

29 May 2022

Form 2

## NOTICE OF AN APPLICATION FOR PLANNING PERMIT

|   |  |
|---|--|
| The land affected by the application is located at:   | <b>126 Kleinitz Road NUNGURNER<br/>Lot 2 PS 707811</b> |
| The application is for a permit to:   | <b>Two Lot Subdivision</b>                             |
| The applicant for the permit is:  | <b>Crowther &amp; Sadler Pty Ltd</b>                   |
| The application reference number is:  | <b>183/2022/P</b>                                      |
| You may look at the application and any documents that support the application on the website of the responsible authority. | <b>(Intentionally blank)</b>                           |

This can be done anytime by visiting the following website:

<https://www.eastgippsland.vic.gov.au/building-and-development/advertised-planning-permit-applications>

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

**An objection must**

- ◆ **be sent to the Responsible Authority in writing,**
- ◆ **include the reasons for the objection, and**
- ◆ **state how the objector would be affected.**

|   |   |
|---|---|
| <b>The Responsible Authority will not decide on the application before:</b> | <b>Subject to applicant carrying out notice</b> |
|---|---|

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

Please note submissions received will be made available for inspection and may be made available to other parties in accordance with the Planning & Environment Act 1987. If you have concerns about this, please contact the East Gippsland Shire Council's Planning Office.

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

VOLUME 11359 FOLIO 342

Security no : 124096701905M  
Produced 07/04/2022 04:17 PM

**LAND DESCRIPTION**

Lot 2 on Plan of Subdivision 707811V.  
PARENT TITLES :  
Volume 08678 Folio 005      Volume 10180 Folio 020  
Created by instrument PS707811V 08/06/2012

**REGISTERED PROPRIETOR**

Estate Fee Simple  
Joint Proprietors  
WILLIAM CHADWELL BURY  
HEATHER MARION BURY both of 166A NUNGURNER ROAD NUNGURNER VIC 3909  
PS707811V 08/06/2012

**ENCUMBRANCES, CAVEATS AND NOTICES**

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

**DIAGRAM LOCATION**

SEE PS707811V FOR FURTHER DETAILS AND BOUNDARIES

**ACTIVITY IN THE LAST 125 DAYS**

NIL

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

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

Street Address: 126 KLEINITZ ROAD NUNGURNER VIC 3909

DOCUMENT END

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PS707811V

**PLAN OF SUBDIVISION**

STAGE No. LR USE ONLY  
**EDITION 1**



**COUNCIL CERTIFICATION AND ENDORSEMENT**

**LOCATION OF LAND**

**PARISH:** COLQUHOUN  
**TOWNSHIP:** NUNGURNER  
**SECTION:** \_\_\_\_\_  
**CROWN ALLOTMENT:** 38, 41, 42, 43, 44, 45 & 46 (PARTS)  
**CROWN PORTION:** \_\_\_\_\_  
  
**TITLE REFERENCES:** VOL 8678 FOL 005  
 VOL 10180 FOL 020  
  
**LAST PLAN REFERENCE:** LOT 9 - LP77490  
 LOT 3 - PS328987S  
  
**POSTAL ADDRESS:** 126 KLEINITZ ROAD,  
 (At time of subdivision) NUNGURNER, 3909  
  
**MGA 94 CO-ORDINATES:** E 578 480  
 (Of approx. centre of land in plan) N 5807 110 **ZONE:** 55

**COUNCIL NAME:** EAST GIPPSLAND SHIRE COUNCIL REF: 42/2012/CRT

1. This plan is certified under Section 6 of the Subdivision Act 1988.
2. ~~This plan is certified under Section 11(7) of the Subdivision Act 1988. Date of original certification under Section 6 / /~~
3. This is a statement of compliance issued under Section 21 of the Subdivision Act 1988. ✓

**OPEN SPACE**

- (i) A requirement for public open space under Section 18 Subdivision Act 1988 ~~has~~ has not been made.
- ~~(ii) The requirement has been satisfied.~~
- ~~(iii) The requirement is to be satisfied in stage~~  
 Council Delegate *A. Hill*  
~~Council seal~~  
 Date 31/05/2012  
~~Re-certified under Section 11(7) of the Subdivision Act 1988~~  
~~Council Delegate~~  
~~Council seal~~  
 Date / /

**VESTING OF ROADS AND/OR RESERVES**

| IDENTIFIER | COUNCIL/BODY/PERSON |
|------------|---------------------|
| NIL        | NIL                 |

**NOTATIONS**

**STAGING** This is / is not a staged subdivision  
 Planning Permit No 60/2012/P

**DEPTH LIMITATION** 15.24 METRES BELOW THE SURFACE

**SURVEY:** THIS PLAN ~~IS~~ IS NOT BASED ON SURVEY  
 THIS SURVEY IS CONNECTED TO PERMANENT MARK No(s)

**EASEMENT INFORMATION**

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

| Easement Reference | Purpose  | Width (Metres) | Origin    | Land Benefited/In Favour Of |
|--------------------|----------|----------------|-----------|-----------------------------|
| E-1                | DRAINAGE | 1.83           | LP20747   | LAND IN LP20747             |
| E-1                | DRAINAGE | 1.83           | PS328987S | SHIRE OF TAMBO              |

LR USE ONLY  
 STATEMENT OF COMPLIANCE / EXEMPTION STATEMENT

RECEIVED   
 DATE 07/06/2012

LR USE ONLY  
 PLAN REGISTERED  
 TIME 3:33pm  
 DATE 08/06/2012  
 M. CURTIS  
 Assistant Registrar of Titles

SHEET 1 OF 2 SHEETS

**Crowther & Sadler Pty. Ltd.**  
 LICENSED SURVEYORS & TOWN PLANNERS  
 152 MACLEOD STREET, BAIRNSDALE, VIC., 3875  
 TELEPHONE (03) 5162 6011

LICENSED SURVEYOR ..... PAUL ANTHONY DWYER .....  
 SIGNATURE *Paul Dwyer* ..... DATE 12/4/2012  
 REF 15092 ..... VERSION 1

