species is recommended, based on the following considerations:

- Is the plant listed as a noxious weed? (Check weeds.org.au)
- Is the plant likely to negatively impact the outcomes I am trying to achieve? For example, willows can crowd out fringing aquatic vegetation and reduce populations of aquatic insects such as dragonflies and mayflies.
- Is it feasible to remove the exotic plant in the long term? For example, removing *Phalaris* from a dam surrounded by a *Phalaris* paddock will be nearly impossible.
- Is this particular exotic replaceable with a native species that will provide the same function, such as stabilising the dam edge, and is it feasible to do so? For example, replacing surrounding pasture grasses and weeds with native grasses may be challenging in highly fertile areas.

In some cases, ripping and spot spraying can be necessary to create the conditions for newly planted species to thrive. However, it is essential to use only chemicals which are suitable for riparian areas, and use them as sparingly as possible due to the potential impacts on frog populations.

Wanted dead or alive

As well as living plants, dead timber and snags are great additions to dams.

Below the water, they provide a surface for beneficial algae to grow on, and create microhabitats for aquatic life including fish and frogs to shelter among. This extra life in the water is all part of maintaining a healthy dam with high levels of oxygen, which in turn means better water quality for stock.

Large logs and branches that protrude from the water provide a safe place for turtles to rest and for waterbirds to perch, out of reach of foxes and feral cats.

In general, dead trees, fallen logs and large fallen branches should be left in-situ in paddocks or woodlands as they provide great habitat, but often they have to be moved for safety reasons or because they interfere with roads, fences or machinery. In this case, the dead timber can be moved into or next to a dam where it will continue to play a role as habitat for years to come.

Site preparation

Plant type	Recommended site preparation and protection of plants	Best time to plant	Planting density
Aquatic and semi aquatic plants	No preparation necessary other than manually clearing away other vegetation from area to be planted. Placing small branches over plants can help protect them from ducks and other herbivores.	Plant in the warmer months when most plants are active — spring, summer and early–mid autumn. If possible, plant when the dam is full.	Optimum density 2–4 plants per square metre in areas chosen for planting.
Terrestrial grasses, herbs, rushes and sedges	Spot spray areas to be planted with a knockdown herbicide. Placing small branches over plants can help protect them from ducks and other herbivores. It is easier to establish plants on dams with less exposed subsoil – otherwise, it might be necessary to add topsoil with organic content to enable plants to establish.	Late winter to early spring. If planting when a dam is not full, plant a variety of plants at varying points up to the maximum water height, so that a range of plants can either establish or fail based on water levels the following season. Once established, most margin plants have some resilience to periodic dry and wet periods.	Optimum density 5–6 plants per square metre in areas chosen for planting. If planting density is too low, areas of bare ground are vulnerable to invasion by exotic species.
Trees and shrubs	Rip ground before planting (ideally some months prior to allow rip lines to collapse). Spray rip lines or spot spray with a knockdown herbicide.	Late winter to early spring. Be careful of frost damaging young seedlings. Guards can help, or delay planting until spring.	Planting density and configuration will vary between regions, so consult your local Landcare group, LLS or CMA for guidance.

Glossary

Annual: A plant that completes its life cycle within a year. Annuals flower, seed and die within a single season.

Aquatic: A plant that grows only in water. Aquatic plants can be free floating or rooted on the bottom of the dam. Some have very long stems that grow up through the water column.

Emergent: Grows in water and damp soil at the water's margin.

Groundcover: Groundcover refers to any plant that lies on top of the soil and protects it from erosion or inhibits weeds. The best groundcover plants grow outwards not upwards.

Herb: Also known as forb. A plant that is not a grass and does not have woody stems.

Mat-forming: A short, ground-hugging groundcover.

Perennial: A plant that lives for many years. Perennials can flower and produce seeds over multiple seasons and retain biomass all year, but may be dormant for some periods. Some perennials can also spread vegetatively from roots, stems, tubers or bulbs.

Phytoremediation: The use of plants to extract toxins or nutrients from soil or water.

Rhizome: An underground, horizontal stem from which buds and roots can grow.

Rush: A plant from the Juncaceae family. Rushes have small petal-like flowers on branched flower stems.

Sedge: A plant from the Cyperaceae family. Sedges have flowers without petals, in spike or club shaped clusters, with a single leaf at the base of each flowering stem.

Semi-aquatic: A plant that can grow submerged or partly submerged in water .

Stem segments: Detached stem sections that can establish a new plant.

Stolon: A stem growing along the ground from which buds and roots can grow.

References

Brock, M., 1997. Are there seeds in your wetland? Assessing wetland vegetation. Land and Water Resources Research and Development Corporation, Canberra, ACT.

Frood, D. and Papas, P., 2016. A guide to water regime, salinity ranges and bioregional conservation status of Victorian wetland Ecological Vegetation Classes. Arthur Rylah Institute for Environmental Research. Technical Report Series No. 266. Department of Environment, Land, Water and Planning, Heidelberg, Victoria.

Romanowski, N., 2009. *Planting Wetlands and Dams: A Practical Guide to Wetland Design, Construction and Propagation.* Landlinks Press, Collingwood, Victoria.

Sainty, G.R. and Jacobs, S.W.L., 2003. *Waterplants in Australia: A Field Guide,* 4th edn., Sainty Books, Griffith, NSW.

Stelling, F. (ed), 1998. *South West Slopes Revegetation Guide.* Murray Catchment Management Committee & Department of Land & Water Conservation, Albury, NSW.

Walsh, N.G. and Entwisle, T.J. (eds), 1994. *Flora of Victoria Volume 2: Ferns and Allied Plants, Conifers and Monocotyledons.* Inkata Press, Melbourne, Victoria.

Sustainable Farms project area

The plant lists are suitable for reference in the Sustainable Farms project area, outlined here in navy blue.

Wholesale nurseries

If your local nursery does not stock the plants you require, they will be able to order the plants via wholesalers such as those listed on our website. Scan the QR code or visit **SustainableFarms.org.au**/info/nurseries

Further information

- For further information on enhancing farm dams for biodiversity, visit sustainablefarms.org.au
- For information on the role of farm dams in the landscape, see: The Farm Dam Handbook, 2011, NSW Government.
- For information on wetland plants, see: Waterplants in Australia: A Field Guide (4th edition), 2003.
- For information about plant identification and distribution, visit NSW Flora Online or Flora of Victoria.
- To connect with local advice, contact your local Landcare group or your Local Land Services or Catchment Management Authority.

