Phillip Island
Planning Services

North West Growth Area Development Plan Report

Prepared for
RFT Building Consulting
September 2019

Quality History

Revision	Revision Date	Details	Authorised	
			Name/Position	Signature
A	September 2019	Development Plan Report	**M. Harrison** Director	Original Signed

Phillip Island
Planning Services

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Phillip Island
Planning Services

1.0 Introduction

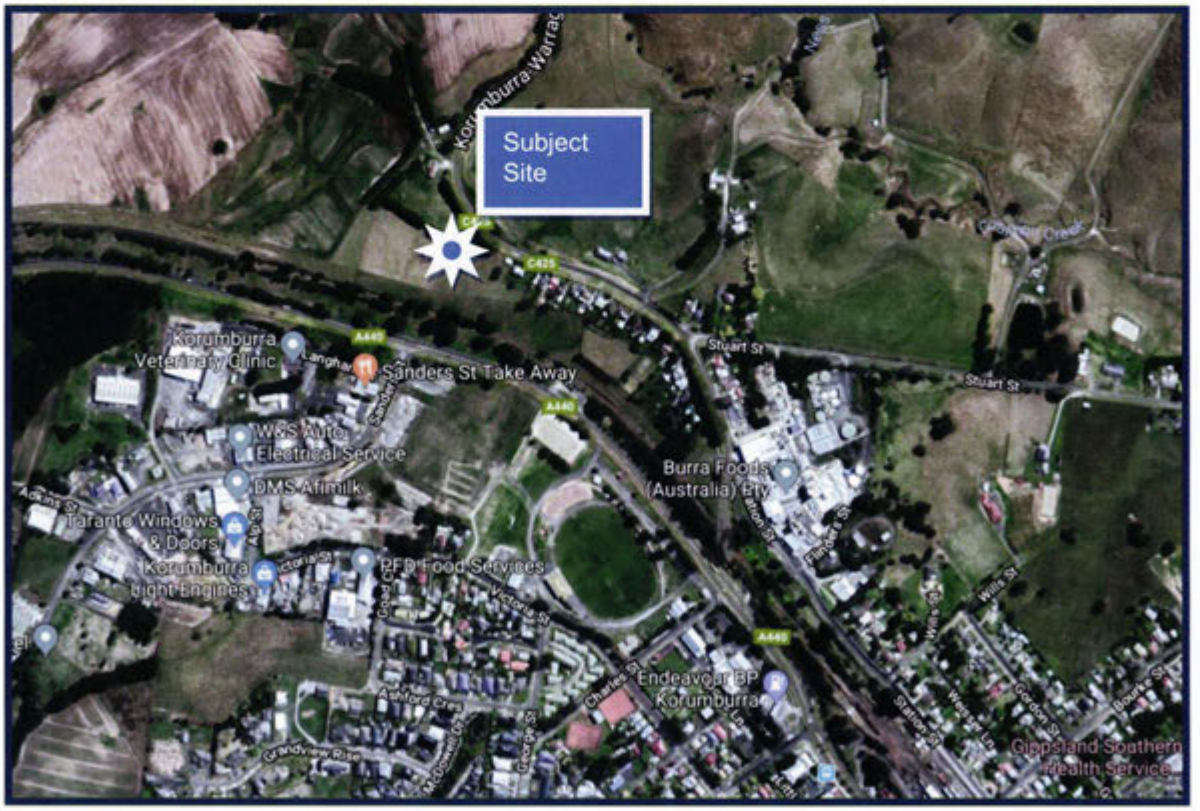
1.1 Overview

This Development Plan Report for No.35 Korumburra – Warragul Road, Korumburra has been prepared by Phillip Island Planning Services Pty Ltd on behalf of RFT Building Consulting.

This report and accompanying material comprise the North West Growth Area Development Plan, which supports the future subdivision and residential use of the subject site. The Development Plan has been prepared in accordance with the provisions of Schedule 8 of the Development Plan Overlay in the South Gippsland Planning Scheme.

The land is located in the north-western growth area of the township of Korumburra.

Figure 1 – Locality Plan



The plans accompanying the Development Plan Report have been prepared by Brosnan Engineering Solutions Pty Ltd. These plans contain information regarding the surrounding context, the proposed general layout of the site, allotment boundaries, road network and public open space treatments. A detailed discussion regarding the proposed Development Plan is provided at Section 5 of this report.

A separate planning permit application for the subdivision of land into 30 lots will be lodged with the South Gippsland Shire Council (Council).

1.2 Background

Following the Gazettal of Amendment C96 to the South Gippsland Planning Scheme on 15 April 2015, the subject land is now subject to the General Residential 1 Zone (GRZ1). It is also affected by the Development Plan Overlay – Schedule 8 (DPO8) and the Environmental Significance Overlay – Schedule 2 (ESO2).

The DPO8 applies to the residential growth area in north-west Korumburra.

The Planning Scheme Amendment and supporting documents were subject to public exhibition and referral to agencies (i.e. VicRoads, South Gippsland Water and West Gippsland Catchment Management Authority). The views of submitters were fully considered by an independent panel and the Development Plan Overlay Schedule was appropriately changed to accommodate the matters raised by Council.

1.3 Development Plan Content

The North West Growth Area Development Plan comprises this report (including diagrams, photos and plans) as well as separate specialist reports which address the following issues:

- Traffic Impact Assessment
- Integrated Stormwater Management Report
- Flora and Fauna Assessment

- Land Contamination Investigation.