*A. Hill*  
 DATE 31/05/2012  
 COUNCIL DELEGATE SIGNATURE  
 Printed 29/05/2022  
 ORIGINAL SHEET SIZE A3

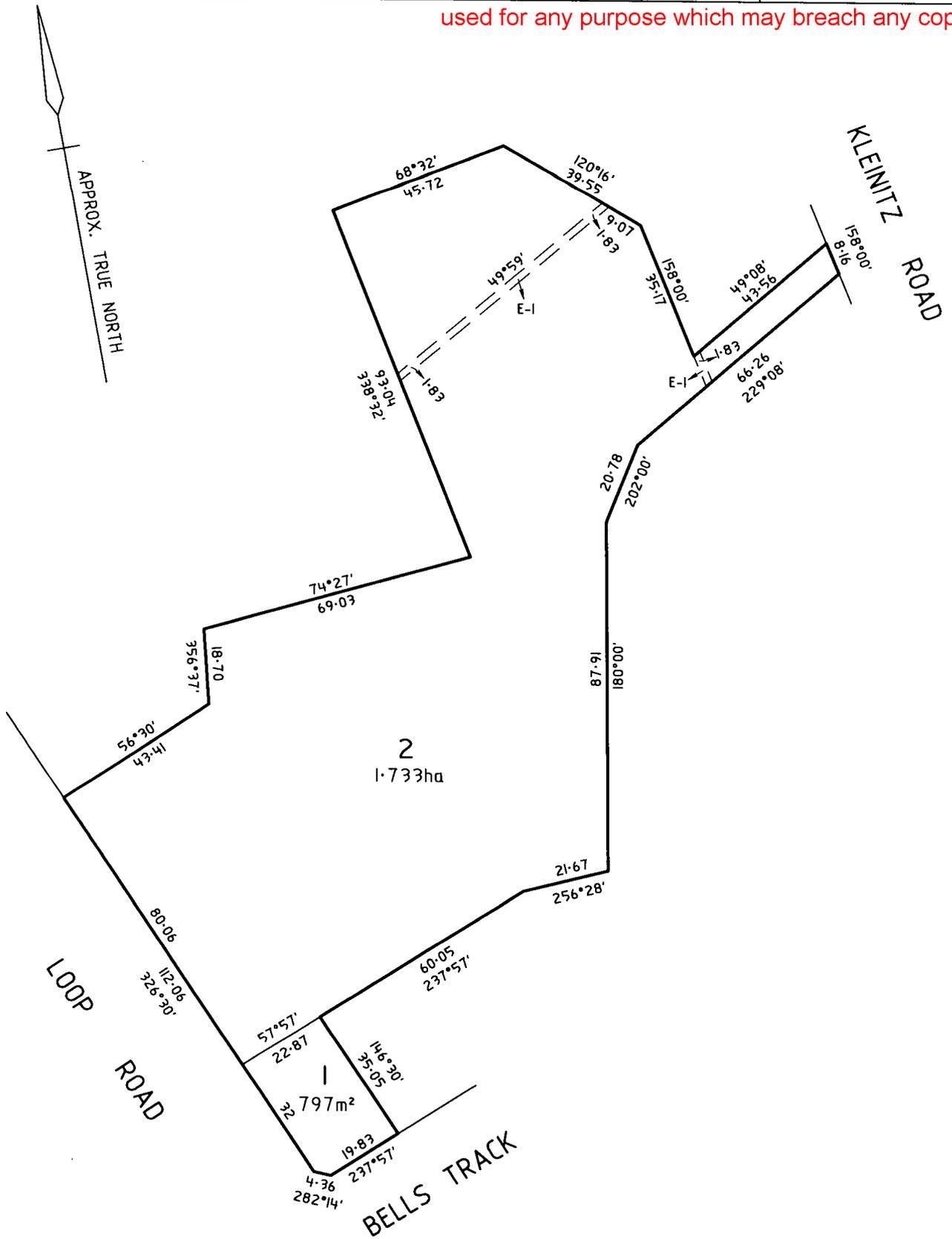
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PLAN OF SUBDIVISION

STAGE No.

PLAN NUMBER

PS 707811V



**Crowthor & Sadler** Pty. Ltd.  
 LICENSED SURVEYORS & TOWN PLANNERS  
 162 MACLEOD STREET, BAIRNSDALE, VIC., 3875  
 TELEPHONE (03) 5162 6011

SHEET 2

|            |        |                       |   |    |    |    |    |
|------------|--------|-----------------------|---|----|----|----|----|
| ORIGINAL   | SCALE  | 10                    | 0 | 10 | 20 | 30 | 40 |
| SHEET SIZE | SCALE  | LENGTHS ARE IN METRES |   |    |    |    |    |
| A3         | 1:1000 |                       |   |    |    |    |    |

LICENSED SURVEYOR PAUL ANTHONY DWYER  
 SIGNATURE *Paul Anthony Dwyer* DATE 12 / 4 / 2012  
 REF 15092 VERSION 1

Printed 29/05/2022  
 DATE 31 / 05 / 2012  
 COUNTY DELEGATE SIGNATURE

## Planning Report

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Two Lot Subdivision  
126 Kleinitz Road, Nungurner

Reference – 19963

April 2022



FS 520900



MEMBER

## Contents

|           |   |           |
|-----------|---|-----------|
| <b>1.</b> | <b>Introduction</b>   | <b>3</b>  |
| <b>2.</b> | <b>Subject Land &amp; Surrounding Context</b>   | <b>4</b>  |
| <b>3.</b> | <b>The Application &amp; Proposal</b>   | <b>5</b>  |
| <b>4.</b> | <b>Cultural Heritage</b>  | <b>6</b>  |
| <b>5.</b> | <b>Planning Policy</b>  | <b>7</b>  |
|           | 5.1 Planning Policy Framework   | 7         |
|           | 5.2 Local Planning Policy   | 8         |
| <b>6.</b> | <b>Planning Elements</b>  | <b>9</b>  |
|           | 6.1 Low Density Residential Zone  | 9         |
|           | 6.2 Design and Development Overlay 11   | 10        |
|           | 6.3 Erosion Management Overlay  | 11        |
|           | 6.4 Vegetation Protection Overlay 3   | 11        |
| <b>7.</b> | <b>Conclusion</b>   | <b>12</b> |
| <b>8.</b> | <b>Attachments</b>  |           |
|           | Application Form  |           |
|           | Proposed Subdivision Plan (Version 1)   |           |
|           | Copy of Title (Lot 2 on PS707811V)  |           |
|           | Geotechnical Risk Assessment Waiver<br>prepared by <i>Chris O'Brien &amp; Company</i> |           |
|           | Land Capability Assessment<br>prepared by <i>Chris O'Brien &amp; Company</i>          |           |

*Note: Applicable Planning Application fee is \$1,337.70*

## 1. Introduction

This planning report is prepared in support of proposed two lot subdivision at 126 Kleinitz Road, Nungurner. The report addresses the provisions of the Low Density Residential Zone, Design and Development Overlay 11, Erosion Management Overlay and Vegetation Protection Overlay as contained within the East Gippsland Planning Scheme.