SustainableFarms.org.au

Sustainable Farms is an initiative of The Australian National University. Contact us for more information.

T (02) 6125 4669 **E** sustainablefarms@anu.edu.au

Sustainable Farms acknowledges the Traditional Custodians of the land we work on and we pay our respects to their Elders, past and present.

NSW GOVERNMENT Local Land Services

SUSTAINABLE FARMS

Appendix.5 Benchmark EVC 175 (Goldfields Bioregion)

Department of Sustainability and Environment

EVC/Bioregion Benchmark for Vegetation Quality Assessment

Goldfields bioregion

EVC 175_61: *Low Rises* Grassy Woodland

Description:
A variable open eucalypt woodland to 15 m tall over a diverse ground layer of grasses and herbs. The shrub component is usually diverse but sparse in cover. In the Goldfields bioregion, Grassy Woodland occurs on sedimentary soils on the lowest slopes at the interface between the plains and the infertile woodlands of the sedimentary hills.

Large trees:

Species	DBH(cm)	#/ha
Eucalyptus spp.	70 cm	15 / ha

Tree Canopy Cover:

%cover	Character Species	Common Name
15%	*Eucalyptus microcarpa*	Grey Box
	Eucalyptus leucoxylon	Yellow Gum

Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Medium Shrub	6	15%	MS
Small Shrub	3	5%	SS
Prostrate Shrub	1	1%	PS
Large Herb	4	10%	LH
Medium Herb	10	15%	MH
Small or Prostrate Herb	2	5%	SH
Large Tufted Graminoid	2	5%	LTG
Medium to Small Tufted Graminoid	11	25%	MTG
Medium to Tiny Non-tufted Graminoid	3	5%	MNG
Bryophytes/Lichens	na	10%	BL
Soil Crust	na	10%	S/C

LF Code	Species typical of at least part of EVC range	Common Name
MS	*Cassinia arcuata*	Drooping Cassinia
MS	*Acacia pycnantha*	Golden Wattle
MS	*Acacia acinacea* s.l.	Gold-dust Wattle
MS	*Dodonaea viscosa* ssp. *cuneata*	Wedge-leaf Hop-bush
PS	*Astroloma humifusum*	Cranberry Heath
SS	*Pultenaea largiflorens*	Twiggy Bush-pea
SS	*Pimelea humilis*	Common Rice-flower
SS	*Eutaxia microphylla* var. *microphylla*	Common Eutaxia
PS	*Astroloma humifusum*	Cranberry Heath
LH	*Xerochrysum viscosum*	Shiny Everlasting
LH	*Chrysocephalum semipapposum*	Clustered Everlasting
LH	*Wahlenbergia luteola*	Bronze Bluebell
LH	*Senecio tenuiflorus*	Slender Fireweed
MH	*Veronica plebeia*	Trailing Speedwell
MH	*Daucus glochidiatus*	Australian Carrot
MH	*Einadia nutans* ssp. *nutans*	Nodding Saltbush
MH	*Vittadinia cuneata*	Fuzzy New Holland Daisy
SH	*Crassula sieberiana*	Sieber Crassula
SH	*Hydrocotyle laxiflora*	Stinking Pennywort
LTG	*Austrostipa mollis*	Supple Spear-grass
MTG	*Elymus scaber* var. *scaber*	Common Wheat-grass
MTG	*Austrostipa scabra* ssp. *falcata*	Rough Spear-grass
MTG	*Poa sieberiana*	Grey Tussock-grass
MTG	*Austrodanthonia setacea*	Bristly Wallaby-grass
MNG	*Austrostipa elegantissima*	Feather Spear-grass
SC	*Thysanotus patersonii*	Twining Fringe-lily
SC	*Convolvulus erubescens* spp. agg.	Pink Bindweed

Victoria The Place To Be

EVC 175_61: *Low Rises* Grassy Woodland - Goldfields bioregion

Recruitment:
Continuous

Organic Litter:
20 % cover

Logs:
15 m/0.1 ha.

Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
LH	*Sonchus oleraceus*	Common Sow-thistle	high	low
LH	*Cirsium vulgare*	Spear Thistle	high	high
MH	*Hypochoeris radicata*	Cat's Ear	high	low
MH	*Petrorhagia velutina*	Velvety Pink	high	low
MTG	*Vulpia bromoides*	Squirrel-tail Fescue	high	low
MTG	*Briza minor*	Lesser Quaking-grass	high	low
MTG	*Briza maxima*	Large Quaking-grass	high	low
MTG	*Bromus hordeaceus* ssp. *hordeaceus*	Soft Brome	high	low
MTG	*Bromus diandrus*	Great Brome	high	low
MNG	*Aira elegantissima*	Delicate Hair-grass	high	low
MNG	*Aira cupaniana*	Quicksilver Grass	high	low
MNG	*Vulpia myuros*	Rat's-tail Fescue	high	low

Published by the Victorian Government Department of Sustainability and Environment April 2004

Appendix.6 Soil reference pits and information

2.30 Rg/uS1 RISES – gently undulating to undulating, SEDIMENTARY, type 1

Extensive tracts of gentle sedimentary terrain throughout the western-central parts of the study area extend south from Kingower to Talbot. Native vegetation has been retained in the bulk of the unit, although the gentler lower slopes and valley floors are frequently cleared for grazing, or less commonly cropping. Gold-mining was prevalent throughout the unit during the later part of last century, and at that time much of the vegetation was cleared to supply the need of then mining community. Scars of that mining era – such as sheet and gully erosion, pits and mullock heaps – can still be found beneath the box-ironbark-gum forests that characteristically cover the goldfields.

The soils have hard-setting surfaces and ground cover is usually sparse. Sheet erosion is common, particularly on the steeper slopes. Gully erosion, and occasionally salting, are other forms of land deterioration.