Where relevant, extracts of these reports (usually the executive summary and key findings) are included in the North West Growth Area Development Plan Report. Full copies of the specialist reports are attached in the appendices and should be read in conjunction with this Development Plan.

It is the purpose of this application to seek approval of the proposed North West Growth Area Development Plan.

2.0 Site Overview

The site encompasses the land at No.35 (Lot 1, TP119384D) Korumburra-Warragul Road, on the north western edge of the township of Korumburra. Refer to **Appendix A - Site Analysis Plan**.

The site is approximately 3.83 hectares in size with extensive frontage to Korumburra – Warragul Road. The site is bounded by farmland to the north (i.e. the balance of the O'Neill property), Korumburra – Warragul Road to the east, the former Melbourne – Leongatha rail corridor to the south and O'Neill farmland to the west.

Existing land use in the vicinity of the subject site encompasses a mixture of residential and farming related uses. The Leongatha rail corridor and the South Gippsland Highway exist to the south of the site.

Korumburra-Warragul Road is a secondary arterial road (VicRoads controlled) generally aligned in a north to south direction connecting Warragul to the township of Korumburra.

The site has a steep, south-facing slope. There are no water-bodies on the site. Two unnamed creek-lines running in a north-south direction, and two farm dams, are located in the paddock immediately west of the site.

The site is heavily degraded and is dominated by exotic pasture grasses and weeds. Historical agricultural practices including regularly cultivation

The site has been subject to frequent cultivation over many years. The western section was recently sewn with Rye Grass Lolium spp and cattle grazing still occurs over much of the site. No native vegetation exists on the site.

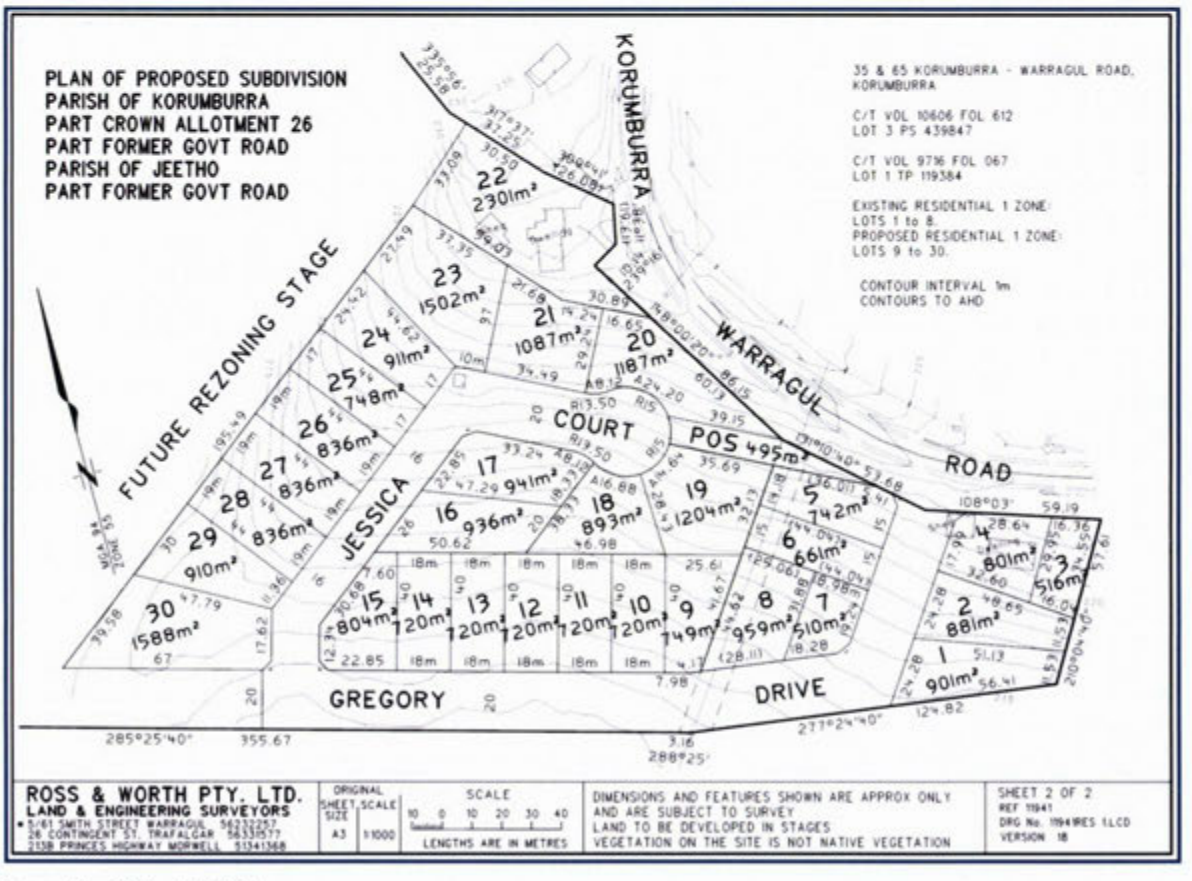
The site falls within the jurisdiction of the West Gippsland Catchment Management Authority.

3.0 The Proposal

On behalf of the O'Neill Family, the North West Growth Area Development Plan seeks to facilitate a residential subdivision of 30 lots. The subdivision is to comprise 29 vacant lots and one lot that will contain the existing O'Neill Family dwelling fronting onto Korumburra – Warragul Road.