*Aerial Image of the Subject Land and Immediate Surrounds (Source: GeoVic)*

## 2. Subject Land & Surrounding Context

The subject land is formally known as Lot 2 on PS707811V or more commonly known as 126 Kleinitz Road, Nungurner is an irregular shaped parcel of land with an overall area of 1.7326 hectares or 17,326 square metres.

Access to the land is provided from Kleinitz Road. Kleinitz Road is sealed road and contains table drains. The land has been developed by a dwelling and outbuildings within a garden setting.

The property runs from Kleinitz Road through to Loop Road. It is undulating and falls to the south-west of the site. Consistent with the zoning of Nungurner being Low Density Residential properties are generally larger and developed for the purposes of dwellings. To the north, south, east and west are residential homes often containing outbuildings.

The style and scale of dwellings in the area varies, representing different eras of development. A characteristic of the location is the native vegetation on both private and public land.



*Location Plan of the Subject Land Within Nungurner*



#### 4. Cultural Heritage

The proposal does not trigger any mandatory requirements to provide a Cultural Heritage Management Plan (CHMP) under the *Aboriginal Heritage Act 2006*.

Pursuant to Regulation 7 of the *Aboriginal Heritage Regulations 2018*, a CHMP is required for an activity if:

- (a) *all or part of the activity area for the activity is in an area of cultural heritage sensitivity; and*
- (b) *all or part of the activity is a high impact activity*



*Cultural Heritage Sensitivity Mapping (Source: VicPlan)*

The subject land is mapped as being cultural heritage sensitive. However, a two lot subdivision is not classified as being a high impact activity. Therefore, there is no mandatory requirement to provide a CHMP in support of the Application.

## 5. Planning Policy

### 5.1 Planning Policy Framework

Clause 11.01-1S Settlement seeks to promote the sustainable growth and development of Victoria and deliver choice and opportunity for all Victorians through a network of settlements.

The proposed subdivision is consistent with the policy objective and supports the underlying strategies as it provides for the growth in population within a settlement boundary and assists to limit urban sprawl.

Being located within an existing township the subdivision will assist to manage coastal population growth, water supply will be provided. A land capability assessment that accompanies the application advises that wastewater can be accommodated and managed on site consistent with Clause 11.03-4S Coastal Settlement.

Being located within the landscaped setting of the Nungurner township the proposed subdivision will create a vacant lot that can be sensitively developed for the purposes of a dwelling without impacting the landscape and vegetation on the land as sought by Clause 12.05-2S Landscapes.

Clause 13.04-2S Erosion and Landslip seeks to protect areas prone to erosion, landslip or other land degradation processes. The application has been supported with a geotechnical risk assessment which advises that the erosion hazard on the land and associated with the subdivision is low.

Clause 15.01-3S Subdivision Design supports the proposed subdivision as it will assist to create a compact neighbourhood, provides attractive and safe lots and creates a vacant land parcel that can be developed to suit a variety of dwelling and household types.

Nungurner has some challenging topography and contains significant stands of native vegetation. These constraints have flavoured the subdivision patterns of the area resulting in larger allotments and various shapes. The subdivision responds to these land constraints and is not dissimilar to many lots in the area consistent with Clause 15.01-5S Neighbourhood Character.

The allotment layout will allow a future dwelling on the proposed vacant lot to be designed to capture solar access and often dwellings on larger allotments utilise water tanks which reduces the reliance on potable water as per Clause 15.02-1S Energy Efficiency.

Assisting to provide for housing supply noted in Clause 16.01-1S the subdivision will provide an additional lot for residential purposes increasing the proportion of housing in designated locations in established urban areas and reduces the share of new dwellings in greenfield, fringe and dispersed development areas.

## 5.2 Local Planning Policy

To make best use of the community's investment in urban infrastructure and to provide support for community and commercial services is the objective at Clause 21.03-1. A land capability assessment demonstrates that the land can manage waste on site, provides for limited infill, provides a larger vacant parcel of land to provide diversity and choice and allows for infill development of towns in preference to dispersed development.

Consistent with Clause 21.03-2 Coastal Settlement the land is well setback from the Lake foreshore and is elevated resulting in unlikely impacts anticipated climate change.

Protecting the landscape as promoted by Clause 21.04-2 has been considered in the subdivision design. The vacant allotment provides cleared areas where a dwelling can be located, in doing so protecting the native vegetation on the land and in turn maintaining the landscaped character of the area.

Clause 21.05 Environmental Risk identifies erosion as a potential risk. The application has been supported with a geotechnical risk assessment which advises that the erosion hazard on the land and associated with the subdivision is low.

As sought by Clause 21.08-1 and Clause 21.08-2 low density house lots are supported where wastewater can be accommodated and managed on the land.

Clause 21.12 Strategies for Sub-Regions, Towns & Localities advises that Nungurner is located within the Coastal & Lakes Sub-region. The Overview of Settlement Futures identifies Nungurner as a small village where minor expansion of the existing area will be encouraged.

The proposed subdivision will maintain the low density bushland character of the area and is consistent with the Nungurner Strategy Plan.

## 6. Planning Elements

### 6.1 Low Density Residential Zone

The subject land is located within the Low Density Residential Zone where a planning permit is required to subdivide land in accordance with Clause 32.03-3 of the planning scheme.



*Extract of the East Gippsland Planning Scheme Mapping Identifying the Subject Land Zoned Low Density Residential (Source: Vic Plan)*

Each lot must be at least 0.4 hectares where reticulated sewerage is not connected.

The proposed subdivision responds positively to the purposes of the zone and decision guidelines:

- Significant planning policy support is outlined in the planning scheme encouraging the subdivision.
- The low density landscaped character of the area will continue to be maintained through the creation of two generous sized lots and the vacant allotment has ample cleared area to develop a dwelling and provide for effluent disposal fields.
- Utility services available in the area being electricity, water supply and telecommunications can be connected to each lot.
- A land capability assessment is submitted with the application advising that wastewater can be accommodated and managed on the land.

## 6.2 Design and Development Overlay 11

Located within the Design and Development Overlay 11 a planning permit is required to subdivide land in accordance with 43.02-3 of the planning scheme.



*Extract of the East Gippsland Planning Scheme Mapping Identifying the Subject Site Located Within a Design and Development Overlay 11 (Source: Vic Plan)*

Schedule 11 of the Design and Development Overlay is Residential Development in Coastal Settlements.

