

# NOTICE OF AN APPLICATION FOR PLANNING PERMIT

The land affected by the application is located at:  
12 Hagenauer Lane, Benalla,  
Lot 3, LP61283, Parish of Benalla

The application is for a permit to:  
Subdivide the land into 5 lots

The applicant for the permit is:  
Mrs Stacey Cole  
Onley Consulting

The application reference number is:  
P0029/24  
DA7640

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

**An objection must:**

- \* be made to the responsible authority in writing;
- \* include the reasons for the objection; and
- \* state how the objector would be affected.

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

The Responsible Authority will not decide on the application before:

**24 May 2024**

If you object, the Responsible Authority will tell you its decision.



## Application for Planning Permit for a Subdivision

Supplied by Stacey Cole  
Submitted Date 13/03/2024

### Application Details

Application Type Planning Permit for a Subdivision  
Version 1  
Applicant Reference Number 6062  
Responsible Authority Name Benalla Rural City Council  
Responsible Authority Reference Number(s) (Not Supplied)  
SPEAR Reference Number S227035S  
Application Status Submitted  
Planning Permit Issue Date NA  
Planning Permit Expiry Date NA

### The Land

Primary Parcel 12 HAGENAUER LANE, BENALLA VIC 3672  
Lot 3/Plan LP61283  
Volume 8651/Folio 467  
SPL 3/LP61283  
CPN A4604  
**Zone:** 32.03 Low Density Residential  
**Overlay:** 44.04 Land Subject to Inundation

### The Proposal

Plan Number (Not Supplied)  
Number of lots 5  
Proposal Description 5 Lot Subdivision  
Estimated cost of the development for which a permit is required \$ 0

### Existing Conditions

#### Existing Conditions Description

The site is located at 12 Hagenauer Lane, Benalla, which is located within the northeastern aspect of the Benalla Township, approximately 2.7 kilometres from the central shopping district of Benalla. The allotment in question is of an irregular shape, with the southern boundary having a large frontage to Hagenauer Lane, with the remaining boundaries all adjoining neighbouring properties. The allotment currently supports a 3-bedroom dwelling and associated shedding that has established access to Hagenauer Lane. The land currently has access to most connections but is devoid of sewer services. There is a combination of native and exotic vegetation on the site. The neighbouring surrounds are residential in nature to the north,

**Title Information - Does the proposal breach an encumbrance on Title?**

west and east with the areasouth of Hagenauer Road zoned Industrial 1, but at his stage is not highly developed in thismanner.

The proposal does not breach an encumbrance on title, such as a restrictive covenant, section 173 agreement or other obligation such as an easement or building envelope.

---

**Applicant Contact**

Applicant Contact

Mrs Stacey Cole  
Onley Consulting  
98 Nixon Street, Shepparton, VIC, 3630  
Business Phone: 0358217171  
Email: [stacey@onleys.com.au](mailto:stacey@onleys.com.au)

---

**Applicant**

Applicant

(Applicant details as per Applicant Contact)

---

**Owner**

Owner

LK & SA Pty Ltd  
29 Dennis Road, Benalla, VIC, 3672

---

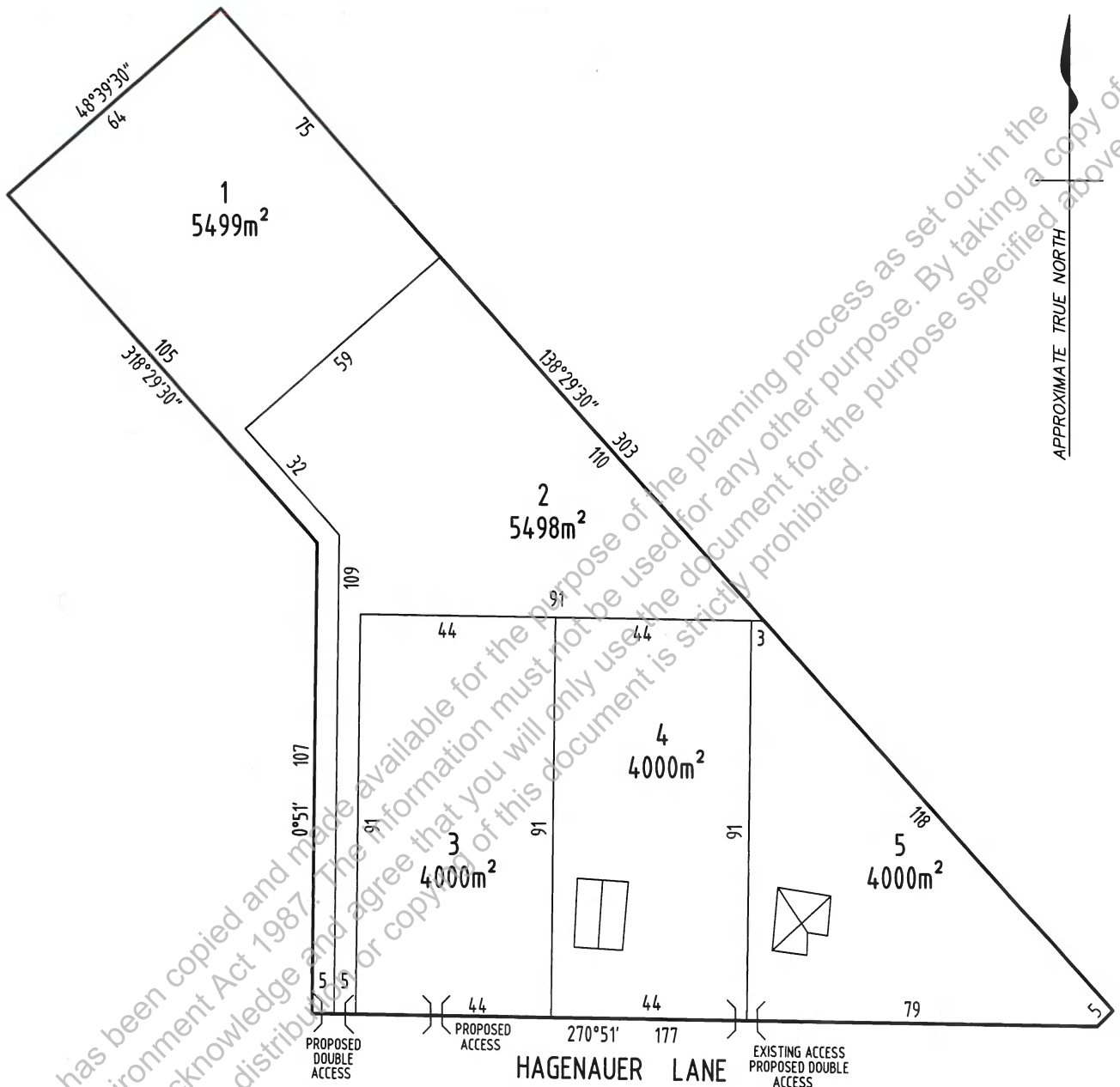
**Declaration**

I, Stacey Cole, declare that the owner (if not myself) has been notified about this application.

I, Stacey Cole, declare that all the information supplied is true.

Authorised by  
Organisation

Stacey Cole  
Onley Consulting



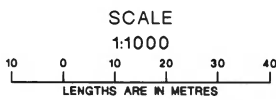
APPROXIMATE TRUE NORTH

HAGENAUER LANE

- EXISTING ACCESS
- EXISTING DWELLING
- EXISTING SHED



PO Box 2120  
 98 Nixon Street  
 Shepparton Vic 3630  
 Tel (03) 5821 7171  
 Fax (03) 5821 2725



**PROPOSED  
 PLAN OF SUBDIVISION**

COUNTY OF MOIRA  
 PARISH OF BENALLA  
 CROWN ALLOTMENT: 1 (PT)  
 SECTION: G  
 TITLE: C/T V. 8651 F.467  
 TITLE:  
 .PTS

DRAFTED BY: JG 6062 PROPv01.dwg

SURVEYORS REF:

**6062**

Sheet 1 of 1 Sheets

SCALE

1 : 1000

SHEET  
 SIZE

**A3**

CLIENT: LEANNE ALLEN  
 12 HAGENAUER LANE  
 BENALLA 3672

MEASUREMENTS AND AREAS ARE APPROXIMATE  
 ONLY AND ARE SUBJECT TO SURVEY.  
 LENGTHS ARE IN METRES.

VERSION:  
**01**

From [www.planning.vic.gov.au](http://www.planning.vic.gov.au) at 12 March 2024 11:33 AM

## PROPERTY DETAILS

Lot and Plan Number: **Lot 3 LP61283**  
 Address: **12 HAGENAUER LANE BENALLA 3672**  
 Standard Parcel Identifier (SPI): **3\LP61283**  
 Local Government Area (Council): **BENALLA**  
 Council Property Number: **A4604**  
 Planning Scheme: **Benalla**  
 Directory Reference: **Vicroads 663 S2**

[www.benalla.vic.gov.au](http://www.benalla.vic.gov.au)

[Planning Scheme - Benalla](#)

## UTILITIES

Rural Water Corporation: **Goulburn-Murray Water**  
 Urban Water Corporation: **North East Water**  
 Melbourne Water: **Outside drainage boundary**  
 Power Distributor: **AUSNET**

## STATE ELECTORATES

Legislative Council: **NORTHERN VICTORIA**  
 Legislative Assembly: **EUROA**

## OTHER

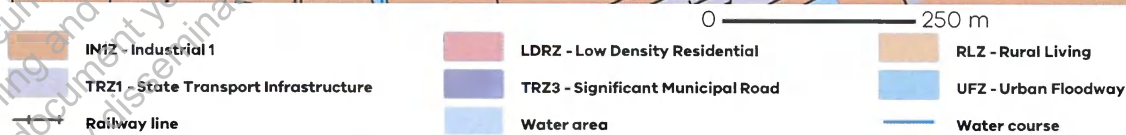
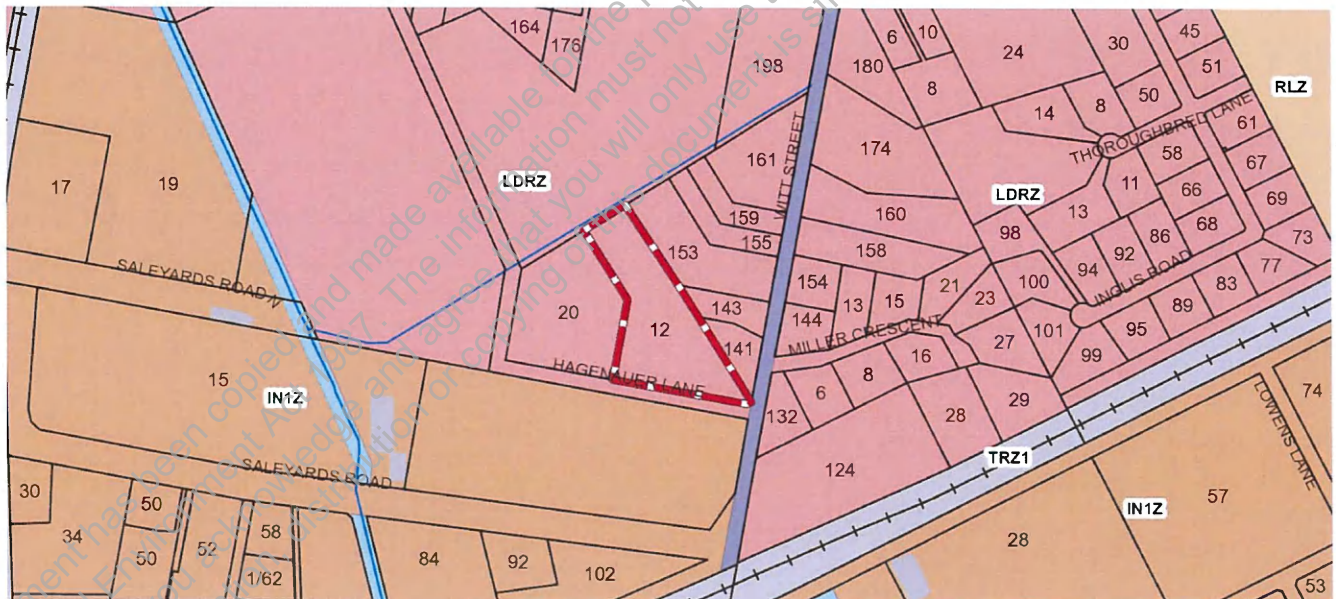
Registered Aboriginal Party: **Yorta Yorta Nation Aboriginal Corporation**

[View location in VicPlan](#)

## Planning Zones

LOW DENSITY RESIDENTIAL ZONE (LDRZ)

SCHEDULE TO THE LOW DENSITY RESIDENTIAL ZONE (LDRZ)



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

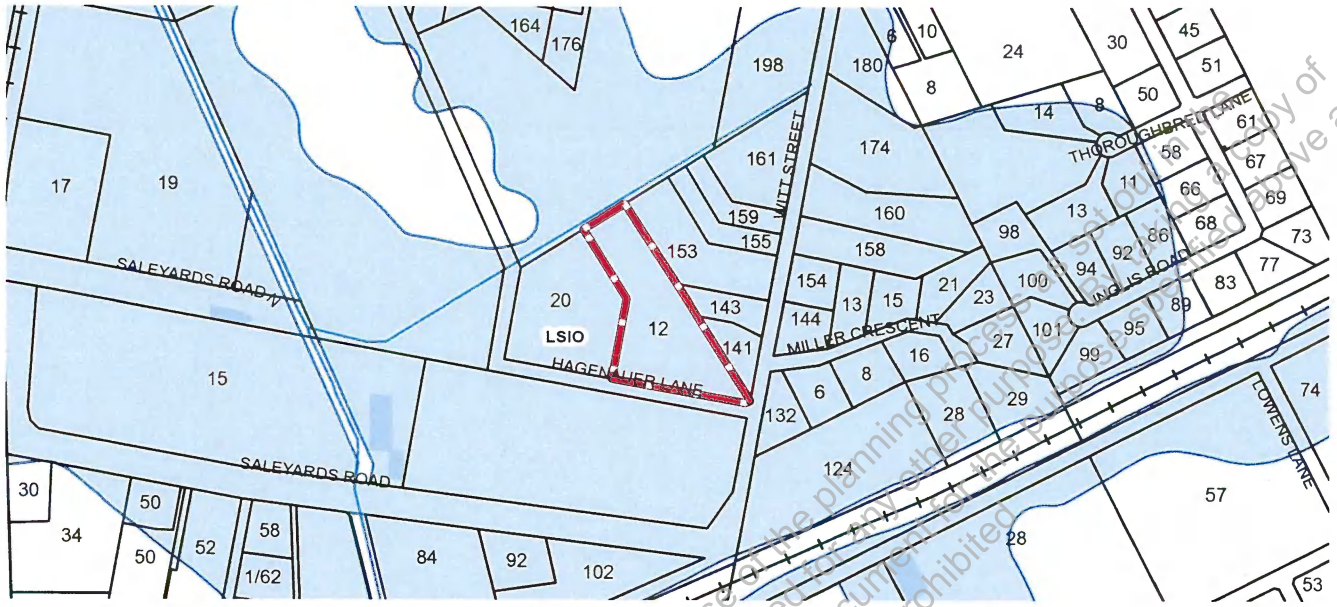
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## Planning Overlays

### LAND SUBJECT TO INUNDATION OVERLAY (LSIO)

### LAND SUBJECT TO INUNDATION OVERLAY SCHEDULE (LSIO)

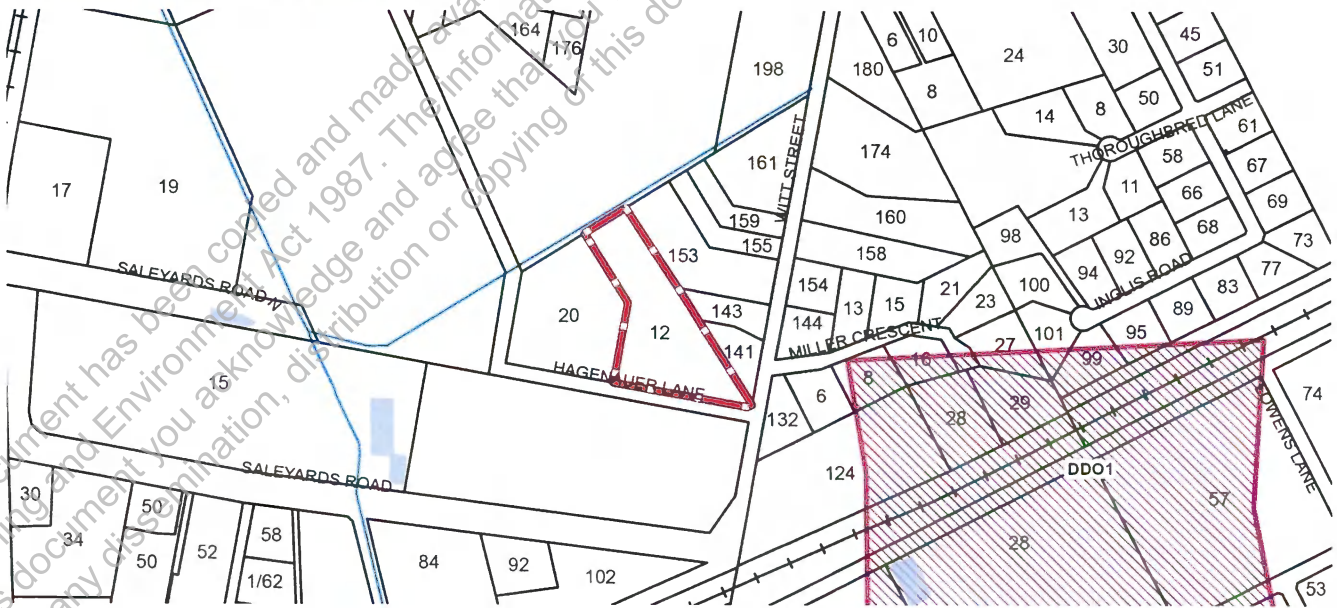


Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

### OTHER OVERLAYS

Other overlays in the vicinity not directly affecting this land

### DESIGN AND DEVELOPMENT OVERLAY (DDO)



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

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## Further Planning Information

Planning scheme data last updated on 7 December 2023.

