Pyrenees Shire Council

Planning Enquiries
Phone: (03) 5349 1100
Web: www.pyrenees.vic.gov.au

Office Use Only

VicSmart: **No**

Specify class of VicSmart application:

Application No: **REFPA20250034**

Date Lodged: **24/03/2025**

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.

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

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

Application type

Is this a VicSmart Application?*

No

If yes, please specify which VicSmart class or classes:

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

Pre-application meeting

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

False

If 'yes', with whom?:

Date: day / month / year

The Land ⓘ

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

Street Address*

Unit No:	St. No: **37**	St. Name: **YOUNGS LANE**

Suburb/Locality: **SNAKE VALLEY** | Postcode: **3351**

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:

If this application relates to more than one address, please attach details.

The Proposal

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

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

A relocation dwelling and studio to be moved to the land and move the existing containers and garage to the rear of the property.

📎 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.

ⓘ Estimated cost of development for which the permit is required*

Cost **$75,000.00**

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

Insert '0' if no development is proposed (eg. change of use, subdivision, removal of covenant, liquor licence)

Existing Conditions ⓘ

Describe how the land is used and developed now*

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

Vacant land with existing shipping containers and garage.

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

Title Information ⓘ

Encumbrances on title*

If you need help about the title, read: How to complete the Application for Planning Permit form

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

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

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

Applicant and Owner Details ⓘ

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

Applicant *

The person who wants the permit

Name:

Title: **Ms** | First Name: **Helen** | Surname: **Moisidis**

Organisation (if applicable): **N/A**

Postal Address | If it is a PO Box, enter the details here:

Unit No: | St. No: **21** | St. Name: **Jacana Avenue**

Suburb/Locality: **Templestowe Lower** | State: **Victoria** | Postcode: **3107**

[redacted]

[redacted]

[redacted]

Information Requirements

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

Is the required information provided?

- ◯ Yes
- ◯ No

Declaration ⓘ

This form must be signed by the applicant*

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

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

Signature:

Date:24 March 2025

day / month / year

Checklist ⓘ

Have you:

- ☐ Filled in the form completely?
- ☐ Paid or included the application fee?

⚠ Most applications require a fee to be paid. Contact Council to determine the appropriate fee.

Provided all necessary supporting information and document?

- ☐ A full and current copy of the 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).

Lodgement ⓘ

Lodge the completed and signed form and all documents with:

Pyrenees Shire Council
5 Lawrence Street BEAUFORT Vic 3373

Telephone: (03) 5349 1100

Contact information:
Telephone: (03) 5349 1100
Email: pyrenees@pyrenees.vic.gov.au

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

VOLUME 11470 FOLIO 793

Security no : 124122873354K
Produced 17/03/2025 10:04 AM

LAND DESCRIPTION

Crown Allotment 1 Section 29 Parish of Carngham.
PARENT TITLE Volume 11145 Folio 189
Created by instrument AK870179Q 31/01/2014

REGISTERED PROPRIETOR

[redacted]

ENCUMBRANCES, CAVEATS AND NOTICES

For details of any other encumbrances see the plan or imaged folio set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE TP296042Q FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NUMBER		STATUS	DATE
AY671032L (E)	CONV PCT & NOM ECT TO LC	Completed	06/12/2024
AY671992C (E)	TRANSFER	Registered	06/12/2024

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

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

Street Address: 37 YOUNGS LANE SNAKE VALLEY VIC 3351

ADMINISTRATIVE NOTICES

NIL

eCT Control 25702Y THE LAW COLLECTIVE
Effective from 06/12/2024

DOCUMENT END

Imaged Document Cover Sheet

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

Document Type	**Plan**
Document Identification	**TP296042Q**
Number of Pages (excluding this cover sheet)	**1**
Document Assembled	**25/11/2024 13:04**

	TITLE PLAN		EDITION 1	TP 296042Q

Location of Land

Parish: CARNGHAM
Township:
Section: 29
Crown Allotment: 1
Crown Portion:

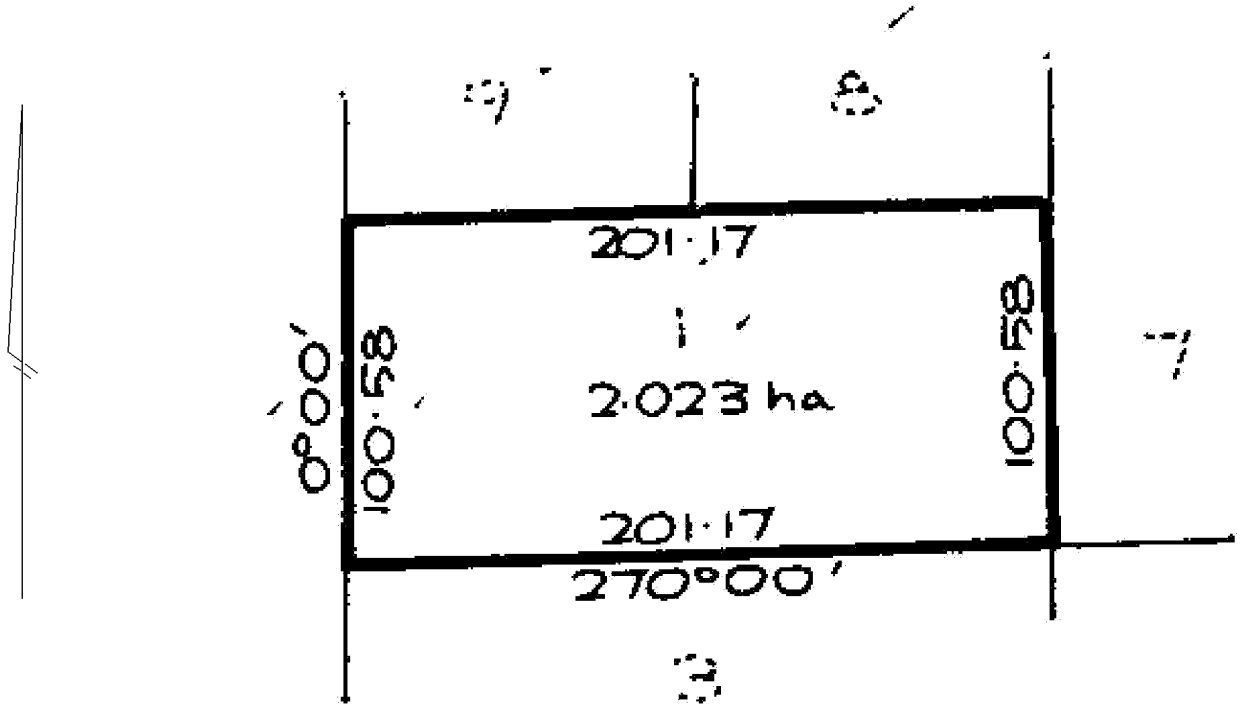
Last Plan Reference:
Derived From: VOL 9484 FOL 273
Depth Limitation: NIL

Notations

ANY REFERENCE TO MAP IN THE TEXT MEANS THE DIAGRAM SHOWN ON THIS TITLE PLAN

Description of Land / Easement Information

THIS PLAN HAS BEEN PREPARED FOR THE LAND REGISTRY, LAND VICTORIA, FOR TITLE DIAGRAM PURPOSES AS PART OF THE LAND TITLES AUTOMATION PROJECT
COMPILED: 31/01/2000
VERIFIED: BH



LENGTHS ARE IN METRES	Metres = 0.3048 x Feet Metres = 0.201168 x Links		Sheet 1 of 1 sheets

PLANNING PROPERTY REPORT

Environment, Land, Water and Planning

From www.planning.vic.gov.au at 24 March 2025 11:34 AM

PROPERTY DETAILS

Address:	**37 YOUNGS LANE SNAKE VALLEY 3351**
Crown Description:	**Allot. 1 Sec. 29 PARISH OF CARNGHAM**
Standard Parcel Identifier (SPI):	**1~29\PP2351**
Local Government Area (Council):	**PYRENEES** www.pyrenees.vic.gov.au
Council Property Number:	**710024910**
Planning Scheme:	**Pyrenees** Planning Scheme - Pyrenees
Directory Reference:	**Vicroads 76 B3**

UTILITIES

Rural Water Corporation:	**Southern Rural Water**
Urban Water Corporation:	**Central Highlands Water**
Melbourne Water:	**Outside drainage boundary**
Power Distributor:	**POWERCOR**

STATE ELECTORATES

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

OTHER

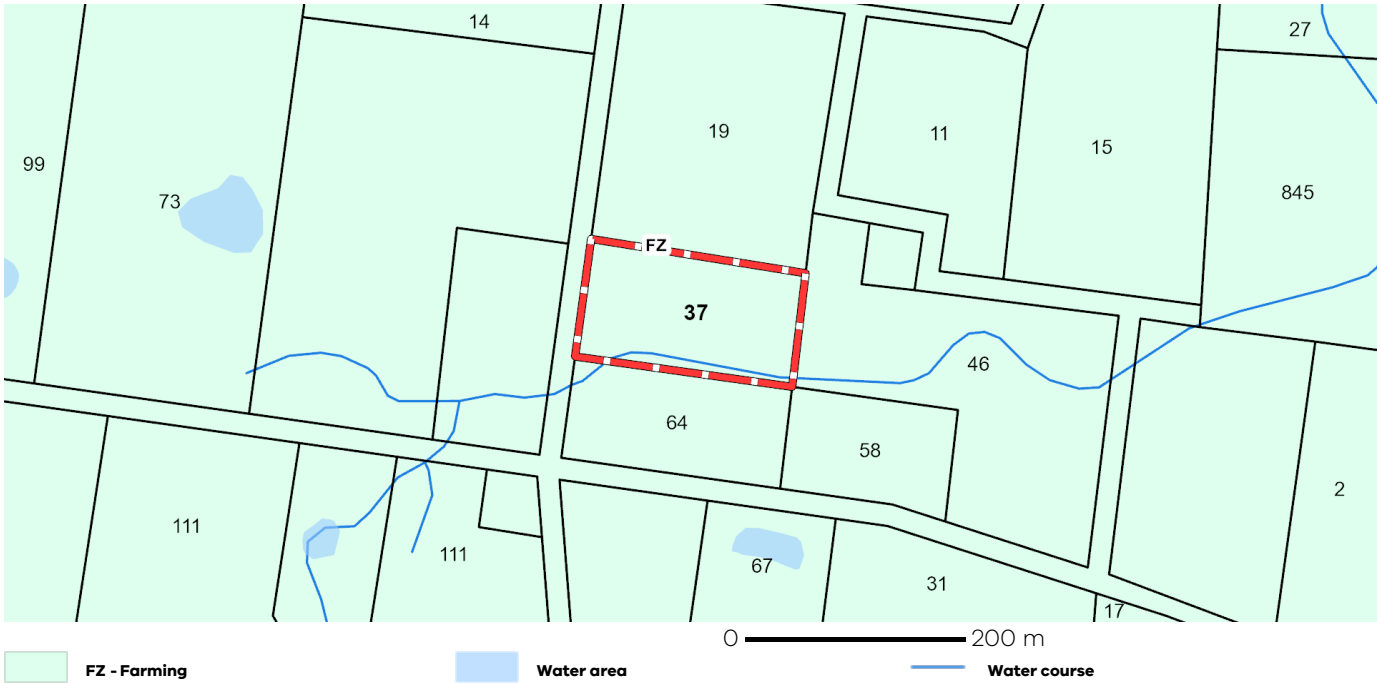
Registered Aboriginal Party:	**Wadawurrung Traditional Owners Aboriginal Corporation**

View location in VicPlan

Planning Zones

FARMING ZONE (FZ)

SCHEDULE TO THE FARMING ZONE (FZ)



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

PLANNING PROPERTY REPORT

Planning Overlay

RESTRUCTURE OVERLAY (RO)
RESTRUCTURE OVERLAY - SCHEDULE 18 (RO18)

RO - Restructure Overlay
Water area
Water course

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

Further Planning Information

Planning scheme data last updated on 20 March 2025.

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

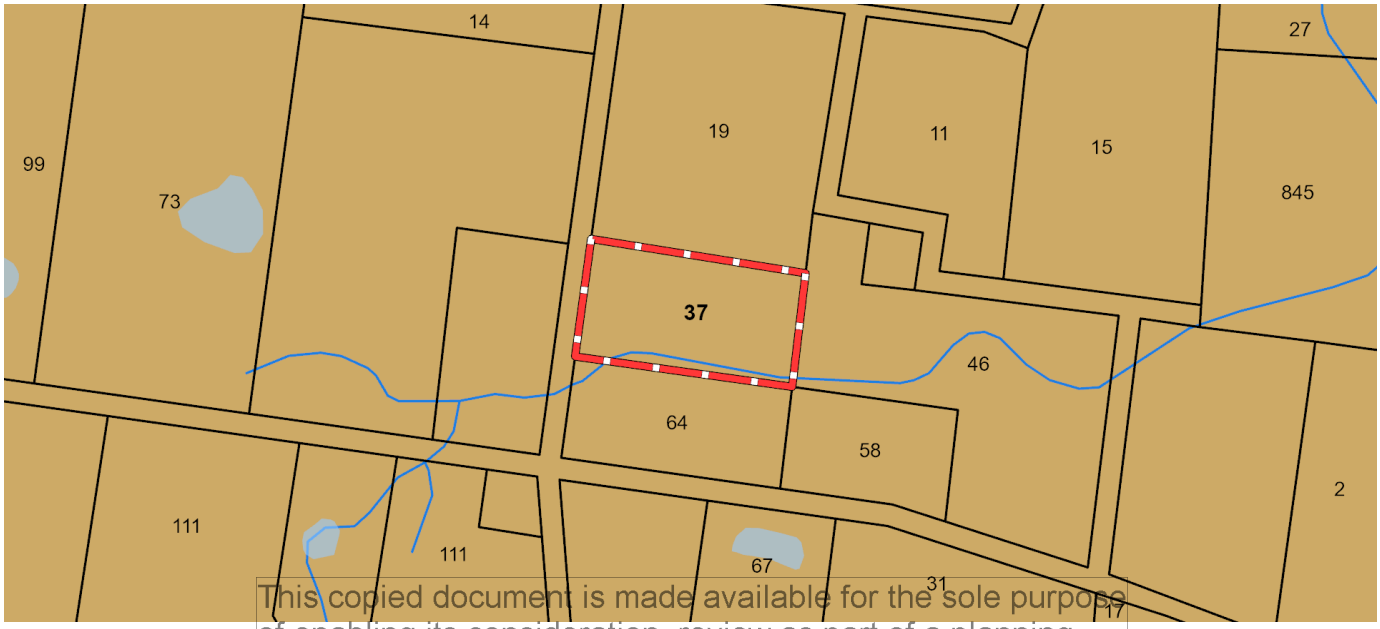
PLANNING PROPERTY REPORT

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.