It is considered that the proposed subdivision responds well to the objectives in schedule 11 and the decision guidelines:

- The subdivision will not detrimentally affect the landscape values of the area. The landscape character will remain intact with clear areas on the vacant lot being able to be used to develop a dwelling. The erosion hazard associated with the land has been reviewed and is considered low.
- The wildlife corridor along Loop Road will remain undisturbed as no access to the vacant allotment is proposed from Loop Road.
- The subject land is well setback from the Lake foreshore and is elevated resulting in the subdivision being highly unlikely to be impacted by coastal processes now and into the future.
- The proposed subdivision responds to the topography and neighbourhood character of the area by creating larger lots and utilising the topography of the land well to provide for a vacant lot that can easily be used and developed by a dwelling.

### 6.3 Erosion Management Overlay

Located within the Erosion Management Overlay a planning permit is required to subdivide the subject land in accordance with Clause 44.01-5 of the planning scheme.



*Extract of the East Gippsland Planning Scheme Mapping Identifying the Subject Site Located Within an Erosion Management Overlay (Source: Vic Plan)*

In accordance with the schedule of the Erosion Management Overlay a geotechnical risk assessment has been undertaken and advises that the risk of erosion on the land and the impacts of the subdivision would be low risk.

### 6.4 Vegetation Protection Overlay

The removal of vegetation will generally require a planning permit to be obtained within the Vegetation Protection Overlay Schedule 3 Nungurner – Metung.

The purpose of the vacant lot is to sell it to the owner's granddaughter and as such there is no intention to remove vegetation on the land.



*Extract of the East Gippsland Planning Scheme Mapping Identifying the Subject Site Located Within a Vegetation Protection Overlay 3 (Source: Vic Plan)*

The proposed common property has been located to ensure vegetation does not have to be removed. Vehicles are able to access both lots under the canopies. The vegetation on the vacant lot can be maintained with large clear areas for the establishment of a dwelling. The proposed common boundary between lots 1 and 2 could result in the loss of vegetation if fenced. As such it is proposed to enter a Section 173 agreement preventing the removal of vegetation in the event the boundary is required to be fenced.

## 7. Conclusion

The proposed two lot subdivision at 126 Kleinitz Road, Nungurner is considered to accord with all relevant provisions of the Low Density Residential Zone, Design and Development Overlay 11, Erosion Management Overlay and Vegetation Protection Overlay of the East Gippsland Planning Scheme. The proposal is consistent with Planning Policy Framework and Local Policy and has been designed to complement the adjoining properties and constraints of the land.

For these reasons we respectfully request that Council consider the merits of the application favourably and resolve to issue a Planning Permit.

MICHAEL SADLER  
Managing Director

Reference No: B22114

Project No: 320322

5/04/2022

Crowther & Sadler Pty Ltd  
P.O Box 722  
BAIRNSDALE Vic 3875

Attn: Amie Ingwersen

Email: amp@crowthersadler.com.au

Dear Amie,

**RE: GRA Waiver for Proposed 2 Lot Subdivision for Heather Bury  
126 Kleinitz Road, Nungurner.**

Chris O'Brien & Company Pty Ltd have been engaged by Amie Ingwersen of Crowther & Sadler Pty Ltd to determine whether or not a full Geotechnical risk assessment report is required for a proposed 2 lot subdivision at 126 Kleinitz Road, Nungurner Vic 3909. An erosion management overlay exists over the property.

The purpose of this letter is to determine if the works to be carried out on this site will be a risk to the surrounding environment and is to be used in the planning application process only. This letter is not a soil classification report and shall not be used for this purpose.

Information contained in this letter is from a visual inspection of the site and based on information supplied to Chris O'Brien & Company Pty Ltd on the work to be completed on the site.

The site was inspected by Andrew Powell on the 5<sup>th</sup> April 2022.

Inspection of the site confirmed no erosion problems currently exist on the site with the site having an excellent cover of grass. There site contains varied vegetation with some significant trees on the site, with the centre area of the proposed allotment being clear of any vegetation. The site has reasonable falls with the site generally falling towards the south west boundary on Loop Road. A residence and outbuildings already exist on lot 1 with the access driveway in the common property mostly formed.

Currently Ausnet service is provided to lot 1 and this will need to be extended to include lot 2, with only shallow trenching work required for this to be done. For sewer a treatment system will be provided on site when a residence is constructed. The existing access driveway will need to be extended and upgraded to provide access to Lot 2. This will required some minor excavation works and the placement of road making materials to form the driveway. During any excavation works we recommend silt fences be placed to protect

**Crowther & Sadler Pty Ltd**

Proposed 2 Lot Subdivision at 15 Counihan Street, Wybung

any downslope areas. Provided this is done we expect no environmental risks from this source.

It is expected a residence will be constructed on lot 2. Storm water created from this will be directed to water tanks, with the overflow from the water tanks to be treated with approved rock beaching. Provided this is done we expect no environmental risks from this source.

We therefore suggest that a full geotechnical risk assessment report is not required for this development. As long as normal precautions are taken such as provided silt fence during excavation and trenching work and that overflows from water tanks are properly treated we anticipate no environmental risks with the work to be undertaken.

Should you need to clarify anything, please contact the Andrew Powell on 0402384596

Yours faithfully,



**Andrew Powell Assoc.Dip (Civil)**  
for CHRIS O'BRIEN & COMPANY PTY LTD

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Photos below show the common property access



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Photos Below Show The General Layout of the Site



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Reference No: B22113

Project No: 320322

5/04/2022

Crowther & Sadler Pty Ltd  
P.O. Box 722  
BAIRNSDALE VIC 3875

Email: [amp@crowthersadler.com.au](mailto:amp@crowthersadler.com.au)

Dear Amie,

**RE: PROPOSED TWO (2) LOT SUBDIVISION  
126 KLEINITZ ROAD, NUNGURNER. VIC**

**WATER ENGINEER'S CERTIFICATION OF LAND CAPABILITY  
ASSESSMENT AND ON SITE SOIL INVESTIGATION FOR  
DOMESTIC EFFLUENT DISPOSAL SEPTIC TANK SYSTEM**

Further to our detailed inspection, at 8:00am on 5<sup>th</sup> April, 2022, of the above site this is to certify that Andrew John Powell, on behalf of Chris O'Brien & Company Pty Ltd, has prepared this report to document our Land Capability Assessment (LCA) and soil percolation test data together with recommendations for a specific location within the above allotment for on-site containment of domestic effluent disposal.

The purpose of this particular land capability assessment (LCA) is to investigate an area for a "Land Application Area" (LAA) located to the south west of the proposed second allotment. Electrically operated pump wells shall be installed adjacent to the septic tank and sand filter to pump the secondary treated wastewater directly to the LAA. The area where the LAA can be located is shown on our site plan, attached hereunder.