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>

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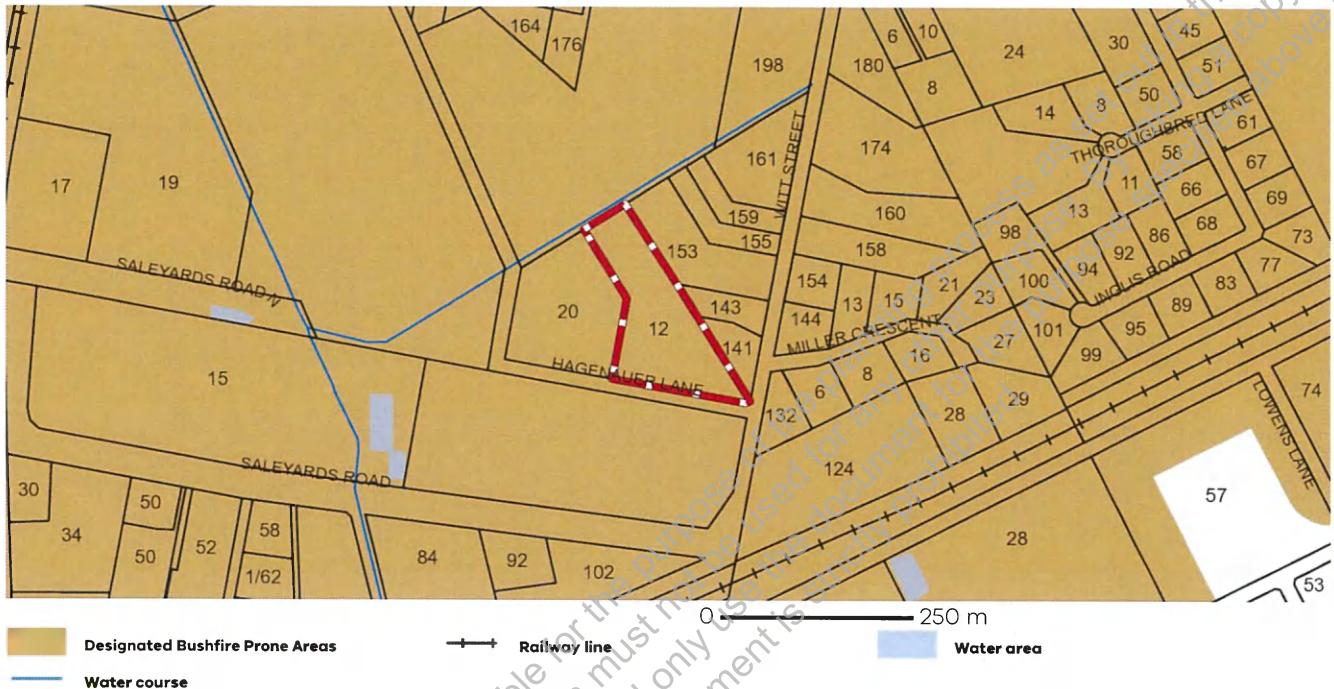
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## Designated Bushfire Prone Areas

This parcel 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.

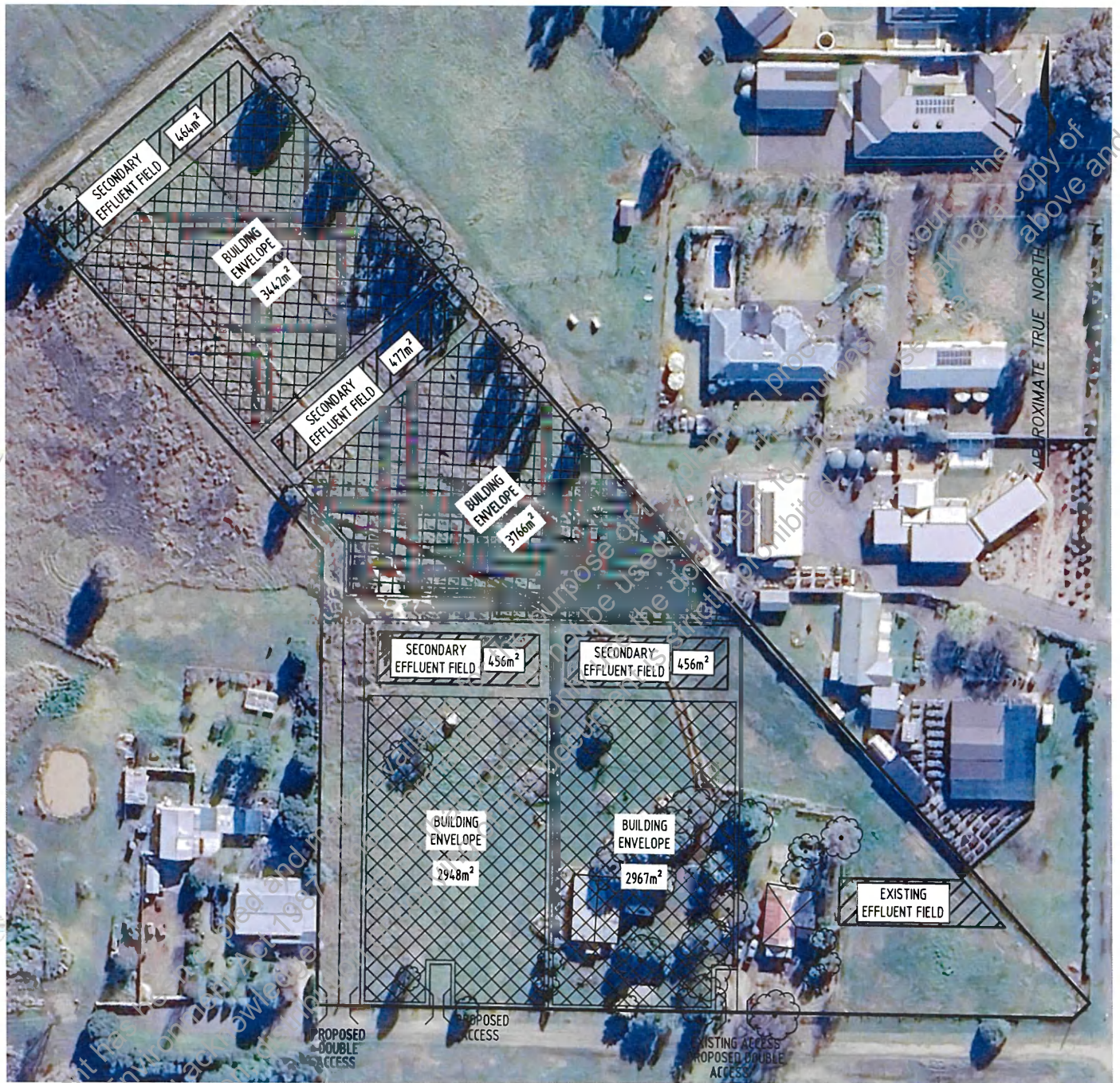
You can find out more about the natural values on your property through NatureKit [NatureKit \(environment.vic.gov.au\)](https://environment.vic.gov.au)




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
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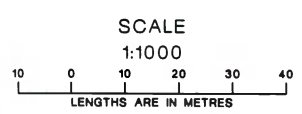
-  EFFLUENT FIELD. LARGER AREAS INDICATE A PRIMARY EFFLUENT TREATMENT. SMALLER AREAS INDICATE A SECONDARY EFFLUENT TREATMENT.
-  RESERVE AREA MUST HAVE THE SAME DIMENSIONS AS A PRIMARY EFFLUENT TREATMENT FIELD.
-  BUILDING ENVELOPE. ZONE IS INDICATES POSSIBLE LOCATION OF A 10m BY 15m BUILDING.

-  EXISTING/PROPOSED ACCESS
-  EXISTING DWELLING
-  EXISTING SHED

NOTE: ALL EFFLUENT FIELDS AND BUILDING ENVELOPES ARE INDICATIVE AND PROOF THE LOTS CAN SUPPORT A DWELLING.



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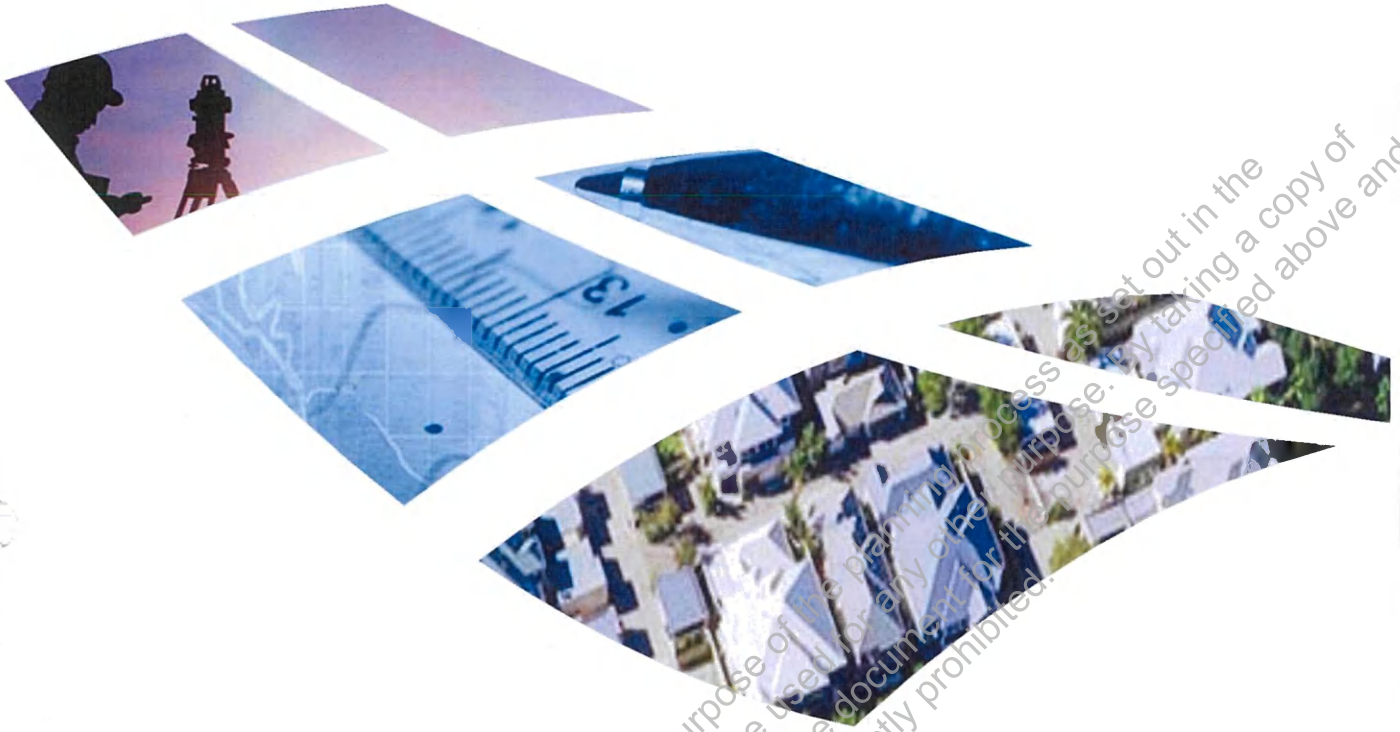


### PROPOSED LAYOUT PLAN

COUNTY OF MOIRA  
PARISH OF BENALLA  
CROWN ALLOTMENT: 1 (PT)  
SECTION: G  
TITLE: C/T V. 8651 F.467  
PTS

DRAFTED BY: JG 6062 LAYOUTv02.dwg

SURVEYORS REF: <b>6062</b>	Sheet 1 of 1 Sheets	CLIENT: LEANNE ALLEN 12 HAGENAUER LANE BENALLA 3672 MEASUREMENTS AND AREAS ARE APPROXIMATE ONLY AND ARE SUBJECT TO SURVEY. LENGTHS ARE IN METRES.
VERSION: <b>01</b>	SCALE 1 : 1000	
	SHEET SIZE <b>A3</b>	



# TOWN PLANNING REPORT

5 LOT SUBDIVISION

ADDRESS

12 Hagenauer Lane, Benalla

PREPARED FOR  
Leanne Allen

DATE  
21 February 2024



SURVEY DESIGN PLANNING

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# Contents

.....	1
<b>1.0 APPLICATION</b> .....	<b>2</b>
1.1 INTRODUCTION .....	2
1.2 PLANNING SCHEME REQUIREMENTS .....	2
1.3 SUMMARY .....	2
<b>2.0 NOMINATED SITE &amp; LOCALITY</b> .....	<b>3</b>
2.1 SITE SUMMARY .....	3
2.2 SURROUNDING LOCALITY .....	4
<b>3.0 PROPOSAL</b> .....	<b>5</b>
3.1 SITE LAYOUT .....	6
<b>4.0 PLANNING ASSESSMENT</b> .....	<b>6</b>
4.1 PLANNING POLICY FRAMEWORK .....	7
4.2 ZONING .....	12
4.3 OVERLAYS .....	<b>Error! Bookmark not defined.</b>
PARTICULAR PROVISIONS .....	17
<b>5.0 CONCLUSION</b> .....	<b>22</b>

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## 1.0 APPLICATION

### 1.1 INTRODUCTION

This report has been prepared by Onleys on behalf of our client and landowners in support of a planning permit application seeking approval for a 5 Lot Subdivision of land. The subject land parcels are located at 12 Hagenauer Lane, Benalla being Lot 3 on PS061283. The subject lot is zoned Low Density Residential Zone and is impacted by a Land Subject to Inundation Overlay.

### 1.2 PLANNING SCHEME REQUIREMENTS

Under the Benalla Shire Planning Scheme, a proposal of this nature generates a planning permit requirement addressing the following provision.

- Clause 32.03-3 of the Low Density Residential Zone indicates a permit is required to subdivide land.

### 1.3 SUMMARY

The site in question is a 2.299-hectare allotment located on the north side of Hagenauer Lane, in the northeast area of the Benalla Township. The lot is zoned Low Density Residential and is impacted by a land subject to inundation overlay.

The intention of this proposal is to subdivide the 2.299 hectares, into five residential based lots sized between 4000m<sup>2</sup> & 5499m<sup>2</sup>, all with independent access to Hagenauer Lane.

The report addresses how the proposal meets the following requirements of the Moira Planning Scheme.

## 2.0 NOMINATED SITE & LOCALITY

### 2.1 SITE SUMMARY

The site is located at 12 Hagenauer Lane, Benalla, which is located within the northeastern aspect of the Benalla Township, approximately 2.7 kilometres from the central shopping district of Benalla.

The allotment in question is of an irregular shape, with the southern boundary having a large frontage to Hagenauer Lane, with the remaining boundaries all adjoining neighbouring properties. The allotment currently supports a 3-bedroom dwelling and associated shedding that has established access to Hagenauer Lane. The land currently has access to most connections but is devoid of sewer services. There is a combination of native and exotic vegetation on the site.

The neighbouring surrounds are residential in nature to the north, west and east with the area south of Hagenauer Road zoned Industrial 1, but at this stage is not highly developed in this manner.



Lot 3 on LP61283

**Figure 1 – Aerial Image of Subject Site**

## 2.2 SURROUNDING LOCALITY

The allotment is in the northeast aspect of the Benalla Township. The immediate surrounding area is zoned for General Residential, Industrial Zone, Transport Zone 3 and a nearby Transport Zone 2.