Geology Ol-m – lower middled Ordovician sandstone, shale and slate

Rainfall 450-600 mm per annum

Slope Average 2-6%; range 1-15%

Dominant landform element (85%) Gentle crest, gentle slope

Minor landform elements (15%) Sharp crest, drainage depression, steeper slope

Soils Dominant: Dr2.41, Dr2.42, Dr3.41, Dr2.22. Red duplex soils on the gentle slopes and crests, with loamy, poorly structured, hardsetting topsoils that frequently contain fragments of sedimentary rock; subsoils are coarsely structured, acidic to neutral and sometimes mottled; the soils are usually less than 1 m deep, and overlie fractured and frequently weathered bedrock

Sub-dominant: Dy3.2, Dy3.41, Db2.41. Yellow to brown mottled sodic duplex soils on the lower slopes and in depressions which are essentially poorer-drained variants of the red duplex soils; the A_1 horizon is grey, loamy and hardsetting, and the pale to bleached massive A_2 horizon frequently contains fragments of stone and sometimes small amounts of buckshot; subsoils are typically acidic

Minor: Gn3, Gn4.11, Gn4.54. Shallow soils with greyish brown, stony loam surface textures which become more clayey and red, or less commonly, pale to red or reddish yellow at depth are common on the upper slopes and sharper stony crests; these soils grade into deeper red duplex soils on the slopes

Native vegetation The woodlands to open forests II of *E. microcarpa, E. leucoxylon* and *E. sideroxylon* are characteristic of the goldfields; *E. sideroxylon* and *E. microcarpa* occur on the upper slopes, with occasionally associated species *E. polyanthemos*, *E, macrorrhyncha* and *E. goniocalyx* while *E. microcarpa* and *E. leucoxylon* grow on the lower slopes, occasionally with *E. melliodora* and *E. camaldulensis* in the larger drainage depressions; *Acacia pycnantha*, with its attractive golden flowers in late winter, is widespread; the understorey is characteristically ope, and usually grassy or heathy, the heathy areas containing numerous plant species and offering colourful displays in spring

Stone-rock outcrop Surface stone common on the upper slopes, but virtually absent on the lower slopes and depressions

Pans Nil or not observed

Land use The forested areas supply limited quantities of timber products such as firewood, sleepers and posts, and also support a scattered but important apicultural industry; prospecting for gold is an extremely popular recreation, and the fold-fields still yield substantial quantities of nuggets – some areas, such as those around Kingower, are more intensively mined in business ventures; significant residential areas adjoin the larger towns of Maryborough and Dunolly; the remaining cleared areas support grazing, or less commonly cropping

Observed land deterioration Numerous forms of deterioration are evident: the weakly structured, hardsetting topsoils shed water readily, and sheet erosion is prevalent; the increased run-off, combined with the moderately dispersible subsoils on the lower slopes, frequently leads to gully erosion; salting occurs in some lower-lying areas of the landscape

Susceptibility to land deterioration
Sheet erosion (moderate to high)
Gully erosion (moderate to high)
Compaction (moderate)
Salting (moderate)

Many areas bear the scars of past gold-mining exploits.

Appendix.7 Biosecurity

VISITORS

PLEASE RESPECT

FARM BIOSECURITY

Please phone or visit the office before entering

☎

Do not enter property without prior approval

Vehicles, people and equipment can carry weed seeds, pests and diseases

animalhealth AUSTRALIA

farmbiosecurity

Plant Health AUSTRALIA

Appendix.8 Bird list within 5km of site.

Bird List within 5km of 164 Mount View Road, Goldsborough. Source ALA

Species Name	Vernacular Name	Number of records	Victoria : Conservation Status	EPBC Act Threatened Species
Gymnorhina tibicen	Australian Magpie	50		
Ptilotula penicillata	White-plumed Honeyeater	26		
Colluricincla (Colluricincla) harmonica	Grey Shrike-thrush	24		
Manorina (Myzantha) melanocephala	Noisy Miner	20		
Eolophus roseicapilla	Galah	18		
Smicrornis brevirostris	Weebill	17		
Psephotus haematonotus	Red-rumped Parrot	16		
Platycercus (Violania) eximius	Eastern Rosella	16		
Ptilotula fusca	Fuscous Honeyeater	15		
Climacteris (Climacteris) picumnus	Brown Treecreeper	14		
Anthochaera (Anthochaera) carunculata	Red Wattlebird	14		
Cacatua (Cacatua) galerita	Sulphur-crested Cockatoo	13		
Falcunculus frontatus	Crested Shrike-tit	13		
Glossopsitta concinna	Musk Lorikeet	13		
Melithreptus (Eidopsarus) gularis	Black-chinned Honeyeater	12		
Pardalotus (Pardalotus) punctatus	Spotted Pardalote	12		
Aegotheles (Aegotheles) cristatus	Australian Owlet-nightjar	12		
Rhipidura (Sauloprocta) leucophrys	Willie Wagtail	11		
Acanthiza (Geobasileus) reguloides	Buff-rumped Thornbill	11		
Melithreptus (Eidopsarus) brevirostris	Brown-headed Honeyeater	11		
Lathamus discolor	Swift Parrot	10	Critically Endangered	Critically Endangered
Hirundo (Hirundo) neoxena	Welcome Swallow	10		
Corcorax melanorhamphos	White-winged Chough	10		
Geopelia placida	Peaceful Dove	9		
Cormobates leucophaea	White-throated Treecreeper	8		
Malurus (Malurus) cyaneus	Superb Fairy-wren	8		
Dacelo (Dacelo) novaeguineae	Laughing Kookaburra	7		
Artamus (Angroyan) cyanopterus	Dusky Woodswallow	7		
Pachycephala (Alisterornis) rufiventris	Rufous Whistler	7		
Grallina cyanoleuca	Magpie-lark	7		
Cacatua (Licmetis) tenuirostris	Long-billed Corella	6		
Chenonetta jubata	Australian Wood Duck	6		
Passer (Passer) domesticus	House Sparrow	6		
Lichenostomus melanops	Yellow-tufted Honeyeater	6		