An area, measuring approx. 25m (NW-SE direction) x 10m (SW-NE direction) and set 10m from the Loop Road boundary and 10m from the south east boundary has been allocated. The test site has an average slope of about 8.0% to the north east and is at the site low point in the north west south east direction. The buffer zones are clear of any ephemeral waters. The area allocated for disposal field will not cause any detriment to the environment nor stormwater run-off quality within the precinct where the allotment is located.

A soil investigation pit was hand excavated. The soil consists of a damp dark brown sandy loam (SL) topsoil containing grass roots moderately dispersed, underlain by moist brown sandy loam (SL) between 120 – 350mm depth below existing grassed surface, underlain moist brown fawn loamy sand (LS) to 650mm depth at termination of the test pit. The field texture grade for this particular soil was identified with the behaviour of several moist bolus exhibited: coarse to touch and sheared between thumb and forefinger.

## DISCUSSION

For this particular site, should soil percolation testing have been undertaken we would expect the percolation rate to exceed 15mm/hr and be less than 500mm/hr. in this case absorption is largely by absorption through the upper soil strata and evapo-transpiration.

## PHOTOGRAPHY

Several colour photographs have been attached to the rear of this report to illustrate the subject allotment terrain and the location of the area of the "On-Site Domestic-Wastewater" disposal field. In addition, a test pit was hand excavated to 650mm depth, to investigate and illustrate the various soil horizons. The test pit, together with the tailings of excavated material, were photographed and have been attached as well. It is obvious, by observation of the photographs, the soil type and the sloping terrain available for disposal, that a sub-surface drip irrigation bed system aided by a sand filter and pumps is appropriate..

## DAILY FLOW & SEPTIC TANK CAPACITY

- For the purposes of this report we have allowed for a residence to be constructed on the new allotment, with the new residence is to have four (4) bedrooms and as a consequence the estimated daily flow in accordance with EPA Publication 891.4 July 2016: Code of Practice – Onsite Wastewater Management: Table 4 (dwelling installed with full water-reduction fixtures and fittings) and AS/NZS 1547:2012 Table H1

$$=(2 + 3 \times 1)150$$

$$=750 \text{ L/day (Roof Tank Water Supply)}$$

- Minimum septic tank capacity (C) in accordance with AS/NZS 1547:2012 Table J1

$$=3000 \text{ litres (Minimum Volume)}$$

## SUB-SURFACE DRIP IRRIGATION BED – DESIGN AREA SIZING IN ACCORDANCE WITH AS/NZS 1547:2012 AND EPA PUBLICATION 891.4: JULY 2016

Reference is made to the Australian Standard code AS/NZS 1547:2012 "On site Domestic-wastewater Management" Appendix M and in particular Clause M3.1 & M6 for Shallow Sub-surface Drip Irrigation Beds. Refer Table M1, whereby the soil examined on site may be classified as a Soil Category 1: Gravels and sands (Massive), the Design Irrigation Rate (DIR) for secondary treated effluent is approx. 5mm/day. Noteworthy is that the EPA "Guidelines for Environmental Management" – Code of Practice Onsite Wastewater Management: Appendix A – Table 9: Soil Categories and Recommended Maximum Design Loading/Irrigation Rates (DLR/DIR) for "Land Application Systems" makes direct reference to Table M1 in AS/NZS 1547:2012 and therefore the exact same DIR is recommended by the EPA. A sub-surface drip irrigation area has been determined by an water balance analysis. The water balance analysis forms part of this report.

## AREA REQUIRED FOR SUB-SURFACE IRRIGATION SYSTEM

The appropriate absorption bed area for a subsoil irrigation system has been determined with a water balance analysis, which is attached to this report. A conservative DIR of 5.0 L/m<sup>2</sup>/day being adopted. According to the water balance a total area of 180sq.m is required to adequately disperse 750L/day of wastewater generated by a four (4) bedroom dwelling supplied by Roof Tank Water Supply. With reference to our Site Layout Plan Drawing (A4 Size) where we show an area 25m x 10m where the proposed system can be located. A final layout of the proposed system will be produced once a residence for the proposed allotment is to be constructed.

## SAND FILTER

A sand filter, as mentioned above, is proposed for this project to produce treated effluent 20/30 Std. the sand filter proposed for this project shall be Single Pass Sand Filter measuring at least 14sq.m (minimum) in surface area by 1400 – 1500mm depth (Refer "Domestic Wastewater Management Technical Guidelines" issued by Baw Baw Shire Council – March 2007 Edition).

## RESERVE AREA NOT REQUIRED

The allocation of a reserve area is not thought to be necessary on this site if a shallow sub-surface drip irrigation bed system is used. The design parameters used to determine the required size of the Land Application Area (LAA) have been suitably conservative. The soil is not sodic nor saline. Provided the LAA allocated is at least 180sq.m, if a sub-surface drip irrigation bed system fails it may be ripped out and another sub-surface drip irrigation bed system placed within the LAA area shown on the site plan.

## PREPARATION OF THE SITE PRIOR TO COMMENCEMENT

The area upon which the shallow sub-surface drip irrigation bed is proposed for construction shall be protected from stormwater overland flow by establishing a shallow open earth vee-drain across the upstream sides of the LAA (effluent disposal field) curtailing around the ends – if required.

## SUMMARY & CONDITIONS

The water balance yields a land application area (LAA) of 180sq.m. It is our professional opinion the area should be at least 180sq.m and the total length of drip irrigation pipe should be at least 240m which will be environmentally adequate and consistent with the above recommendations.

Based on the land capability assessment results, it is our opinion that the soil type and profile on this site are suitable for disposal of wastewater on site, by the use of a sand filter producing min. 20/30 grade effluent and an on-site disposal system using sub-surface drip irrigation such as Geoflow Wastewater™ or Netafirm disposal system.

From the test results it can be seen that a four (4) bedroom dwelling requires a disposal area of around 180sq.m (minimum) for a shallow sub-surface drip irrigation bed system.

Siting of the proposed wastewater disposal field envelope shall be within the area tested. Refer to attached site plan. The following factors shall be considered when positioning the proposed wastewater disposal field.

- 1) Standard siting guidelines as per the requirements of the East Gippsland Shire Council (EGSC) guidelines.
- 2) At least 3.0m (subject to agreement between EGSC and COB & Co. prior to commencement) up-slope and 1.5m down-slope of any title boundary/road reserve or building.

The following additional conditions shall be observed in addition to those set out by the local Council.