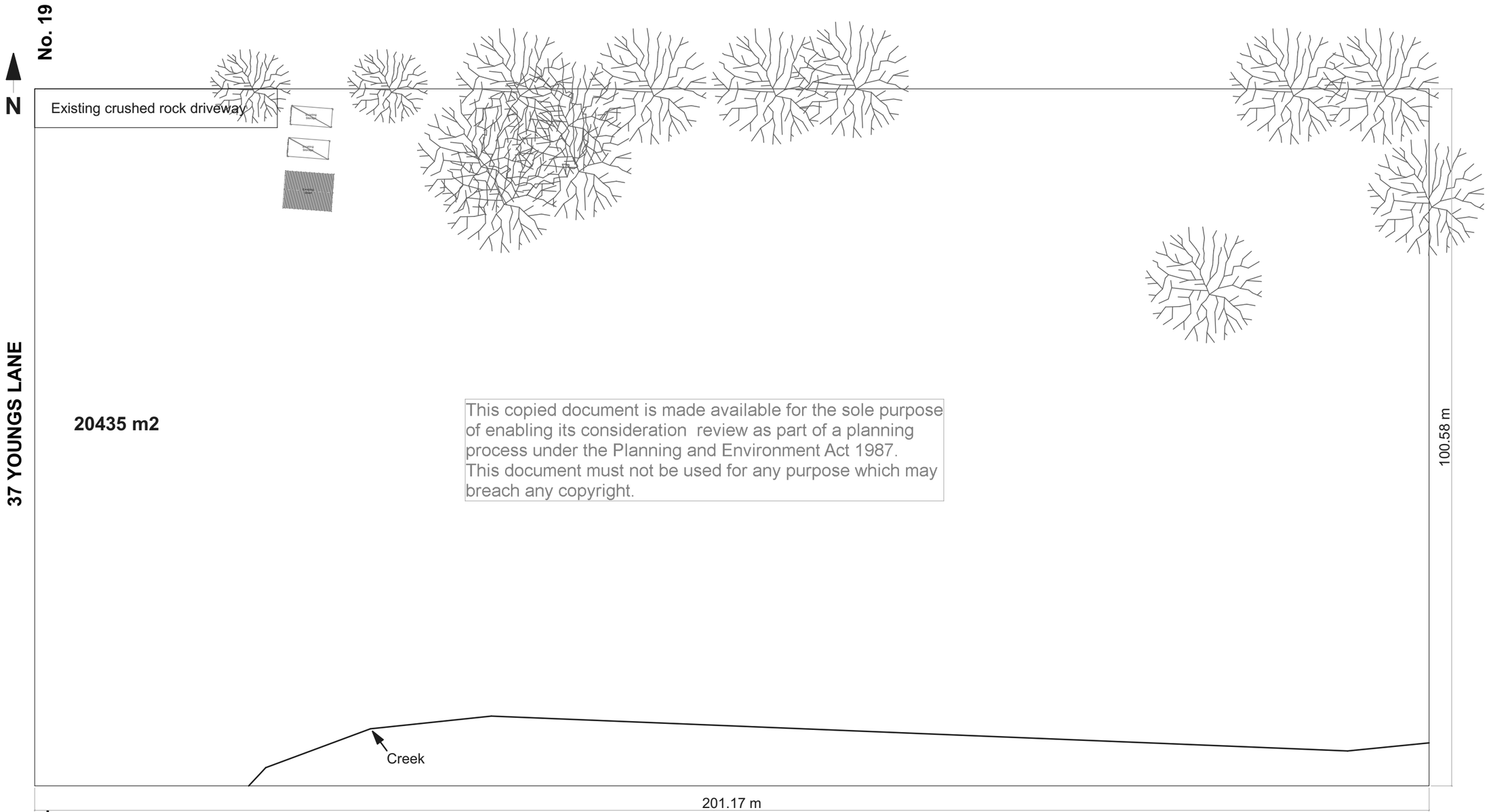
Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website https://www.vba.vic.gov.au. Copies of the Building Act and Building Regulations are available from http://www.legislation.vic.gov.au. For Planning Scheme 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)



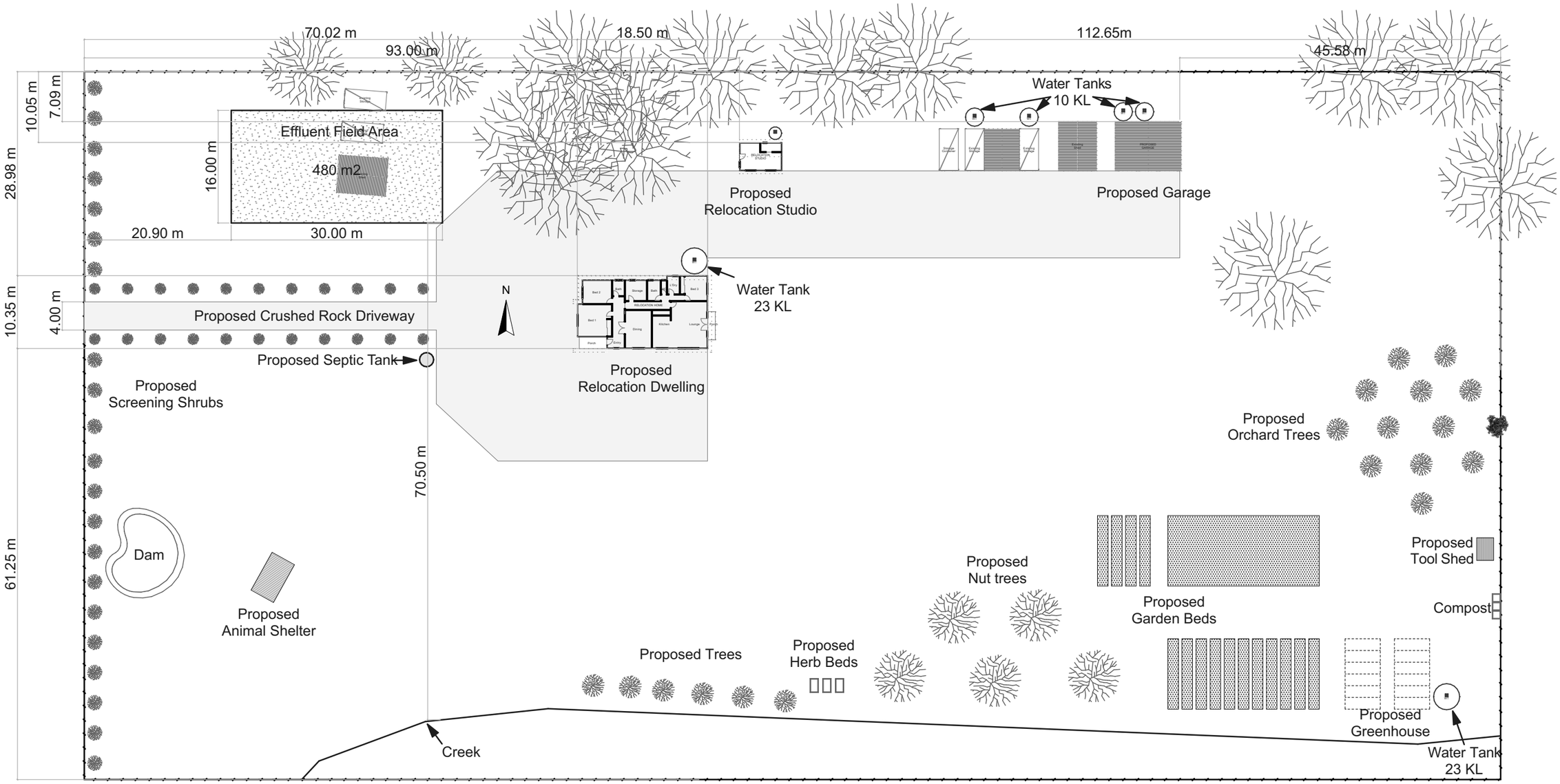
SPARTAN DESIGN

[redacted]

37 Youngs Lane
PROJECT ADDRESS
37 Youngs Lane Snake Valley 3351

DRAWING SCALE
1:600
PROJECT No
001
DRAWN
SM

DRAWING TITLE
Existing Site Plan
DRAWING No
A100
REVISION



SPARTAN DESIGN

[redacted]

PROJECT
37 Youngs Lane
PROJECT ADDRESS
37 Youngs Lane Snake Valley 3351

DRAWING SCALE
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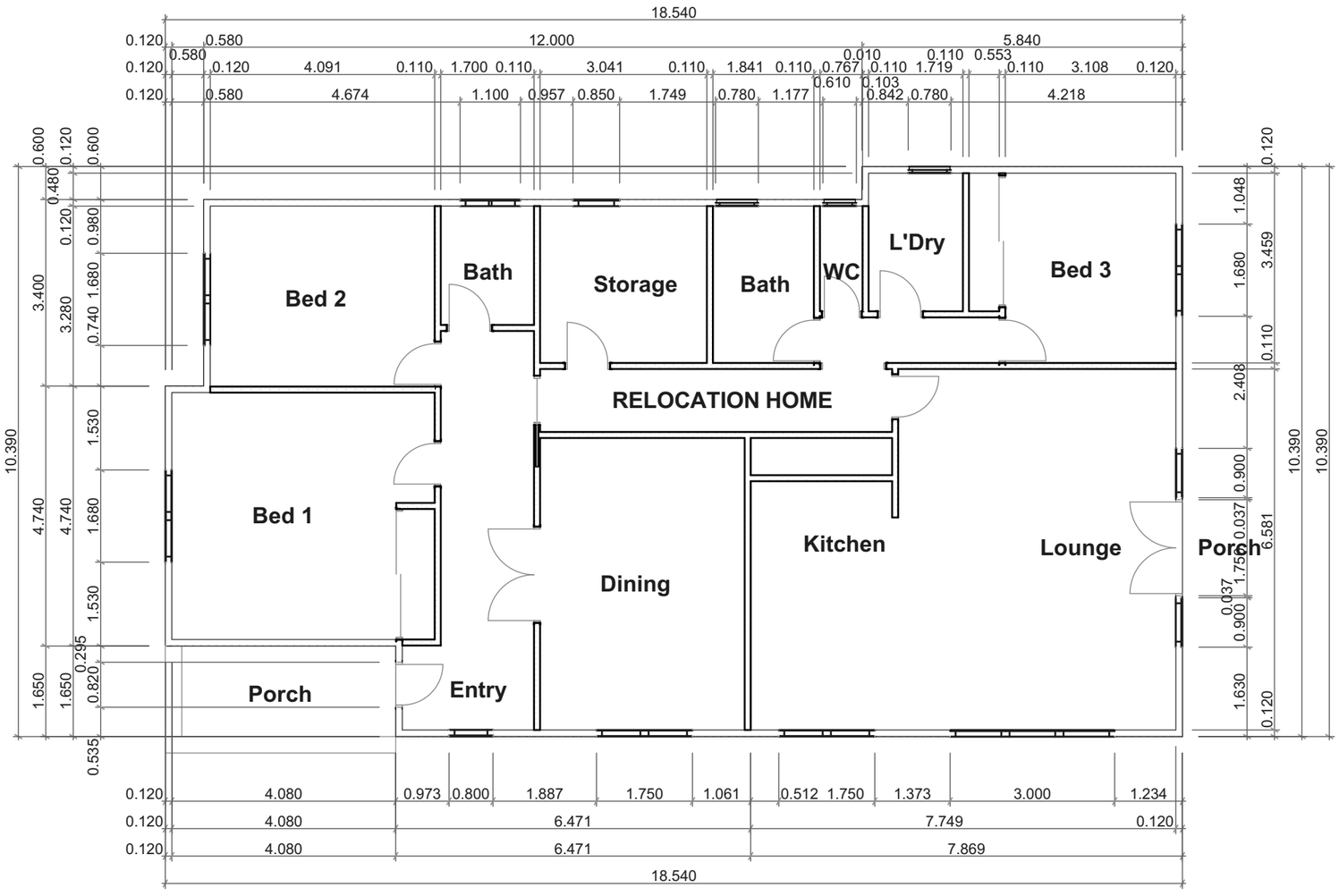
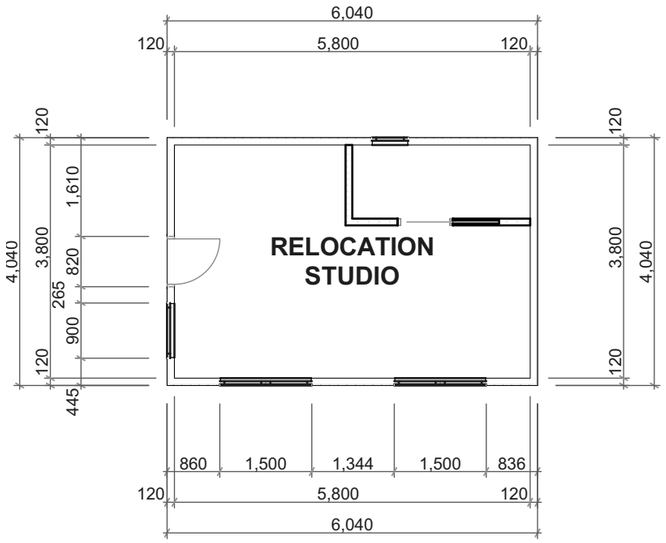
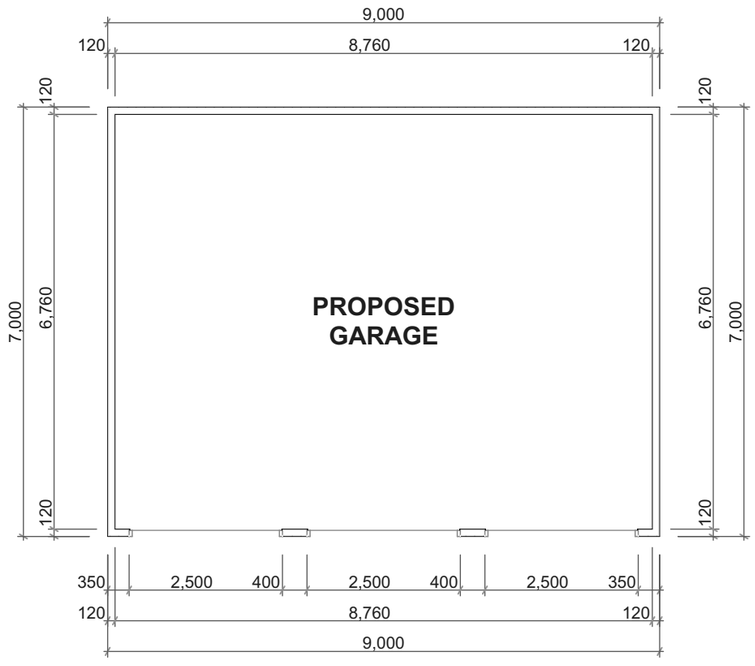
PROJECT No
001
DRAWN
SM

DRAWING TITLE
Proposed Site Plan
DRAWING No
A200
REVISION

N





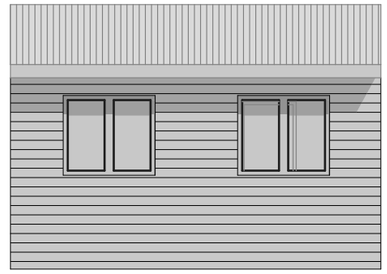


SPARTAN DESIGN

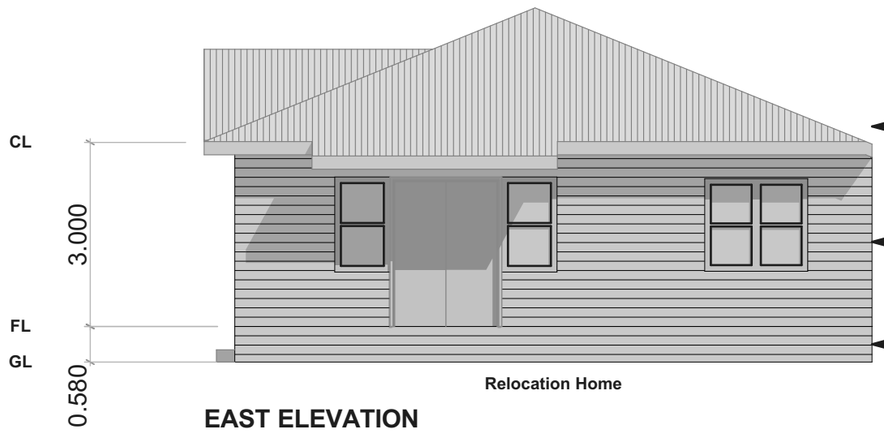
PROJECT	[redacted]
37 Youngs Lane	
PROJECT ADDRESS	
37 Youngs Lane Snake Valley 3351	
DRAWING SCALE	1:100
PROJECT No	001
DRAWN	SM
DRAWING TITLE	Floor Plans, Dwelling, Studio, Garage
DRAWING No	A300
REVISION	