The proposed subdivision of the subject site is supported by the approved Korumburra Framework Plan and is identified as an 'Urban Expansion Area'. The site enjoys significant strategic level support. The Panel for Amendment C96 concluded that the development of the O'Neill Family property is strategically justified in terms of its consistency with the Korumburra Structure Plan and its contribution to overall residential land supply in Korumburra.

Figure 2 – Proposed 30 Lot Subdivision



Source: Ross & Worth Pty Ltd

Based on the proposed subdivision plan shown in Figure 2, the site will provide a diversity of lots sizes that will range in size from 510m^2 to 2,301m^2.

The site is a suitable location for residential development having regard to the following:

- Its close proximity to the Korumburra Town Centre which is less than one kilometre to the south-east
- The potential for views over the township and surrounding rural area due to the elevated topography of the site
- The ability to provide a range of lot sizes that will meet demand for larger residential lots compared to what is currently available on the market in Korumburra.

The Development Plan for the subject site has been prepared by Brosnan Engineering Solutions Pty Ltd. Refer to **Appendix B – Development Plan**.

In terms of implementation, the development of the subject site is envisaged to occur in one stage only given that it comprises 30 lots. The Staging Plan for the subject site has also been prepared by Brosnan Engineering Solutions Pty Ltd. Refer to **Appendix C – Staging Plan**.

4.0 Relevant Planning Provisions

4.1 Amendment C96 to the South Gippsland Planning Scheme

Prepared by South Gippsland Shire Council at the request of the O'Neill Family, Amendment C96 to the South Gippsland Planning Scheme was gazetted in April 2015. The purpose of the rezoning was to facilitate the site's redevelopment for residential purposes.

The amendment formally changed the South Gippsland Planning Scheme by:

- Rezoned 3 hectares of the Farming Zone (FZ) land to GRZ1.
- Deleted the ESO5 land from the areas to be rezoned GRZ1.
- Introduced the Development Plan Overlay Schedule 8 (DPO8) to 35 Korumburra-Warragul Road.

4.2 Planning and Environment Act, 1987

The *Planning and Environment Act 1987* ('P&E Act') is the underpinning legislation that directs land use planning and development and protection in Victoria. The legislation identifies objectives for planning and establishes the planning framework, including the establishment and administration of planning schemes, the provision of planning permits, enforcement and proceedings, compensation, roles and functions of panels and hearings. The objectives of planning in Victoria as outlined in Section 4 of the P&E Act and pertinent to the proposed development include:

- Provide for the fair, orderly, economic and sustainable use, and development of land
- Provide for the protection of natural and man-made resources and the maintenance of ecological processes and genetic diversity
- To secure a pleasant, efficient and safe working, living and recreational environment for all Victorians and visitors to Victoria
- To conserve and enhance those buildings, areas or other places which are of scientific, aesthetic, architectural or historical interest, or otherwise of special cultural value;

- To protect public utilities and other assets and enable the orderly provision and co-ordination of public utilities and other facilities for the benefit of the community
- To facilitate development in accordance with the objectives set out in paragraphs (a), (b), (c), (d) and (e)
- To balance the present and future interests of all Victorians.

4.3 Planning Policy Framework

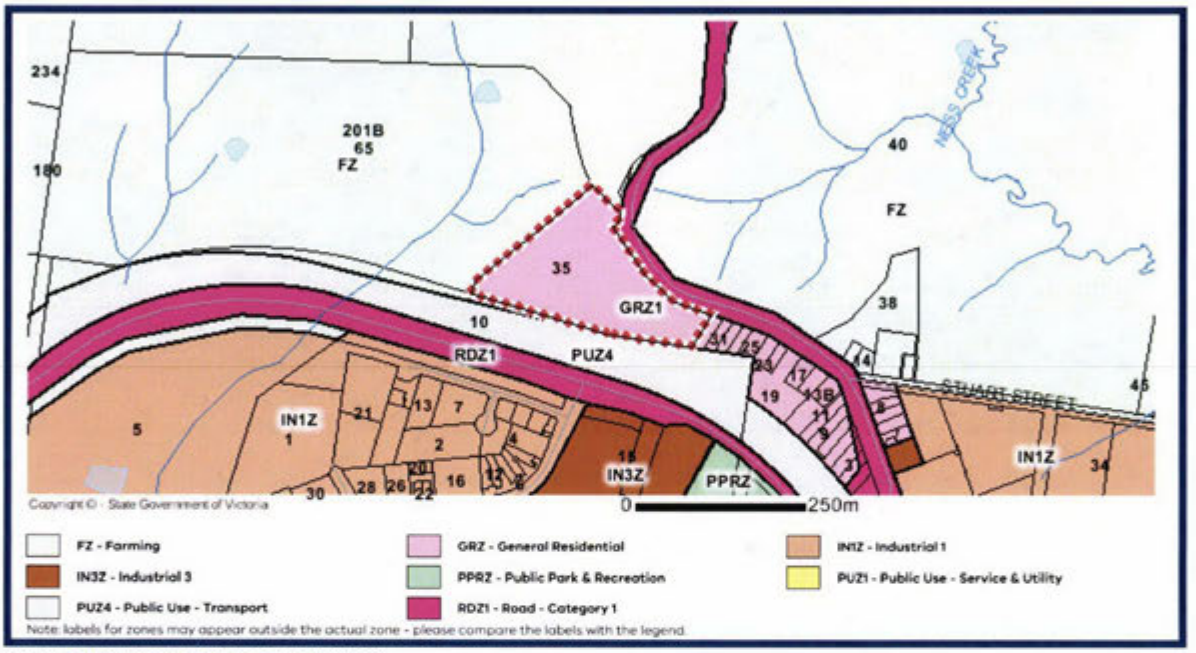
The North West Growth Area Development Plan has been produced in accordance with Schedule 8 to the Development Plan Overlay having regard to the following key State and Local Planning Policies.