Figure 2 – Surrounding Area

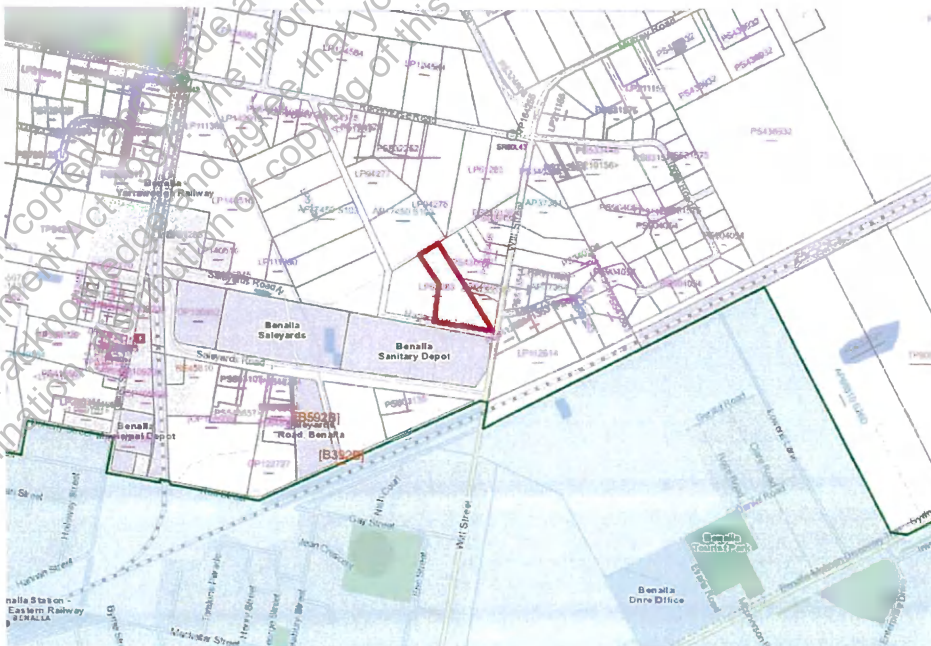
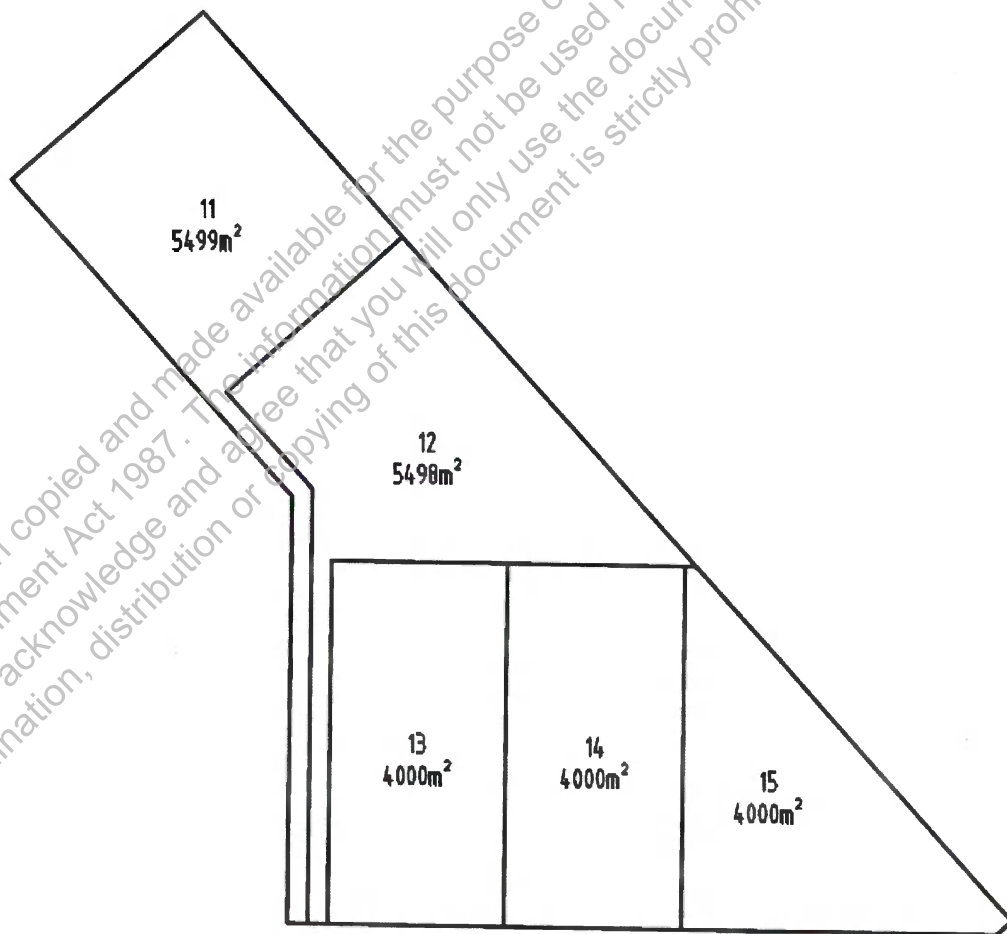


Figure 3 – Surrounding Area Lot Layout

### 3.0 PROPOSAL

The subject site is located on the northeastern side of the Benalla Township on the northern side of Hagenauer Lane, comprising of a combined 2.299 hectares. The site is zoned as Low Density Residential Zone. The proposed subdivision will comprise of the creation of 5 lots within Lot 3 on LP61283.

Lots	Area (m <sup>2</sup> )	Orientation
1	5499	Southwest Facing
2	5498	Southwest Facing
3	4000	South Facing
4	4000	South Facing
5	4000	South Facing



**Figure 4 – Proposed Subdivision Layout**

### 3.1 SITE LAYOUT

The proposed subdivision creates 5 new lots from the original allotment. The allotments will either have a south or southwest facing orientation with independent access for each allotment from Hagenauer Lane, Benalla. The design for this development factors in the integration of street network, and relevant utilities to effectively service this proposal.

### 4.0 PLANNING ASSESSMENT

The application is assessed against the following provisions of the Moira Shire Planning Scheme.

Section	Clause #	Provision
<b>General Provisions</b>		
Planning Policy Framework		
	2.01	Context
	2.02	Vision
	02.03-1	Settlement
	02.03-6	Housing
	11.01-1S	Settlement
	11.02-3S	Sequencing of Development
	12.01-1S	Protection of Biodiversity
	12.05-2S	Landscapes
	13.02-1S	Bushfire Planning
	13.04-1S	Contaminated and potentially contaminated land
	15.01-3S	Subdivision design
<b>Particular Provisions</b>		
<b>Zones</b>		
	32.03	Low Density Residential Zone
	65.02	Decision Guidelines - Subdivision
<b>Overlays</b>		
	44.04	Land Subject to Inundation Overlay
	56	Residential Subdivision



## 4.1 PLANNING POLICY FRAMEWORK

### Clause 2.01 Context

Benalla Rural City covers an area of 2354 square kilometres, has a population of 14,020 (VIF 2019) and is situated in Victoria's northeast approximately 180 kilometres from Melbourne. The urban centre of Benalla is the major city and supports a network of smaller towns including Baddaginnie, Goorambat, Devenish, Swanpool, Tatong, Thoona and Winton.

Benalla Rural City is a diverse rural municipality based on the Broken River. It also includes fertile agricultural land along the Hollands Creek which is a major tributary to the Broken River.

The major water features are the Broken River, Hollands Creek, Winton Wetlands, Lake Nillahcootie and Lake Benalla. The wetlands, river corridors, Mount Samaria State Park, Reef Hills State Park and parts of the Warby Ranges State Park form the major environmental features and, along with roadsides, support most of the remaining native vegetation.

The municipality is strategically located on the nationally significant Hume and Midland Highways and Melbourne to Sydney Railway. This convergence of transport routes means Benalla is a significant transport hub which is a major benefit to local industry.

The economy is focussed on Benalla's regional centre role, agricultural production, tourism and manufacturing. It is dominated by employment in the manufacturing, retail trade, agriculture and health and community services sectors.

The Benalla Central Business District (CBD) serves a large rural hinterland and provides a wide range of higher order community services and facilities but faces strong competition from Shepparton and Wangaratta.

The municipality has a strong industrial base located to the north and east of Benalla. The industries are generally based on specialist manufacturing, processing of timber products, value adding to agricultural produce and providing a service base for the region.

The rural areas of the municipality are acknowledged for good soils and access to irrigation water. The major agricultural industries are prime lamb, beef production and broad acre cropping, with some irrigation and dairying. More recent agricultural uses include viticulture, horticulture and forestry.

## Clause 2.02 Vision

A sustainable, thriving and cohesive community where lifestyle, culture, health and wellbeing are supported by strong leadership and community partnership.

## Clause 2.03-1 Settlement

**Benalla** (pop 10,430 (VIF 2019)) is the major urban centre of the municipality, and provides the focus for most residential, commercial, retail and industrial opportunities. The Benalla CBD includes a traditional strip shopping centre along a main road and suffers from pedestrian and vehicular conflicts and retail fragmentation.

Benalla's central location in regional Victoria attracts regional offices for government departments and modern education facilities including the Goulburn Ovens Institute of TAFE.

Enterprise Park provides the bulk of industrial opportunities while Benalla has the capacity to accommodate larger industry that requires buffers to the north of town.

Benalla is situated on Lake Benalla, which is a significant natural feature of local and regional importance. Development at the interface with the lake environs needs to be carefully assessed and have regard to urban and landscape character including views.

## Clause 2.03-6 Housing

Ageing population and decreasing household size requires the provision of a greater diversity in dwelling options. Medium density housing should maintain the character of residential areas and be located close to services. There is a high demand for supported accommodation for older people, particularly hostel and retirement housing.

The municipality has attracted residents to non-urban areas due to the ease of access from major population centres, attractive landscape and environment, lifestyle qualities and improved telecommunications. This form of land use can affect agricultural activities by inhibiting the operation of farming activities raising the value of land above agriculture levels.

Rural residential living must be planned in locations that support existing communities and settlements, supplied with physical and community services, and not detract from agricultural or other land uses.

In managing housing, Council seeks to:

- Encourage a diverse housing mix that meets the changing demographics of the community, including medium density housing, standard residential development, low density residential and rural living development.
- Support planned rural residential opportunities whilst minimising environmental or agricultural impacts.

Response: The proposal supports the intent of this clause in that it is a subdivision that will create rural residential opportunities in an area identified by Council as suitable for this style of development.

### **Clause 11.01-1S Settlement**

This clause is of relevance to promote the sustainable growth and development of Victoria and deliver choice and opportunity for all Victorians through a network of settlements.

Strategies that are relevant to the proposal include:

- *Develop sustainable communities through a settlement framework offering convenient access to jobs, services, infrastructure and community facilities.*
- *Support sustainable development of the regional centres of Ararat, Bacchus Marsh, Bairnsdale, Benalla, Castlemaine, Colac, Echuca, Gisborne, Hamilton, Kyneton, Leongatha, Maryborough, Portland, Sale, Swan Hill, Warragul/Drouin and Wonthaggi.*
- *Ensure regions and their settlements are planned in accordance with their relevant regional growth plan.*
- *Guide the structure, functioning and character of each settlement taking into account municipal and regional contexts and frameworks.*
- *Provide for growth in population and development of facilities and services across a regional or sub-regional network.*

Response: The proposed subdivision is consistent with the above policies as it will create low density residential style allotments within the Council's Low Density Residential Zone. Opportunities for low density and rural living style developments were also identified in the Benalla Urban Growth Strategy of 2019.

### **Clause 11.02-3S Sequencing of Development**

*This clause is of relevance to this application as its objective is to manage the sequence of development in areas of growth so that services are available from early in the life of new communities.*

Strategies that are relevant to the proposal include:

- *Define preferred development sequences in areas of growth to better coordinate infrastructure planning and funding.*
- *Ensure that new land is released in areas of growth in a timely fashion to facilitate coordinated and cost-efficient provision of local and regional infrastructure.*
- *Require new development to make a financial contribution to the provision of infrastructure such as community facilities, public transport, and roads.*
- *Improve the coordination and timing of infrastructure and service delivery in areas of growth.*
- *Support opportunities to co-locate facilities.*
- *Ensure that planning for water supply, sewerage and drainage works receives high priority in early planning for areas of growth.*

Response: The proposed site is in the existing Low Density Residential area of Benalla with the immediate neighbouring area to the north also being developed into larger allotments

A full range of services including power, potable water, gas, and telecommunications are readily accessible to the site.

### **Clause 12.01-1S Protection of Biodiversity**

This clause is of relevance as it seeks to assist the protection and conservation of Victoria's Biodiversity.

Strategies relevant to the proposal include:

- *Use biodiversity information to identify important areas of biodiversity, including key habitat for rare or threatened species and communities, and strategically valuable biodiversity sites.*
- *Strategically plan for the protection and conservation of Victoria's important areas of biodiversity.*
- *Ensure that decision making takes into account the impacts of land use and development on Victoria's biodiversity, including consideration of:*
  - *Cumulative impacts.*
  - *Fragmentation of habitat.*
  - *The spread of pest plants, animals, and pathogens into natural ecosystems.*
- *Avoid impacts of land use and development on important areas of biodiversity.*

Response: The proposed allotments have a selection of Native & Exotic Vegetation, which are not proposed to be removed as part of this application.

### **Clause 12.05-2S Landscapes**

This clause is of relevance as it seeks to protect and enhance significant landscapes and open spaces that contribute to character, identity, and sustainable environments.

The strategies associated with this objective include:

- *Ensure significant landscape areas such as forests, the bays and coastlines are protected.*
- *Ensure development does not detract from the natural qualities of significant landscape areas.*
- *Improve the landscape qualities, open space linkages and environmental performance in significant landscapes and open spaces, including green wedges, conservation areas and non-urban areas.*
- *Recognise the natural landscape for its aesthetic value and as a fully functioning system.*
- *Ensure important natural features are protected and enhanced.*

Response: The proposed lots have been appropriately sited and designed. The new lots will be developed to minimise the extent of cut and fill by seeking to develop appropriate lot sizes.

### **Clause 13.02-1S Bushfire Planning**

This objective of this clause is to strengthen the resilience of settlements and communities to bushfire through risk based planning that prioritises the protection of human life.

This policy must be applied to all planning and decision making under the Planning and Environment Act 1987 relating to land that is:

- Within a designated bushfire prone area.
- Subject to a Bushfire Management Overlay; or
- Proposed to be used or developed in a way that may create a bushfire hazard.

Response: The proposed subdivision will meet the objectives of Clause 13.02-1S. The site will have access to a constant water supply, and fire breaks, if required can be managed during the construction phase of the subdivision.

Notwithstanding, the proposal will meet the relevant regulations in accordance with the CFA Act 1958.

Standard conditions relating to the CFA guidelines can also be included subject to any permit issued.

### **Clause 15.01-3S Subdivision Design**

This clause is relevant to the proposal as its objective is to ensure the design of subdivisions achieves attractive, safe, accessible, diverse, and sustainable neighbourhoods.

The strategies in support of this objective include;

- *Creating compact neighbourhoods that have walkable distances between activities.*
- *Creating urban places with a strong sense of place that are functional, safe and attractive.*
- *Providing a range of lot sizes to suit a variety of dwelling and household types to meet the needs and aspirations of different groups of people.*
- *Facilitating an urban structure where neighbourhoods are clustered to support larger activity centres served by high quality public transport.*

Response: The proposed subdivision layout is consistent with the Low Density Residential Zoning and utilises existing road infrastructure with all lots being designed to have direct access to Hagenauer Lane.

## 4.2 ZONING

### Clause 32.03 Low Density Residential Zone

The subject land is located within the Low Density Residential Zone as shown in Figure 4 below. Clause 32.03-3 of the Low Density Residential Zone indicates a planning permit is required to subdivide land.

The purposes of the Low Density Residential Zone include:

- *To implement the Municipal Planning Strategy and the Planning Policy Framework.*
- *To provide for low-density residential development on lots which, in the absence of reticulated sewerage, can treat and retain all wastewater.*

Response: The proposed development is consistent with the intention of the zone in that it is a low-density residential development within a designated Low Density Residential Zone.

### Clause 32.08 -13 - Decision Guidelines

The Municipal Planning Strategy and the Planning Policy Framework	The proposal is considered to be consistent with Planning Policy Framework in that it will contribute to the Low Density Residential Zone.
The protection and enhancement of the natural environment and character of the area including the retention of vegetation and faunal habitat and the need to plant vegetation along waterways, gullies, ridgelines and property boundaries.	The proposal is consistent with the purpose of the zone, in particular providing low-density residential development on lots which, in the absence of reticulated sewerage, can treat and retain all wastewater. A Land Capability Statement accompanies this application.
The availability and provision of utility services, including sewerage, water, drainage, electricity and telecommunications.	None Applicable
In the absence of reticulated sewerage: <ul style="list-style-type: none"> <li>• The capability and suitability of the lot to treat and retain all wastewater as determined by a Land Capability Assessment on the risks to human health and the environment of an on-site wastewater management system constructed, installed, or altered on the lot in accordance with the requirements of the Environment Protection Regulations</li> </ul>	A Land Capability assessment accompanies this application, demonstrating that the treatment of all effluent can be dealt with within the confines of each proposed development.

<p>under the <i>Environment Protection Act 2017</i>.</p> <ul style="list-style-type: none"> <li>The benefits of restricting the size of lots to generally no more than 2 hectares to enable lots to be efficiently maintained without the need for agricultural techniques and equipment.</li> </ul>	
The relevant standards of Clauses 56.07-1 to 56.07-4.	Addressed later in this report.

### Clause 65.02 – Decision Guidelines Application to Subdivide Land

The suitability of the land for subdivision.	The land is suitable for subdivision and is located in a Low Density Residential Zone.
The existing use and possible future development of the land and nearby land.	The allotment currently supports an older dwelling, supporting shedding and yards. The proposal will create allotments of similar size to the Low Density Residential Land immediately to the north and northeast of this development.
The availability of subdivided land in the locality, and the need for the creation of further lots.	The Benalla Urban Growth Strategy identifies current zoned land that is suitable for Low Density and Rural Living opportunities, which this development adheres to.
The effect of development on the use or development of other land which has a common means of drainage	The proposed development will not have an adverse effect on the common means of drainage.
The subdivision pattern having regard to the physical characteristics of the land including existing vegetation	The proposal creates allotments of size that are demonstrated to sustain a building envelope and supporting effluent treatment field without adversely impacting on native vegetation
The density of the proposed development.	The density of the proposal is consistent with the surrounding areas of the northeast area of the Benalla Township.
The area and dimensions of each lot in the subdivision.	The lots range from 4000m <sup>2</sup> to 5499m <sup>2</sup> .

The layout of roads having regard to their function and relationship to existing roads	The development will create 5 allotments all with independent access to Hagenauer Lane.
The movement of pedestrians and vehicles throughout the subdivision and the ease of access to all lots	All lots will have independent access to Hagenauer Lane.
The provision and location of reserves for public open space and other community facilities.	The development is with 2.5 kilometres of the Benalla Racecourse and the surrounding sporting facilities. It is also felt that given the size of the proposed allotments, walking access to local parks is not as detrimental as it would be in a residential based development.
The staging of the subdivision.	The proposal is not a staged subdivision.
The design and siting of buildings having regard to safety and the risk of spread of fire.	N/A
The provision of off-street parking.	The proposed allotment sizes are considered adequate for off street parking for each allotment
The provision and location of common property.	Common Property does not form part of this application.
The functions of any body corporate.	A body corporate is not proposed as part of this development.
The availability and provision of utility services, including water, sewerage, drainage, electricity, and gas.	The proposed subdivision will include the provision of all available utilities.
If the land is not sewered and no provision has been made for the land to be sewered, the capacity of the land to treat and retain all sewage and sullage within the boundaries of each lot.	A Land Capability Statement confirming all effluent can be treated within the confines of each title is supplied with this application.
Whether, in relation to subdivision plans, native vegetation can be protected through subdivision and siting of open space areas.	As all lots are in excess of 4000m <sup>2</sup> . No native vegetation will be deemed lost as part of this application.