Relocation Home

SOUTH ELEVATION



Relocation Studio



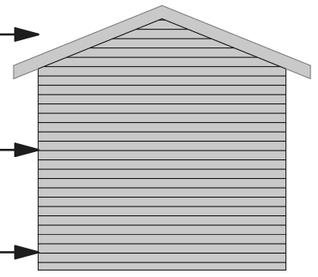
Relocation Home

EAST ELEVATION

Existing zincalume corrugated roofing

Existing weatherboards - Vivid White

Existing base boards - Vivid White



Relocation Studio

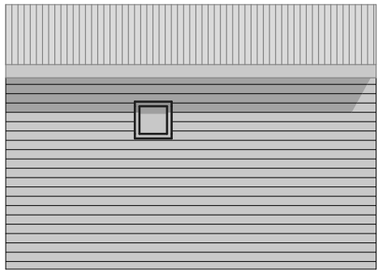
SPARTAN DESIGN

[redacted]

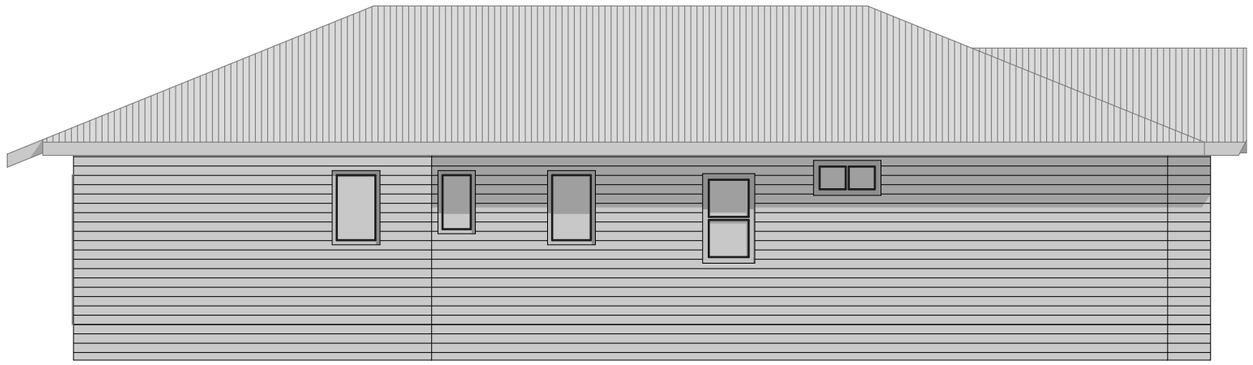
PROJECT
37 Youngs Lane
PROJECT ADDRESS
37 Youngs Lane Snake Valley 3351

DRAWING SCALE
1:100
PROJECT No
001
DRAWN
SM

DRAWING TITLE
SOUTH & EAST ELEVATIONS,
DRAWING No
A500
REVISION

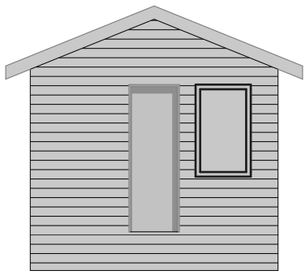


Relocation Studio



Relocation Home

NORTH ELEVATION



Relocation Studio

Relocation Home

WEST ELEVATION

SPARTAN DESIGN

[redacted]

PROJECT
37 Youngs Lane
PROJECT ADDRESS
37 Youngs Lane Snake Valley 3351

DRAWING SCALE
1:100
PROJECT No
001
DRAWN
SM

DRAWING TITLE
NORTH & WEST ELEVATIONS
DRAWING No
A400
REVISION

LAND CAPABILITY ASSESSMENT

Ballarat Soil Testing
Specialising in building site soil classification & land capability assessments
ABN 24 586 140 741

SUMMARY:	
Preferred treatment device	Septic tank with 3000 - 3500 *L* capacity (primary treatment)
Preferred land application system	Conventional trench and bed system of 180 *lineal metres* • Length of each trench - 30 metres • Width of each trench - 1.0 metre • Spacing between trenches - 2.0 metres
Alternative treatment device	Aerated Wastewater Treatment System (AWTS) (secondary treatment)
Alternative land application system	Subsurface irrigation system of 544m^2 • The drip irrigation system needs to be installed at a depth of 150 - 250*mm in* situ or in imported good quality topsoil with a 1*m* spacing between lines
Loading rate	900*L/day*

JOB:	
Reference No	HM300125
Date	February 6, 2025

SITE:	
Proposed development	New dwelling and studio requiring on-site effluent treatment.
Property address	37 Youngs Lane, Snake Valley
Shire council	Pyrenees Shire Council

PREPARED FOR:	
[redacted]	
Address	21 Jacana Avenue, Templestowe Lower VIC 3107

PREPARED BY:	
Geologist	S. O'Loughlin
Contact	0419 536 910 - ballaratsoiltesting@gmail.com

REVIEW:	DATE:	DETAILS:
A	February 5, 2025	Initial draft for submission
B	February 5, 2025	Second draft
C	February 6, 2025	Third draft
D		
E		
F		

Table of contents

1 Commission

When a property developer, potential buyer or land holder considers subdividing land or building one or more premises, they must first determine whether wastewater can be sustainably managed and absorbed by the land within the property boundaries without negatively impacting the beneficial uses of surface waters and groundwater.

It is the responsibility of the property owner to prove to Council that the proposed onsite wastewater treatment and recycling system will operate sustainably on the property without adverse impacts on public health or the environment.

The objective of this investigation is to conduct a Land Capability Assessment (LCA) and propose a suitable type of onsite wastewater management system for the proposed residential development at the above address.

This document provides a detailed LCA for the allotment, information about the site and soil conditions along with monitoring and management recommendations.

This report has been written to comply with all relevant and current Victorian legislation, guidelines, codes and standards, including:

- Guideline for onsite wastewater management, EPA Victoria, May 2024;
- Guideline for onsite wastewater effluent dispersal and recycling systems, EPA Victoria, May 2024;
- AS/NZS 1547:2012, Onsite domestic wastewater management;
- AS/NZS 1547:2012, Onsite domestic wastewater management;
- AS/NZS 1547:1994, Onsite domestic wastewater management;
- Code of Practice Onsite Wastewater Management, Publication No. 891.4, July 2016, Environmental Protection Authority;
- Land Capability Assessment for Onsite Domestic Wastewater Management, Publication 746.1, March 2003, EPA Victoria;
- Victorian Land Capability Assessment Framework, January 2014, Municipal Association of Victoria.

Exclusion of liability:

- Please be advised, it is the property owner's responsibility when applying for a Planning Permit or Septic Tank Permit, or a consultant might lodge an LCA if they are acting on behalf of the property owner to obtain a Planning or Septic Tank Permit should the property owner direct the consultant to do so.
- It is the responsibility of the property owner to prove to Council that the proposed onsite wastewater treatment and recycling system will operate sustainably on the property without adverse impacts on public health or the environment.
- This LCA document does not substitute a Planning Permit or Septic Tank Permit nor does it provide guidance or recommend the suitability of an allotment for purchase. That is the responsibility of the client. Ballarat Soil Testing assumes no responsibility for the decision of the client to purchase an allotment.

2 Locality and site description

2.1 The site

	Site shape, dimensions, size, gradient and drainage
The site has a total area of:	2.102 ha
The ground surface is:	Very lightly undulating.
The gradient of the site is:	Slight slope falling to south.
The drainage on site is:	Good

	Existing use and development on the site
The current use of the site is:	Vacant
The buildings or works located on the site are:	Small shed and 2 x sea containers in northwest of allotment.

	Existing access arrangements
The main vehicle access to the site is provided from:	Gate access from Youngs Lane.
The space available for vehicle maneuverability can be considered:	Excellent
The site is located:	Please refer to Attachment 1.

	Existing vegetation
Describe the vegetation on the site, including the type, location, extent and any other relevant information:	Pasture grasses across site. Numerous cypress trees along northern boundary of allotment.

2.2 The locality and surrounding land

	Existing use and development on adjacent sites
Describe the land and existing land uses around the subject land:	Rural residential and farming. FZ - Farming Zone.

3 Proposed development

3.1 Construction

	Building
The proposed building on site:	New dwelling and studio requiring on-site effluent treatment.
The number of bedrooms/study is proposed to be:	Primary dwelling • 3 x bedrooms Studio dwelling • 1 x bedroom.
The maximum occupancy is proposed to be:	Primary dwelling • 4 x people Studio dwelling • 2 x people TOTAL • 6 x people.

3.2 Wastewater

	Wastewater system
Target effluent quality:	Primary treatment systems, such as septic tanks, use physical methods such as screening, flocculation, sedimentation, flotation and composting to remove the gross solids from the wastewater, plus biological anaerobic and aerobic microbial digestion to treat the wastewater and the biosolids. Unlike secondary standard effluent, primary treated effluent does not have a specific water quality standard. Consequently, primary treated effluent can only be dispersed to land via below-ground applications.
Anticipated wastewater load:	Daily household wastewater generation is estimated by multiplying the potential occupancy, which is based on the number of bedrooms (plus one person), by the Minimum Wastewater Flow Rates. Assessments should include any additional room(s) shown on the house plan such as a study, library or sunroom that could be closed off with a door, as a bedroom for the purposes of the following calculations. Assuming 6 x people maximum occupancy and wastewater generation of 150*L/day/person*. Therefore: • Total Design Load = 900*L/day*.

3.3 Intended water supply and sewer source

	Services
Domestic water supply	Property will only use tank water. Reticulated water supply is likely to be provided.
Availability of sewer	No town sewerage system is available.

4 Site and soil assessment

4.1 Work undertaken

	Assessment
Assessor:	Stephen O'Loughlin
Date:	January 30, 2025

4.2 Site assessment

Feature	Description	Level of constraint	Mitigation measures
Aspect (affects solar radiation received)	North	Nil	NN
Climate (difference between annual rainfall and pan evaporation)	Excess of rainfall over evaporation in the wettest months	Major	Conventional absorption trench system with 1.0 metre wide trenches to be installed. Irrigation area sizing using the Nominated Area Water Balance & Storage Calculations allows for the wettest recorded months should secondary treatment be installed.
Erosion (or potential for erosion)	Nil or minor	Nil	NN
Exposure to sun and wind	Full sun	Nil	NN
Fill (imported)	No fill	Nil	NN
Flood frequency (ARI)	Less than 1 in 100 years	Nil	NN
Groundwater bores	No bores onsite or on neighbouring properties	Nil	There is no groundwater bore on this allotment.
Land area available for LAA	Exceeds LAA and duplicate LAA and buffer distance requirements	Nil	NN
Landslip (or landslip potential)	Nil	Nil	NN
Rock outcrops (% of surface)	<10%	Nil	NN

Slope Form (affects water shedding ability)	Straight side-slopes	Moderate	NN
Slope gradient (%)			
(a) for absorption trenches and beds	<6%	Nil	NN
(b) for surface irrigation	<6%	Nil	NN
(c) for subsurface irrigation	<10%	Nil	NN
Soil Drainage (qualitative)	No visible signs or likelihood of dampness, even in wet season	Nil	NN
Stormwater run-on	Low likelihood of stormwater run-on	Nil	NN
Surface waters - setback distance (m)	Setback distance complies with requirements in Guideline for onsite wastewater management, EPA Victoria, May 2024	Nil	NN
Vegetation coverage over the site	Plentiful vegetation with healthy growth and good potential for nutrient uptake	Nil	Lawn grasses to be planted in proposed effluent field area.
Soil Drainage (Field Handbook definitions)	Well drained. Water removed from the soil readily, excess flows downward. Some horizons may remain wet for several days after addition	Minor	Conventional absorption trench system with 1.0 metre wide trenches to be installed. Shallow subsurface irrigation recommended with thorough water balance calculated should secondary treatment be installed.

*NN: not needed

4.3 Soil key features

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

4.4 Geology

	Geological mapping
Geological Survey Code:	Nc1
Description:	Dissected colluvial deposits: inactive outwash fan, scree apron,and alluvial-colluvial-swamp deposits; polymictic gravel, sand, silt and clay; variably sorted and rounded, stratified, laminated or massive.

Reference:	TAYLOR, D.H., 1996. Linton 1:50,000 geological map. Geological Survey of Victoria.

4.5 Local Mine Hazards

	DPI Search for Mine Hazard results
Department of Primary Industries records:	"do not indicate the existence of any mining activity on this site, but the site may be over or close to known mining activity. Note that there may be unrecorded mine openings connecting with such activity."

4.6 Soil

	Soil conditions
The predominant soil profile on site is:	Silty loam and silty clay loam overlying stiff silty clay at a depth of 500 - 600*mm*.

4.7 Soil profile determination

	Assessment
Field work:	7 x boreholes were established and excavated in the proposed construction and effluent field areas.
Method of drilling or excavation:	Trailer-mounted soil sampling machine.
Method of classification:	The soil was classified according to AS/NZS 1547-1994/2012 while considering Snake Valley's wet temperate climate.
Site and test plan:	Please refer to Attachment 2.
Reporting:	Please refer to Attachment 3 for sample hole results.

4.8 Soil assessment

Feature	Assessment	Level of Constraint	Mitigation Measures
Soil category (AS/NZ 1547:2012)	4a - moderately structured clay loam overlying 5a - strongly structured light clay.		

Soil depth	Topsoil: 500 - 600*mm*	Minor	Conventional absorption trench system with 1.0 metre wide trenches to be installed. Shallow subsurface irrigation recommended should secondary treatment be installed.
Soil Permeability & Design Loading Rates	Topsoil: 4a - moderately structured clay loam: 0.5 - 1.5 m/day saturated conductivity (K_{sat}); 10 mm/day Design Loading Rate (DLR) for irrigation system and 3.5 mm/day Design Loading Rate (DIR) for irrigation system.	Minor	NN
	Subsoil: 5a - strongly structured light clay: 0.12 - 0.5 m/day saturated conductivity (K_{sat}) (AS/NZS1547:2012); 5 mm/day Design Loading Rate (DLR) for irrigation system and 3 mm/day Design Irrigation Rate (DIR) for irrigation system (Guideline for onsite wastewater management, EPA Victoria, May 2024).	Moderate	Adopt DLR = 5*mm/day* for preferred primary treatment system. Adopt DIR = 3*mm/day* for alternative secondary treatment system.
Gleying	Nil	Nil	NN
Mottling	Very well to well-drained soils generally have uniform brownish or reddish colour	Nil	NN
pH	5.5 - 8 is the optimum range for a wide range of plants	Nil	NN
Rock Fragments	0 - 10%	Nil	NN
Soil Depth to Rock or other impermeable layer	>1.5 m	Nil	NN
Soil Structure (pedality)	Highly to moderately-structured	Nil	NN
Soil Texture, Indicative Permeability	5a	Moderate	Adopt DLR = 5*mm/day* for preferred primary treatment system. Adopt DIR = 3*mm/day* for alternative secondary treatment system.
Watertable Depth (m) below the base of the LAA	>2m	Nil	NN

*NN: not needed

4.9 Groundwater Assessment

	Visualising Victoria's Groundwater Data Search
VVG records:	Groundwater depth: < 5*m* Groundwater salinity: 1000 - 3500*mg/L*

4.10 Victorian Planning Provision – Overlays

Overlay	Assessment
Planning Zone:	FZ - Farming Zone
Planning Overlay:	RO18 - Restructure Overlay
Declared Special Water Supply Catchment Area:	None.

4.11 Overall assessment results and land capability rating

Based on the most constraining site features and soil assessment, the overall land capability of the proposed effluent management area is not constrained:

- The site is not in a Declared Special Water Supply Catchment Area.
- The site is larger than 8000m^2, it is characterized by light clays with adequate topsoils to a depth of 500 - 600*mm* and is not subject to flooding.