1. The quality of wastewater used for sub-surface drip irrigation bed system must comply with the following limits.

|                           |                             |
|---------------------------|-----------------------------|
| Biochemical Oxegen Demand | Max: 20mg/l                 |
| Suspended Solids          | Max: 30mg/l                 |
| Faecal coliforms          | Max: 10 organisms per 100ml |
| Free chlorine             | Max: 2mg/l      Min 0.5mg/l |

2. The system has been designed on a standard 600mm wide by 400mm layout (waste flow pipes are installed at 600mm centres with emitters spaced at 400mm along the waste flow pipes). The emitters are rated at 2.3l/hr.
3. The disposal field shall be sown with lawn grasses as soon as possible on completion of works. This will stabilize the soil and allow for the vegetation to take up the wastewater.
4. Only water from the septic tank is permitted to enter the disposal system. Stormwater run-off shall be prevented from entering the shallow sub-surface drip irrigation bed system area. We

suggest an open earth vee-drain be constructed to 100mm depth along the high sides of this area or other approved method as approved by the Design Engineer.

5. Vehicles or heavy equipment shall not be permitted on the disposal field as damage to the pipe work may result.
6. Spikes, tent pegs, garden stakes etc. shall not be driven into the ground in the disposal field as damage to the pipe work may result.
7. An ongoing maintenance program shall be instigated to ensure that both the sand filter and the shallow sub-surface drip irrigation bed system are properly maintained and serviced to ensure proper operation.

## CONCLUSION

Following the Land Capability Assessment on this site it is professional opinion that the newly created allotment is suitable for on-site wastewater disposal utilizing a secondary treatment system which is highly unlikely to cause detriment to the environment.

Adequate maintenance and checking of the proposed system should be established as part of the Council Permit Application approvals process.

Yours faithfully,



**Andrew Powell Assoc.Dip (Civil)**  
for CHRIS O'BRIEN & COMPANY PTY LTD

**LAND CAPABILITY ASSESSMENT AND SOIL PERCOLATION TESTING**

| Land Features | Land Capability Class Rating |         |         |         |              | Site Rating |
|---------------|------------------------------|---------|---------|---------|--------------|-------------|
|               | Very Good(1)                 | Good(2) | Fair(3) | Poor(4) | Very Poor(5) |             |

**General Characteristics**

|  |  |   |                                   |   |                                      |          |
|--|--|---|-----------------------------------|---|--------------------------------------|----------|
| Site Drainage  | No visible signs of dampness               | Moist soil, but no standing water in soil pit |                                   | Visible signs of dampness, such as moisture tolerant plants | Water ponding on surface             | <b>2</b> |
| Runoff   | None                                       | Low   | Moderate                          | High, need for diversionary structures                      | Very high, diversion not practical   | <b>2</b> |
| Flood Levels   | Never                                      |   | <1 in 100                         | >1 in 100 and <1 in 20                                      | <1 in 20                             | <b>1</b> |
| Proximity to watercourses                                | >60m                                       |   |                                   |   | <60m                                 | <b>1</b> |
| Slope%   | 0-2  | 2-8   | 8-12                              | 12-20   | >20                                  | <b>2</b> |
| Landslip   | No actual or potential failure             |   | Low potential for failure         | High potential for failure                                  | Present or past failure              | <b>1</b> |
| Groundwater (seasonal watertable depth(m))               | >5   | 5-2.5   | 2.5-2.0                           | 2.0-1.5   | <1.5                                 | <b>1</b> |
| Rock outcrop (% of land surface containing rocks >200mm) | 0  | <10%  | 10-20%                            | 20-50%  | >50%                                 | <b>1</b> |
| Erosion potential  | No erosion potential                       | Minor   | Moderate                          | High  | Severe erosion potential             | <b>1</b> |
| Exposure   | High sun and wind exposure                 |   | Moderate                          | Low sun and wind exposure                                   |                                      | <b>1</b> |
| Landform   | Hill crests, convex side slopes and plains |   | Concave sideslopes and footslopes |   | Floodplains and incised channels     | <b>1</b> |
| Vegetation type  | Turf or pasture                            |   |                                   |   | Dense forest with little undergrowth | <b>1</b> |
| Average Rainfall (mm/year)                               | <450                                       | 450-650                                       | 650-750                           | 750-1000  | >1000                                | <b>3</b> |
| Pan Evaporation (mm/yr)                                  | <1500                                      | 1250-1500                                     | 1000-1250                         |   | <1000                                | <b>2</b> |

**Soil profile charecteristics**

|                            |         |         |         |           |           |          |
|----------------------------|---------|---------|---------|-----------|-----------|----------|
| Soil permeability category | 2 and 3 | 4       |         | 5         | 1 and 6   | <b>5</b> |
| Profile depth              | >2m     | 1.5m-2m | 1.5m-1m | 1.0m-0.5m | <0.5m     | <b>2</b> |
| Presence of mottling       | None    |         |         |           | Extensive | <b>1</b> |

|                                     |         |         |       |       |          |              |
|-------------------------------------|---------|---------|-------|-------|----------|--------------|
| Coarse fragments (%)                | <10     | 10-20   | 20-40 | 40-60 | >60      | 2            |
| pH                                  | 6-8     |         | 4.5-6 |       | <4.5, >8 | Not measured |
| Emerson aggregate                   | 4, 6, 8 | 5       | 7     | 2, 3  | 1        | <b>1</b>     |
| Electrical conductivity (Ece)(Ds/m) | <0.3    | 0.3-0.8 | 0.8-2 | 2-4   | >4       | Not measured |
| Sodicity ESP%                       | <3      |         | 6-8   | 8-14  | >14      | <b>3</b>     |

### INSTALLATION CONDITIONS

All installations shall comply with the AS/NZS 1547:2012 the, EPA Code of Practice – Septic Tanks 1996, the Victorian Water Supply and Sewerage Plumbing Regulations 1986 and AS 3500 National Plumbing and Drainage Code.

No septic tank or sand filter shall be installed closer than 1.5m to the foundations of any house, building or the boundary of the allotment.

Inlets and outlets of the septic tank must be baffled to avoid disturbing the contents of the septic tank.

Inspection openings of the septic tank shall be brought up to and permanently marked at surface level. Inspection openings shall be fitted with childproof airtight covers which are capable of being readily removed and replaced by one adult. Access opening covers shall not be cemented or otherwise fixed in position so as to be incapable of being readily removed for inspection purposes.