The impact the development will have on the current and future development and operation of the transport system.

The development utilizes the existing council road infrastructure, with all allotments having access to Hagenauer Lane. The current Benalla public transport infrastructure does not service this section of Benalla.

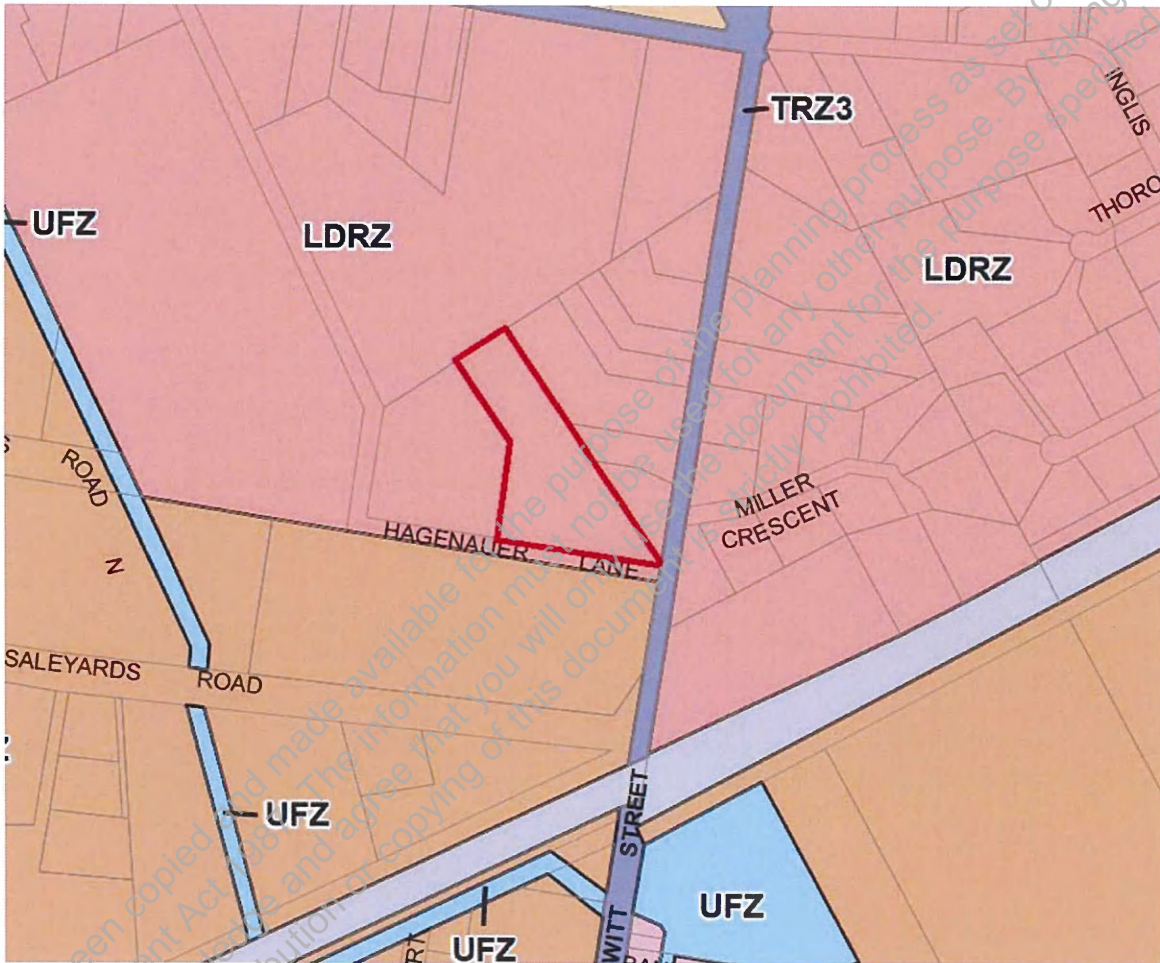


Figure 5 - Zoning map showing the subject land in the General Residential Zone

## 4.3 OVERLAYS

### Clause 44.04 Land Subject to Inundation Overlay (LSIO)

The subject site is affected by a Land Subject to Inundation Overlay (LSIO) as shown in Figure 7 below.

The purpose of this overlay is:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To identify land in a flood storage or flood fringe area affected by the 1 in 100-year flood or any other area determined by the floodplain management authority.
- To ensure that development maintains the free passage and temporary storage of floodwaters, minimises flood damage, is compatible with the flood hazard and local drainage conditions and will not cause any significant rise in flood level or flow velocity.
- To minimise the potential flood risk to life, health and safety associated with development.
- To reflect any declaration under Division 4 of Part 10 of the Water Act, 1989 where a declaration has been made.
- To protect water quality in accordance with the provisions of relevant State Environment Protection Policies, particularly in accordance with Clauses 33 and 35 of the State Environment Protection Policy (Waters of Victoria).
- To ensure that development maintains or improves river and wetland health, waterway protection and flood plain health.

Pursuant to Clause 44.04-3 A permit is required to subdivide land.

Response: The proposed subdivision is not proposing new development, only a change in cadastre and therefore will have no new impact on the Land Subject to Inundation Overlay.

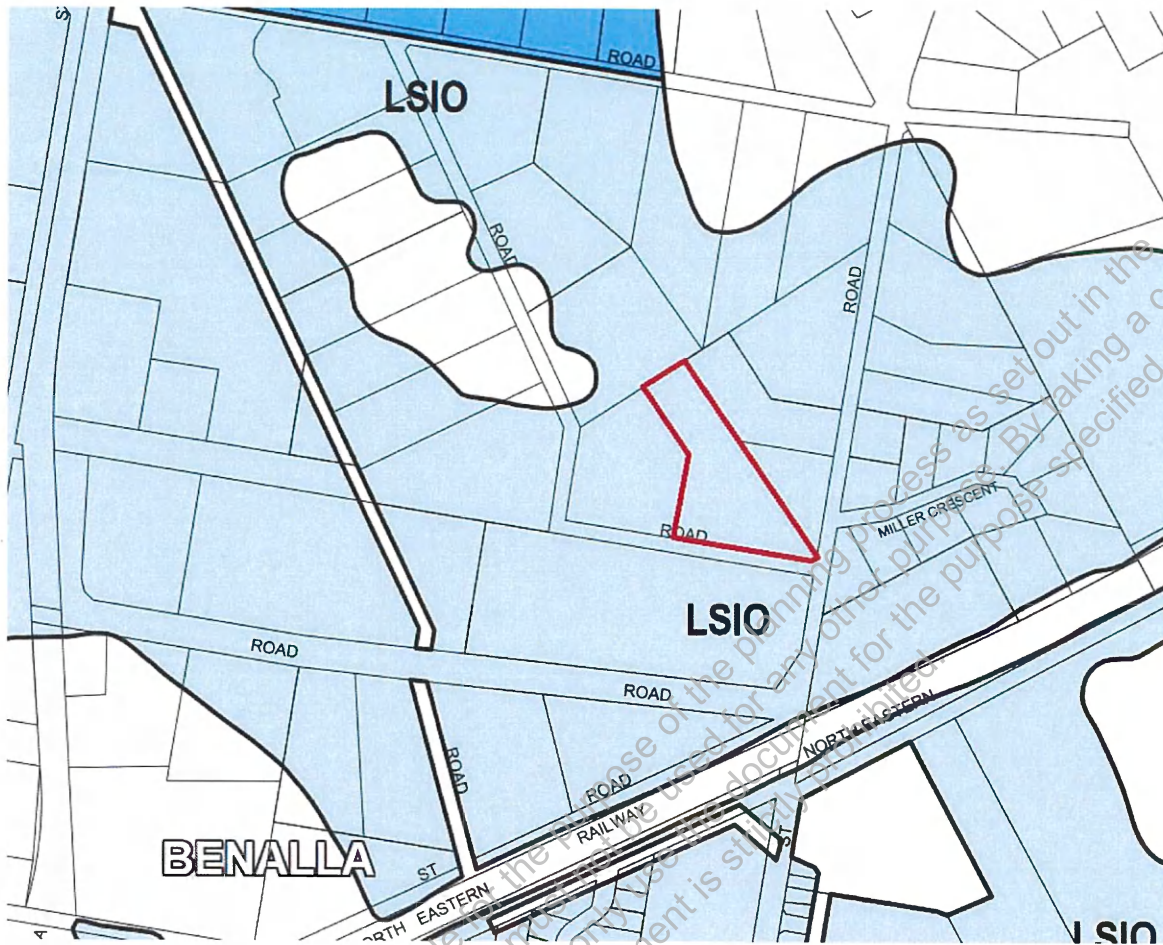


Figure 6 – Overlay map showing the land is subject to a Land Subject to Inundation Overlay

## PARTICULAR PROVISIONS

### Clause 56 Residential Subdivision

Pursuant to Clause 32.08-3, an application to subdivide land must meet the requirements of Clause 56, including the objectives and standards included in the clauses specified in the table to Clause 32.08-3. Accordingly, an application to subdivide land between 3 - 15 lots must be assessed against all except Clauses 56.02-1, 56.03-1 to 56.03-4, 56.05-2, 56.06-1, 56.06-3 56.06-6

The following table provides an assessment against the applicable clauses.

<p><b>Clause 56.07-1</b></p> <p><b>Drinking water Supply Objectives</b></p> <p>To reduce the use of drinking water.</p> <p>To provide an adequate, cost-effective supply of drinking water.</p>	<p><b>Standard C22</b></p> <p>The supply of drinking water must be:</p> <ul style="list-style-type: none"> <li>• Designed and constructed in accordance with the requirements and to the satisfaction of the relevant water authority.</li> <li>• Provided to the boundary of all lots in the subdivision to the satisfaction of the relevant water authority</li> </ul>	<p><b>Complies</b></p> <p>The drinking water infrastructure will be designed and connected to the standards of the relevant water authority.</p>
<p><b>Clause 56.07-2</b></p> <p><b>Reused and recycled water objective</b></p> <p>To provide for the substitution of drinking water for non-drinking purposes with reused and recycled water.</p>	<p><b>Standard C23</b></p> <p>Reused and recycled water supply systems must be:</p> <ul style="list-style-type: none"> <li>• Designed, constructed, and managed in accordance with the requirements and to the satisfaction of the relevant water authority, Environment Protection Authority and Department of Health and Human Services.</li> <li>• Provided to the boundary of all lots in the subdivision where required by the relevant water authority.</li> </ul>	<p><b>Not Applicable:</b></p> <p>The use of reused or recycled water is not part of the development plan.</p>
<p><b>Clause 56.07-3</b></p> <p><b>Wastewater management objective</b></p> <p>To provide a wastewater system that is adequate for the maintenance of public health and the management of</p>	<p><b>Standard C24</b></p> <p>Wastewater systems must be:</p> <ul style="list-style-type: none"> <li>• Designed, constructed, and managed in accordance with the requirements and to the satisfaction of the relevant water authority and the Environment Protection Authority.</li> </ul>	<p><b>Complies.</b></p> <p>The wastewater infrastructure will be designed and connected to the standards of the relevant water authority.</p>

<p>effluent in an environmentally friendly manner.</p>	<ul style="list-style-type: none"> <li>• Consistent with any relevant approved domestic wastewater management plan.</li> </ul> <p>Reticulated wastewater systems must be provided to the boundary of all lots in the subdivision where required by the relevant water authority.</p>	
<p><b>Clause 56.07-4</b></p> <p><b>Stormwater management objectives</b></p> <p>To minimise damage to properties and inconvenience to residents from stormwater.</p> <p>To ensure that the street operates adequately during major storm events and provides for public safety.</p> <p>To minimise increases in stormwater and protect the environmental values and physical characteristics of receiving waters from degradation by stormwater.</p> <p>To encourage stormwater management that maximises the retention and reuse of</p>	<p><b>Standard C25</b></p> <p>The stormwater management system must be:</p> <ul style="list-style-type: none"> <li>• Designed and managed in accordance with the requirements and to the satisfaction of the relevant drainage authority.</li> <li>• Designed and managed in accordance with the requirements and to the satisfaction of the water authority where reuse of stormwater is proposed.</li> <li>• Designed to meet the current best practice performance objectives for stormwater quality as contained in the Urban Stormwater - Best Practice Environmental Management Guidelines (Victorian Stormwater Committee, 1999).</li> <li>• Designed to ensure that flows downstream of the subdivision site are restricted to pre-development levels unless increased flows are approved by the relevant drainage authority and there are no detrimental downstream impacts.</li> </ul>	<p><b>Complies.</b></p> <p>The stormwater infrastructure will be designed and connected to the standards of the relevant water authority.</p>

<p>stormwater. To encourage stormwater management that contributes to cooling, local habitat improvements and provision of attractive and enjoyable spaces.</p>	<ul style="list-style-type: none"> <li>• Designed to contribute to cooling, improving local habitat and providing attractive and enjoyable spaces.</li> </ul> <p>The stormwater management system should be integrated with the overall development plan including the street and public open space networks and landscape design.</p> <p>For all storm events up to and including the 20% Average Exceedance Probability (AEP) standard:</p> <ul style="list-style-type: none"> <li>• Stormwater flows should be contained within the drainage system to the requirements of the relevant authority.</li> <li>• Ponding on roads should not occur for longer than 1 hour after the cessation of rainfall.</li> </ul> <p>For storm events greater than 20% AEP and up to and including 1% AEP standard:</p> <ul style="list-style-type: none"> <li>• Provision must be made for the safe and effective passage of stormwater flows.</li> <li>• All new lots should be free from inundation or to a lesser standard of flood protection, where agreed by the relevant floodplain management authority.</li> <li>• Ensure that streets, footpaths, and cycle paths that are subject to flooding meet the safety criteria <math>daVave &lt; 0.35 \text{ m}^2/\text{s}</math> (where, <math>da</math> = average depth in metres and <math>Vave</math> = average velocity in metres per second).</li> </ul> <p>The design of the local drainage network should:</p>
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- Ensure stormwater is retarded to a standard required by the responsible drainage authority.
- Ensure every lot is provided with drainage to a standard acceptable to the relevant drainage authority. Wherever possible, stormwater should be directed to the front of the lot and discharged into the street drainage system or legal point of discharge.
- Ensure that inlet and outlet structures take into account the effects of obstructions and debris build up. Any surcharge drainage pit should discharge into an overland flow in a safe and predetermined manner.
- Include water sensitive urban design features to manage stormwater in streets and public open space. Where such features are provided, an application must describe maintenance responsibilities, requirements, and costs.

Any flood mitigation works must be designed and constructed in accordance with the requirements of the relevant floodplain management authority.

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## 5.0 CONCLUSION

The proposal for the subdivision of land at 12 Hagenauer Lane, Benalla represents a thorough and contextual design response that provides a Low Density Residential subdivision in a natural landscape character setting.

In summary, it is submitted that the proposal is a positive response to the site context and is strongly supported by the Benalla Planning Framework. In particular:

- The proposed subdivision supports the key directions of the Planning Policy Frameworks promoting housing diversity and providing land suitable for the construction of residential dwellings.
- The proposed subdivision is consistent with the Benalla Urban Growth Strategy, in that this land is identified as Residential Land.
- The proposal complies with the relevant objectives and standards of Clause 56.
- The proposed subdivision provides an appropriate design response to the constraints of the land having regard to the environmental site conditions including slope, native vegetation, land subject to inundation, and potentially contaminated land.
- The proposed subdivision will not impact on areas of Aboriginal Cultural Heritage Significance.

Given the above it is submitted that the proposal should be supported, subject to standard conditions.



## Land Capability Assessment

12 Hagenauer Lane, Benalla



## Distribution

### Land Capability Assessment

12 Hagenauer Lane, Benalla

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Accreditation Land Capability Assessment for On-site Wastewater Management Certificate CET, 2015  
 Experience 10 years' experience in geotechnical engineering and environmental assessments, with a focus on wastewater management across all states of Australia.

Edition	Description	Date
001	Version 1	08/03/2024

## 1. SUMMARY

The following summary table should be read in conjunction with the entire report.