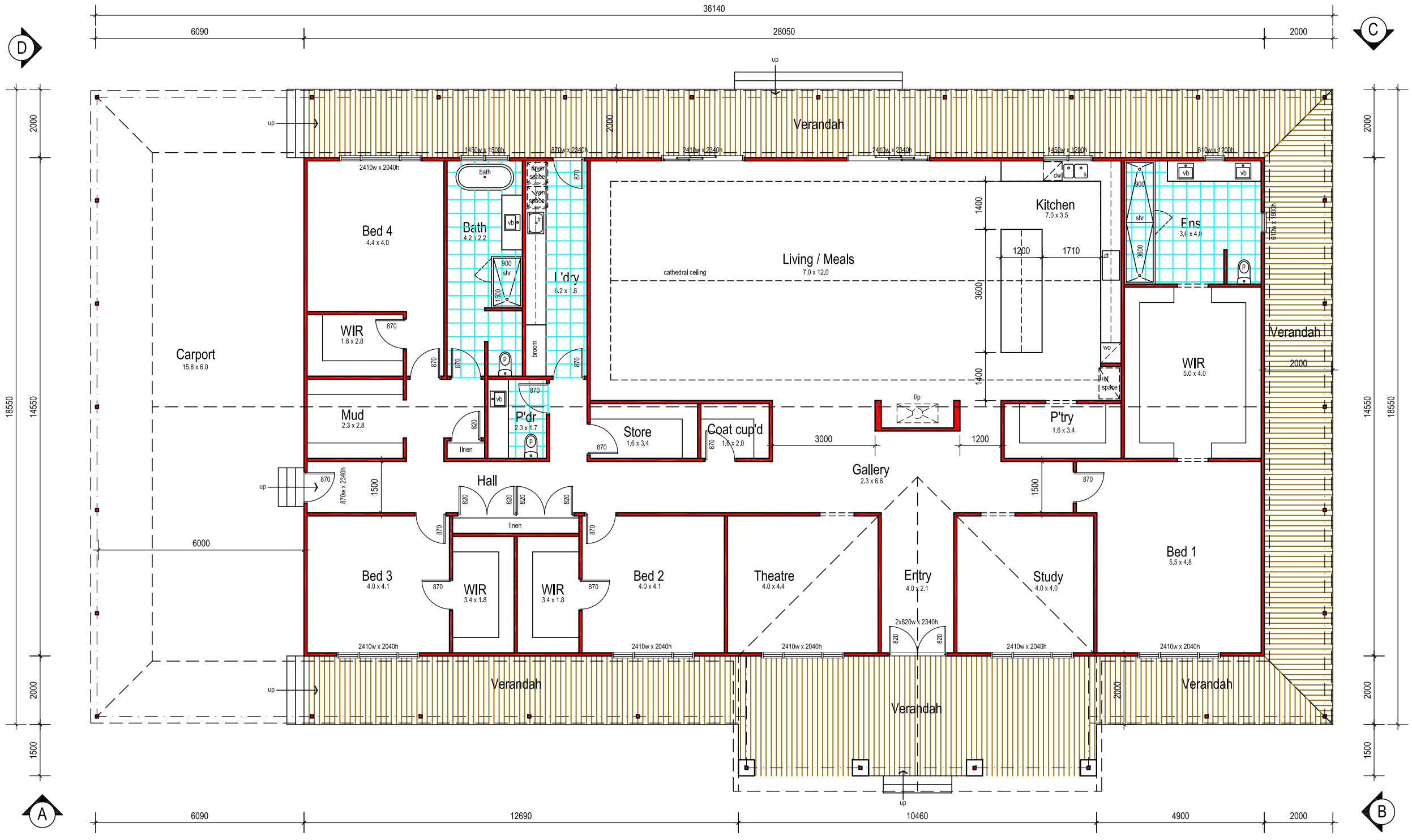
Phaps (Phaps) chalcoptera	Common Bronzewing	6		
Petroica (Petroica) boodang	Scarlet Robin	6		
Ninox (Hieracoglaux) connivens	Barking Owl	6	Critically Endangered	
Phylidonyris (Meliornis) novaehollandiae	New Holland Honeyeater	6		
Pardalotus (Pardalotinus) striatus	Striated Pardalote	6		
Myiagra (Seisura) inquieta	Restless Flycatcher	5		
Cincloramphus (Maclennania) mathewsi	Rufous Songlark	5		
Artamus (Campbellornis) superciliosus	White-browed Woodswallow	5		
Dicaeum (Dicaeum) hirundinaceum	Mistletoebird	5		
Oreoica gutturalis	Crested Bellbird	5	Endangered	
Aquila (Uroaetus) audax	Wedge-tailed Eagle	4		
Eopsaltria (Eopsaltria) australis	Eastern Yellow Robin	4		
Microeca (Microeca) fascinans	Jacky Winter	4		
Parvipsitta pusilla	Little Lorikeet	4		
Parvipsitta porphyrocephala	Purple-crowned Lorikeet	4		
Hieraaetus (Hieraaetus) morphnoides	Little Eagle	4	Vulnerable	
Coracina (Coracina) papuensis	White-bellied Cuckoo-shrike	4		
Accipiter (Leucospiza) fasciatus	Brown Goshawk	4		
Falco (Hierofalco) peregrinus	Peregrine Falcon	3		
Ninox (Ninox) boobook	Southern Boobook	3		
Coracina (Coracina) novaehollandiae	Black-faced Cuckoo-shrike	3		
Corvus coronoides	Australian Raven	3		
Heteroscenes pallidus	Pallid Cuckoo	3		
Falco (Ieracidea) berigora	Brown Falcon	2		
Petroica (Petroica) goodenovii	Red-capped Robin	2		
Pomatostomus (Morganornis) superciliosus	White-browed Babbler	2		
Vanellus (Lobipluvia) miles	Masked Lapwing	2		
Nymphicus hollandicus	Cockatiel	2		
Cracticus torquatus	Grey Butcherbird	2		
Corvus mellori	Little Raven	2		
Petrochelidon (Hylochelidon) nigricans	Tree Martin	2		
Ninox (Ninox) novaeseelandiae	Southern Boobook	2		
Podargus strigoides	Tawny Frogmouth	2		
Strepera (Neostrepera) versicolor	Grey Currawong	2		
Rhipidura (Rhipidura) albiscapa	Grey Fantail	2		