- Clause 11.01-1S: Settlement
- Clause 11.02-3S: Sequencing of development
- Clause 12.01-1S: Protection of biodiversity
- Clause 12.01-2S:Native vegetation management
- Clause 13.04-2S: Erosion and land slip
- Clause 14.02-1S: Catchment planning and management
- Clause 15.01-3S: Subdivision design
- Clause 16.01-2S: Location of residential development
- Clause 18.01-1S: Land use and transport planning
- Clause 18.02-1S: Sustainable personal transport
- Clause 18.02-3S: Road system
- Clause 18.02-4S: Car parking
- Clause 19: Infrastructure (inclusive of relevant sub-clauses)
- Clause 21.10: Housing
- Clause 21.12: Transport
- Clause 21.13: Infrastructure
- Clause 21.15: Local areas (including 21.15-2-Korumburra).

4.4 Zoning

This subject site is located within the General Residential Zone (GRZ1) pursuant to Clause 32.08 of the South Gippsland Planning Scheme.

Figure 2 – Zoning Plan



Source: http://www.land.vic.gov.au/ **(2019)**

The purpose of the General Residential Zone (GRZ1) is:

- *To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.*
- *To encourage development that respects the neighbourhood character of the area.*
- *To encourage a diversity of housing types and housing growth particularly in locations offering good access to services and transport.*
- *To allow educational, recreational, religious, community and a limited range of other non-residential uses to serve local community needs in appropriate locations.*

The Development Plan is consistent with the purpose of the zone. The Development Plan will assist in the implementation of the objectives of this zone by encouraging residential development in a designated township growth area which will meet the current and future household demands.

4.5 Development Plan Overlay

The subject land is affected by the Development Plan Overlay – Schedule 8 (DPO8) in accordance with the provisions of the South Gippsland Planning Scheme.

Figure 2 – Overlay Plan

Source: http://www.land.vic.gov.au/ **(2019)**

The purpose of the DPO is:

- To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.
- To identify areas which require the form and conditions of future use and development to be shown on a development plan before a permit can be granted for the land.
- To exempt an application from notice and review if it is generally in accordance with a development plan.

Pursuant to clause 43.04-1 a permit must not be granted to use or subdivide land, construct a building or construct or carry out works until a development plan has been prepared to the satisfaction of the responsible authority.

The North West Growth Area Development Plan implements the objectives and provisions of Schedule 8 to the Development Plan Overlay and the policy statements, which apply to the land.

4.6 Particular Provisions

The following particular provisions of the South Gippsland Planning Scheme are relevant to the consideration of this Development Plan.

- Clause 52.06: Car parking
- Clause 52.17: Native vegetation
- Clause 53.18: Stormwater management in urban development
- Clause 56: Residential subdivision.

4.7 General Provisions

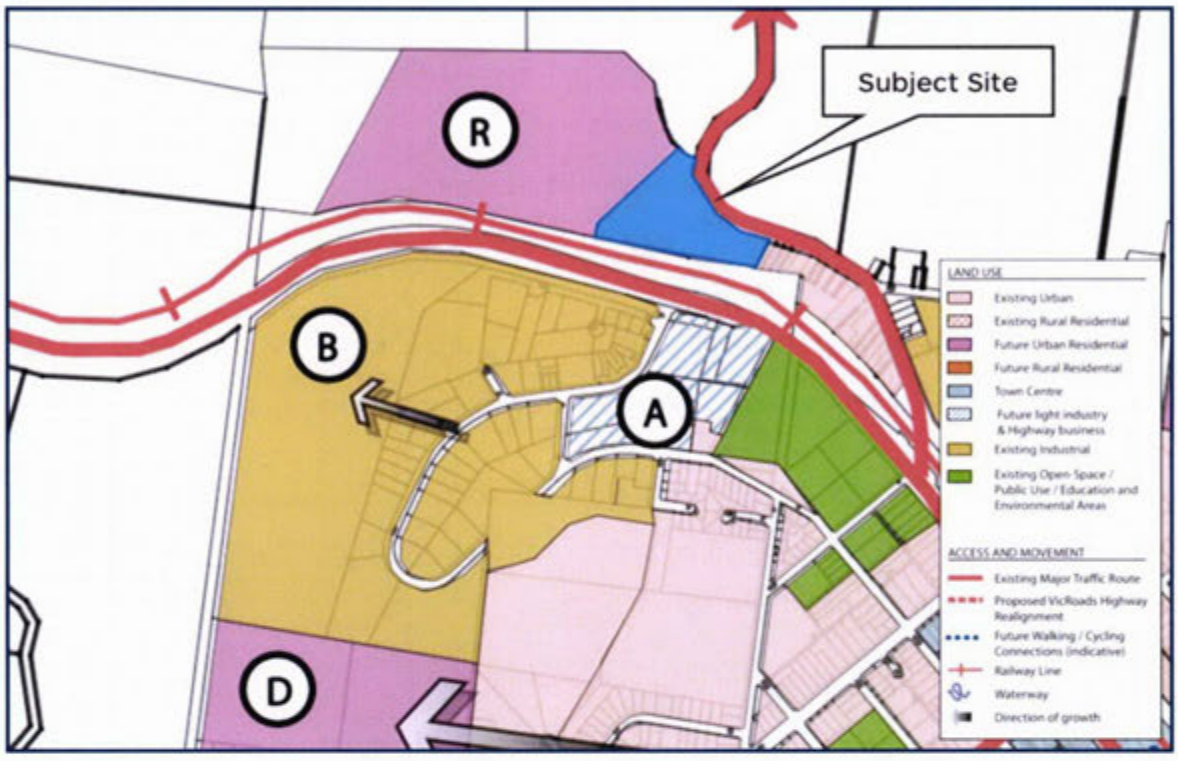
The following general provisions of the South Gippsland Planning Scheme are relevant to the consideration of this Development Plan.