Food waste disposal units are not recommended for use with septic tank systems. **If used in household situation, a minimum extra allowance of 25% shall be made for additional sludge storage.**

**Spa baths over 200 litre capacity are not to be connected to the primary septic tank but must be taken into account for effluent disposal calculations.**

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**Nominated Area Water Balance For Secondary Treatment**

|                                 |  |                   |
|---------------------------------|--|-------------------|
| Site Address:                   | 126 Kleintz Road - Nungurner           |                   |
| Notes:                          | <b>MAV Model LCA</b>                   |                   |
| Input Data                      | <b>Notes</b>                           |                   |
| Design Wastewater Flow          | Q                                      | 750 L/day         |
| Design DIR                      | DIR                                    | 5 mm/day          |
| Nominated Land Application Area | L                                      | 180 Sq.m          |
| Crop Factor                     | C                                      | 0.6-0.85 unitless |
| Retained Rainfall               | Rf                                     | 0.8 unitless      |
| Rainfall Data                   | Bairnsdale Station 085279 mean monthly |                   |
| Evaporation Data                | East Sale Station 085072 mean monthly  |                   |

| Parameters                                       | Symbol | Formula   | Units    | Jan        | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep    | Oct    | Nov    | Dec    | Total   |
|--|--------|-----------|----------|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Days in month                                    | D      | \         | days     | 31         | 28     | 31     | 30     | 31     | 30     | 31     | 31     | 30     | 31     | 30     | 31     | 365     |
| Rainfall   | R      | \         | mm/month | 49.7       | 46.1   | 46.5   | 56.5   | 44.0   | 62.7   | 48.2   | 36.0   | 50.2   | 59.9   | 77.4   | 60.4   | 636.9   |
| Evaporation                                      | E      | \         | mm/month | 201.5      | 162.4  | 136.4  | 84.0   | 52.7   | 42.0   | 46.5   | 68.2   | 93.0   | 124.0  | 153.0  | 186.0  | 1349.7  |
| Crop Factor                                      | C      |           |          | 0.85       | 0.85   | 0.7    | 0.7    | 0.6    | 0.6    | 0.6    | 0.6    | 0.7    | 0.7    | 0.85   | 0.85   |         |
| <b>OUTPUTS</b>                                   |        |           |          |            |        |        |        |        |        |        |        |        |        |        |        |         |
| Evapotranspiration                               | ET     | E x C     | mm/month | 171.28     | 138.04 | 95.48  | 58.8   | 31.62  | 25.2   | 27.9   | 40.92  | 65.1   | 86.8   | 130.05 | 158.1  | 1029.3  |
| Percolation                                      | B      | DIRxD     | mm/month | 155        | 140    | 155    | 150    | 155    | 150    | 155    | 155    | 150    | 155    | 150    | 155    | 1825    |
| Outputs  |        | ET+B      | mm/month | 326.28     | 278.04 | 250.48 | 208.8  | 186.62 | 175.2  | 182.9  | 195.92 | 215.1  | 241.8  | 280.05 | 313.1  | 2854.3  |
| <b>INPUTS</b>                                    |        |           |          |            |        |        |        |        |        |        |        |        |        |        |        |         |
| Retained Rainfall                                | RR     | RxRf      | mm/month | 39.76      | 36.88  | 37.2   | 45.2   | 35.2   | 50.16  | 38.56  | 28.8   | 40.16  | 47.92  | 61.92  | 48.32  | 510.1   |
| Effluent Irrigation                              | W      | (QxD)/L   | mm/month | 129.17     | 116.67 | 129.17 | 125.0  | 129.17 | 125.0  | 129.17 | 129.17 | 125.0  | 129.17 | 125.0  | 129.17 | 1520.86 |
| Inputs   |        | RR + W    | mm/month | 168.93     | 153.55 | 166.37 | 170.2  | 164.37 | 175.16 | 167.73 | 157.97 | 165.16 | 177.09 | 186.92 | 177.49 | 2030.96 |
| <b>LAND AREA FOR ZERO STORAGE</b>                |        |           |          |            |        |        |        |        |        |        |        |        |        |        |        |         |
| Maximum effluent Application for Zero Storage    | X      | (ET+B)-RR | mm/month | 286.52     | 241.16 | 213.28 | 163.6  | 151.42 | 125.04 | 144.34 | 167.12 | 174.94 | 193.88 | 218.13 | 264.78 |         |
| Effluent Produced                                | Y      | Q*D       | L/month  | 23250      | 21000  | 23250  | 22500  | 23250  | 22500  | 23250  | 23250  | 22500  | 23250  | 22500  | 23250  |         |
| Maximum area required for zero storage           |        | Y/X       | Sq.m     | 81.15      | 87.08  | 109.01 | 137.53 | 153.55 | 179.94 | 161.08 | 139.12 | 128.62 | 119.92 | 103.15 | 87.81  |         |
| <b>LAND AREA REQUIRED FOR ZERO STORAGE</b>       |        |           | Sq.m     | 82         | 88     | 109    | 138    | 154    | 180    | 162    | 140    | 129    | 120    | 104    | 88     |         |
| <b>MINIMUM AREA REQUIRED FOR ZERO STORAGE m2</b> |        |           |          | <b>180</b> |        |        |        |        |        |        |        |        |        |        |        |         |

This is based on the worst months of the year, so the balance overestimates the area/storage requirements and is hence conservative for all other months.



General Site Photos and Test Pit.