The proposed effluent management area is located above the 1:100 flood level and by using primary treatment and conventional absorption trench and beds, there will be ample protection of surface waters and groundwater.

Should secondary treatment be installed, an Aerated Wastewater Treatment System (AWTS) and pressure-compensating subsurface irrigation is the recommended system.

5 Wastewater management system

5.1 Overview

This report provides recommendations for treatment and land application systems that are appropriate to the land capability. The following sections provide an overview of a suitable system, with sizing and design considerations and justification for its selection. Detailed design for the system is beyond the scope of this study, but should be undertaken at the time of building application and submitted to Council.

5.2 Treatment system

Septic tank

This site requires a 3000 - 3500 *L* septic tank that will provide primary treatment of domestic wastewater, including separation of suspended material.

In this system, household wastewater first flows into a primary septic tank where solids settle to bottom of the tank to form a sludge layer, and grease and fat float to the surface to form a scum layer. Clarified effluent then flows (or is pumped via a pump well) to the absorption trench or bed for treatment and disposal.

5.3 Type of land application system

Absorption trenches and beds

Conventional absorption trenches and beds for primary treated effluent are applicable for this site.

The depth and overall basal area depend on soil type and anticipated wastewater volume, climate and site features.

It is recommended that the trenches on this site be excavated to a maximum width of 1000*mm* and a depth of 400*mm*. Each trench is to be a maximum of 30 metres in length with 2 metre spacings between trenches.

In a conventional septic tank and absorption system, wastewater is gravity-fed or pumped from the septic tank to the absorption area. Trenches or beds are usually built below ground and can be media-filled or consist of a durable self-supporting arch resting on gravel (or occasionally coarse sand).

Effluent is typically distributed along the length of the trench or bed through slotted or drilled 100 millimetre distribution pipes, and then filtered through the gravel and sand to the underlying soil. A clogging layer or biomat develops along the bottom and sides of the trench and acts as a further filter.

This filtering process helps remove pathogens, toxins and other pollutants. Nutrients in the effluent are taken up by vegetation (normally grass) planted across the absorption trench area, incorporated in the biomat, and, in the case of phosphorus, adsorbed onto clay particles in the soil.

5.4 Sizing the absorption trenches and beds system

To determine the necessary size of the absorption trenches and beds system, water balance modelling has been undertaken using the method and water balance tool developed for the Victorian Land Capability Assessment Framework (2014). The calculations are summarised below, with full details provided in Attachment 5.

	Data used in the water balance
Average daily effluent load:	900*L/day*
Design loading rate (DLR):	5 *mm/day*
Selected trench or bed width:	1.0 *metre*
Spacing between each trench or bed:	2.0 *metres*
Total effluent field area:	480m^2

Size
As a result of these calculations, a proposed 3 x bedroom dwelling and a 1 x bedroom studio on this site requires at least 180 *lineal metres* of conventional absorption trenches and beds.

Number of habitable rooms	Number of occupants	Total daily household wastewater	Length of trench
4	5	750	150 m
5	**6**	**900**	**180 m**
6	7	1050	210 m

5.5 Type of secondary treatment systems available should they be required

Aerated Wastewater Treatment System (AWTS) or Sand Filter
To treat domestic wastewater and allow irrigation with the treated effluent, we recommend installing a system that provides secondary treatment with disinfection to meet Environmental Protection Authority requirements for irrigation. Indicative target effluent quality is: • BOD <20 mg/L; • SS <30mg/L. Several suitable options are available, including a **Aerated Wastewater Treatment System (AWTS) or sand filter** . Either of these options are capable of achieving the desired level of performance and final selection is the responsibility of the property owner, who will forward details to Council for approval.

5.6 Alternative type of treatment system

Aerated Wastewater Treatment System (AWTS)

To treat domestic wastewater and allow irrigation with the treated effluent, we recommend installing a system that provides secondary treatment with disinfection to meet Environmental Protection Authority requirements for irrigation. The water quality of secondary standard effluent in Victoria is <20 *mg/L* BOD_5, <30 *mg/L* TSS and, where disinfected, *E. coli* <10 *cfu* /100 *mL*.

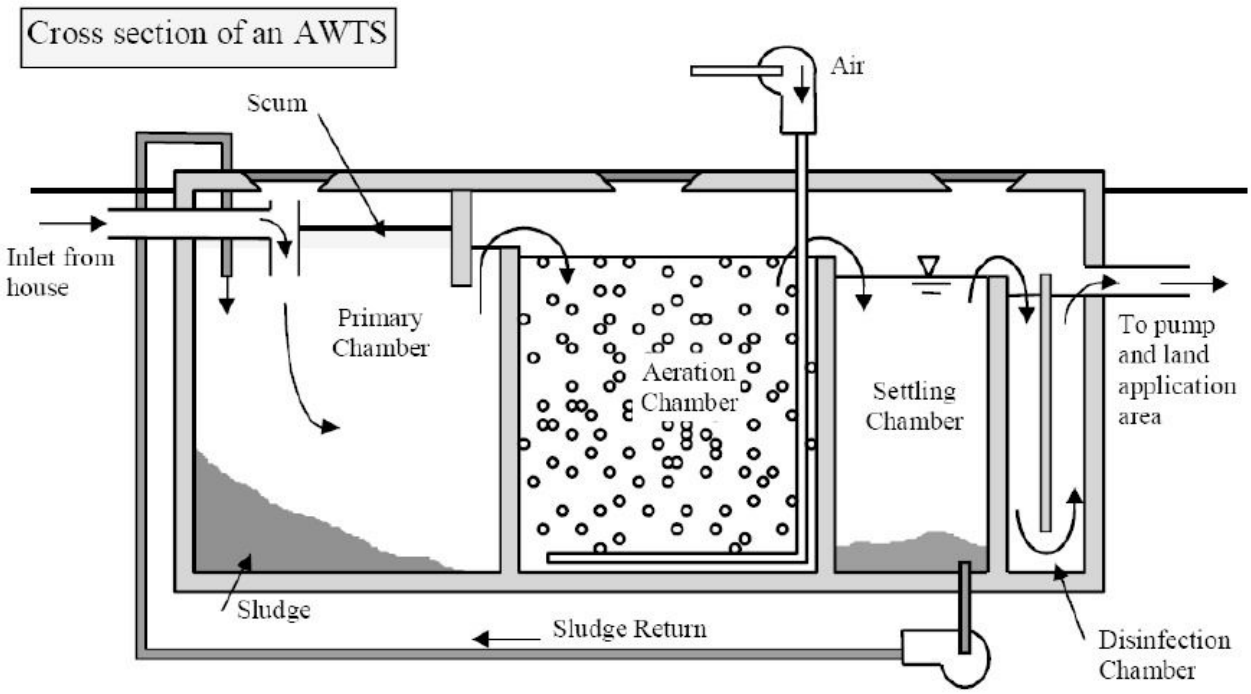
An **Aerated Wastewater Treatment System (AWTS)** is the preferred option and is designed to treat small (<2000*L/day*) wastewater flows. This system consists of a series of treatment chambers combined where air is bubbled through wastewater in a tank provides oxygen to micro-organisms to facilitate aerobic biological digestion of the organic matter in the wastewater.

Wastewater from a household is treated in stages in several separate chambers. The first chamber is similar to a conventional septic tank. The wastewater enters the chamber where the solids settle to the bottom and are retained in the tank forming a sludge layer.

Scum collects at the top, and the partially clarified wastewater flows into a second chamber. Here the wastewater is mixed with air to assist bacteria to further treat it.

A third chamber allows additional clarification through the settling of solids, which are returned for further treatment to either the septic chamber or to the aeration chamber. The clarified effluent is disinfected in another chamber (usually by chlorination) before irrigation can take place.

Bacteria in the first chamber break down the solid matter in the sludge and scum layers. Material that cannot be fully broken down gradually builds up in the chamber and must be pumped out periodically.



5.7 Alternative type of land application system

Pressure-compensating subsurface irrigation system
The default land application system for sustainably recycling secondary treated sewage or greywater effluent to land is **pressure-compensating subsurface irrigation** (with disc or mesh filters and scour and vacuum valves) which evenly distributes effluent throughout the irrigation area. The distribution pipes (drip-lines) fill up with effluent until a certain pressure is reached which opens the emitter valves. More controlled pressure can be applied when the field is divided into two or more zones and these smaller areas are intermittently dosed using a sequencing valve. Water is not wasted by evaporation or runoff, flexible garden designs are possible, water is delivered to the plants' roots in the topsoil layer and it provides the highest protection for environmental and public health. In combination with the selected secondary treatment system, these systems will provide even and widespread dispersal of highly treated effluent loads within the root-zone of plants. Secondary quality effluent is a valuable water and nutrient resource and should be used beneficially to support vegetation growth, not be discharged deep in the soil profile where it provides very little beneficial use to the land or to the residents. A gravity-flow effluent irrigation system is not allowed, due to the lack of even distribution. Irrigation distribution pipes must not have dripper-holes drilled or cut into them after purchase because the effluent will flow out of the holes in the first few metres of pipe at a far higher rate than the system is designed for and higher than the soil is capable of sustainably absorbing.

5.8 Sizing the irrigation system

To determine the necessary size of the effluent field system, water balance modelling has been undertaken using the method and water balance tool developed for the Victorian Land Capability Assessment Framework (2014). The calculations are summarised below, with full details provided in Attachment 8.

The water balance can be expressed by the following equation:

Precipitation + Effluent Applied = Evapotranspiration + Percolation

	Data used in the water balance
Mean monthly rainfall station:	Trawalla (89030)
Mean monthly pan evaporation station:	Trawalla (89030) - SILO
Average daily effluent load:	900*L/day*
Design irrigation rate (DIR):	3*mm/day*
Crop factor:	0.6 to 0.8
Rainfall runoff factor:	0.9

Size
As a result of these calculations, a subsurface irrigation field of at least 544m^2 is required for a proposed 3 x bedroom dwelling and a 1 x bedroom studio on this site should secondary treatment be installed.

Number of habitable rooms	Number of occupants	Total daily household wastewater	Area of subsurface irrigation bed
4	5	750	454m^2
5	**6**	**900**	**544m^2**
6	7	1050	635m^2

5.9 Siting and configuration of the irrigation system

Description
It is preferable to keep the irrigation area as high on the property and a maximum distance from the creek to the south as possible. **The client's preferred area is in the northwest of the allotment in the area where the existing shed and sea containers are at this stage.** **There is an alternative area available in the northeast of the site.** Attachments 4 and 7 show an envelope of land that is suitable for effluent management. Final placement and configuration of the irrigation system will be determined by the client and/or system installer, provided it remains within this envelope. Whilst there is ample area for application of the effluent, it is important that appropriate buffer distances to any waterways be maintained. It is important to note that buffers are measured as the overland flow path for run-off water from the effluent irrigation area. It is recommended that the owner consult an irrigation expert familiar with effluent irrigation equipment to design the system, and an appropriately registered plumbing/drainage practitioner to install the system. The irrigation plan must ensure even application of effluent throughout the entire irrigation area.

5.10 Buffer distances required for primary treatment system

Description
Setback buffer distances from effluent land application areas and treatment systems are required to help prevent human contact, maintain public amenity and protect sensitive environments. The relevant buffer distances for this site, taken from the Guideline for onsite wastewater management, EPA Victoria, May 2024 are: • 300 metres from a dam, lake or reservoir (potable water supply); • 100 metres from waterways (potable water supply); • 60 metres from waterways, wetlands (continuous or ephemeral, non-potable); estuaries, ocean beach at high-tide mark; dams, lakes or reservoirs (stock and domestic, non-potable); • 20 metres from groundwater bores in Category 2b to 6 soils; and • 6 metres if area up-gradient and 3 metres if area down-gradient of property boundaries, swimming pools and buildings (conservative values for primary effluent). **All buffer distances are achievable.** The site plan in Attachment 4 shows the location of the proposed primary treatment system components and other relevant features.

5.11 Buffer distances required for secondary treatment system

Description
Setback buffer distances from effluent land application areas and treatment systems are required to help prevent human contact, maintain public amenity and protect sensitive environments. The relevant buffer distances for this site, taken from Table 5 of the Code (2016) are: • 150 metres from a dam, lake or reservoir (potable water supply); • 100 metres from waterways (potable water supply); • 30 metres from waterways, wetlands (continuous or ephemeral, non-potable); estuaries, ocean beach at high-tide mark; dams, lakes or reservoirs (stock and domestic, non-potable); • 20 metres from groundwater bores in Category 2b to 6 soils; and • 3 metres if area up-gradient and 1.5 metres if area down-gradient of property boundaries, swimming pools and buildings (conservative values for primary effluent). The setback distance in a Special Water Supply Catchment area may be reduced by up to a maximum of 50% conditional on the following requirements (otherwise the setback distances for primary treatment systems apply): • effluent is secondary treated to 20/30 standard as a minimum • a maintenance and service contract, with a service technician accredited by the manufacturer, is in place to ensure the system is regularly serviced in accordance with Council Septic Tank Permit conditions and • Council is satisfied the reduction in set-back distance is necessary to permit the appropriate development of the site and that risks to public health and the environment are minimised. **All buffer distances are achievable.** The site plan in Attachment 7 shows the location of the alternative secondary treatment system components and other relevant features.

5.12 Installation of the irrigation system

Description
Installation of the irrigation system must be carried out by a suitably qualified, licensed plumber or drainer experienced with effluent irrigation systems. To ensure even distribution of effluent, it is essential that the pump capacity is adequate for the size and configuration of the irrigation system, taking into account head and friction losses due to changes in elevation, pipes, valves, fittings etc. An additional, optional measure to achieve even coverage is to divide the irrigation area into two or more separate sub-zones; dosed alternately using an automatic indexing or sequencing valve. The irrigation area and surrounding area must be vegetated or revegetated immediately following installation of the system, preferably with turf. The area should be fenced or otherwise isolated (such as by landscaping), to prevent vehicle and stock access; and signs should be erected to inform householders and visitors of the extent of the effluent irrigation area and to limit their access and impact on the area. Stormwater run-on is not expected to be a concern for the proposed irrigation area, due to the landform of the site and its relatively gentle slopes. However, upslope diversion berms or drains may be constructed if this is deemed to be necessary during installation of the system, or in the future. Stormwater from roofs and other impervious surfaces must not be disposed of into the wastewater treatment system or onto the effluent management system.

5.13 Monitoring, operation and maintenance

Description
Maintenance is to be carried out in accordance with the EPA Certificate of Approval of the selected secondary treatment system and Council's permit conditions. The treatment system will only function adequately if appropriately and regularly maintained. <u>To ensure the treatment system functions adequately, residents must:</u> • Have a suitably qualified maintenance contractor service the treatment system at the frequency required by Council under the permit to use; • Use household cleaning products that are suitable for septic tanks; • Keep as much fat and oil out of the system as possible; and • Conserve water (AAA rated fixtures and appliances are recommended). <u>To ensure the land application system functions adequately, residents must:</u> • Regularly harvest (mow) vegetation within the LAA and remove this to maximise uptake of water and nutrients; • Monitor and maintain the irrigation system following the manufacturer's recommendations, including flushing the irrigation lines; • Regularly clean in-line filters; • Not erect any structures and paths over the LAA; • Avoid vehicle and livestock access to the LAA, to prevent compaction and damage; and • Ensure that the LAA is kept level by filling any depressions with good quality topsoil (not clay).

6 Conclusions

As a result of our investigations we conclude that sustainable onsite wastewater management is feasible with appropriate mitigation measures, as outlined, for the proposed 3 x bedroom dwelling and a 1 x bedroom studio at 37 Youngs Lane, Snake Valley.

Based on the most constraining site features and soil assessment, the overall land capability of the proposed effluent management area is not constrained:

- The site is not in a Declared Special Water Supply Catchment Area.
- The site is larger than 8000m^2, it is characterized by light clays with adequate topsoils to a depth of 500 - 600*mm* and is not subject to flooding.