- Clause 65.01: Approval of an application or plan.

4.8 Korumburra Structure Plan (2010, Amended 2014)

The Korumburra Structure Plan was adopted by Council in November 2011 and gazetted as Planning Scheme Amendment C70 on 28 February 2013. In addition to No.35 Korumburra-Warragul Road, a large proportion of the land at 65 Korumburra-Warragul Road was also identified as suitable for urban expansion. Amendments to the approved Korumburra Structure Plan were made in 2014.

Figure 3 – Korumburra Structure Plan (2010)



The purple colour designates the land as 'Future Urban Residential' on Farming Zone adjoining the northwest boundary of the town. The letter "R" identifies land (p11) with a recommendation that the land should:

Rezone to facilitate future urban residential development when required, having close regard to issues of pedestrian connectivity to the existing Town Centre.

5.0 Assessment of Requirements for Development Plan

Clause 3.0 of the Development Plan outlines the requirements that a Development Plan must address to the satisfaction of the Responsible Authority. Responses to the relevant requirements of DPO8 are provided in the following section.

5.1 Land use and Subdivision

The North West Growth Area Development Plan and proposed subdivision provides for the sequential extension of the existing residential area in the north-west of the Korumburra township.

The development, as envisaged in Amendment C96, provides for the proper and orderly extension of physical services, roads and open space.

Comprising 30 lots, the proposed subdivision is to be delivered in one stage only. Lot 30 with two road frontages and sufficient depth and width dimensions is the generally considered suitable for further subdivision. The subdivision of Lot 30 would be subject to a separate planning application to Council in the future.

In relation to interfaces, the site predominantly interfaces with farming land. In the south east, the site adjoins existing residential development. The layout of the subdivision is designed to front dwellings away from existing residential development along Korumburra – Warragul Road (except for Lot 3). The positioning of the road along the southern boundary of the site provides a buffer from the railway reserve, which will help preserve future amenity should rail services to Leongatha ever be reintroduced.

The subdivision layout provides a physical buffer from the rail corridor and South Gippsland Highway (further to the south). Noise attenuation measures in future housing on the lots will be the responsibility of individual owners.

The range of lot sizes and orientations will provide opportunities for a diverse range of housing in the future. The lot breakdown is as follows:

Table 1 – Individual Lot Sizes

Lot Size	No.	Share
401 – 600m^2	2	7%
601 - 800m^2	9	30%
801 - 1000m^2	13	43%
1001m^2	6	20%
Total	**30**	**100%**

The North West Growth Area Development Plan ensures that the purposes of Clause 56 in the South Gippsland Planning Scheme are satisfied. This is primarily achieved via the following:

- Providing a framework for a liveable and sustainable neighbourhood that offers a range of residential lot sizes within close proximity to public open space, retail and commercial uses and other community facilities and services in Korumburra.
- Providing a framework for a future residential subdivision that appropriately responds to the site and its context.
- Managing the site's constraints to ensure good solar orientation of lots and solar access for future dwellings.
- Ensuring streets and houses promote passive surveillance of the street network.
- Providing attractive and continuous landscaping in streets and the public open reserve that contributes to the character and identity of the future neighbourhood.
- Providing an internal road and pedestrian network that ensures an acceptable level of permeability.

5.2 Earthworks and Landform

DP08 requires the development of the O'Neill Property to detail how the proposed design responds to the topography and contours of the land and whether significant earthworks are likely to be required for subdivision(s) to ensure good development design outcomes are achieved.

The topography in Korumburra's urban and greenfield development areas is an important part of the township landscape and visual character. Sloping sites offer unique amenity opportunities that benefit from elevated positions including views and outlook. The landform of the subject site is sloping, and this has been a key design consideration in the design and layout of the subdivision.

Brosnan Engineering Solutions Pty Ltd has prepared a Slope Stability Plan for the future subdivision and residential use of the subject site. Refer **Appendix D – Slope Stability Plan**. Comprising two sheets, the Slope Stability Plan denotes the existing contours at an interval of 1m . The direction and percentage of fall is identified for each of the proposed lots. The maximum fall (a cross fall) is 14.8% on proposed Lot 23.

The proposed depth and width proportions of each of the lots will ensure that the balancing between cut and fill can be readily accommodated within the individual lots without extensive earthworks and full width site benching. The sloping nature of the site requires earthworks and land forming but the design and layout, by minimising the extent of earth works, reduces the potential for future drainage problems.