<u>Designs wastewater load</u>	4 Bedroom dwelling	900 L/day
<u>Soils characteristics</u>	<u>Horizon A</u>	<u>Horizon B</u>
Soil category	3b Loam	5b Light clay
Indicative permeability	0.5-1.5 m/d	0.06-0.12 m/d
<u>Critical site features</u>	<ul style="list-style-type: none"> <li>Proposed small lot size.</li> <li>Low permeable clay soils.</li> <li>Land subject to inundation Overlay</li> </ul>	
<u>Minimum treatment requirements</u>	Secondary	
<u>Disposal system</u>	<u>Suitability</u>	<u>Area required</u>
Absorption trenches	Not suitable	N/A
Subsurface Irrigation	Suitable	440 m <sup>2</sup>
ETA Beds	Suitable	225 m <sup>2</sup>
Mound	Suitable	225 m <sup>2</sup>
<u>Wastewater can be sustainably disposed to land</u>		Yes

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Table of Contents

<b>1. SUMMARY</b> .....	<b>3</b>
<b>2. INTRODUCTION:</b> .....	<b>5</b>
2.1 Proposed Development:.....	5
<b>3. SITE DESCRIPTION:</b> .....	<b>5</b>
3.1 Site Location: .....	5
3.2 Site Topography and Condition:.....	5
3.3 Key Site Information: .....	6
3.4 Site Geology:.....	7
<b>4. SOIL ASSESSMENT AND CONSTRAINTS:</b> .....	<b>7</b>
4.1 Soil Profile:.....	7
4.2 Site Exposure: .....	7
4.3 Soil Assessment: .....	8
A summary of the analysis is included in Table 4.3.....	8
4.4 Field Assessed Permeability: .....	9
4.5 Critical site Features: .....	9
<b>5. LAND CAPABILITY ASSESSMENT MATRIX:</b> .....	<b>10</b>
<b>6. MANAGEMENT PROGRAM:</b> .....	<b>13</b>
6.1 Treatment System: .....	13
6.1.1 Aerated Wastewater Treatment System (AWTS):.....	13
6.1.2 Sand Filters: .....	13
6.2 Treatment System Location:.....	13
6.2.1 Septic Tank Sizing: .....	14
6.3 Land Application:.....	14
6.3.1 Disposal systems:.....	14
6.4 Land Application Outputs:.....	15
6.5 Proposed Wastewater Envelope: .....	15
6.6 Existing Open Spoon Drain: .....	15
6.7 Designated Area: .....	16
6.7.1 Setback Distances: .....	17
6.8 Soil Renovation:.....	17
6.9 Monitoring, Operation and Maintenance: .....	17
6.9.1 Storm Water Management:.....	19
<b>7. CONCLUSIONS:</b> .....	<b>19</b>
<b>8. REFERENCES:</b> .....	<b>19</b>

## 2. INTRODUCTION:

A.C. Geotechnical Pty Ltd (AC) have been engaged to undertake a Land Capability Assessment (LCA) for the proposed subdivision of 12 Hagenauer Lane, Benalla

The objectives of the assessment was to determine the following:

- Sub-surface ground profile and geological setting.
- The depth to groundwater (if encountered).
- The permeability of the soil profile.
- The capability of the proposed lots to sustainably manage wastewater within the allotment boundaries.
- A minimum wastewater envelope size for each proposed lot.
- A general management program for each proposed lot that should be put into place to minimise health and environmental impacts of on-site wastewater management, including the impact on surface water and groundwater.

### 2.1 Proposed Development:

It is proposed to subdivide the site into 5 lots with sizes ranging from 4000 m<sup>2</sup> m to 5499 m<sup>2</sup>.

For the purpose of this assessment, a design wastewater load for a four (4) bedroom dwelling without water saving fixtures has been used to calculate the minimum LAA size for each proposed lot.

## 3. SITE DESCRIPTION:

### 3.1 Site Location:

The subject site is located on the corner of Hagenauer Lane and Witt Street. The site is surrounded by similar size properties, the assumed land use of these properties is summarised in **Table 3.1**.

**Table 3.1 -Surrounding land use**

North	Low density residential
South	Low density residential
East	Low density residential
West	Low density residential

### 3.2 Site Topography and Condition:

The site is a triangular shape on the north side of Hagenauer Lane. The site contains an existing dwelling and multiple outbuilds. An open drain runs through the centre of the site.

Vegetation on the site comprises open pasture and scattered mature trees.

Site photographs are included in **Appendix B**.

### 3.3 Key Site Information:

A summary of site characteristic and wastewater loading are included in **Table 3.3**.

**Table 3.3 -Key site features**

<b>Site Address</b>	12 Hagenauer Lane, Benalla
<b>Owner/Applicant</b>	LK & SA Pty Ltd
<b>Local Council</b>	Benalla
<b>Zoning</b>	Low Density Residential (LDRZ)
<b>Total Land Area</b>	Approximately 2.32 ha Subdivided to lots between 4000 m <sup>2</sup> and 5499 m <sup>2</sup>
<b>Domestic Water Supply</b>	Reticulated/Tank
<b>Anticipated wastewater loads (Litres/day)</b>	<u>EPA Code of practice - onsite wastewater management (2016)</u> Household without water reduction fixtures 180 L / person / day. Persons = no. bedrooms + 1 (4 + 1 = 5 persons) <b>Design wastewater load.</b> 5 x 180 = 900 L / day
<b>Organic Material Loading Design Rates</b>	<u>EPA Code of practice - onsite wastewater management (2016)</u> 60 g per person per day (5 x 60) = 300 g/day
<b>Availability of sewer</b>	Sewer is not likely to become available to this area in the near future
<b>Groundwater Quality</b>	Groundwater is classified as Brackish (1000 - 3500 mg/L TDS) <a href="http://www.vvg.org.au">www.vvg.org.au</a>
<b>Water Table</b>	Local registered bores in the area suggest the ground water is held approximately 10 m below the surface
<b>Climate</b>	Average annual rainfall 623.3 mm
<b>Flood Potential</b>	Land subject to inundation Overlay
<b>Water catchment area</b>	N/A
<b>Proximity to waterways</b>	N/A
<b>Vegetation</b>	Pasture, scattered mature trees
<b>Exposure</b>	Generally open
<b>Slope</b>	Relatively level
<b>Landform</b>	Plains
<b>Erosion Potential</b>	Negligible.
<b>Surface Drainage</b>	Good
<b>Rocks and Rock Outcrop</b>	None

### 3.4 Site Geology:

According to the Geological Survey of Victoria, the site is in an area of Quaternary aged alluvial deposits belonging to Shepparton Formation. An extract from GeoVic 3 is included in **Figure 3.4**.

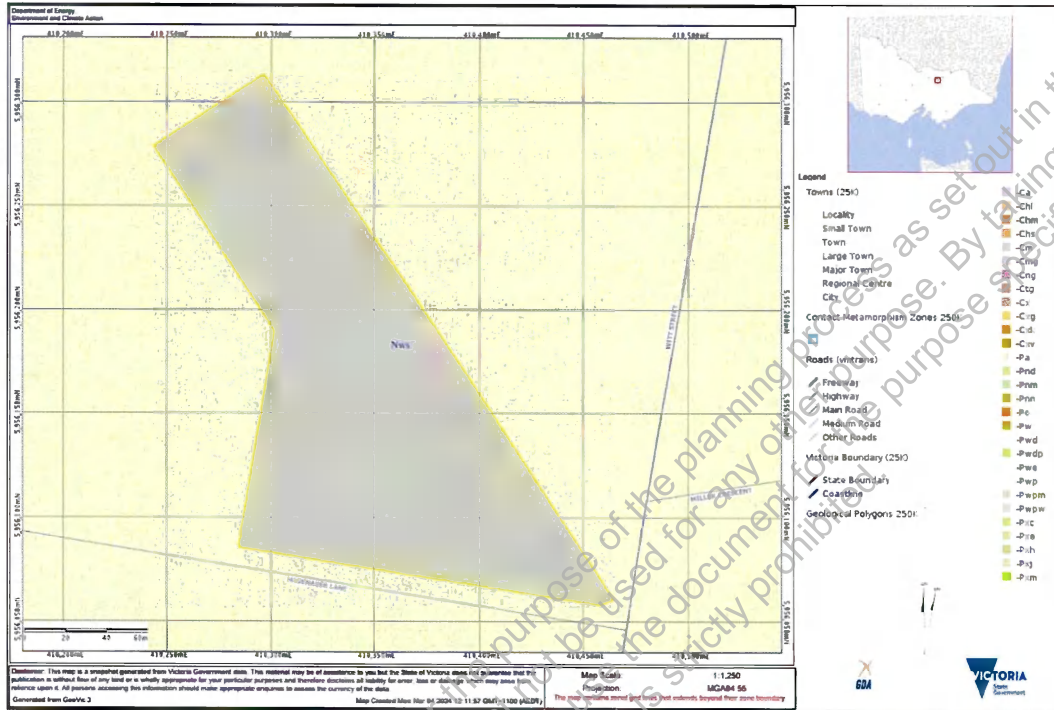


Figure 3.4 Extract of Geological from GeoVic 3

## 4. SOIL ASSESSMENT AND CONSTRAINTS:

### 4.1 Soil Profile:

The soil profile encountered during the investigation consisted of pale brown silt overlaying medium plasticity, brown, silty clay.

The critical soil horizon are the medium plasticity silty clay.

No groundwater was encountered during this investigation. No abnormal moisture conditions were identified through this assessment.

Borelogs are included in **Appendix C**.

### 4.2 Site Exposure:

A general assessment of the site exposure is as follows:

The site is exposed to the prevailing winds. The proposed effluent disposal areas are generally exposed to sun and wind all year round.

### 4.3 Soil Assessment:

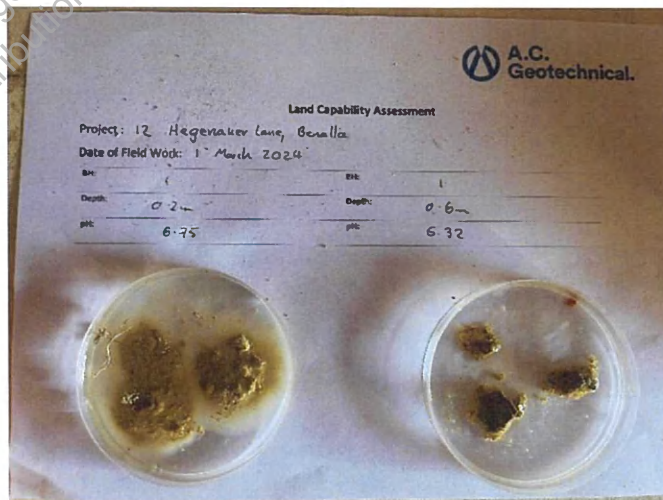
Laboratory analysis on each sample collected included the following:

- Texture Analysis using ribboning technique.
- Modified Emerson Analysis.
- Electrical Conductivity.
- pH analysis.

A summary of the analysis is included in **Table 4.3**

**Table 4.3 -Summary of soil assessment**

<b>BORE HOLE 1</b>	<b>SAMPLE DEPTH: 200mm</b>	<b>SAMPLE DEPTH: 600mm</b>
<b>SOIL ASSESSMENT (AS1547-2012)</b>	<b>SOIL HORIZON: A</b>	<b>SOIL HORIZON: B</b>
<b>Soil Colour</b>	Pale brown	Brown
<b>Soil Texture</b>	Loam	Light clay
<b>Coarse Fragments (%)</b>	None	None
<b>Soil Structure</b>	Weak	Moderate
<b>Soil Dispersion</b>	Non-dispersive	Non-dispersive
<b>Soil Permeability</b>	0.5-1.5 mm/d	0.06-0.12 mm/d
<b>Soil Category</b>	3b	5b
<b>pH 1:5 Ratio Electronic Method</b>	6.75	6.32
<b>Electrical Conductivity</b>	62 $\mu\text{S/cm}$ /1000 = .062 dS/m	79 $\mu\text{S/cm}$ /1000 = .079 dS/m
<b>Salinity Hazard</b>	Non-saline	Non-saline



**Figure 4.3 Laboratory Analysis**



#### 4.4 Field Assessed Permeability:

Insitu permeability testing with a constant head permeameter was undertaken in multiple locations across the site, see site plan for locations in **Attachment A**, in accordance with AS 1547-2012 using the constant-head test method. The field assessed permeability was calculated using the Talsma-Hallam constantly maintained head of water equation identified in AS 1547-2012.

$$K_{\text{sat}} = \frac{4.4 Q [0.5 \sinh^{-1}(H/2r) - \sqrt{\{(r/H)^2 + 0.25\}} + r/H]}{2\pi H^2}$$

Where:

$K_{\text{sat}}$  = saturated hydraulic conductivity of the soil in cm/min.

4.4 = correction factor for a systematic under-estimate of soil permeability in the mathematical derivation of the equation.

Q = rate of loss of water from the reservoir in cm<sup>3</sup>/min.

H = depth of water in the test hole in cm.

r = radius of the test hole in cm.

A summary of permeability results are included in **Table 4.4**. Permeability Calculations are included in **Appendix D**.

**Table 4.4 - Summary of insitu permeability**

Constant Head Permeability	
Indicative permeability ( $K_{\text{sat}}$ )	0.082 m/day

**Note:** The results in the table above are based on average readings taken from the test holes.

The corresponding  $K_{\text{sat}}$  value of 0.082 m/day in EPA Onsite Wastewater Management – Code of Practice Publication No. 891.4 July 2016 Appendix A Table 9 is category (light clay soil).

#### 4.5 Critical site Features:

The critical site features are:

- Proposed lot size.
- Low permeable clay soils.
- Land subject to inundation Overlay.



**5. LAND CAPABILITY ASSESSMENT MATRIX:**

**Table 5.1** and **Table 5.2** includes a Land Capability Assessment (LCA) matrix in accordance with EPA Publication 746.1. The LCA has been developed for the whole site however soils information relates to soils within the vicinity of the proposed wastewater envelope.

**Table 5.1 - Land capability assessment matrix - Site**

Land Features	Land Capability Class Rating					Site Rating	Comments	Mitigation
	Very Good (1)	Good (2)	Fair (3)	Poor (4)	Very Poor (5)			
<b>General Characteristics</b>								
<b>Site drainage / runoff</b>	No visible signs of dampness	Moist soil but no standing water	Visible signs of dampness i.e. water tolerant plants	Water ponding on surface	No abnormal moisture conditions	1	N/A	
<b>Runoff</b>	None	Low	Moderate	High	Very High	3	Small lot size	Secondary treatment of wastewater required
<b>Flood / inundation potential (yearly return exceedance)</b>	Never	< 1 in 100	>1 in 100 to < 1 in 20	> 1 in 100 to < 1 in 20	> 1 in 20	3	Site covers by overlay	All subject to inundation positioned above the 1 in 20-year floor level for this site.
<b>Proximity to water courses</b>	> 60 metres	< 60 metres	< 60 metres	< 60 metres	> 60 m	1	>60 m	N/A
<b>Slope (%)</b>	0 - 2	2 - 8	8 - 12	12 - 20	> 20	1	Relatively level	N/A

Landslip	No potential for failure	Low potential for failure	High potential for failure	Present or Past Failure	1	Relatively level site	N/A
Groundwater table (m) seasonal watertable depth	>5.0	2.5 - 5.0	2.0 - 2.5	1.5 - 2.0	<1.5	1	Groundwater held at approximately 10 m below the surface N/A
Rock Outcrops (% of land surface containing rocks >200mm)	0%	<10%	10-20%	20-50%	>50%	1	None observed N/A
Erosion Potential	No erosion potential	Minor	Moderate	High	Severe erosion potential	1	Negligible Maintain current level of surface cover where practical
Exposure	High sun and wind exposure	Moderate	Moderate	Low sun and wind exposure	High exposure to sun and wind	1	N/A
Landform	Hill crests, convex side slopes and plains	Concave side slopes and foot slopes	Floodplains and incised channels	Plains		1	N/A
Vegetation Type (land application area)	Turf or pasture	Dense Forest				1	N/A
Fill	No Fill present	Fill Present				1	No fill encountered N/A
Rainfall (mm/yr) <sup>2</sup>	<450	450 - 650	650 - 750	750 - 1000	>1000	2	Average annual evaporation of 623.3 mm LAA size to be determined by water balance calculations
Pan evaporation (mm/yr) <sup>3</sup>	>1500	1250 - 1500	1000 - 1250	<1000		3	Annual evaporation of 1211.9 mm LAA size to be determined by water balance calculations

Table 5.2 - Land capability assessment matrix - Soils

**Soil Profile Characteristics**

<b>Profile depth</b>	>2.0m	1.5-2.0m	1.0-1.5m	<1.0m	1	Deep soil profile	N/A
<b>Shrinkage* (%)</b>	Low <4%	Moderate 4-12%	High 12-20%	Very High >20%	2	Medium plasticity light clay	N/A
<b>Permeability* (m/d)</b>	0.15-0.30	0.08-0.15 0.30-0.60	0.06-0.08 0.60-1.50	<0.06 1.50-2.00 >2.00	2	Light clay	LAA size to be determined by water balance calculations
<b>Soil Permeability Category<sup>1</sup></b>	2 and 3	4	5	Land 6	4	Light clay	LAA size to be determined by water balance calculations
<b>Coarse fragments* (%)</b>	<10	10-20	20-40	>40	1	<10%	N/A
<b>Emerson Test* (dispersion / slaking)</b>	4,6,8	5	7	2,3	1	Non-dispersive	N/A
<b>Electrical Conductivity (Ece) (dS/m)</b>	<0.3	0.3-0.8	0.8-2.0	2.0-4.0	1	Non-saline	N/A
<b>pH</b>	6-8	4.5-6	<4.5, >8		1	Neutral soils	N/A

<sup>1</sup> Source: AS1547-2012

<sup>2</sup> Source BOM station – Benalla Airport (082170)

<sup>3</sup> Source BOM station – Benalla Airport (082170) 2019

\* Relevant to soil layer(s) associated with wastewater application

## 6. MANAGEMENT PROGRAM:

The onsite wastewater system design and management program must suit the capability of the site and will consider the proposed development. The following sections discuss the inputs used to assess the suitability and requirements of EPA approved land based systems. Detailed design for the system is beyond the scope of this study.

### 6.1 Treatment System:

Based on site conditions and constraints outlined in the previous sections, secondary treatment of effluent is considered necessary for sustainable management of wastewater.

Untreated domestic wastewater typically has values of 200-300mg/L biochemical oxygen demand (BOD5) and 200-300mg/L total suspended solids (TSS). Indicative target effluent quality for secondary treatment systems are < 20mg/L BOD5, < 30mg/L TSS and <10cfu/100mL E.Coli.

The two most common options capable of achieving the desired performance are, aerated wastewater treatment systems (AWTS) and single pass sand filters. A summary of these systems is outlined below.

#### 6.1.1 Aerated Wastewater Treatment System (AWTS):

AWTS are pre-fabricated or pre-engineered treatment systems designed to treat small wastewater flows. They are tank-based systems that typically employ the following processes:

- Settling of solids and flotation of scum in an anaerobic primary chamber.
- Oxidation and consumption of organic matter through aerobic biological processes.
- Clarification – secondary settling of solids; and
- Disinfection prior to disposal.