Acanthiza (Geobasileus) uropygialis	Chestnut-rumped Thornbill	2		
Ocyphaps lophotes	Crested Pigeon	2		
Acanthiza (Subacanthiza) nana	Yellow Thornbill	2		
Tadorna (Casarca) tadornoides	Australian Shelduck	1		
Microcarbo melanoleucos	Little Pied Cormorant	1		
Todiramphus (Todiramphus) sanctus	Sacred Kingfisher	1		
Entomyzon cyanotis	Blue-faced Honeyeater	1		
Anas (Anas) superciliosa	Pacific Black Duck	1		
Phalacrocorax (Phalacrocorax) carbo	Great Cormorant	1		
Pachycephala (Pachycephala) pectoralis	Golden Whistler	1		
Platalea (Platibis) flavipes	Yellow-billed Spoonbill	1		
Ptilotula ornata	Yellow-plumed Honeyeater	1		
Stagonopleura (Stagonopleura) guttata	Diamond Firetail	1	Vulnerable	Vulnerable
Chalcites osculans	Black-eared Cuckoo	1		
Gerygone fusca	Western Gerygone	1		
Philemon (Tropidorhynchus) corniculatus	Noisy Friarbird	1		
Acanthagenys rufogularis	Spiny-cheeked Honeyeater	1		
Artamus (Campbellornis) personatus	Masked Woodswallow	1		
Egretta novaehollandiae	White-faced Heron	1		
Melithreptus (Melithreptus) lunatus	White-naped Honeyeater	1		
Neochmia (Aegintha) temporalis	Red-browed Finch	1		
Merops (Merops) ornatus	Rainbow Bee-eater	1		
Acanthiza (Geobasileus) chrysorrhoa	Yellow-rumped Thornbill	1		
Apus (Apus) pacificus	Fork-tailed Swift	1		
Anthus (Anthus) novaeseelandiae	Australian Pipit	1		
Strepera (Strepera) graculina	Pied Currawong	1		
Petroica (Littlera) phoenicea	Flame Robin	1		
Oriolus (Mimeta) sagittatus	Olive-backed Oriole	1		

Appendix.9 Amphibians List within 5km of site

Species Name	Vernacular Name	Number of records	EPBC Act Threatened Species
Litoria caerulea	Green Tree Frog	59	
Litoria lesueuri	Lesueur's Frog	18	
Litoria xanthomera	Orange-thighed Frog	12	
Litoria gracilenta	Dainty Green Tree Frog	12	
Litoria fallax	Eastern Dwarf Tree Frog	8	
Litoria nasuta	Rocket Frog	6	
Litoria rothii	Northern Laughing Tree Frog	6	
Litoria rheocola	Common Mist Frog	5	
Rhinella marina	Cane Toad	4	
Papurana daemeli	Water Frog	3	
Litoria jungguy	Jungguy Tree Frog	3	
Litoria serrata	Green-eyed Tree Frog	2	
Litoria infrafrenata	White-lipped Tree Frog	2	
Litoria dayi	Day's Frog	2	Vulnerable
Litoria wilcoxii	Wilcox's Frog	2	
Litoria eucnemis	Fringed Tree Frog	2	
Limnodynastes peronii	Striped Marsh Frog	2	
Mixophyes schevilli	Northern Barred Frog	1	
Cophixalus ornatus	Ornate Frog	1	

Appendix.10 House Plans and all development Plans



Floor Plan scale1:125

HOUSE	SQM	SQS
FLOOR AREA	408.12	
VERANDAH	164.99	
CARPORT	110.65	
TOTAL AREA	683.76	73.60

REGISTERED Building Practitioner

Rev.	Amendments:	Date:	By:
-	Drawings issued for approval.	18.07.24	F.M.
A	Drawings issued for approval.	07.08.24	F.M.
B	Drawings issued for approval.	19.08.24	F.M.
C	Drawings issued for approval.	17.10.24	F.M.

Project:
NEW RESIDENCE

At:
No. 164 MOUNT VIEW ROAD, GOLDSBOROUGH.

Client:
BOBBY KAREVSKI & RIKKI MORANI

Drawing Name:
FLOOR PLAN

CBD Creative Building Designers
9A Fosters Road, Keilor Park, Vic. 3042
Office: (03) 9336 3343
Mobile: 0404 856 726
Email: fabio@cbddesigns.com.au
Web: www.cbddesigns.com.au

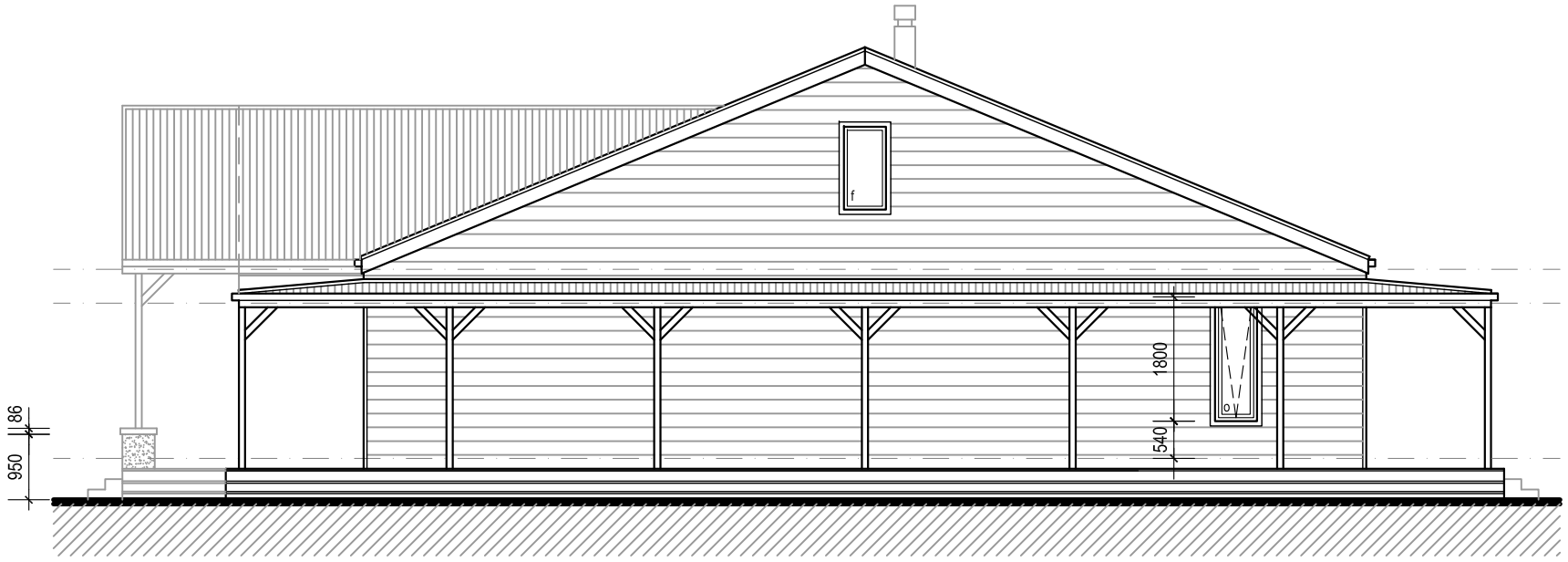
Job No: 061924
Date: 18.07.24
Scale: 1:125 @ A3
Drawn: F.M.
Checked: F.M.