The proposed effluent management area is located above the 1:100 flood level and by using primary treatment and conventional absorption trench and beds, there will be ample protection of surface waters and groundwater.

Should secondary treatment be installed, an Aerated Wastewater Treatment System (AWTS) and pressure-compensating subsurface irrigation is the recommended system.

Specifically, we recommend the following:

- Primary treatment of wastewater by an EPA-accredited septic tank.
- Land application of wastewater in a 180 *lineal metres* (minimum) conventional trench and bed system.
    - Length of each trench - 30 metres
    - Width of each trench - 1.0 metre
    - Spacing between trenches - 2.0 metres
    - Total effluent field area - 480m^2

Should secondary treatment be installed, the following is recommended:

- Secondary treatment of wastewater in an Aerated Wastewater Treatment System (AWTS).
- Land application of wastewater in a 544m^2 pressure compensating subsurface irrigation field
    - Length of field - 30 metres
    - Width of field - approx. 19 metres
    - See Attachment 9 - Subsurface irrigation system example.
- The client's preferred area is in the northwest of the allotment in the area where the existing shed and sea containers are currently located.
    - There is an alternative area available in the northeast of the site.
- Installation of water saving devices in the new residence to reduce the effluent load for onsite disposal.
- Use of low phosphorus and low sodium (liquid) detergents to improve effluent quality and maintain soil properties.
- Operation and management of the treatment and disposal system in accordance with manufacturer's recommendations, the EPA Certificate of Approval, the Guideline for onsite wastewater management, EPA Victoria, May 2024 and the recommendations made in this report.

If there are any queries regarding the content of this report, please contact this office.

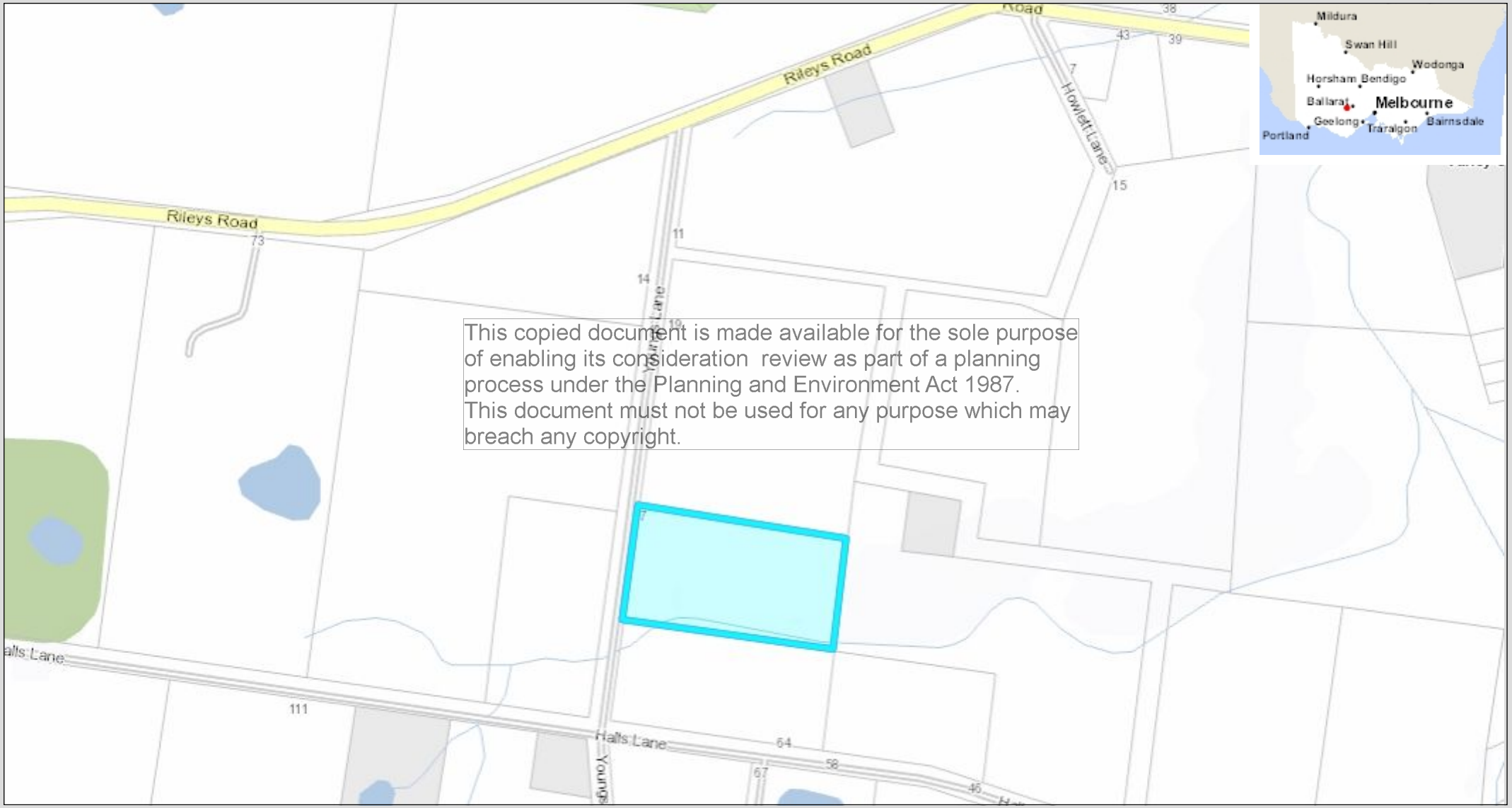
STEPHEN O'LOUGHLIN
Geologist

Attachment 1 – Locality plan

Plan included on next page.

Locality plan

37 Youngs Lane, Snake Valley



254 0 127 254 Meters

GDA2020_Vicgrid

Disclaimer: This map is a snapshot generated from Victorian Government data. This material may be of assistance to you but the State of Victoria does not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for error, loss or damage which may arise from reliance upon it. All persons accessing this information should make appropriate enquiries to assess the currency of the data.

Map Created on	**05-Feb-2025**
Scale	**1:5,000**

Attachment 2 – Soil testing program plan

Plan included on next page.

Attachment 3 – Sample hole results

Sample Hole BH01

Depth (mm)	Description	Fill	Moisture	Consistency	Allowable Bearing Pressure (kPa)	Reactivity
100 200 300	Silty LOAM; grey	–	Dry	Soft	–	–
400	Silty clay LOAM; light grey	–	Slightly moist	Firm	–	–
500 600 700 800	Silty CLAY; dark grey	–	Slightly moist	Stiff	150	Moderate
900 1000 1100 1200 1300 1400	Silty CLAY; dark grey/brown	–	Slightly moist	Stiff	150	Moderate
1500	END OF HOLE					

Sample Hole BH02

Depth (mm)	Description	Fill	Moisture	Consistency	Allowable Bearing Pressure (kPa)	Reactivity
100 200	Silty LOAM; grey	–	Dry	Soft	–	–
300 400	Silty clay LOAM; light grey	–	Slightly moist	Firm	–	–
500 600 700	Silty CLAY; dark grey	–	Slightly moist	Stiff	150	Moderate
800 900 1000 1100 1200 1300 1400	Silty CLAY; dark grey/brown	–	Slightly moist	Stiff	150	Moderate
1500	END OF HOLE					

Sample Hole BH03

Depth (mm)	Description	Fill	Moisture	Consistency	Allowable Bearing Pressure (kPa)	Reactivity
100 200	Silty LOAM; grey	–	Dry	Soft	–	–
300 400	Silty LOAM; light grey	–	Slightly moist	Firm	–	–
500 600 700	Silty CLAY; dark grey	–	Slightly moist	Stiff	150	Moderate
800 900 1000 1100 1200 1300 1400	Silty CLAY; dark grey/brown	–	Slightly moist	Stiff	150	Moderate
1500	END OF HOLE					

Sample Hole BH04

Depth (mm)	Description	Fill	Moisture	Consistency	Allowable Bearing Pressure (kPa)	Reactivity
100 200 300	Silty LOAM; grey	–	Dry	Soft	–	–
400 500	Silty LOAM; light grey	–	Slightly moist	Firm	–	–
600 700 800 900 1000	Silty CLAY; dark grey	–	Slightly moist	Stiff	150	Moderate
1100 1200 1300 1400	Silty CLAY; dark grey/brown	–	Slightly moist	Stiff	180	Moderate
1500	END OF HOLE					

Sample Hole BH05

Depth (mm)	Description	Fill	Moisture	Consistency	Allowable Bearing Pressure (kPa)	Reactivity
100 200	Silty LOAM; grey	–	Dry	Soft	–	–
300 400	Silty LOAM; light grey	–	Slightly moist	Firm	–	–
500 600 700 800	Silty CLAY; dark grey	–	Slightly moist	Stiff	150	Moderate
900 1000 1100	Silty CLAY; dark grey/brown	–	Slightly moist	Stiff	150	Moderate
1200 1300 1400	Silty CLAY; white/brown	–	Slightly moist	Stiff	180	Moderate
1500	END OF HOLE					

Sample Hole BH06

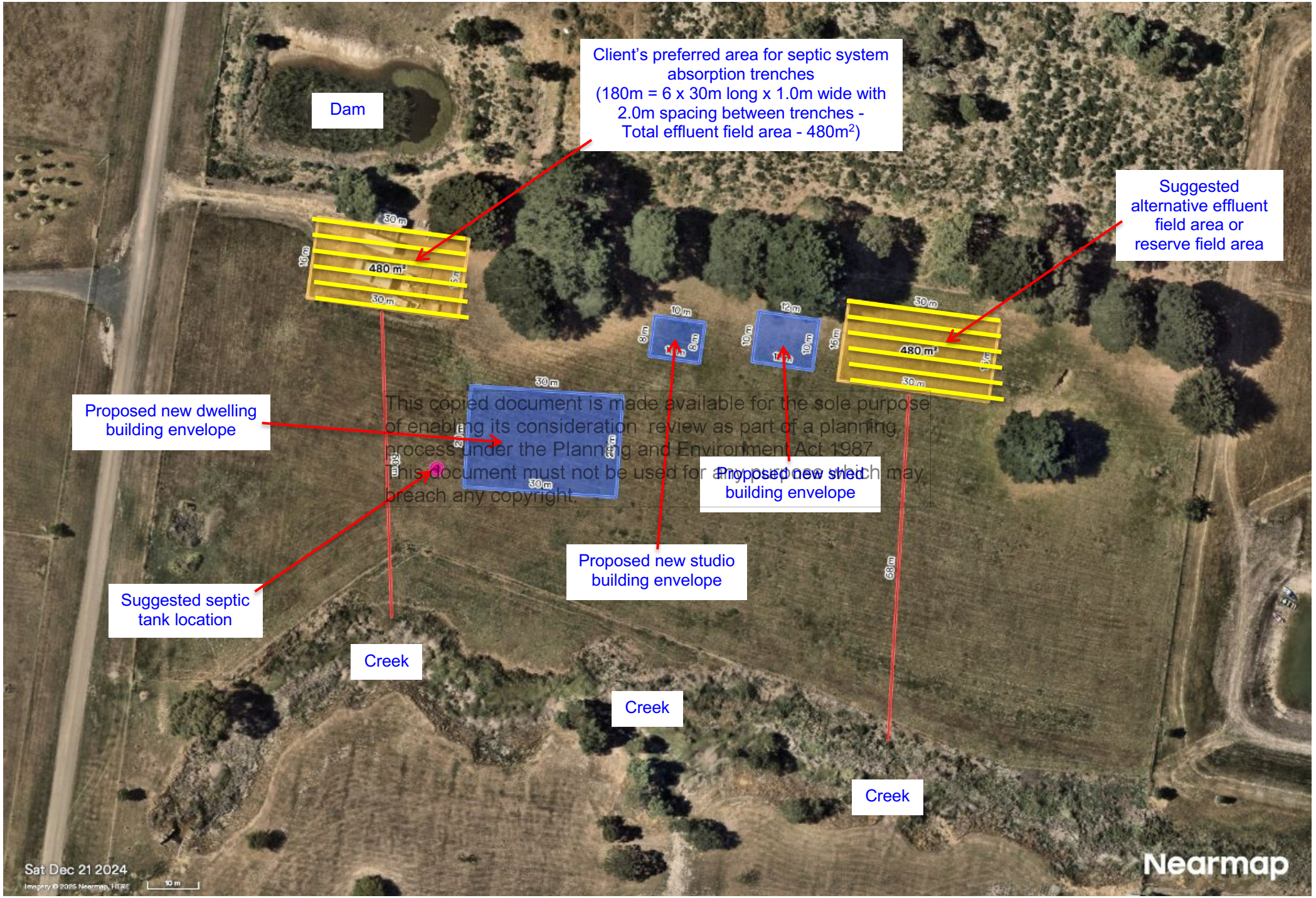
Depth (mm)	Description	Fill	Moisture	Consistency	DLR (mm/day)	DIR (mm/day)
100 200 300 400	Silty clay LOAM; grey	–	Dry	Firm	10	3.5
500	Silty clay LOAM; light grey	–	Slightly moist	Firm	10	3.5
600 700 800 900 1000	Silty CLAY; dark grey/brown	–	Slightly moist	Stiff	5	3
1100 1200 1300 1400	Silty CLAY; white/light brown	–	Slightly moist	Stiff	5	3
1500	END OF HOLE					

Sample Hole BH07

Depth (mm)	Description	Fill	Moisture	Consistency	DLR (mm/day)	DIR (mm/day)
100 200	Silty LOAM; grey/brown	–	Dry	Soft	10	4
300 400 500 600	Silty clay LOAM; light grey	–	Slightly moist	Firm	10	3.5
700 800	Silty CLAY; brown/dark grey; some tree roots	–	Slightly moist	Stiff	5	3
900 1000	Silty CLAY; grey/brown/red	–	Slightly moist	Stiff	5	3
1100 1200 1300 1400	Silty CLAY; brown/grey	–	Slightly moist	Stiff	5	3
1500	END OF HOLE					

Attachment 4 – Proposed wastewater treatment plan for preferred primary treatment system

Plan included on next page.



Attachment 5 – Trench bed sizing calculations

Spreadsheet included on next page.

Victorian Land Capability Assessment Framework

Trench & Bed Sizing

FORMULA FOR TRENCH AND BED SIZING			
L = Q/DLR x W			From AS/NZS 1547:2012
Where:	Units		
L = Trench or bed length	m		Total trench or bed length required
Q = Design Wastewater Flow	L/day		Based on maximum potential occupancy and derived from Table 4 in the EPA Code of Practice (2013)
DLR = Design Loading Rate	mm/day		Based on soil texture class/permeability and derived from Table 9 in the EPA Code of Practice (2013)
W = Trench or bed width	m		As selected by designer/installer

INPUT DATA				
Design Wastewater Flow	Q	900	L/day	Based on maximum potential occupancy and derived from Table 4 in the EPA Code of Practice (20
Design Loading Rate	DLR	5.0	mm/day	Based on soil texture class/permeability and derived from Table 9 in the EPA Code of Practice (201
Trench basal area required	B	180.0	m^2	
Selected trench or bed width	W	1.0	m	As selected by designer/installer

OUTPUT			
Required trench or bed lengt	L	**180.0**	m

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

Attachment 6 – Code of Practice Onsite Wastewater Management – Appendix D: Septic Tanks

Table included on next page.

Appendix D: Septic Tanks

Commissioning

After installation or desludging, and before use, a septic tank must be two-thirds filled with clean water to:

- provide ballast in the tank to prevent groundwater lifting the tank out of the ground
- reduce odours
- enable any subsequent secondary treatment plant to be switched on, commissioned and used immediately.