Good maintenance of AWTS (e.g. removal of sludge) is essential to ensure a consistently high level of performance. By law, AWTS are required to be serviced quarterly by an approved maintenance contractor.

#### 6.1.2 Sand Filters:

Sand filters provide advanced secondary treatment to water that has already undergone primary treatment in a septic tank or similar device. They contain approximately 600mm depth of filter media (usually medium to coarse sand, but other media can be incorporated) within a lined excavation containing an underdrain system. Selection of the filter media is critical, and a carefully designed distribution network is necessary. A dosing well and pump is normally used to allow periodic dosing. Depending on the desired level of treatment, sand filters can be single pass or may incorporate partial recirculation.

### 6.2 Treatment System Location:

Based on requirements of EPA 891.4, above-ground and in-ground treatment systems must comply with the same setback distances to building footings and boundary fences as land application systems.

### 6.2.1 Septic Tank:

The minimum septic tank size should be 3,500 L. All opening to the septic tank must be positioned above the 1 in 20 year floor level for this site.

### 6.3 Land Application:

A range of possible land application systems have been considered, such as absorption trenches/beds, evapotranspiration/absorption (ETA) beds, mound systems and sub-surface irrigation. AS1547:2012 outlines factors affecting the construction and operation of common land application systems and a guide to selecting a system taking into consideration site features, subsurface soil conditions and identified constraints. The suitability of EPA approved land based systems are discussed in **Table 6.3**.

**Table 6.3 Land Application System**

Land Application	Description	Site Suitability
<b>Absorption Trenches</b>	Trenches are the most common type of land application system and are generally used on lots which are reasonably flat and where water soaks into the soil readily in all weather conditions. Commonly, distribution pipes, self-supporting arch trenching or box trenching are laid in trenches filled with aggregate/rock. Effluent then soaks into the surrounding soil.	Not considered suitable, due to small lots and low permeable clays.
<b>ETA Beds / Wick trenches</b>	Beds are shallower forms of trenches. Because beds have smaller sidewall area compared with trenches, the absorption provided by sidewall loading is reduced. This is compensated for by reducing the design loading rate.	Suitable
<b>Mound System</b>	A mound system permits the absorption area to be sited in a location where the natural water table or impermeable rock approaches the ground surface. The mound is filled with medium-grade sand to provide suitable filtering before intercepting the natural soils. A pump/siphon dosing system distributes effluent uniformly through a bed of aggregate placed at the top of the mound.  The sand media in the mound system acts as a secondary treatment system, removing the need for a separate sand filter or AWTS	Suitable
<b>Sub-surface Irrigation</b>	Subsurface drip irrigation requires secondary treated effluent dosing lines buried in the topsoil at shallow depth. Irrigation systems operate by both soil absorption and evapotranspiration from plants/trees	Suitable

#### 6.3.1 Disposal systems:

Water balance modelling has been undertaken to calculate the minimum size of the LAA. The water balance takes into account the average annual rainfall, evaporation data, the daily effluent load, the design irrigation/loading rates for secondary treated effluent, the seasonal crop factor and the retained rainfall. The water balance model is designed so that the land application area is based upon a depth of saturated soil (i.e. water stored within indicative soil porosity) that meets the upper limits of acceptance for each land application method. The water balance must ensure that the soil can sustain growth during the summer months. The design system parameters used for the water balance calculations are summarised in **Table 6.3.1**.

**Table 6.3.1 Design System Parameter**

Treatment system	Application System	DIR / DLR	Runoff coefficient	Maximum storage depth
Primary treatment	Absorption trenches		<u>Not Suitable</u>	
Secondary treatment	ETA Beds	5	25%	0 mm
	Wick trenches	10		
	Mound System*	5	25%	0 mm
	Sub-surface irrigation	3	25%	0 mm

\* Mound disposal system incorporates a secondary treatment sand media, removing the requirement for a separate secondary treatment system

#### 6.4 Land Application Outputs:

Minimum Land Application Area (LAA) sizing for each application method was calculated using water balance calculations. LAA sizing calculations are included in **Appendix D**. The minimum required disposal area for each system is summarised in **Table 6.4**.

**Table 6.4 Required Land Application Area (LAA)**

Disposal system	Minimum reserve size required
Wastewater output	900 L / day
Absorption trenches	<u>Not Suitable</u>
Subsurface irrigation	440 m <sup>2</sup>
ETA Beds	225 m <sup>2</sup>
Mound	225 m <sup>2</sup>
Wick trenches	68 m (1.6m wide)

#### 6.5 Proposed Wastewater Envelope:

The lots have sufficient suitable area available for the proposed LAA. If it is councils' preference to allocate a wastewater envelope for each lot, the envelope should have a minimum area of 1,000 m<sup>2</sup>. A wastewater envelope of this size will provide adequate flexibility for different disposal systems and sizing.

#### 6.6 Existing Open Spoon Drain:

An open spoon drain runs through the property. It is proposed to realign this along the north-east boundary. The LAA must be setback a minimum of 6m from the new drain alignment.

## 6.7 Designated Area:

The Land Application Area (LAA) shall be located in a designated area to enhance evapotranspiration and shall:

- Not be used for purposes that compromise the effectiveness of the system or access for maintenance.
- Be used only for effluent application.
- Have boundaries clearly delineated by appropriate vegetation or other type of border.
- Have no run-off seepage or effluent beyond the designated area.

The site plan in **Appendix A** presents several potential areas suitable for LAA placement as well as setback areas from site features which must be maintained. Please note that the final LAA placement is the responsibility of the owner and should be included in a detailed design providing the minimum LAA and setback distances are maintained.

The required LAA will be smaller than that marked on the site plan. An appropriately sized LAA, as discussed in **Section 6.4**, must be located entirely within the area nominated on the site plan.

Setback distances for secondary treated wastewater disposal are included in **Section 6.6.1**.



### 6.7.1 Setback Distances:

The minimum setback distances for secondary treated wastewater are summarised in **Table 6.6.1**. The proposed LAA must adhere to these minimum setback distances.

**Table 6.7.1 Minimum Setback Distances**

Landscape feature or structure	Setback distance (m) (primary treated wastewater)	Setback distance (m) (secondary treated wastewater)
<u>Building</u>		
Wastewater field up-slope of building	6	3
Wastewater field down-slope of building	3	1.5
Wastewater field up-slope of cutting/escarpment	30	15
<u>Allotment boundary</u>		
Wastewater field up-slope of Allotment boundary	6	3
Wastewater field down-slope of Allotment boundary	3	1.5
<u>Services</u>		
Water supply pipe	3	1.5
Wastewater field up-slope of potable supply channel	300	150
Wastewater field down-slope of potable supply channel	20	10
Gas supply pipe	3	1.5
In-ground water tank	15	7.5
Stormwater drain	6	3
<u>Recreational areas</u>		
Children's grassed playground	6	3
In-ground swimming pool	6	3
<u>Surface water – up-slope of</u>		
Waterway, non-potable creeks, dams, channels	60	30
<u>Groundwater bores</u>		
Category 2b to 6 soils	40	20

### 6.8 Soil Renovation:

Due to the low permeability clay soils encountered at the site, soil renovation is recommended if a trench or bed disposal system is installed. The following method should be adopted:

- Gypsum should be initially applied to the trench base at a rate of 1kg/m<sup>2</sup>.

This information should be included on the Council Permit.

### 6.9 Monitoring, Operation and Maintenance:

The septic tank is de-sludged every 3 years; however, this frequency may vary depending on the following conditions.

- 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.

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.

To ensure the treatment systems function adequately, residents must:

- 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, noncoloured, 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](http://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.

### 6.9.1 Storm Water Management:

All stormwater must be disposed of to the legal point of discharge.

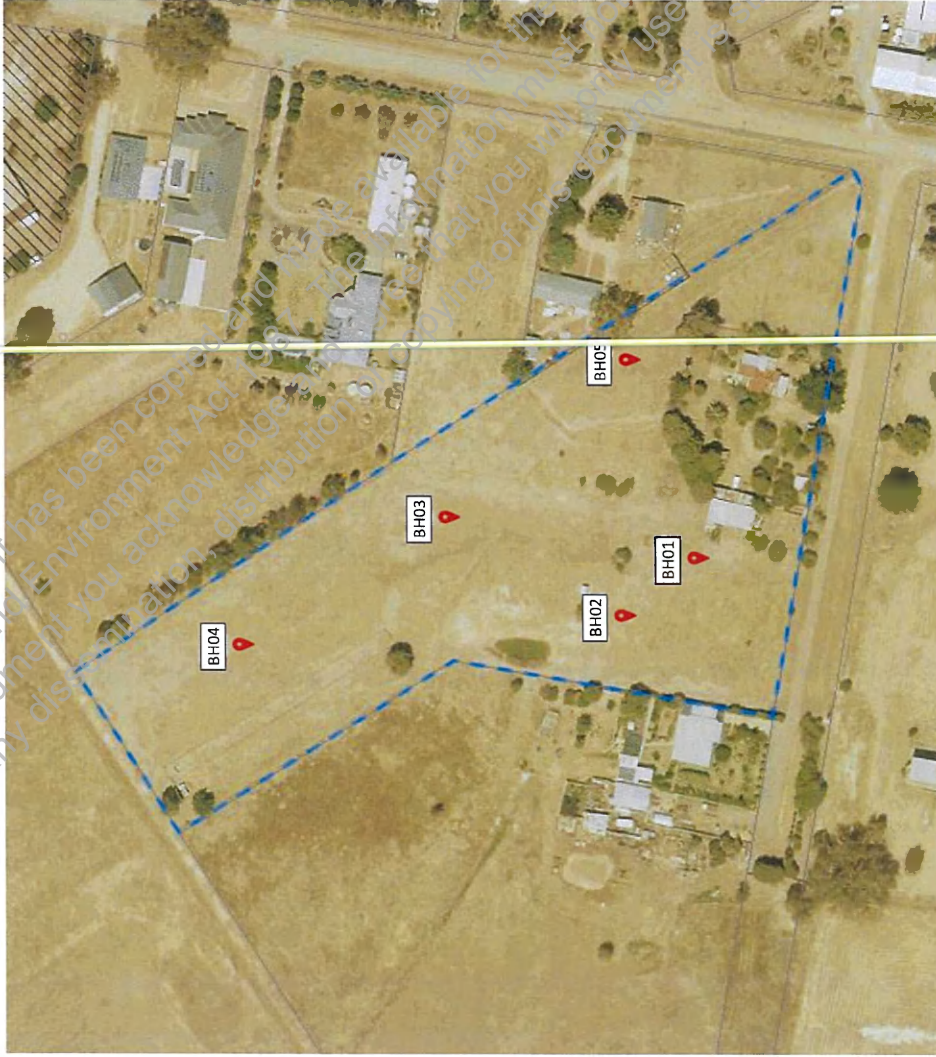
**Note:** An agricultural drain (AG) must be installed on the high side of the wastewater envelope. The drain is to be installed a minimum of 100mm into the naturally occurring clay soils and allow sufficient fall to intercept and drain all overland and subsurface run-off to a legal point of discharge. If a legal point of discharge cannot be obtained, the drainage line may discharge directly to the surface soils, a minimum distance of 10 metres beyond the wastewater disposal area.

## 7. CONCLUSIONS:

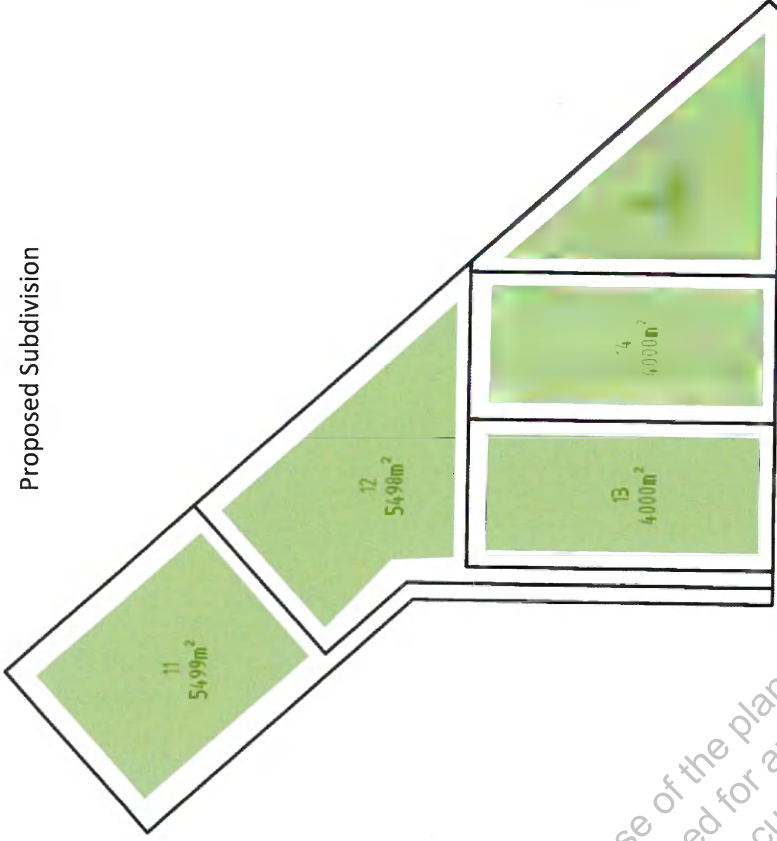
From this investigation it is concluded that the use of an on-site wastewater treatment and disposal system is environmentally sustainable on each proposed lot, if the recommendations made in this report are followed.

## 8. REFERENCES:

- Environmental Protection Authority – Guidelines for Environmental Management Code of Practice – Onsite Wastewater Management, July 2016 ~ Publication 891.4
- Municipal Association Victoria (MAV) January 2014, Model Land Capability Assessment Framework
- Australian/New Zealand Standard AS/NZS 1547-2012 – On-site domestic wastewater management.
- A.C. Geotechnical Pty Ltd - Field and Laboratory data (where applicable) collected and recorded.
- Environmental Protection Authority - "Code of Practice - Septic Tanks", March 1996" ~ Publication 451.
- Environmental Protection Authority, Information Bulletin- "Land Capability Assessment for onsite Domestic Wastewater Management", March 2003 ~ Publication 746.1.



Proposed Subdivision





**Notes**

1. LAA must be setback a minimum of 3.0 m from all boundaries.
2. LAA area must be setback a minimum of 3.0 m from the proposed building envelope or dwelling.
3. LAA must be setback a minimum of 6.0 m from any proposed stormwater drain.
4. Minimum setback distances are outlined in Section 6.6.1.

Not to Scale

Investigation locations are approximate

**Legend**

-  Investigation Location.
-  Suitable Wastewater envelope to be located within this suitable area.

**Attachment A: Site Plan**

12 Hagenauer Lane  
Benalla



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## Appendix B

### Site Photographs

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## Appendix C

Borelog

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Borehole Record BH01



Project Number	24052	Date	1/03/2024
Project Location	Land Capability Assessment 12 Hagenauer Lane, Benalla	Drilling Method	HA AC
Logged			
Depth (m)	Description		
0.00	SILT: Pale grey/brown, firm, dry-moist.		
			Disturbed sample - 0.2 m
0.40	Silty CLAY (CI): Medium plasticity, Brown, stiff, moist, dry of plastic limit.		
			Disturbed sample - 0.6 m
3.00	Borehole terminated - target depth achieved		

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## Borehole Record BH02



Project Number	24052	Date	1/03/2024
Project Location	Land Capability Assessment 12 Hagenauer Lane, Benalla	Drilling Method	HA AC
Logged			

Depth (m)	Description	
0.00	SILT: Pale grey/brown, firm, dry-moist.	
0.50	Silty CLAY (Cl): Medium plasticity, Brown, stiff, moist, dry of plastic limit.	
3.00	Borehole terminated - target depth achieved	

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# Borehole Record BH03



Project Number	24052	Date	1/03/2024
Project Location	Land Capability Assessment 12 Hagenauer Lane, Benalla	Drilling Method	HA
		Logged	AC
Depth (m)	Description		
0.00	SILT: Dark brown, firm, Moist, minor root matter.		
0.40	Silty CLAY (CI): Medium plasticity, Brown, stiff, moist, dry of plastic limit.		
3.00	Borehole terminated - target depth achieved		

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## Borehole Record BH04



Project Number	24052	Date	1/03/2024
Project Location	Land Capability Assessment 12 Hagenauer Lane, Benalla	Drilling Method Logged	HA AC
Depth (m)	Description		
0.00	SILT: Dark brown, firm, Moist, minor root matter.		
0.40	Silty CLAY (CI): Medium plasticity, Brown, stiff, moist, dry of plastic limit.		
3.00	Borehole terminated - target depth achieved		

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## Borehole Record BH05



Project Number	24052	Date	1/03/2024
Project Location	Land Capability Assessment 12 Hagenauer Lane, Benalla	Drilling Method Logged	HA AC
Depth (m)	Description		
0.00	SILT: Dark brown, firm, Moist, minor root matter.		
0.40	Silty CLAY (CI): Medium plasticity, Brown, stiff, moist, dry of plastic limit.		
3.00	Borehole terminated - target depth achieved		

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## Appendix D

### Constant Head Calculations & Water Balance

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# INSITU CONSTANT HEAD PERMEABILITY



<b>Project Address:</b>	12 Hagenauer Lane	<b>Project Number:</b>	24052	
<b>Location:</b>	Benalla	<b>Date:</b>	4/03/2024	
<b>Client:</b>	LK & SA Pty Ltd			
INPUT DATA				
	Borehole		Reservoir	
<b>Borehole diameter</b>	100 cm	<b>Diameter</b>	97 mm	
<b>Borehole Depth</b>	500 cm	<b>Base area</b>	295.4426 mm <sup>2</sup>	
<b>Water level from surface</b>	250 cm			
<b>Depth of water in hole</b>	250 cm			
FIELD DATA				
	Test 1	Test 2	Test 3	Test 4
<b>Time intervals (min)</b>	Water depth in reservoir			
Initial Depth	200			
5				
10				
15				
20	194			
				<b>Average</b>
<b>Q (cm<sup>2</sup>/min)</b>	8.863278	0	0	0
<b>Ksat (cm/min)</b>	0.0056965	0	0	0
<b>Ksat (m/d)</b>	0.082029599	0	0	0
				<b>8.863278</b>
				<b>0.0056965</b>
				<b>0.082029599</b>