As none of the proposed lots on the subject site have a slope of 15% or greater, a geotechnical report is not required for the development. On this basis, building envelopes or other controls are not required for the future subdivision.

The North West Growth Area Development Plan presents a site and slope responsive design that will minimise future cut and fill, preserve the natural landscape and character and provide high quality streetscapes.

5.3 Infrastructure Services

An Infrastructure Plan has been prepared by Brosnan Engineering Solutions Pty Ltd for the future subdivision and residential use of the subject site. Refer **Appendix E – Infrastructure Plan**. The Infrastructure Plan identifies the future design and development of infrastructure on the O'Neill Property.

The Infrastructure Plan denotes the following in accordance with the latest version of the Infrastructure Design Manual used by Council:

- The scale, location and overall layout of the development
- Existing surface level contours to Australian Height Datum (AHD)
- Existing natural and constructed features that impact upon the engineering design
- The location and dimensions of the public open space reserve
- The proposed road layout.

The location of existing and proposed potable water, sewer main, electricity, telecommunications and drainage are shown on the Infrastructure Plan.

Vehicle Access to the development will be via a new unsignalized intersection on Korumburra-Warragul Road. Further details are provided in the Traffic Impact Assessment section.

Stormwater Management Strategy (Integrated Stormwater Management Plan)

A Stormwater Management Strategy has been prepared for the subject site by Brosnan Engineering. Refer **Appendix F – Stormwater Management Strategy.**

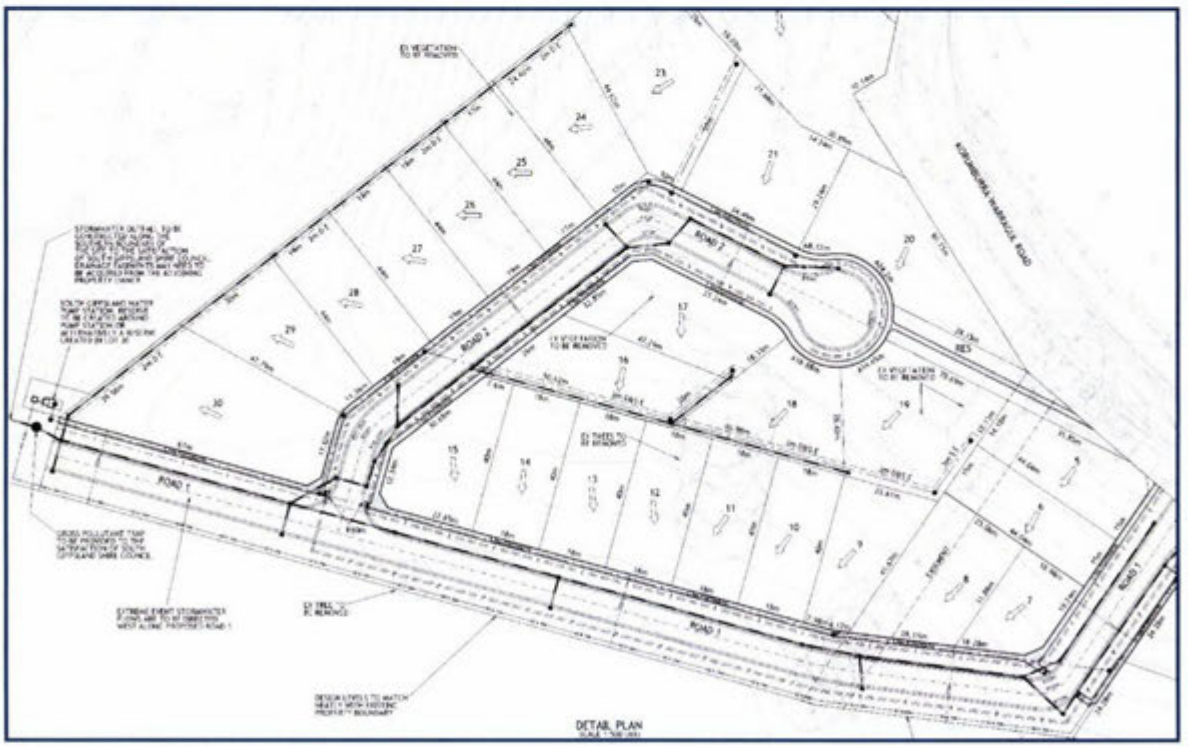
The Stormwater Management Strategy incorporates water sensitive urban design techniques and provides for the protection of natural systems, integration of stormwater treatment into the landscape, improved water quality, reduction/mitigation of run-off and peak flows including consideration of downstream impacts and how they may be affected by roadworks to neighbouring properties.

South Gippsland Shire Council's Engineering Department have confirmed that stormwater detention will be required for the development. Stormwater detention is required for the subdivision and oversized underground drainage pipes will detain the 1 in 5 year developed flows back to the 1 in 5 year pre-developed flows to a coefficient of 0.35.

The internal stormwater drainage has been designed to accord with the requirements of the Infrastructure Design Manual.

Stormwater from the development will discharge to the existing property (part of the O'Neill Property) to the west of the site. The outfall drainage is proposed to discharge to what has been identified as a future road reserve. The detailed design for the outfall drainage will need to ensure that no adverse effects occur on the land to the west (i.e. erosion) and has impact on surrounding properties. A gross pollutant trap will be installed to screen, filter and treat stormwater runoff on the subject site.