When domestic wastewater from the dwelling flows into the septic tank it contains sufficient microbiological organisms to start and continue the treatment process. There is no need to 'feed' or dose a new or desludged septic tank with starter material or micro-organisms. If odour occurs after the commissioning of a system, a cup of garden lime can be flushed down the toilet each day until the odour disappears. If the odour persists, the property should seek professional advice from a plumber.

Sludge and scum

As organic matter from the wastewater and inert material, such as sand, settle to the bottom of the tank a layer of sludge forms. This layer contains an active ecosystem of mainly anaerobic micro-organisms which digest the organic matter and reduce the volume of sludge. Scum forms as a mixture of fats, oils, grease and other light material floats on top of the clarified liquid that has separated from the solids. When the clarified liquid flows out of the septic tank it is called 'primary treated effluent'.

It is not necessary or recommended that householders pour commercial products that are reputed to dissolve sludge build-up, down the toilet or sink. A teaspoon of granulated yeast flushed down the toilet once a fortnight may assist with microbial activity, though such a procedure is not an alternative to regular sludge and scum pump-out (Lord 1989).

Desludging septic tanks

Over time, the sludge and scum layers build up and need to be removed for the tank to function properly. The level of solids accumulation in the tank cannot be accurately predicted, and will depend on the waste load to the tank. Therefore, the sludge and scum depth should be checked annually by a contractor. If a septic tank is under a maintenance contract, regular assessment (every 1 to 3 years) of the sludge and scum layers must be part of the maintenance agreement.

The sludge and scum need to be pumped-out with a vacuum suction system when their combined thickness equals 50% of the operational depth of the tank. The frequency of pump-out depends on:

- whether the tank is an adequate size for the daily wastewater flow
- the composition of the household and personal care products
- the amount of organic matter, fat, oil and grease washed down the sinks
- the use of harsh chemicals such as degreasers
- overuse of disinfectants and bleaches
- the use of antibiotics and other drugs, especially dialysis and chemotherapy drugs
- whether any plastic or other non-organic items are flushed into the tank.

A well-functioning septic tank – one that is not overloaded with liquid, organic matter or synthetic material – typically only needs to be desludged once every 3 to 8 years (depending on the size of the tank). A septic tank connected to a home with a frequently used dishwasher will need to be pumped out more frequently (typically every 3 to 4 years) than a home with no dishwasher connected (typically every 5 to 6 years). A holiday home will need to be pumped out less frequently. Large (6,000 L) domestic septic tanks which are common in New Zealand and the USA and have started to be installed in Victoria, have been proven to require desludging only once every 10 to 15 years (Bounds, 1994).

After pump-out, tanks must not be washed out or disinfected. They should be refilled with water to reduce odours and ensure stability of plumbing fixtures. A small residue of sludge will always remain and will assist in the immediate re-establishment of bacterial action in the tank.

Householders should keep a record of their septic tank pump-outs and notify the local Council that a pump-out was undertaken in accordance with the Council Permit.

Septic tank failure

It is critical that a septic tank is not used as a rubbish receptacle. Septic tanks are designed solely for the treatment of water and organic materials. Items such as sanitary napkins, tampons, disposable nappies, cotton buds, condoms, plastic bags, stockings, clothing and plastic bottles will cause the septic tank to fail and require costly removal of these items. If a tank is contaminated or poisoned by household materials it should be pumped out immediately to enable the microbiological ecosystem to re-start.

Without the removal of the scum and sludge, sewage biosolids will increasingly be discharged into the soil absorption trenches and will eventually cause them to fail. This can force untreated sewage onto the ground surface and cause:

- noxious odours
- a boggy backyard
- a health hazard to the family, pets, visitors and neighbours from the pathogens in the sewage
- environmental degradation of the property, surrounding area and waterways from the nutrients, organic matter and other pollutants in the discoloured water

  and
- a public health risk to drinking water supplies in potable water supply catchments.

Positive actions a property owner can take to help a septic tank function well:

- Use soapy water (made from natural unscented soap), vinegar and water or bi-carbonate of soda and water to clean toilets and other water fixtures and fittings.
- Read labels to learn which bathroom and laundry products are suitable for septic tanks. Generally plain, non-coloured, unscented and unbleached products will contribute to a well-functioning septic tank.
- Use detergents with low levels of salts (e.g. liquid detergents), sodium absorption ratio, phosphorus and chlorine (see www.lanfaxlabs.com.au).
- Wipe oils and fats off plates and saucepans with a paper towel and dispose of in the kitchen compost bin.
- Use a sink strainer to restrict food scraps entering the septic system.
- Ensure no structures such as pavements, driveways, patios, sheds or playgrounds are constructed over the tank or absorption trench area.
- Ensure the absorption trench area is not disturbed by vehicles or machinery.
- Engage a service technician to check the sludge and scum levels, pumps and alarms annually.
- Keep a record of the location of the tank and the trenches and all maintenance reports (including the dates of tank pump-outs, tank inspections and access openings) and ensure the service technician sends a copy of the maintenance report to the local Council.
- Have the tank desludged when the combined depth of the scum and sludge is equal to the depth of the middle clarified layer.

Indications of failing septic tanks and soil absorption trenches

- Seepage along effluent absorption trench lines in the soil
- Lush green growth down-slope of the soil absorption trench lines
- Lush green growth down-slope of the septic tank
- Inspection pits and/or the soil absorption trenches consistently exhibiting high water levels
- Soil absorption trench lines become waterlogged after storms
- General waterlogging around the land disposal area
- Presence of dead and dying vegetation (often native vegetation) around and down-slope of the land disposal areas
- A noxious odour near the tank and the land disposal area
- Blocked water fixtures inside the house, with sewage overflowing from the relief point
- High sludge levels within the primary tank (within about 150 mm of inlet pipe)
- Flow obstructed and not able to pass the baffle in the tank
- The scum layer blocking the effluent outflow.

Decommissioning treatment systems

Septic tanks

When a septic tank is no longer required it may be removed, rendered unusable or reused to store stormwater. The contents of the tank must first be pumped out by a sewage sludge contractor. The contractor must also hose down all inside surfaces of the tank and extract the resultant wastewater. Where the tank will no longer be used but will remain in the ground, the contractor must first disinfect the tank by spreading (broadcasting) hydrated lime over all internal surfaces in accordance with the WorkSafe safety precautions associated with using lime (i.e. wearing gloves, safety goggles and not using lime on a windy day).

Under no circumstances should anyone enter the tank to spread the lime or for any other reason, as vapours in confined spaces can be toxic.

A licensed plumbing practitioner must disconnect the tank from the premises and from the absorption trench system. The inlet and outlet pipes on the tank must be permanently sealed or plugged. To demolish a tank, the bottom of the tank is broken and then the lid and those parts of the walls that are above ground are collapsed into the tank. The tank is then filled with clean earth or sand.

Before a tank may be used to store stormwater a licensed plumbing practitioner must disconnect it from the premises and the trench system and connect an overflow pipe from the tank to the stormwater legal point of discharge. Before disinfecting the tank, it must be pumped out, the inside walls hosed down and then pumped out again. The tank is to be filled with fresh water and disinfected, generally with 100 mg/L of pool chlorine (calcium hypochlorite or sodium hypochlorite) to provide a resultant minimum 5 mg/L of free residual chlorine after a contact time of 30 minutes. However, advice should be obtained from a chemical supplier about safety precautions, dosage and concentrations to provide adequate disinfection for any tank. The chlorine is not to be neutralised, but be allowed to dissipate naturally for at least 1 week, during which time the water must not be used. Pumps may be installed to connect the tank to the irrigation system. The contents of the tank must not be used for any internal household purposes or to top-up a swimming pool. The water may only be used for garden irrigation. The tank and associated irrigation system must be labelled to indicate the water is unfit for human consumption in accordance with AS/NZS 3500: Plumbing and Drainage (Blue Mountains City Council 2008).

Secondary treatment systems

All treatment systems must be decommissioned by a licensed plumbing practitioner.

Attachment 7 – Proposed wastewater treatment plan for alternative secondary treatment system

Plan included on next page.


Dam
Client's preferred area for 544m² subsurface irrigation field. Please note, the area shown is slightly larger than that required.
Suggested alternative effluent field area or reserve field area. Please note, the area shown is slightly larger than that required.
570 m²
570 m²
Proposed new dwelling building envelope
Proposed new shed building envelope
Proposed new studio building envelope
Suggested AWTS location
Creek
Creek
Creek
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Sat Dec 21 2024
Nearmap

Attachment 8 – Water balance calculations

Spreadsheets included on next page.

Victorian Land Capability Assessment Framework

Irrigation area sizing using Nominated Area Water Balance & Storage Calculations

Site Address:	37 Youngs Lane, Snake Valley		
Date:	February 6, 2024	**Assessor:**	S. O'Loughlin - Ballarat Soil Testing

INPUT DATA

Design Wastewater Flow	Q	900	L/day	Based on maximum potential occupancy and derived from Table 4 in the EPA Code of Practice (2013)
Design Irrigation Rate	DIR	3.0	mm/day	Based on soil texture class/permeability and derived from Table 9 in the EPA Code of Practice (2013)
Nominated Land Application Area	L	544	m^2	[1]
Crop Factor	C	0.6-0.8	unitless	Estimates evapotranspiration as a fraction of pan evaporation; varies with season and crop type[2]
Rainfall Runoff Factor	RF	0.9	unitless	Proportion of rainfall that remains onsite and infiltrates, allowing for any runoff
Mean Monthly Rainfall Data	Trawalla (89030)			
Mean Monthly Pan Evaporation Data	Trawalla (89030) - SILO			BoM Station and number

Parameter	Symbol	Formula	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Days in month	D		days	31	28	31	30	31	30	31	31	30	31	30	31	**365**
Rainfall	R		mm/month	39.5	39.0	38.8	52.7	62.8	61.5	65.2	71.0	69.2	65.7	54.7	48.4	**668.5**
Evaporation	E		mm/month	165.2	137.8	112.4	67.3	38.8	25.3	28.3	42.5	63.6	98.0	125.0	153.9	**1058.1**
Crop Factor	C		unitless	0.80	0.80	0.70	0.70	0.60	0.60	0.60	0.60	0.80	0.80	0.80	0.80	
OUTPUTS																
Evapotranspiration	ET	ExC	mm/month	132	110	79	47	23	15	17	26	51	78	100	123	**801.5**
Percolation	B	DIRxD	mm/month	93.0	84	93.0	90.0	93.0	90.0	93.0	93.0	90.0	93.0	90.0	93.0	**1095.0**
Outputs		ET+B	mm/month	225.2	194.2	171.6	137.1	116.3	105.2	110.0	118.5	140.9	171.4	190.0	216.1	**1896.5**
INPUTS																
Retained Rainfall	RR	RxRF	mm/month	35.55	35.1	34.92	47.43	56.52	55.35	58.68	63.9	62.28	59.13	49.23	43.56	**601.65**
Applied Effluent	W	(QxD)/L	mm/month	51.3	46.3	51.3	49.6	51.3	49.6	51.3	51.3	49.6	51.3	49.6	51.3	**603.9**
Inputs		RR+W	mm/month	86.8	81.4	86.2	97.1	107.8	105.0	110.0	115.2	111.9	110.4	98.9	94.8	**1205.5**
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	-138.3	-112.8	-85.4	-40.1	-8.5	-0.2	0.0	-3.3	-29.0	-61.0	-91.2	-121.2	
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	147	158	204	301	467	542	544	511	343	249	192	162	

MINIMUM AREA REQUIRED FOR ZERO STORAGE: 544.0 m^2

CELLS

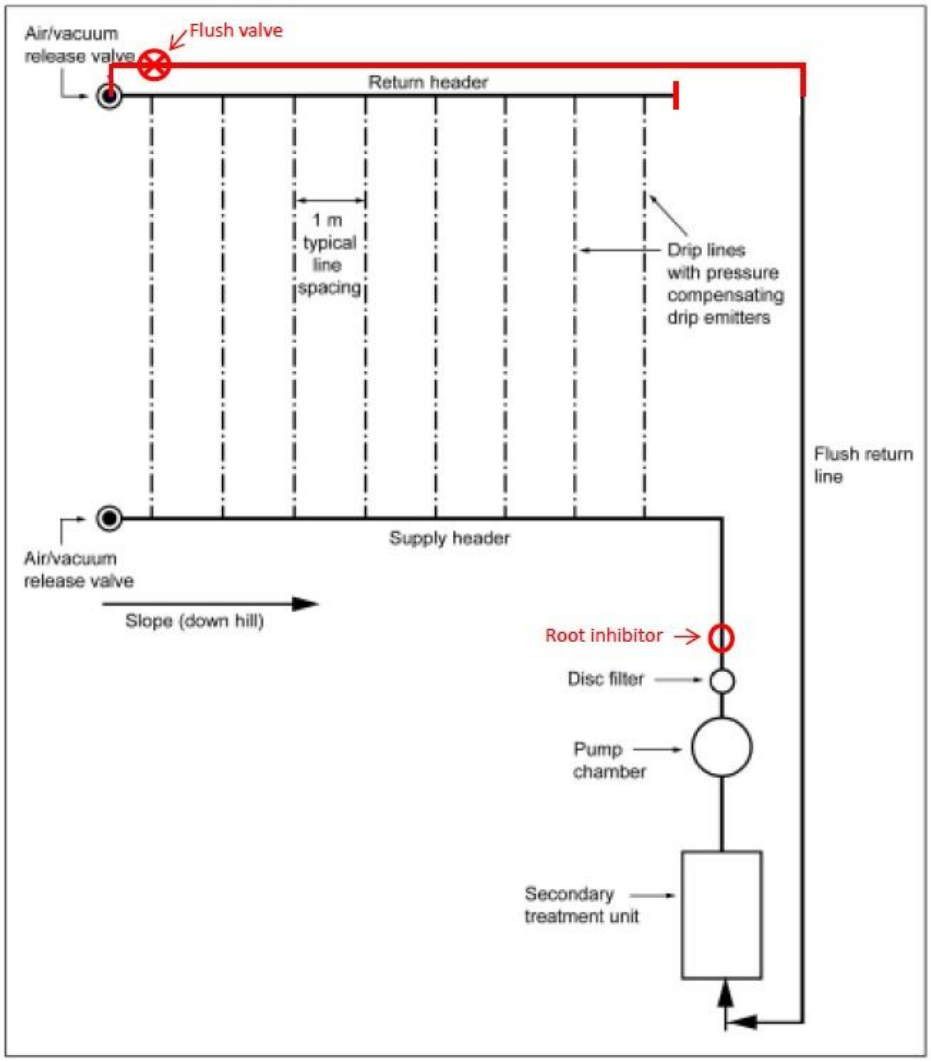
	Please enter data in blue cells
XX	Red cells are automatically populated by the spreadsheet
XX	Data in yellow cells is calculated by the spreadsheet, DO NOT ALTER THESE CELLS

NOTES

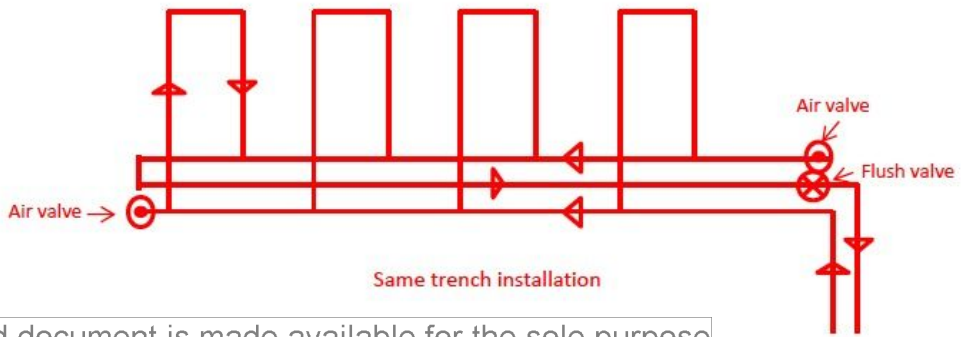
[1] This value should be the largest of the following: land application area required based on the most limiting nutrient balance or minimum area required for zero storage

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

Attachment 9 – Subsurface irrigation system example



Revised Figure M1 Page 167 AS/NZS1547:2012 to ensure effective distribution and flushing



Attachment 10 – VicPlan planning property report

Report included on next page.