Orientation

Drawing No: 01 | Rev: C | Stage: PD

PRELIMINARY DESIGN
DRAWINGS ISSUED FOR APPROVAL

Elevation A scale1:100



Elevation B scale1:100

PRELIMINARY

Rev.	Amendments:	Date:	By:
-	Drawings issued for approval.	18.07.24	F.M.
A	Drawings issued for approval.	07.08.24	F.M.
B	Drawings issued for approval.	19.08.24	F.M.
C	Drawings issued for approval.	17.10.24	F.M.

REGISTERED Building Practitioner

Project:
NEW RESIDENCE

At:
No. 164 MOUNT VIEW ROAD, GOLDSBOROUGH.

Client:
BOBBY KAREVSKI & RIKKI MORANI

Drawing Name:
ELEVATIONS

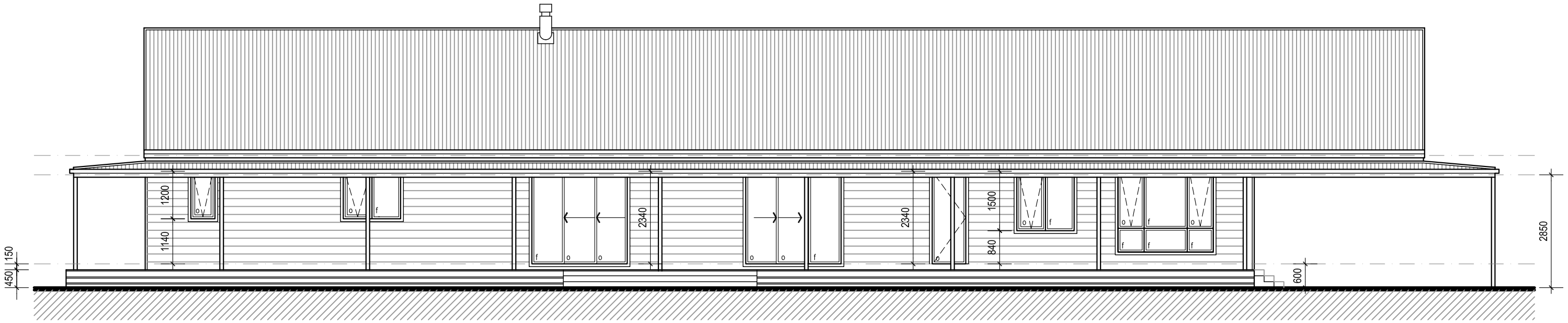
CBD Creative Building Designers
9A Fosters Road, Keilor Park, Vic. 3042
Office: (03) 9336 3344
Mobile: 0404 856 726
Email: fabio@cbddesigns.com.au
Web: www.cbddesigns.com.au

Job No: 061924
Date: 18.07.24
Scale: 1:125 @ A3
Drawn: F.M.
Checked: F.M.

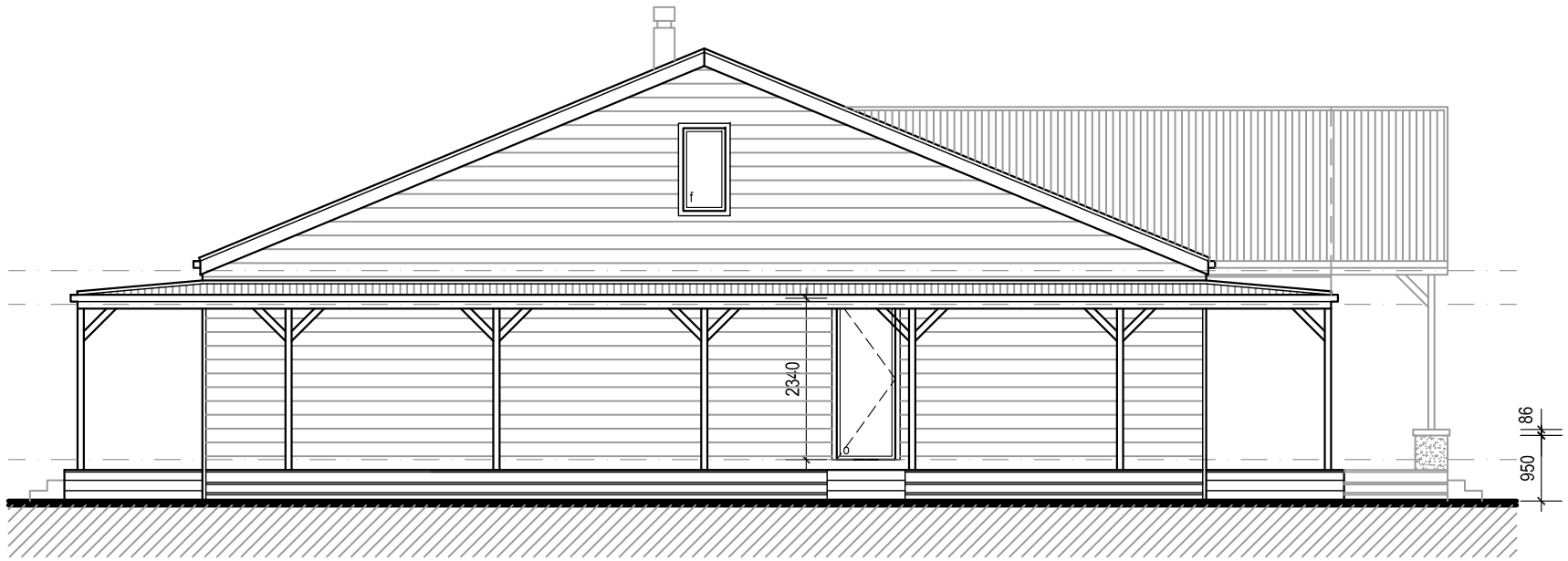
Orientation

Drawing No:	Rev:	Stage:
02	C	PD

PRELIMINARY DESIGN
DRAWINGS ISSUED FOR APPROVAL



Elevation C scale1:100



Elevation D scale1:100

PRELIMINARY

Rev.	Amendments:	Date:	By:
-	Drawings issued for approval.	18.07.24	F.M.
A	Drawings issued for approval.	07.08.24	F.M.
B	Drawings issued for approval.	19.08.24	F.M.
C	Drawings issued for approval.	17.10.24	F.M.