Figure 4 – Stormwater Design



Traffic Impact Assessment (Transport Report)

Ratio have prepared a Transport Report to inform the preparation of the North West Growth Area Development Plan and to provide an assessment of the anticipated transport implications of the proposed subdivision. Refer **Appendix G – Transport Report.**

Korumburra-Warragul Road is a secondary arterial road (VicRoads controlled). Adjacent to the site frontage, Korumburra-Warragul Road is aligned in a northwest – southwest direction and accommodates one traffic lane in each direction within a variable width road reserve. Within the vicinity of the site, Korumburra-Warragul Road has a posted speed limit that varies between 60km/h and 80km/h and carries a weekday average of 1,815 vehicles per day. The 2019 traffic volumes surveyed on Korumburra-Warragul Road are comparable to the traffic volumes recorded on the road in March 2013, as presented in reports prepared by GTA Consultants.

Against existing traffic conditions in the vicinity of the subject site, the additional traffic generated by the proposed (and potential future) development could not be expected to compromise the function or safety of the surrounding road network.

Vehicle Access

Vehicle Access to the development will be via a new unsignalized intersection on Korumburra-Warragul Road. The site access intersection proposes an ancillary left turn (AUL) and channelised right turn (CHT) treatment. The site access design was previously approved by VicRoads in a letter dated 28 June 2012.

Internal Roads

The primary section of the road network connecting the proposed development to Korumburra-Warragul Road (Road 1) will have a road reserve width of 20m which will accommodate the following:

- A 7.3m wide road carriageway
- 6.0m wide verges on both sides of the carriageway

- 1.5m wide footpaths contained within the verges.

The secondary section of internal road network serving lots 16 – 29 on the current subdivision plan (Road 2) will have a road reserve width of 16 which will accommodate:

- A 7m wide carriageway
- 4.5m wide verges on both sides of the road carriageway
- 1.5m wide footpaths contained with the verges.

All internal roads will include standard 1.5m wide footpaths along lot frontages within the road reserves. The internal road network is anticipated to carry relatively low volumes of traffic. As such, it is anticipated that cyclists will be able to comfortably and safely travel on these streets.

Waste Collection and Emergency Vehicles

The internal road network will accommodate waste collection vehicle access to any part of the subject site and the court bowl arrangement will permit a vehicle of a size up to and including an 8.8m long typical waste collection vehicle to turn in a satisfactory manner.

The dimensions of the proposed court bowl treatment meet the requirements for a CFA fire truck to make a three point turn.

Car Parking

On the basis of the subdivision delivering 30 residential dwellings, there is a statutory requirement to provide six visitor car parking spaces. The visitor car parking can be readily accommodated on-street within the 7.3m wide carriageway of the internal roads, with the available carriageway width sufficient for car parking to occur on both sides of the road whilst maintaining a single through lane for traffic.

5.4 Open Space

The North West Growth Area Development Plan and the associated 30 lot subdivision designates a public open space reserve of 495m^2. The open space reserve is a corridor and will effectively function as a green space link and passive recreation area for future residents.

The open space reserve will provide a shared pathway connection between the court bowl and Korumburra – Warragul Road. The open space reserve is of sufficient dimensions to accommodate emergency vehicle access.

The extent of public open space, as depicted on the Development Plan, accords with that previously considered by the Panel for Amendment C96.

5.5 Flora and Fauna

To address the flora and fauna requirements specified by Schedule 8 of the Development Plan Overlay, Cardno Victoria Pty Ltd undertook a Flora and Fauna Assessment. Refer **Appendix H – Flora and Fauna Assessment**. The assessment incorporates a desktop and field component to ascertain the presence or likely presence of biodiversity values listed under relevant environmental legislation and policy.

Cardno concluded that study area is highly degraded and supports limited biodiversity values. Given the extensive modifications to the study area as a result of historical agricultural practices, the site does not support any native vegetation and is dominated by exotic pasture grasses and weeds. Habitat for native fauna is marginal and it is unlikely that threatened species are present.

The study area does not support any threatened ecological communities. No EPBC Act or FFG Act-listed ecological communities were identified during the field assessment, and no EPBC Act-listed ecological communities were raised by the Protected Matters Search Tool.

Two creek-lines located 100 and 500 metres to the west of the study area are potential habitat for the nationally-significant Giant Gippsland Earthworm. Indirect impacts to the

species are unlikely given that stormwater discharge into the creek is expected to maintain existing flows.

5.6 Land Contamination

A Stage 1 Preliminary Site Investigation Report has been prepared by Geoaquitards Environmental. Refer **Appendix I – Stage 1 Preliminary Site Investigation Report.**

To address the land contamination assessment requirements specified by Schedule 8 to the Development Plan Overlay, the following analysis was undertaken:

- A review of previous land uses, historical documents and site history
- A review of geology and hydrogeology on the site and surrounding area
- A visual inspection of any aesthetic effects (i.e. staining of surface soil and odour)
- A review of potential soil and groundwater contamination from on-site and off-site sources.

The desktop investigation included a review of previous land uses and the potential for the introduction of contamination to soil through onsite sources.

The site has historically been used for farming/grazing and associated residential use. Records indicate that the site had two residential buildings in 1947 and may have been used for grazing or diary farming activities since 1947. Immediately surrounding land also appears to have been used for grazing or farming activities.