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# WICK TRENCH SIZE CALCULATIONS



# A.C. Geotechnical.

<b>Project Address:</b>	12 Hagenauer Lane	<b>Project Number:</b>	24052
<b>Location:</b>	Benalla	<b>Date:</b>	4/03/2024
<b>Client:</b>	LK & SA Pty Ltd		
<b>INPUT DATA</b>			
<b>Daily flow allowance (per person)</b>	180 L		
<b>Daily wastewater volume</b>	900 L		
<b>Effluent quality</b>	Secondary		
<b>Soil texture</b>	Light clay		
<b>Soil structure</b>	Moderate		
<b>Soil category</b>	5b		
<b>Indicative Permeability</b>	0.06-0.12 Ksat		
<b>Design Loading Rate</b>	10 mm/d		
<b>Factor of Safety</b>	1.2		
<b>ABSORPTION TRENCHES</b>			
<b>L = Q / (DLR x (W/F))</b>			
Where:			
L = length of trench			
Q = Design daily flow in L/day			
DLR = Design Loading rate in mm/d			
W = width of trench in m			
F = Factor of safety			
<b>Width of trench</b>	1.6 m	<b>Width of trench</b>	2.5 m
<b>Length =</b>	<b>68 m</b>	<b>Length =</b>	<b>43.2</b>

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# WATER BALANCE ETA BEDS



Project Address:	12 Hagenauer Lane	Project Number:	24052											
Location:	Benalla	Date:	4/03/2024											
Client:	LK & SA Pty Ltd													
INPUT DATA														
Daily flow allowance (per person)	180 L													
Daily wastewater volume	900 L													
Effluent quality	Secondary													
Effective rainfall	0.75 %													
Soil texture	Light clay													
Soil structure	Moderate													
Soil category	0.06-0.12													
Effective Permeability	0.06-0.1 Ksat													
ETA BEDS														
DLR	5 mm/d													
Porosity	40 %													
Maximum Storage Depth	0 mm													
Crop Factor - standard pasture	0.85	0.85	0.85	0.6	0.6	0.6	0.6	0.6	0.6	0.85	0.85	0.85		
crop factors -Lucene	0.95	0.9	0.85	0.8	0.7	0.55	0.55	0.65	0.75	0.85	0.95	1		
Crop factor - Shade	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
Crop factor - woodlot	1	1	1	1	1	1	1	1	1	1	1	1		
Rainfall Data	Benalla Airport (082170)													
Evaporation Data	Benalla Airport (082170)													
Parameter	Unit	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Days in month		31	28	31	30	31	30	31	31	30	31	30	31	365
Rainfall (mm)		53.3	37.2	55.7	50.2	46.7	59.6	63.3	59.7	41.4	50.9	54.6	50.7	623.3
Evaporation (mm)		201.5	165.2	133.3	75	40.3	30	31	43.4	69	105.4	138	179.8	1211.9
Output														
Evapotranspiration (mm)		171.28	140.42	113.31	45	24.18	18	18.6	26.04	41.4	89.59	117.3	152.83	957.94
Percolation (mm)		155	140	155	150	155	150	155	155	150	155	150	155	1825
Total Output (mm)		326.28	280.42	268.31	195	179.18	168	173.6	181.04	191.4	244.59	267.3	307.83	2782.9
Inputs														
Effective Rainfall (mm)		39.975	27.9	41.775	37.65	35.025	44.7	47.475	44.775	31.05	38.175	40.95	38.025	467.48
Application Rate (mm)		124	112	124	120	124	120	124	124	120	124	120	124	1460
Total Inputs (mm)		163.98	-280.4	165.78	157.65	159.03	164.7	171.48	168.78	151.05	162.18	160.95	162.03	1927.5
Storage Calculations														
Waste Loading (mm)		286.3	252.52	226.53	157.35	144.16	123.3	126.13	136.27	160.35	206.42	226.35	269.81	
Volume of Wastewater (mm)		27900	25200	27900	27000	27900	27000	27900	27900	27000	27900	27000	27900	328500
Cumulative Storage (mm)		0	0	0	0	0	0	0	0	0	0	0	0	0
Area														225 m <sup>2</sup>
Width														3 m
Length														45 m



# WATER BALANCE SUBSURFACE IRRIGATION



Project Address:	12 Hagenauer Lane	Project Number:	24052											
Location:	Benalla	Date:	4/03/2024											
Client:	LK & SA Pty Ltd													
INPUT DATA														
Daily flow allowance (per person)	180 L													
Daily wastewater volume	900 L													
Effluent quality	Secondary													
Effective rainfall	0.75 %													
Soil texture	Sandy loam													
Soil structure	Massive													
Soil category	2b													
Specific Permeability	1.4-3.0 Ksat													
SUBSURFACE IRRIGATION														
DLR	3 mm/d													
Porosity	45 %													
Maximum Storage Depth	0 mm													
Crop Factor - standard pasture	0.85	0.85	0.85	0.6	0.6	0.6	0.6	0.6	0.6	0.85	0.85	0.85		
crop factors -Lucene	0.95	0.9	0.85	0.8	0.7	0.55	0.55	0.65	0.75	0.85	0.95	1		
Crop factor - Shade	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
Crop factor - woodlot	1	1	1	1	1	1	1	1	1	1	1	1		
Rainfall Data	Benalla Airport (082170)													
Evaporation Data	Benalla Airport (082170)													
Parameter	Unit	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Days in month		31	28	31	30	31	30	31	31	30	31	30	31	365
Rainfall (mm)		53.3	37.2	55.7	50.2	46.7	59.6	63.3	59.7	41.4	50.9	54.6	50.7	623.3
Evaporation (mm)		201.5	165.2	133.3	75	40.3	30	31	43.4	69	105.4	138	179.8	1211.9
Output														
Evapotranspiration (mm)		171.28	140.42	113.31	45	24.18	18	18.6	26.04	41.4	89.59	117.3	152.83	957.94
Percolation (mm)		93	84	93	90	93	90	93	93	90	93	90	93	1095
Total Output (mm)		264.28	224.42	206.31	135	117.18	108	111.6	119.04	131.4	182.59	207.3	245.83	2052.9
Inputs														
Effective Rainfall (mm)		39.975	27.9	41.775	37.65	35.025	44.7	47.475	44.775	31.05	38.175	40.95	38.025	467.48
Application Rate (mm)		63.409	57.273	63.409	61.364	63.409	61.364	63.409	63.409	61.364	63.409	61.364	63.409	746.59
Total Inputs (mm)		103.38	-224.4	105.18	99.014	98.434	106.06	110.88	108.18	92.414	101.58	102.31	101.43	1214.1
Storage Calculations														
Waste Loading (mm)		224.3	196.52	164.53	97.35	82.155	63.3	64.125	74.265	100.35	144.42	166.35	207.81	
Volume of Wastewater (mm)		27900	25200	27900	27000	27900	27000	27900	27900	27000	27900	27000	27900	328500
Cumulative Storage (mm)		0	0	0	0	0	0	0	0	0	0	0	0	0
Land area required														440 m2



# NUTRIENT BALANCE



# A.C. Geotechnical.

<b>Project Address:</b>	12 Hagenauer Lane	<b>Project Number:</b>	24052
<b>Location:</b>	Benalla	<b>Date:</b>	4/03/2024
<b>Client:</b>	LK & SA Pty Ltd		
Nitrogen Balance -Nitrogen			
Hydraulic Loading	900	l/day	
Effluent N concentration	25	mg/l	
Daily N loading	22500	mg/day	
Annual N loading	8212500	mg/year	
Denitrification loss	20	%	
Denitrification loss	6570000	mg/year	
Total annual N loading	6.57	kg/year	
Plant uptake	220	kg/ha/year	
Minimum area for uptake	299	m <sup>2</sup>	

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## Appendix E

### Property Reports

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From [www.land.vic.gov.au](http://www.land.vic.gov.au) at 29 February 2024 08:12 PM

## PROPERTY DETAILS

Address: **12 HAGENAUER LANE BENALLA 3672**  
Lot and Plan Number: **Lot 3 LP61283**  
Standard Parcel Identifier (SPI): **3\LP61283**  
Local Government Area (Council): **BENALLA**  
Council Property Number: **A4604**  
Directory Reference: **Vicroads 663 S2**

[www.benalla.vic.gov.au](http://www.benalla.vic.gov.au)

## SITE DIMENSIONS

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



**Area:** 23187 sq. m (2.32 ha)

**Perimeter:** 761 m

For this property:

- Site boundaries
- Road frontages

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

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

For more accurate dimensions get copy of plan at [Title and Property Certificates](#)

## UTILITIES

Rural Water Corporation: **Goulburn-Murray Water**  
Urban Water Corporation: **North East Water**  
Melbourne Water: **Outside drainage boundary**  
Power Distributor: **AUSNET**

## STATE ELECTORATES

Legislative Council: **NORTHERN VICTORIA**  
Legislative Assembly: **EUROA**

## PLANNING INFORMATION

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

The Planning Property Report for this property can found here - [Planning Property Report](#).

Planning Property Reports can be found via these two links

**Vicplan** <https://mapshare.vic.gov.au/vicplan/>

**Property and parcel search** <https://www.land.vic.gov.au/property-and-parcel-search>

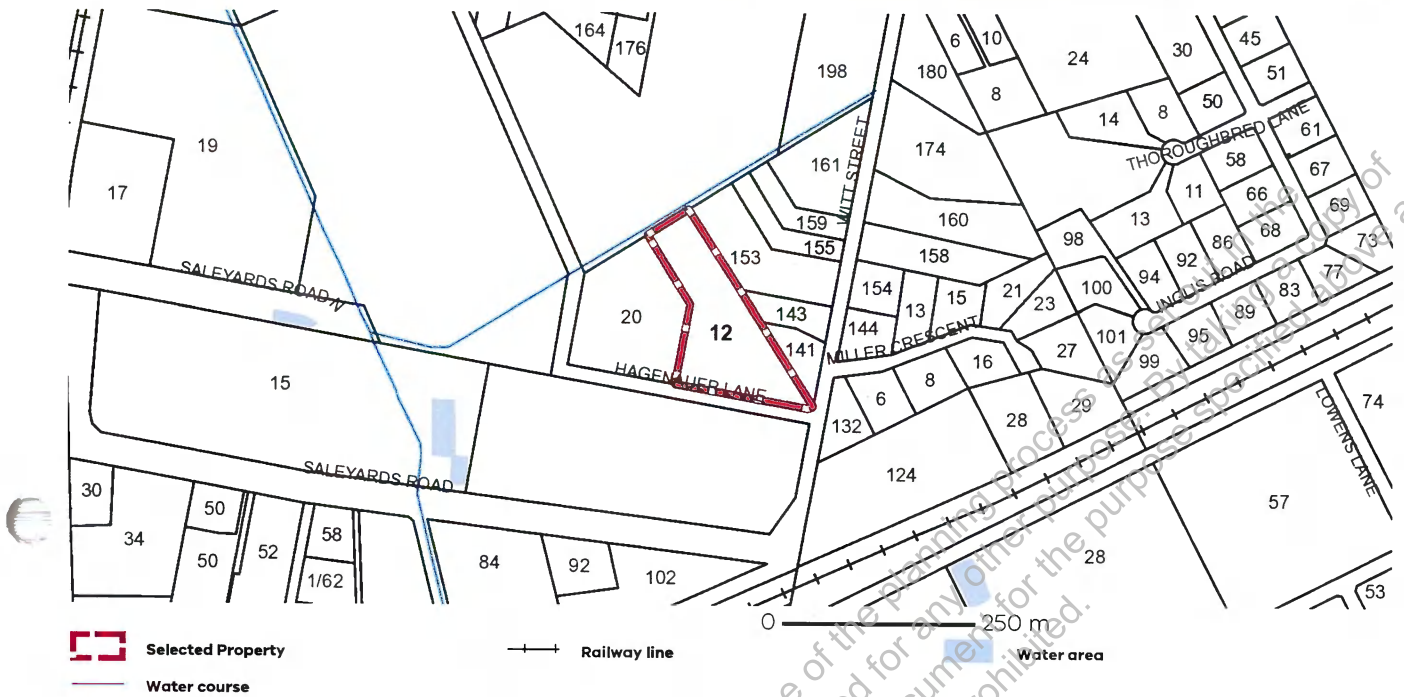
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PROPERTY REPORT:12 HAGENAUER LANE BENALLA 3672

## Area Map



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From [www.planning.vic.gov.au](http://www.planning.vic.gov.au) at 29 February 2024 08:13 PM

## PROPERTY DETAILS

Lot and Plan Number: **Lot 3 LP61283**  
 Address: **12 HAGENAUER LANE BENALLA 3672**  
 Standard Parcel Identifier (SPI): **3\LP61283**  
 Local Government Area (Council): **BENALLA**  
 Council Property Number: **A4604**  
 Planning Scheme: **Benalla**  
 Directory Reference: **Vicroads 663 S2**

[www.benalla.vic.gov.au](http://www.benalla.vic.gov.au)

[Planning Scheme - Benalla](#)

## UTILITIES

Rural Water Corporation: **Goulburn-Murray Water**  
 Urban Water Corporation: **North East Water**  
 Melbourne Water: **Outside drainage boundary**  
 Power Distributor: **AUSNET**

## STATE ELECTORATES

Legislative Council: **NORTHERN VICTORIA**  
 Legislative Assembly: **EUROA**

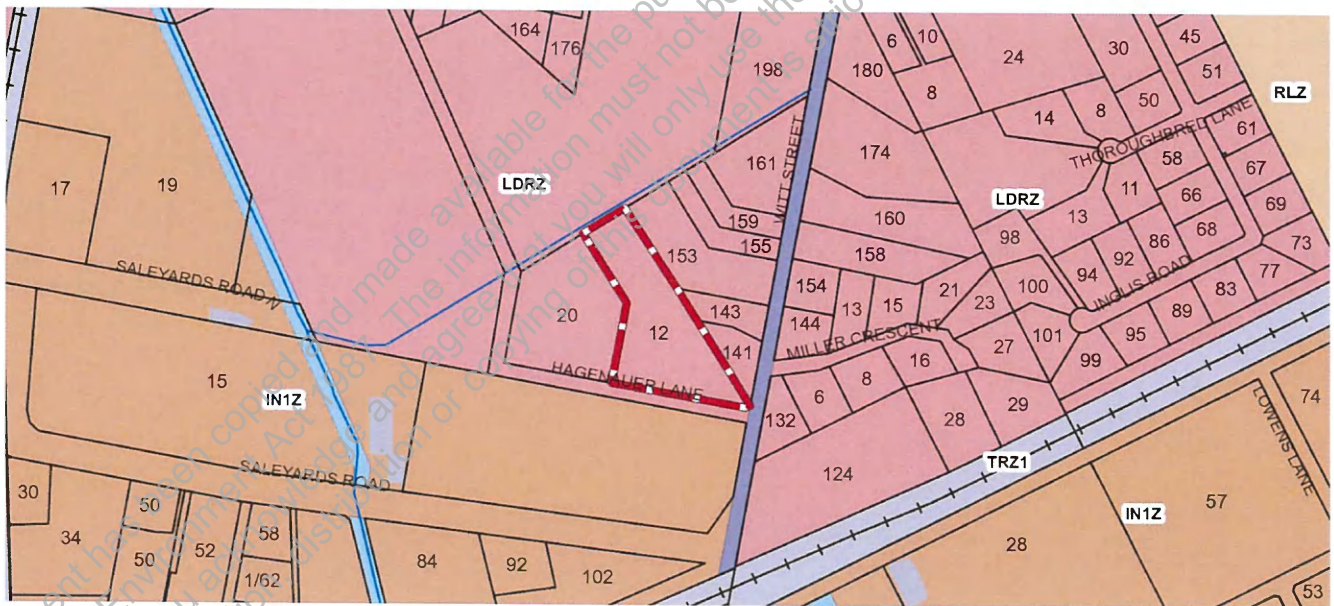
## OTHER

Registered Aboriginal Party: **Yorta Yorta Nation Aboriginal Corporation**

[View location in VicPlan](#)

## Planning Zones

LOW DENSITY RESIDENTIAL ZONE (LDRZ)  
SCHEDULE TO THE LOW DENSITY RESIDENTIAL ZONE (LDRZ)