REGISTERED Building Practitioner

· WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS, DO NOT SCALE.
· REPORT ANY DISCREPANCIES TO THIS OFFICE BEFORE COMMENCING ANY WORKS FOR CLARIFICATION.

Project:
NEW RESIDENCE

At:
No. 164 MOUNT VIEW ROAD, GOLDSBOROUGH.

Client:
BOBBY KAREVSKI & ELIKA MORANI

Drawing Name:
ELEVATIONS

CBD Creative Building Designers
9A Fosters Road, Keilor Park, Vic. 3042
Office: (03) 9336 3345
Mobile: 0404 856 726
Email: fabio@cbddesigns.com.au
Web: www.cbddesigns.com.au

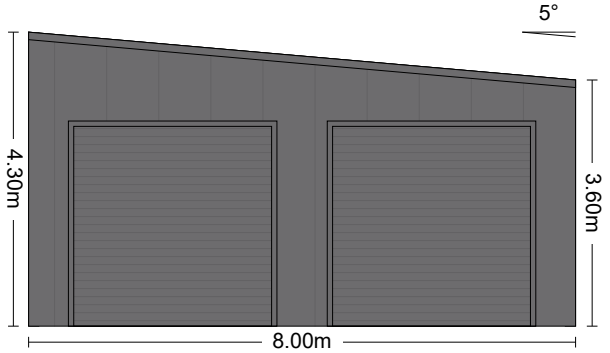
Job No: 061924
Date: 18.07.24
Scale: 1:125 @ A3
Drawn: F.M.
Checked: F.M.

Orientation

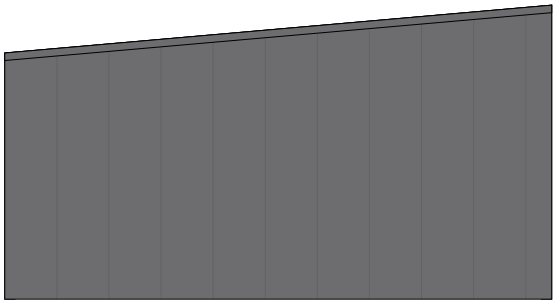
Drawing No:	Rev:	Stage:
03	C	PD

PRELIMINARY DESIGN
DRAWINGS ISSUED FOR APPROVAL

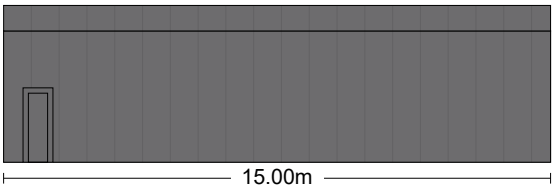
ShedBoss Ballarat				Quotation	
ABN:	55 638 984 713	Phone:	0438 360 409	No:	**426671**
Address:	21 Albert Street Sebastopol VIC 3356	Fax:	03 53 364 700	Date:	22/04/2025
		Lic No:	CDBL-54479	Valid:	7 Days
Email:	sales@shedbossballarat.com.au				
Web:	shedboss.com.au/ballarat/				



FRONT VIEW



REAR VIEW



FRONT ELEVATION

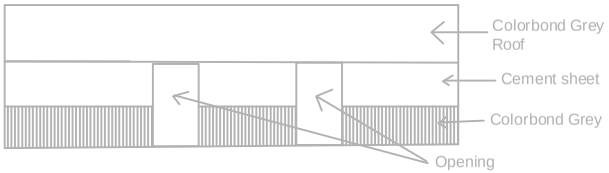
PLAN VIEW

REAR ELEVATION

South west Elevation

North east Elevation

North-west Elevation



South-east Elevation

Note:
The contractor shall verify all dimensions and all underground services at the site before commencing work. The contractor shall verify all levels from the consulting engineer prior to construction.

DO NOT SCALE FROM DRAWINGS

PROJECT: *164 Mount View Road, Goldsborough*

PROJECT NO: *2723*

DATE: APR 2025

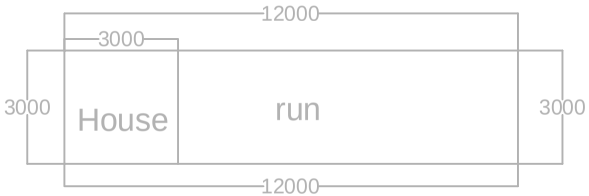
DWG TITLE: *LARGE CHOOK SHED*

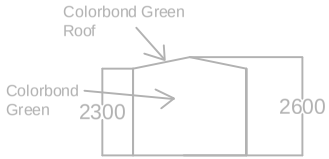
SCALE: 1:200 @A4

NORTH (West, East, South)

DRAWINGS FOR PLANNING PERMIT ONLY NOT TO BE USED FOR CONSTRUCTION

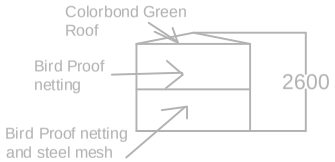
NATURAL RESOURCE LINK PTY LTD
54 Frazer Street
Clunes 3370
julie@nrlinks.com.au



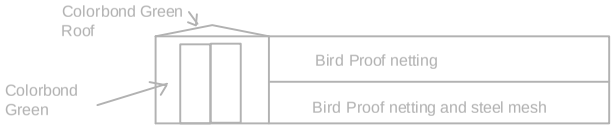


North-west Elevation

North east Elevation



South-east Elevation



South west Elevation

Note:
The contractor shall verify all dimensions and all underground services at the site before commencing work. The contractor shall verify all levels from the consulting engineer prior to construction.