PLANNING PROPERTY REPORT

Department of Transport and Planning

From www.planning.vic.gov.au at 05 February 2025 09:28 AM

PROPERTY DETAILS

Address:	**37 YOUNGS LANE SNAKE VALLEY 3351**
Crown Description:	**Allot. 1 Sec. 29 PARISH OF CARNGHAM**
Standard Parcel Identifier (SPI):	**1~29\PP2351**
Local Government Area (Council):	**PYRENEES** www.pyrenees.vic.gov.au
Council Property Number:	**710024910**
Planning Scheme:	**Pyrenees** Planning Scheme - Pyrenees
Directory Reference:	**Vicroads 76 B3**

UTILITIES

Rural Water Corporation:	**Southern Rural Water**
Urban Water Corporation:	**Central Highlands Water**
Melbourne Water:	**Outside drainage boundary**
Power Distributor:	**POWERCOR**

STATE ELECTORATES

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

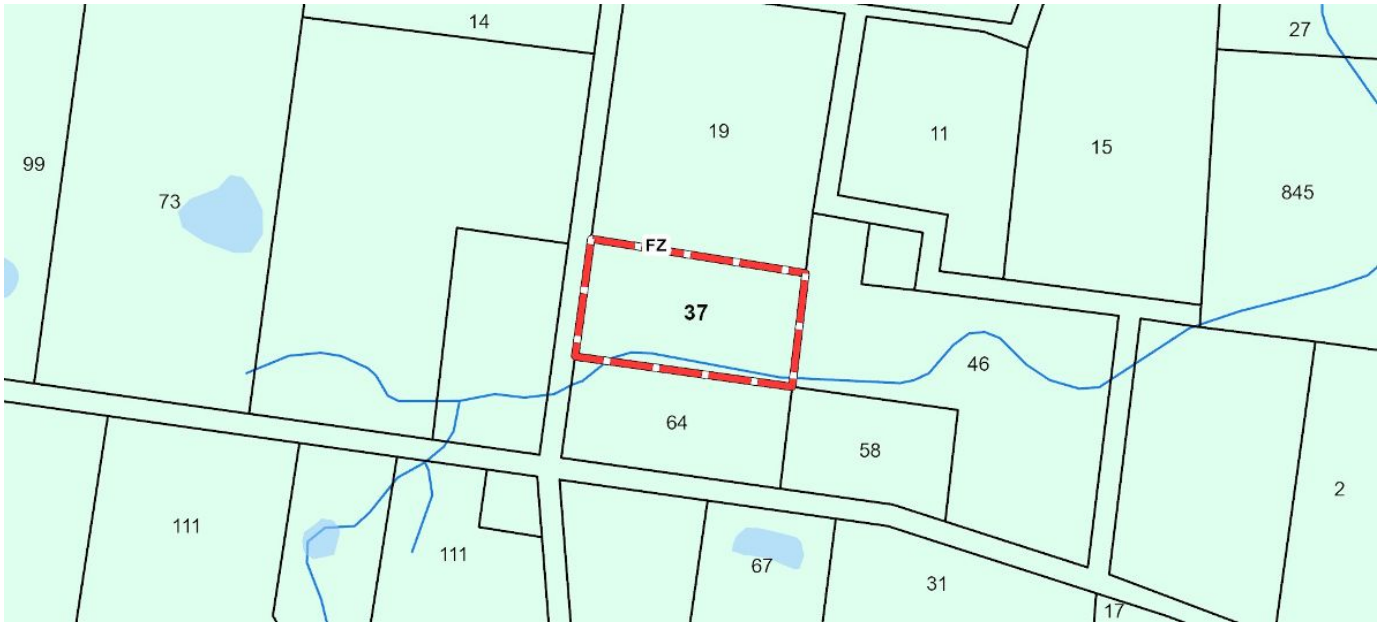
OTHER

Registered Aboriginal Party:	**Wadawurrung Traditional Owners Aboriginal Corporation**

View location in VicPlan

Planning Zones

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



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

PLANNING PROPERTY REPORT

Department of Transport and Planning

Planning Overlay

RESTRUCTURE OVERLAY (RO)
RESTRUCTURE OVERLAY - SCHEDULE 18 (RO18)

RO - Restructure Overlay | Water area | Water course

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

Further Planning Information

Planning scheme data last updated on 05 February 2025.

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

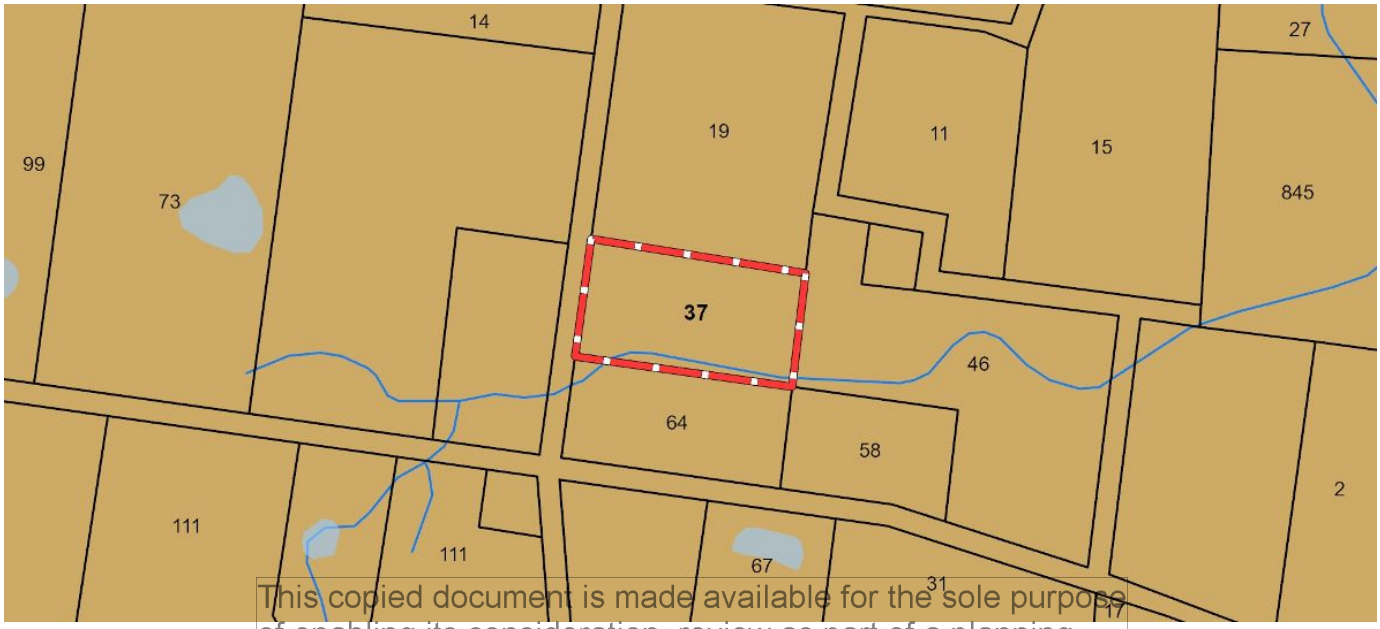
Department of Transport and Planning

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)

Attachment 11 – Reducing Wastewater

In accordance with the principles of the waste hierarchy, the following steps are recommended to limit the amount of wastewater generated and beneficially use the resultant water resource onsite:

	Suggestions
1. Avoid generating excess wastewater by:	a) constructing a house with fewer bedrooms b) installing a dry composting toilet c) not installing a spa d) not installing a bath (low flow rate shower only) e) not installing a kitchen food waste grinder.
2. Reduce the volume of wastewater generated by installing:	High 'Water Efficiency Labelling Scheme' (WELS)-rated water-efficient fittings (minimum '3 Stars' for appliances and minimum '4 Stars' for all fittings and fixtures): a) water-efficient clothes washing machines (front or top loading) b) dual-flush (6.5/3.5L or less) toilets c) water-efficient shower roses d) water-efficient dishwashers e) aerated taps f) hot and cold water mixer taps (especially for the shower) g) flow restrictors h) hot water system fitted with a 'cold water diverter' which recirculates the initial flow of cold water until it is hot enough for a shower.
3. Reuse (another use without any treatment) wastewater by:	a) washing fruit and vegetables in tap water in a container and reusing the water for another purpose in the house such as watering pot plants b) collecting the initial cold water from showers in buckets and using it for another purpose such as soaking feet, hand washing clothes or washing the car on the lawn.
4. Recycle wastewater after treatment by using it to:	a) water gardens and lawn areas b) flush toilets with effluent from an EPA-approved 10/10/10 greywater system c) supply effluent to the cold water tap of the washing machine from an EPA-approved 10/10/10 greywater treatment system

FARM MANAGEMENT PLAN

Address: 37 Youngs Lane, Snake Valley 3351
Lot and Plan Number: Allot. 1 Sec. 29 Parish of Carngham
Standard Parcel Identifier (SPI): 1-29\PP2351
Local Government (Council): Pyrenees
Property Number: 710024910
Directory Reference: VicRoads 76 B3

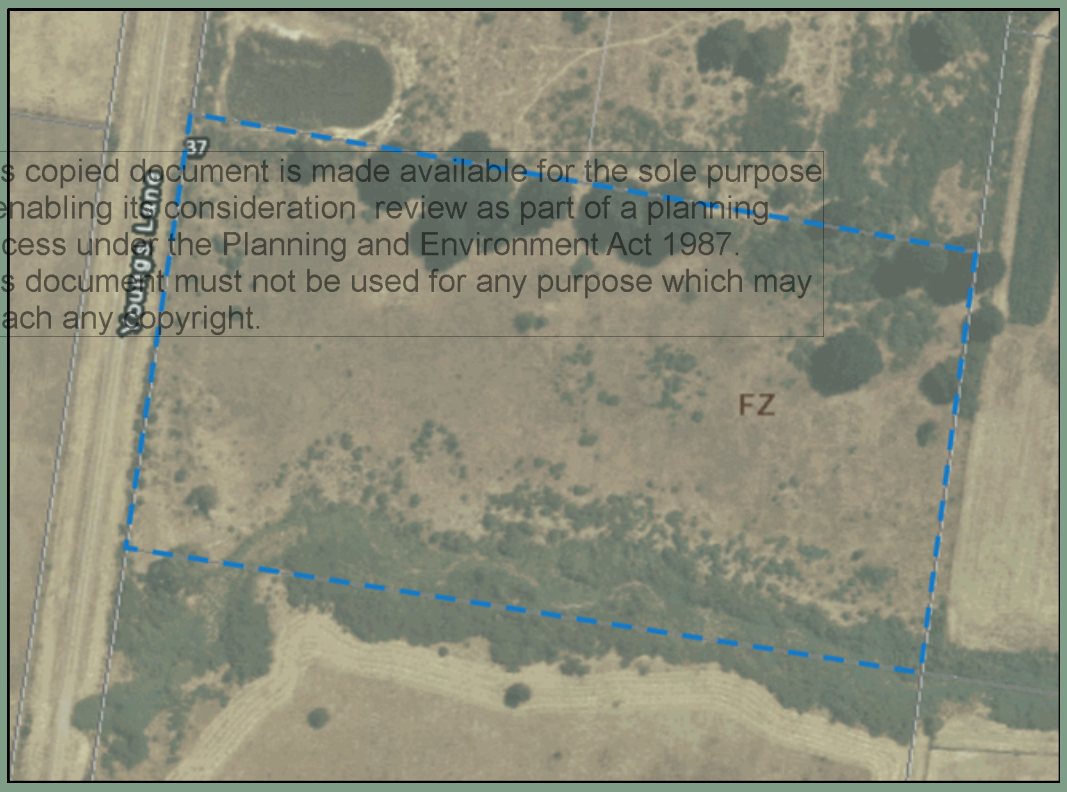


TABLE OF CONTENTS

EXECUTIVE SUMMARY

This Farm Management Plan details the development of a 5-acre property at 37 Youngs Lane, Snake Valley, as a small-scale mixed farm integrating a relocated family dwelling with a separate studio, a future small herd of goats (2-3 head), vegetable gardens, and a fruit and nut orchard. Onsite management is critical from an animal welfare and risk management perspective, as well as for maintaining the land and food production.

The plan emphasises sustainable practices, responsible animal husbandry, and compatibility with the surrounding rural landscape. It aligns with the Pyrenees Shire's commitment to agricultural land retention, environmental protection, and maintaining the aesthetic value of the region, as outlined in the planning guidelines.

Given the nature of the land resource, the characteristics of the district, and the agricultural potential of the property, this plan demonstrates its potential for sustainable land management practices within the Farming Zone planning overlay. The proposed development will have no negative impact on the natural resources or agricultural viability of the land. Rather, it is expected to enhance the area's agricultural productivity and environmental sustainability and landscape.

The property currently stands as a largely undeveloped grassland, heavily impacted by invasive gorse weed. The creek along the southern boundary is overgrown, contributing to erosion and reduced water flow. Additionally, the property contains an overgrown, non-functioning dam that requires rehabilitation to improve water storage capacity and support agricultural activities.
At the front of the property, two shipping containers and a single garage are present, currently detracting from the property's aesthetics. These structures will be relocated to the rear of the property and repurposed for storage and farm operations.
Significant improvements will be made to enhance the property's agricultural viability and environmental sustainability. Efforts will focus on maintaining ground cover, improving soil health, and systematically removing invasive woody weeds, particularly gorse. A comprehensive land management approach will integrate rotational goat grazing, mulching, and native vegetation planting to suppress regrowth and restore ecological balance.
The plan also includes provisions for sustainable water management, such as rainwater harvesting, dam rehabilitation, and creek restoration. Renewable energy solutions, including a fully off-grid solar system, will be implemented to support long-term farm operations. These improvements will ensure compliance with local regulatory requirements while fostering a productive and ecologically responsible farming enterprise.

INTRODUCTION

This Farm Management Plan has been requested to address the requirements of the Pyrenees Shire Council in respect to a Planning Permit for a dwelling to support a small scale farm. The relocation of a dwelling and a seperate studio on the 2.1ha property located on Youngs Lane, Snake Valley, 31km from the centre of Ballarat is essential to support the agricultural activities of the farm. The farm will be actively involved in the cultivation of vegetables, fruits and nuts, as well as the management of livestock.

Part of the Farm Plan is to continue to improve the biodiversity and environmental health of the land. The Farming Zone is the zone that is strongly focused on protecting and promoting farming and agriculture.

The relocation of a dwelling and a separate studio on the property is essential to support the diverse agricultural activities taking place. These activities require constant attention, oversight, and timely intervention, all of which can only be effectively managed with on-site accommodation. Onsite management is also required from an animal welfare and risk management perspective.

This Farm Plan will improve the biodiversity and environmental health of the property through soil regeneration using sustainable practices in agriculture through organic farming, protect and restore natural habitats through creating wildlife-friendly features and planting native species which will help to combat invasive species. It will also reduce our carbon footprint by using renewable energy such as solar, rainwater harvesting, growing our own food and reduce waste through composting.

1. Operational Needs and Farm Management:

The farm's operations, including planting, tending, harvesting, and managing a variety of crops (vegetables, fruits, and nuts), require regular and continuous attention. In addition, the care and management of the animals — including feeding, health checks, cleaning, and monitoring for signs of distress or illness — are daily tasks that demand immediate response. A dwelling on-site ensures that these activities can be performed efficiently and without interruption, while a separate studio for helpers will provide additional support for farm tasks during peak seasons or busy periods.