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

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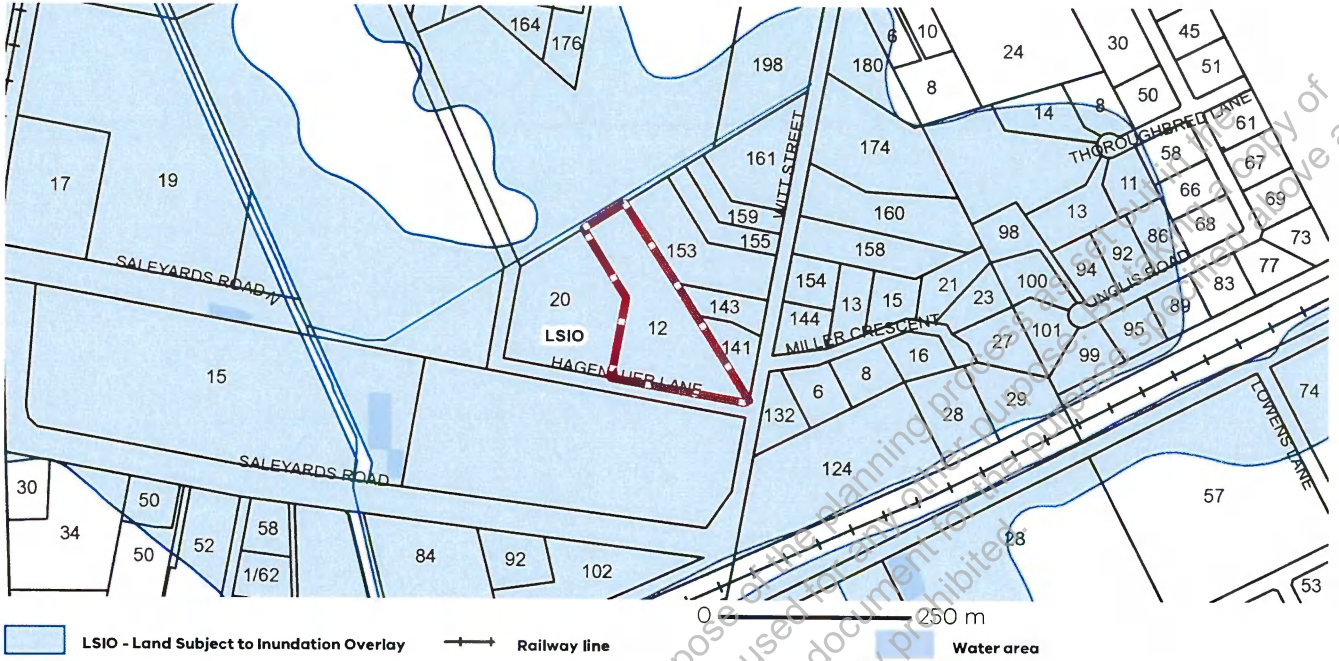
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## Planning Overlays

LAND SUBJECT TO INUNDATION OVERLAY (LSIO)  
LAND SUBJECT TO INUNDATION OVERLAY SCHEDULE (LSIO)

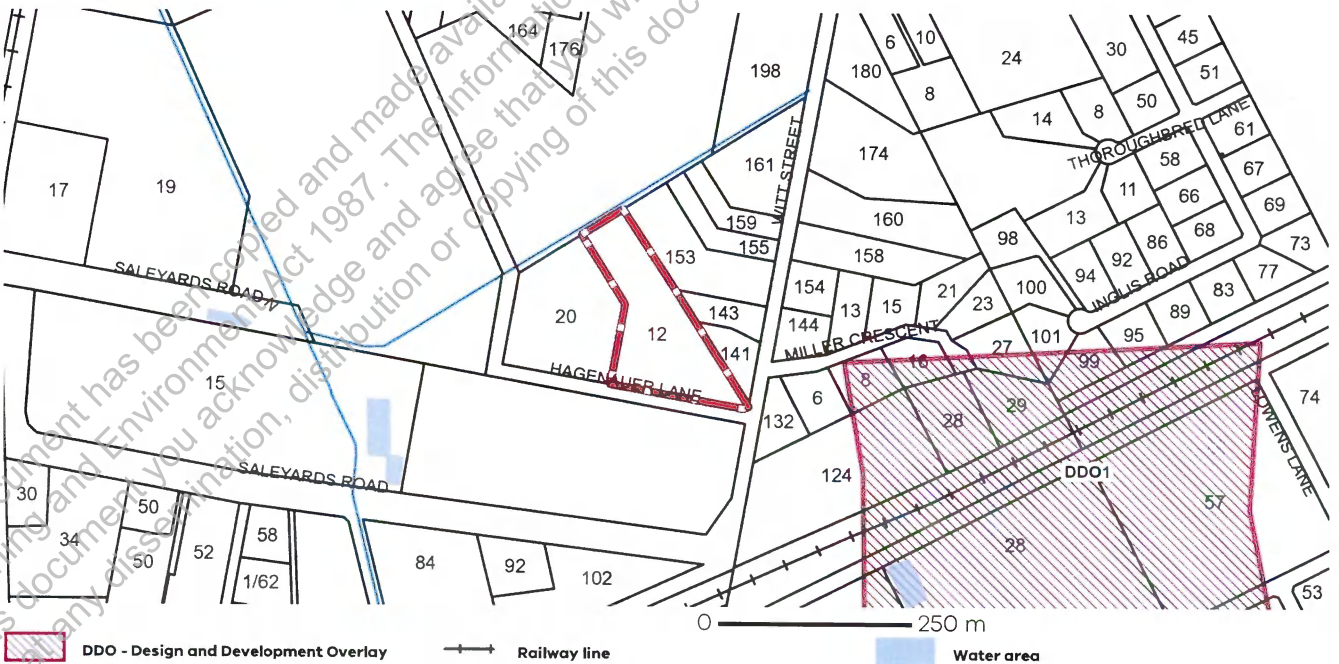


Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend

### OTHER OVERLAYS

Other overlays in the vicinity not directly affecting this land

DESIGN AND DEVELOPMENT OVERLAY (DDO)



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

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## Further Planning Information

Planning scheme data last updated on 7 December 2023.

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 affect 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>

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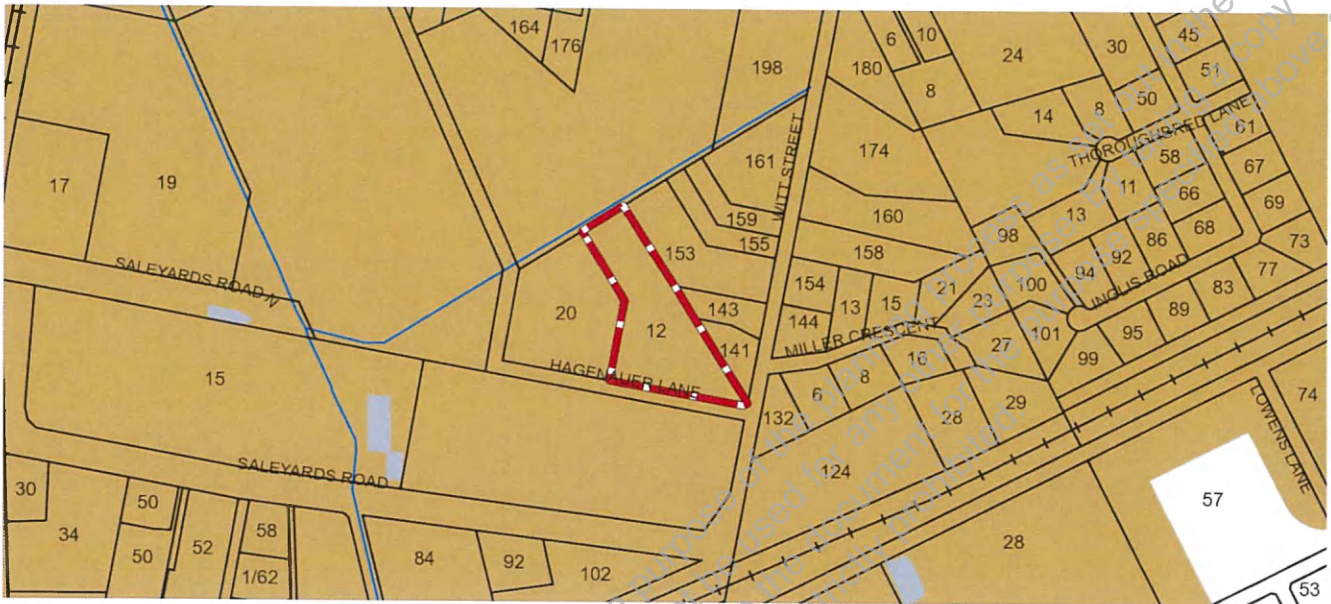
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## Designated Bushfire Prone Areas

**This parcel 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 \(environment.vic.gov.au\)](https://www.environment.vic.gov.au) or please contact your relevant council.

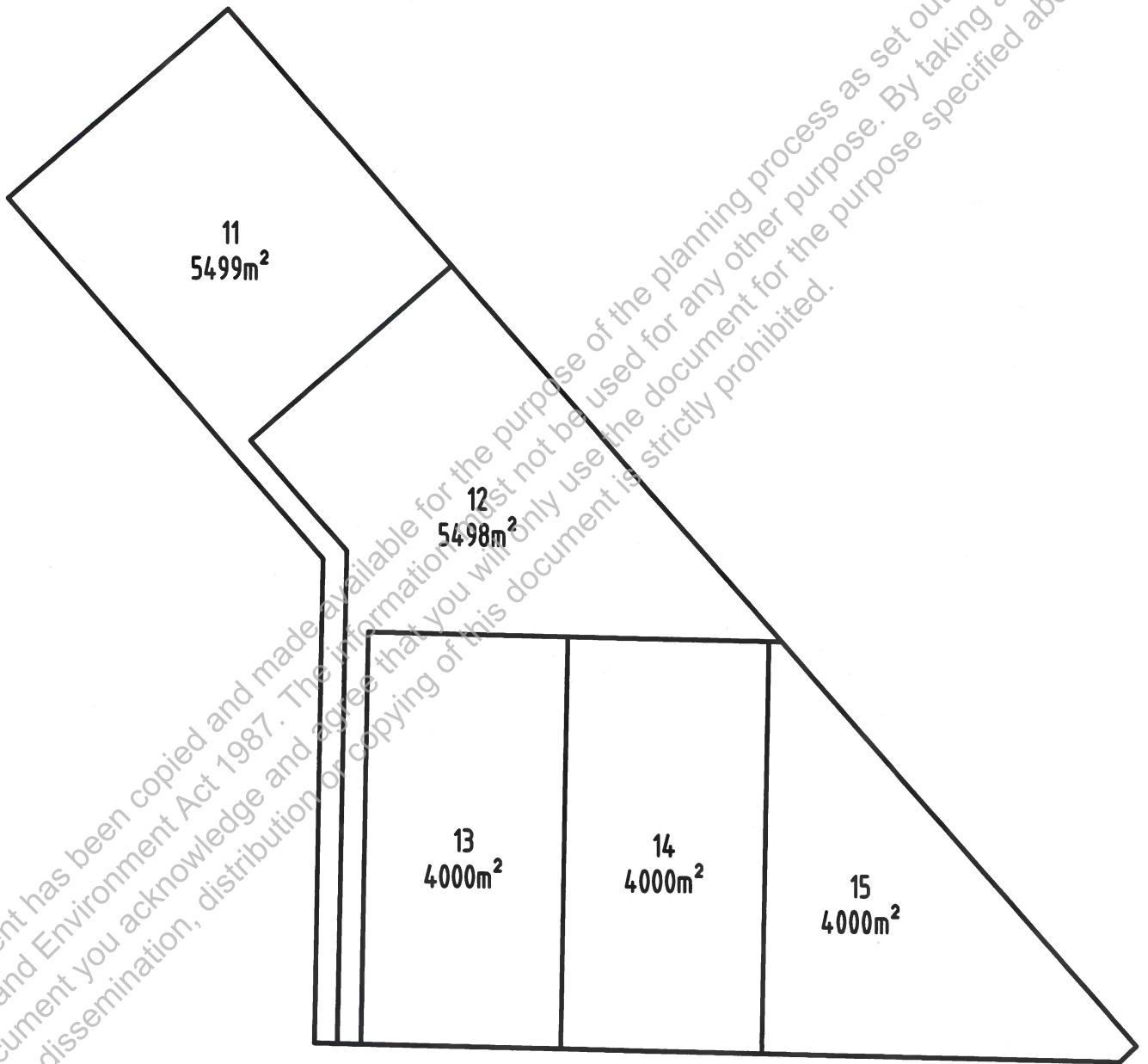
You can find out more about the natural values on your property through NatureKit [NatureKit \(environment.vic.gov.au\)](https://www.environment.vic.gov.au)

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

Page 1 of 1

VOLUME 08651 FOLIO 467

Security no : 124112724437R  
Produced 16/02/2024 04:16 PM

## LAND DESCRIPTION

Lot 3 on Plan of Subdivision 061283.  
PARENT TITLE Volume 08634 Folio 666  
Created by instrument LP061283 29/12/1966

## REGISTERED PROPRIETOR

Estate Fee Simple  
Sole Proprietor  
LK & SA PTY LTD of 29 DENNIS ROAD BENALLA VIC 3672  
AX652375U 18/01/2024

## ENCUMBRANCES, CAVEATS AND NOTICES

MORTGAGE AX652376S 18/01/2024  
NATIONAL AUSTRALIA BANK LTD

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

## DIAGRAM LOCATION

SEE LP061283 FOR FURTHER DETAILS AND BOUNDARIES

## ACTIVITY IN THE LAST 125 DAYS

NUMBER		STATUS	DATE
AX645907C (E)	CONV PCT & NOM ECT TO LC	Completed	17/01/2024
AX652375U (E)	TRANSFER	Registered	18/01/2024
AX652376S (E)	MORTGAGE	Registered	18/01/2024

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

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

Street Address: 12 HAGENAUER LANE BENALLA VIC 3672

## ADMINISTRATIVE NOTICES

NIL  
eCT Control 16089P NATIONAL AUSTRALIA BANK LTD  
Effective from 18/01/2024

DOCUMENT END

PLAN OF SUBDIVISION OF CROWN ALLOTMENT 1 SECTION G & PART OF CROWN ALLOTMENT SECTION F. PARISH OF BENALLA.

COUNTY OF MOIRA VOL. 8634 FOL. 666 Measurements are in Links Conversion Factor LINKS X 0.201168 = METRES

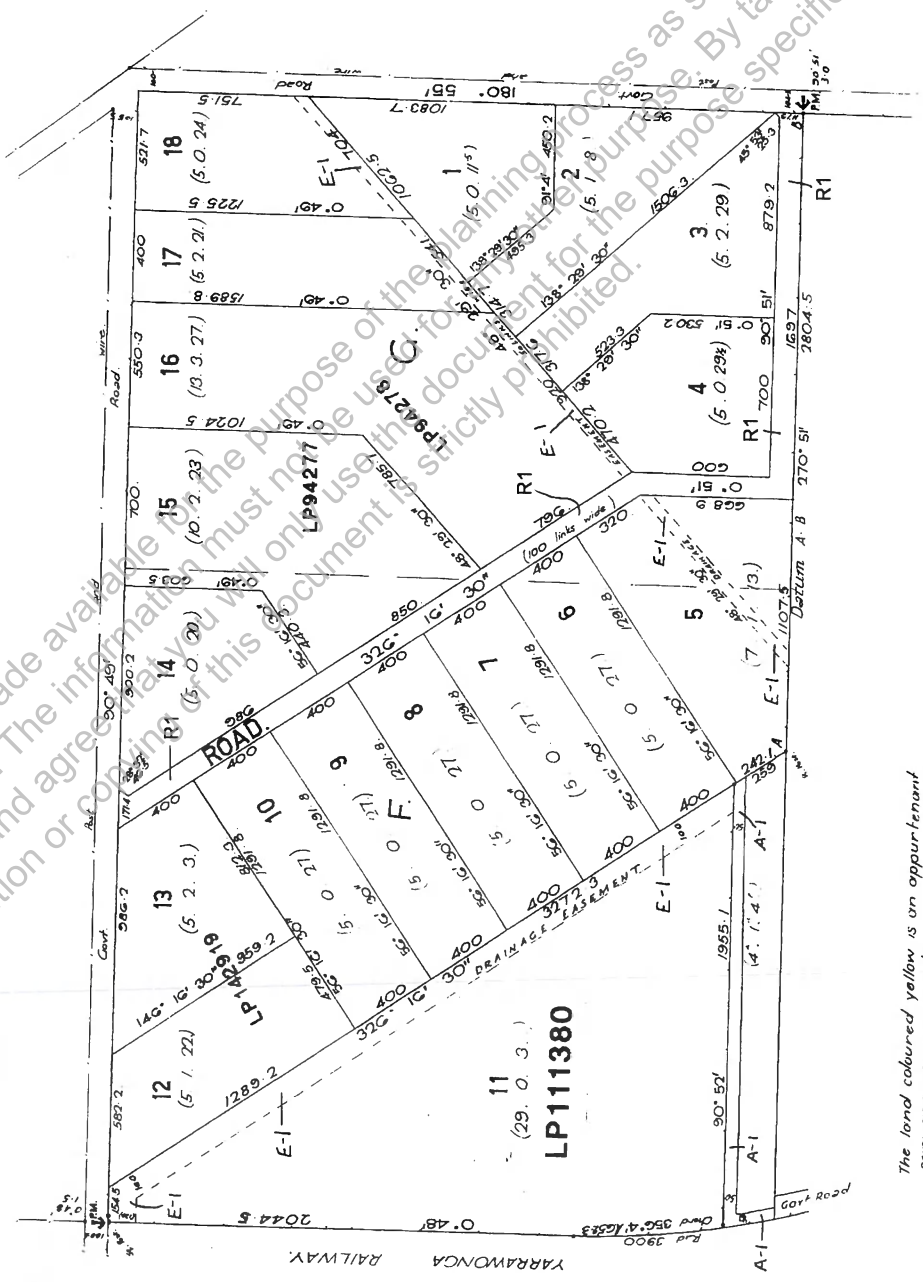
LP61283 EDITION 1 APPROVED 25/11/66

COLOUR CONVERSION E-1 = BLUE R1 = BROWN A-1 = YELLOW

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

APPURTENANCES THE LAND COLOURED YELLOW IS AN APPURTENANT EASEMENT SEE VOL. 8634 FOL. 666

CHART NO. 14.



The land coloured yellow is an appurtenant carriage-way easement vide slip.

WARNING: THE IMAGE OF THIS DOCUMENT OF THE REGISTER HAS BEEN DIGITALLY AMENDED. NO FURTHER AMENDMENTS ARE TO BE MADE TO THE ORIGINAL DOCUMENT OF THE REGISTER.