DO NOT SCALE FROM DRAWINGS

PROJECT:
164 Mount View Road, Goldsborough

PROJECT NO: *2723*

DATE:
APR 2025

DWG TITLE:
SMALL CHOOK SHED

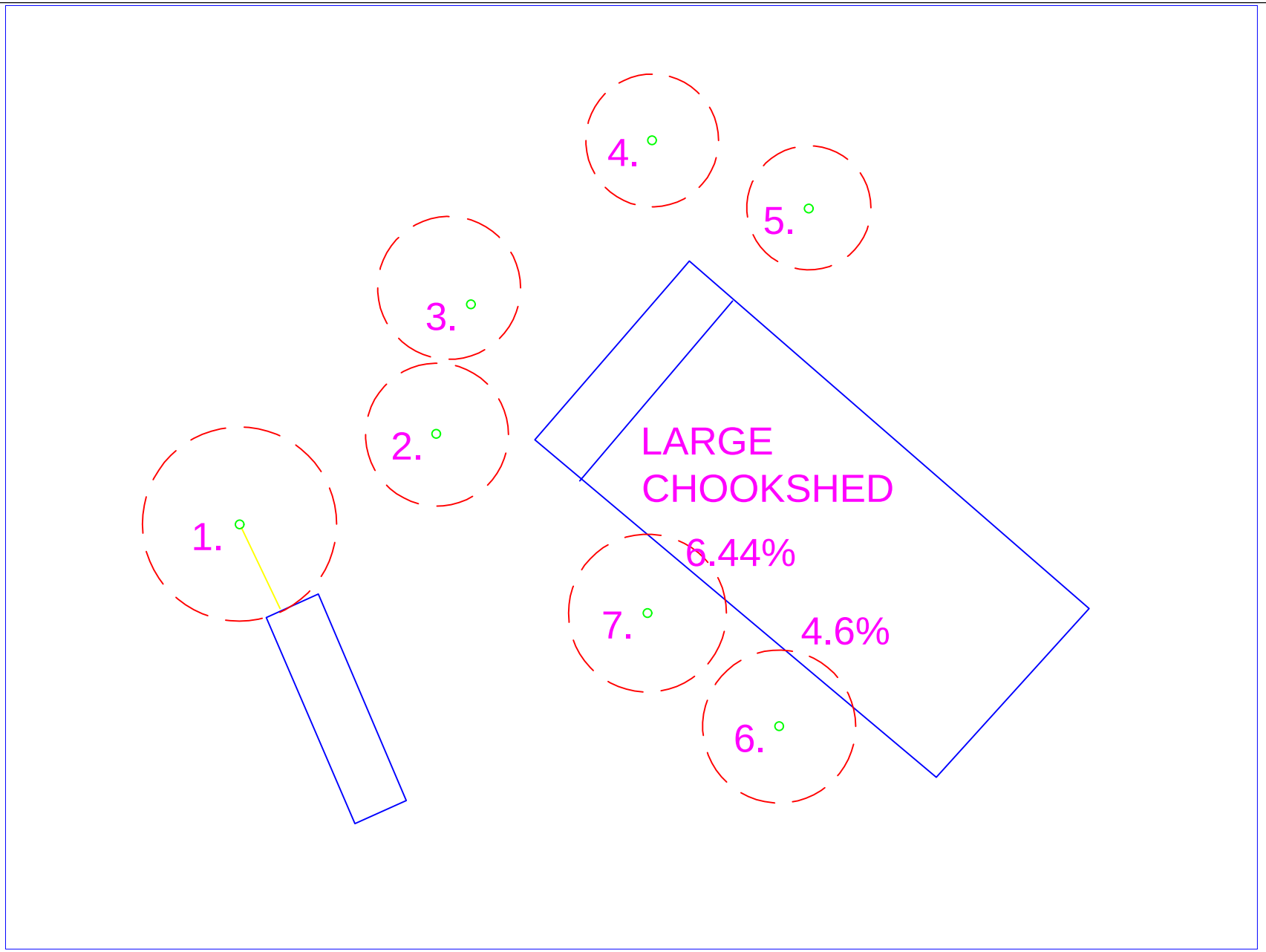
SCALE: 1:200 @A4

West NORTH East South

DRAWINGS FOR PLANNING PERMIT ONLY NOT TO BE USED FOR CONSTRUCTION

NATURAL RESOURCE LINK PTY LTD
54 Frazer Street
Clunes 3370
julie@nrlinks.com.au

Appendix.11 Tree Protection Zone check for Clause 52.17 trigger (none evident)



Note:
The contractor shall verify all dimensions and all underground services at the site before commencing work. The contractor shall verify all levels from the consulting engineer prior to construction.

DO NOT SCALE FROM DRAWINGS

PROJECT: *164 Mount View Road, Goldsborough*

PROJECT NO: *2723*

DATE: APR 2025

DWG TITLE: *TREE PLAN*

SCALE: 1:300 @A4

NORTH — West — East — South

DRAWINGS FOR PLANNING PERMIT ONLY
NOT TO BE USED FOR CONSTRUCTION

NATURAL RESOURCE LINK PTY LTD
54 Frazer Street
Clunes 3370
julie@nrlinks.com.au

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

VOLUME 11591 FOLIO 878

Security no : 124117153999A
Produced 03/08/2024 08:03 PM

LAND DESCRIPTION

Land in Plan of Consolidation 375113G.
PARENT TITLES :
Volume 01282 Folio 247 Volume 05914 Folio 642 Volume 06855 Folio 900
Volume 08274 Folio 675 Volume 10733 Folio 002 Volume 11572 Folio 389
Created by instrument PC375113G 20/08/2015

REGISTERED PROPRIETOR

[redacted]

ENCUMBRANCES, CAVEATS AND NOTICES

MORTGAGE AY034465H 24/05/2024
COMMONWEALTH BANK OF AUSTRALIA

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

DIAGRAM LOCATION

SEE PC375113G FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

[redacted]

----------END OF REGISTER SEARCH STATEMENT----------

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

ADMINISTRATIVE NOTICES

NIL

[redacted]

DOCUMENT END