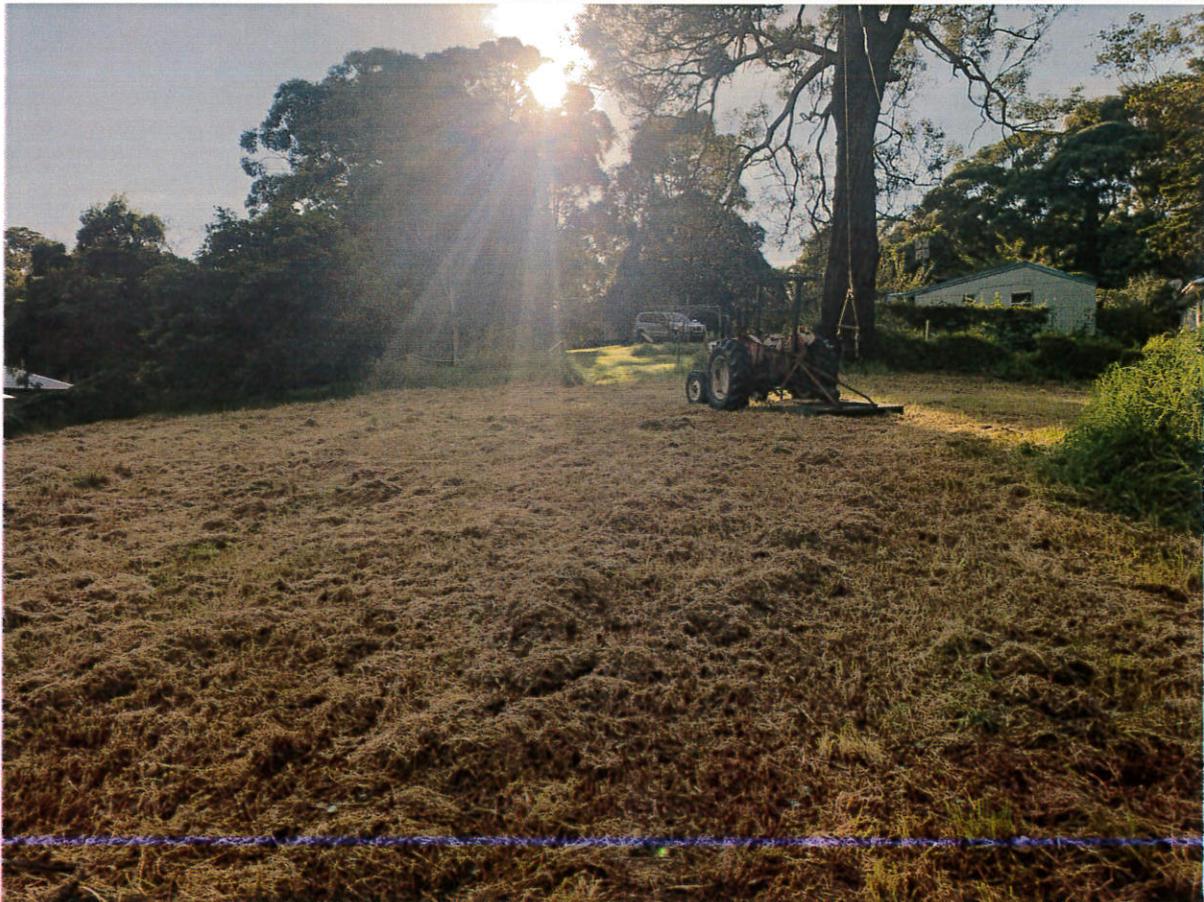
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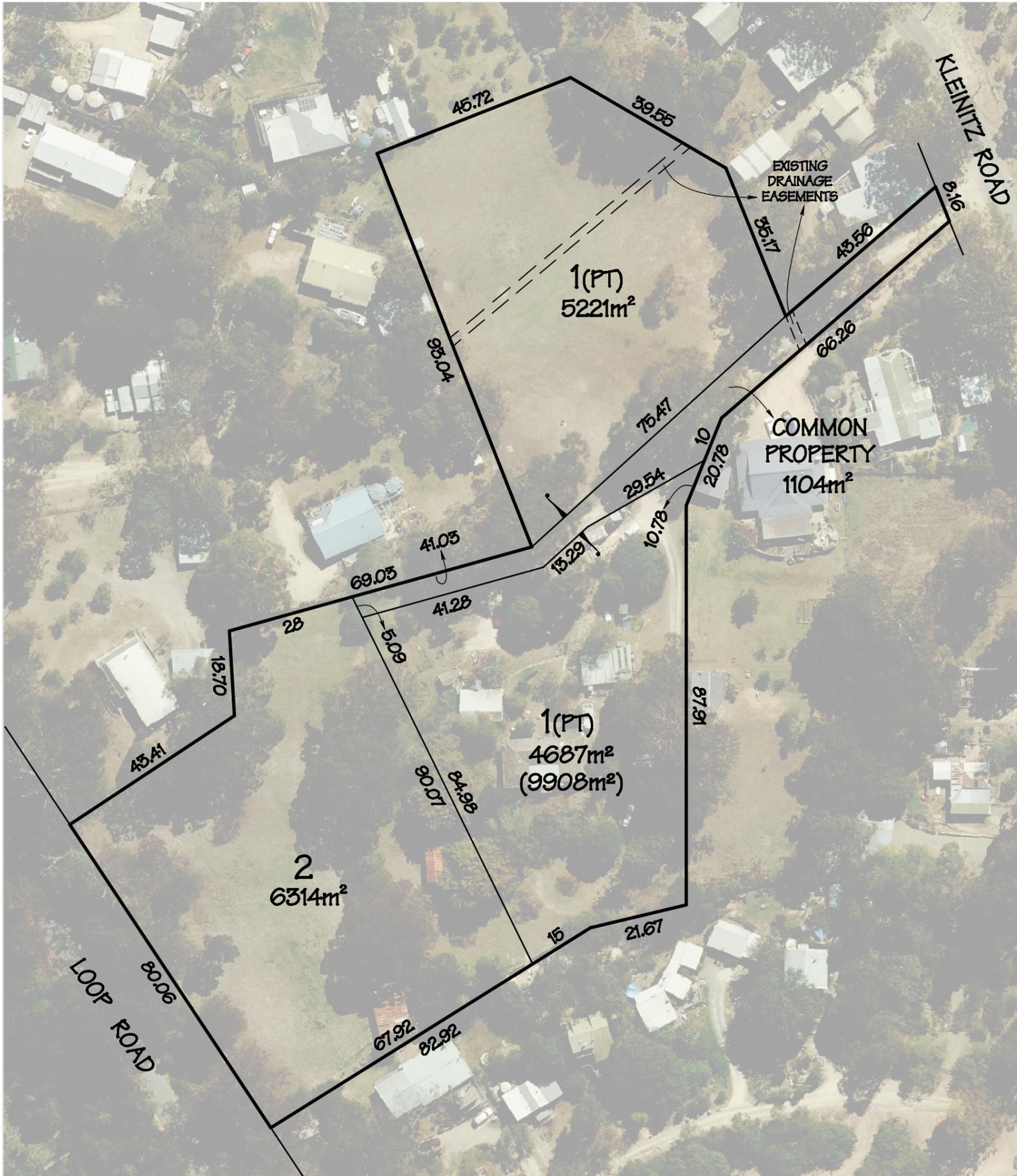


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# PROPOSED SUBDIVISION

PARISH OF COLQUHOUN  
TOWNSHIP OF NUNGURNER  
CROWN ALLOTMENTS 41, 42, 43,  
44, 45 & 46 (PARTS)

LOT 2 ON P5707811V



**HEATHER BURY**  
126 KLEINITZ ROAD, NUNGURNER

**Crowther & Sadler Pty. Ltd.**

LICENSED SURVEYORS & TOWN PLANNERS  
152 MACLEOD STREET, BAIRNSDALE, VIC., 3875  
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## NOTATIONS

AREAS ARE APPROXIMATE ONLY  
DIMENSIONS ARE SUBJECT TO SURVEY

SCALE (SHEET SIZE A3)

1 : 1000

SURVEYORS REF.

19963 Printed 29/05/2022

VERSION 1 - DRAWN 07/05/2022 Page 36 of 36