2. Animal Welfare and Safety:

The safety and welfare of the animals are a top priority. Livestock, such as goats, require constant care to ensure they are healthy, well-fed, and secure. Having help on-site allows for immediate attention to any emergencies or issues, such as health concerns, adverse weather conditions, or predation risks. The presence of a dwelling and a studio for helpers ensures there is always someone available to respond swiftly to any situation, maintaining a high level of care for the animals and preventing any potential harm or stress.

3. Enhanced Farm Security and Protection:
The presence of both a dwelling and a studio improves the overall security of the farm, safeguarding both crops and animals from theft, vandalism, or potential dangers. With living quarters on-site, there is a constant presence to monitor the farm, especially during overnight hours or in adverse conditions, when farm assets are most vulnerable. This ensures that both crops and animals remain protected and that the farm is continuously monitored for any security or safety concerns.

4. Seasonal and Intensive Labor Needs:
The farm will experience fluctuations in labor demands, particularly during planting and harvesting seasons, as well as during periods requiring intensive care of the animals. The separate studio for helpers will provide the necessary accommodation to support extra labor during these times, ensuring that farm operations continue smoothly and efficiently. The ability to house farm helpers on-site also minimises delays and ensures immediate availability, improving productivity and supporting the overall success of the farm.

5. Sustainability and Long-Term Viability:
The relocation of both a dwelling and a studio is essential for the long-term sustainability and success of the farm. These facilities allow for the management of the property in a way that supports its ongoing productivity while maintaining the safety and health of the animals and produce. They provide the necessary infrastructure to ensure the farm is operated effectively and responsibly, fostering a safe and sustainable environment for both agricultural activities and animal care.

For these reasons, the presence of a dwelling and a separate studio for helpers is integral to the operation and management of the farm. It ensures the well-being of both the produce and the animals, and provides the necessary accommodation to meet the demands of the farming activities on a day-to-day basis.

Background on the Property Owners and their Plans for the Property

The property owners, Helen Moisidis and Recep Kayim purchased the property in November 2024 with the intention to relocate a dwelling and a separate studio to be able to live at the property while cultivating the land into a thriving small scale farm, producing organic vegetables, fruits and nuts. Currently the property displays grassland with sporadic gorse growth resulting from the lack of maintenance from the neighbouring property. The creek is also in need of maintenance to prevent further erosion of land and to control gorse growth. Taking control of the invasive gorse weed is a priority and will be dealt with using organic methods, further details supplied under the Vegetation Assessment section.

Helen has a solid understand on how to successfully grow, harvest and tend to the land. She has always had a backyard garden and been a part of a community garden for several years. Her strong planning and organisation skills are critical in the planning and implementing seasonal planting schedules as well as the non waste produce management and preparation methods. Helen also runs an online business and makes decorative ceramics currently sold at makers markets.

Recep has a good understand about the needs and maintenance requirements of a farm having grown up in a village in Turkey. His hands on approach and mechanical mind will come into use with all the maintenance and repair works that are required on a farm.

PROPERTY OVERVIEW

1. Location & Size

- The property is 5 acres, zoned as farmland in the Pyrenees Shire.
- A creek runs along the southern boundary.
- The land has a Class M site classification.

2. Current Conditions

- The land currently contains pasture grasses with invasive gorse weed, which requires active management - see figure 1.
- A small dam is present but requires rehabilitation for future use - see figure 2.
- The property is currently undeveloped, with minimal existing infrastructure of two shipping containers and a small garage - see figure 3.
- The creek to the southern boundary is overgrown with gorse and reeds with land erosion present - see figure 4.

3. Type & Topography:

- The soil is classified as moderately reactive clay or silt sites, which may experience moderate ground movement from moisture changes.
- Gently sloping terrain with some flat areas suitable for agricultural use.
- Soil improvements will be undertaken through organic amendments, mulching, and rotational grazing to enhance fertility.

4. Site Classification:

- Class: M.
- Description: Moderately reactive clay or silt sites, which may experience moderate ground movement from moisture changes.
- Rationale: Group (3) soils – non-basaltic and non-calcareous residual clays derived from sedimentary, metamorphic, granitic or other acid volcanic rocks
- >1.8m depth of clay over massive rock
- Very slight undulating land with a slight slope falling to the south. Good drainage with existing vegetation of pasture grasses across site and numerous cypress trees along northern boundary of allotment. The predominant soil profile is silty loam and silty loam overlying stiff silty clay at a depth of 400mm. Detailed report supplied in the Site Classification Report.

Figure 1 - Pasture grasses and gorse weed

Figure 2 - Dam

Figure 3 - Existing Infrastructure

Figure 4 - Creek

PROPOSED LAND USE

1. Livestock Management

- Small herd of goats for weed control and milk production.
- Goats will be rotated in different paddocks to manage gorse and promote soil health.

2. Horticulture & Cropping

- Seasonal vegetable gardens for self-sufficiency and small scale sales in the event of surplus produce.
- Future greenhouses planned to extend growing seasons.
- Fruit and nut orchard for self-sufficiency and small scale sales in the event of surplus produce.
- Native vegetation planting to support local biodiversity, improve water quality and soil health, reducing maintenance needs, and providing habitat for wildlife.
- Variety of tree planting to act as natural windbreaks, protect property and crops, and improve microclimates.
- The property is currently undeveloped, with minimal existing infrastructure of two shipping containers and a small garage.

3. Infrastructure & Development

- Relocation house and studio for on-site accomodation to support farm operations and security.
- Secure paddock fencing for goats and to protect garden produce.
- Garden beds, fruit and nut orchard
- Water tanks for rainwater catchment for household and irrigation use.
- Solar panels & batteries for household and out buildings electricity use.
- Rehabilitation of the dam to provide an additional water source.
- Protection of creek through revegetation to prevent erosion.
- Existing shipping containers and garage for storage and vehicle protection - see Figure XX.
- New shipping containers and garage for storage, machinery protection and workshop.
- Greenhouses for extended growing seasons.

ENVIRONMENT & RESOURCE MANAGEMENT

1. Gorse Weed Management

- Manual removal of mature plants, followed by natural suppression methods such as mulching and shading out gorse regrowth.
- Grazing management using goats to control regrowth while ensuring rotational grazing practices to prevent overgrazing and soil degradation.
- Introduction of competitive native vegetation to suppress future gorse infestations and enhance biodiversity.
- Ongoing monitoring and selective organic herbicide application if necessary to eliminate persistent growth.

2. Soil & Pasture Management

- Implementation of regenerative agriculture techniques, including cover cropping, composting, and no-till practices to build soil health.
- Regular soil testing to monitor fertility levels and amend soil with natural fertilizers such as manure and compost.
- Pasture rotation strategies to prevent soil depletion and maintain land productivity.
- Strategic planting of deep-rooted grasses and legumes to improve soil structure and increase nitrogen availability.

3. Water Resource Protection

- Protection of the creek by establishing riparian buffer zones with native grasses and shrubs to prevent erosion and improve water filtration.
- Construction of swales and water catchment features to maximize moisture retention and mitigate runoff.
- Rehabilitation of the small dam to increase water storage capacity and provide a sustainable water source for irrigation and livestock.
- Rainwater harvesting system expansion to optimize water use efficiency and ensure year-round supply.

4. Energy & Sustainability

- Fully off-grid solar system powered by a 40kW solar array with backup battery storage for energy security.
- Utilization of energy-efficient farm equipment and passive design principles in infrastructure to reduce power demand.
- Septic system designed to handle wastewater efficiently, including a septic tank and a drainage field (leach field) to filter and safely disperse treated water into the soil.
- Sustainable waste management, including composting of organic materials and responsible disposal of farm-related waste to minimize environmental impact.

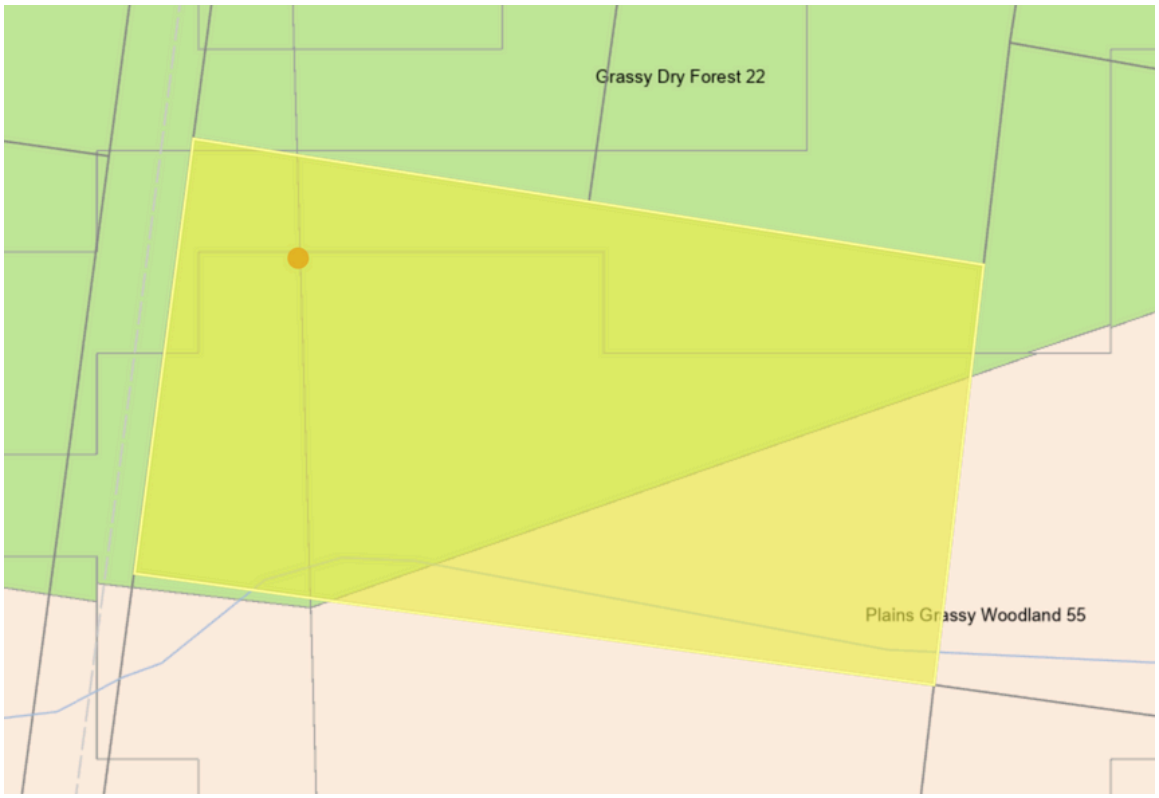


Figure 5 - Ecological Vegetation Class Map

Figure 6 - Location Arial View

Figure 7 - Street Location Arial View

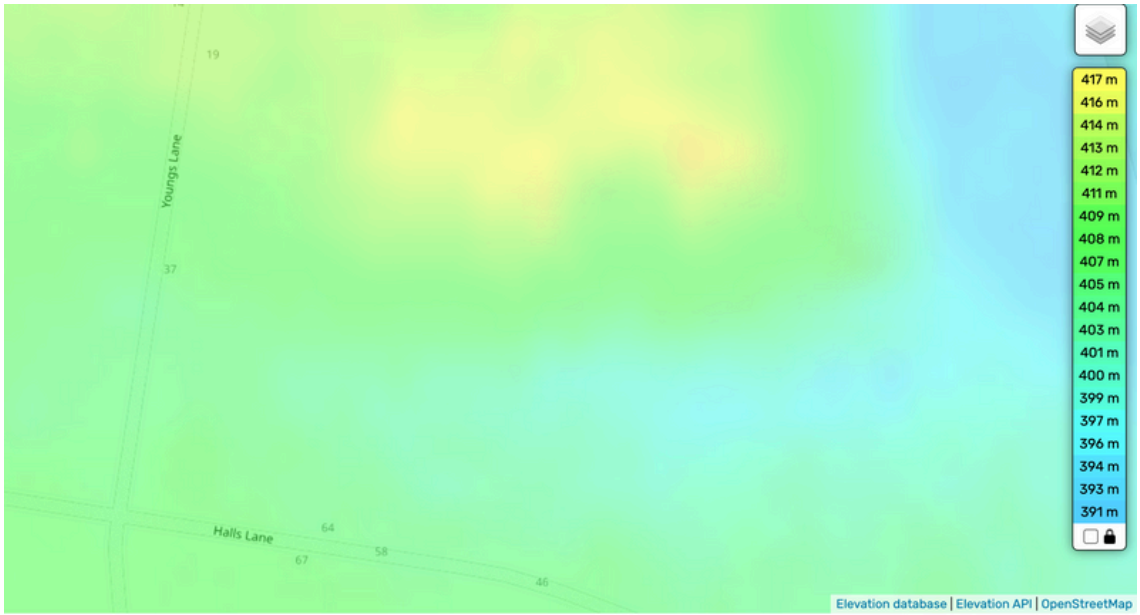


Figure 8 - Elevation Map

FINANCIAL & OPERATIONAL PLAN

1. Projected Costs

- Infrastructure Development: House relocation, garage, fencing, greenhouses, goat shelter.
- Livestock & Feed Costs: Initial goat herd purchase, feeding, veterinary care.
- Land Rehabilitation: Weed removal, dam repair, creek erosion control, soil improvement initiatives.
- Solar & Water Systems: Installation of solar panels, batteries, rainwater tanks, and irrigation systems.

2. Projected Revenue

- Goat Dairy Products: Milk, cheese, and possibly soap production.
- Vegetable Sales: Seasonal fresh produce for local markets.
- Orchard Products: Sale of fruit, nuts, and value-added products (e.g., preserves, dried fruit).
- Future Agritourism Potential: Workshops, farm tours, or on-site farm stays.

3. Timeline for Implementation

- Year 1: Solar and water system installation, weed management, soil improvement, basic infrastructure setup, initial vegetable garden establishment, and fencing.
- Year 2: Orchard planting, goat acquisition, and dam rehabilitation.
- Year 3-5: Greenhouse construction, creek rehabilitation and expansion of farm operations.

RISK MANAGEMENT & COMPLIANCE

1. Biosecurity & Pest Management

- Regular monitoring for new invasive species through visual inspections and land surveys.
- Sustainable grazing and integrated pest management strategies to control weed and pest populations without excessive chemical use.
- Secure storage of animal feed to prevent rodent infestation and contamination.
- Implementation of quarantine measures for new livestock to prevent disease introduction.
- Encouraging biodiversity with native plantings to naturally regulate pests.

2. Fire & Safety Considerations

- Creation of defensible space around structures by clearing flammable vegetation and maintaining low fuel loads.
- Firebreaks maintained around paddocks and infrastructure to reduce wildfire spread risk.
- Establishment of emergency firewater supplies, including additional storage tanks and access to the rehabilitated dam.
- Implementation of fire-resistant landscaping around key structures.
- Compliance with CFA (Country Fire Authority) recommendations for bushfire preparedness.
- Access roads designed to accommodate emergency vehicles and provide clear exit routes.

3. Environmental Protection & Sustainability

- Ensuring all activities adhere to environmental protection standards, including maintaining water quality and protecting native habitats.
- Management of soil erosion through revegetation, controlled grazing, and minimal tillage farming.
- Implementation of a waste reduction and recycling program, ensuring minimal farm-generated waste enters landfill.
- Use of sustainable building materials and energy-efficient designs for all infrastructure projects.

4. Compliance with Local Regulations

- All structures, land use practices, and developments align with Pyrenees Shire zoning and environmental guidelines.
- Ongoing communication with local authorities to ensure adherence to evolving agricultural and environmental policies.
- Mitigation measures in place to prevent dust, noise, and odor nuisances to neighboring properties.
- Adherence to state and federal animal welfare standards for livestock management.
- Regular audits and self-assessments to ensure compliance with biosecurity, waste management, and land conservation laws.