The subject site is not listed on the Victorian Environment Protection Authority's Priority Sites Register nor are there any in the vicinity of the site.

Geoacquitards Environmental consider that sources related to on site conditions and activities have a low potential for contamination. Based on the current and historical search carried out for the site, no potential sources of contamination were identified by Geoaquitards Environmental. In summary, the site is considered suitable for the proposed use and does not require a Phase 2 site assessment or audit.

6.0 Conclusion

This report accompanies an application for approval of the North West Growth Area Development Plan for the land at No.35 Korumburra – Warragul Road, Korumburra.

The North West Growth Area Development Plan including accompanying plans and technical reports implement the objectives and provisions of Schedule 8 to the Development Plan Overlay and the policy statements which apply to the land.

The North West Growth Area Development Plan Development Plan provides information regarding the site, its surrounding context, the proposed general layout of the site, allotment boundaries, road network and public open space treatments. The proposed 30 lot subdivision of the site will be subject to Council approval as part of a future planning permit application.

The proposed subdivision of the site, as identified in the Development Plan, is supported by the Korumburra Framework Plan and is identified as an 'Urban Expansion Area'. The site enjoys significant strategic level support. The Panel for Amendment C96 concluded that the development of the O'Neill Family property is strategically justified in terms of its consistency with the Korumburra Structure Plan and its contribution to overall residential land supply in Korumburra.

It is submitted to Council that the North West Growth Area Development Plan prepared by Phillip Island Planning Services, and the accompanying consultant reports, adequately addresses the requirements of Schedule 8 to the Development Plan Overlay and other applicable requirements of the South Gippsland Planning Scheme that apply to the site.

We hereby respectfully request that Council approve the relevant **North West Growth Area Development Plan** documentation.

Phillip Island
Planning Services

APPENDICES

NORTH WEST GROWTH AREA DEVELOPMENT PLAN

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APPENDIX A - SITE ANALYSIS PLAN

PLAN OF PROPOSED SUBDIVISION
PARISH OF KORUMBURRA
PART CROWN ALLOTMENT 26
PART FORMER GOVT ROAD
PARISH OF JEETHO
PART FORMER GOVT ROAD

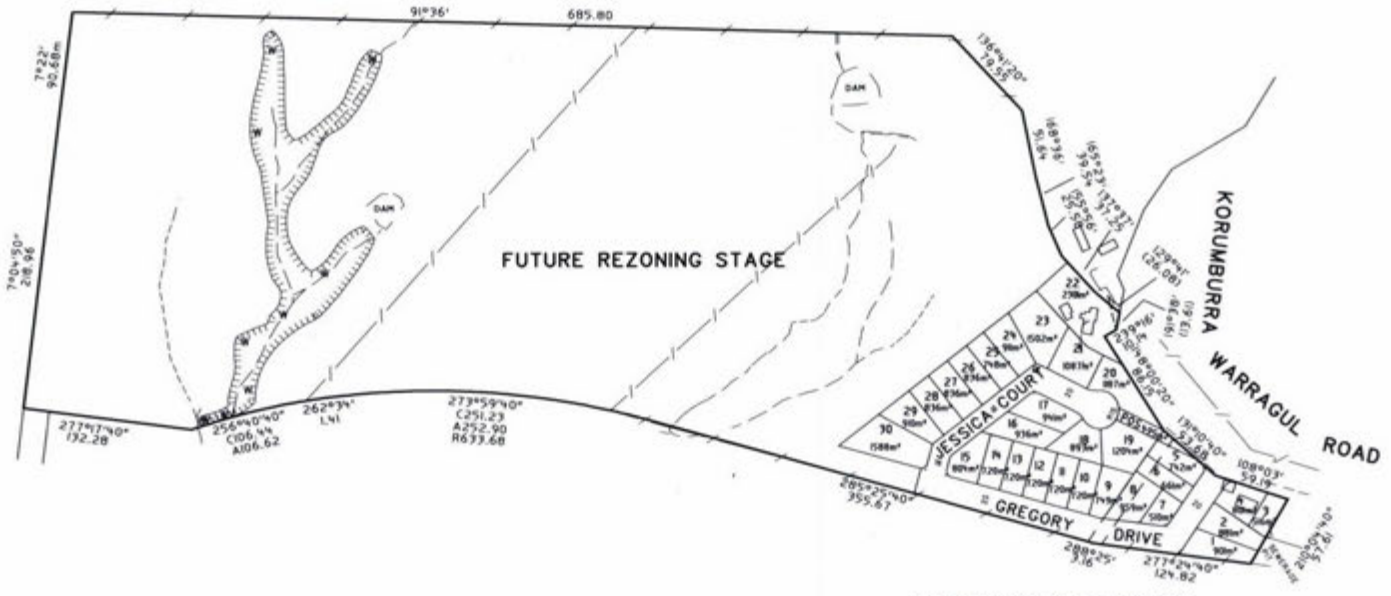
35 & 65 KORUMBURRA - WARRAGUL ROAD,
KORUMBURRA

C/T VOL 10606 FOL 612
LOT 3 PS 439847

C/T VOL 9716 FOL 067
LOT 1 TP 119384

EXISTING RESIDENTIAL 1 ZONE:
LOTS 1 to 6 .
PROPOSED RESIDENTIAL 1 ZONE:
LOTS 7 to 28.

MGA ZONE 55



SEE SHEET TWO FOR ENLARGEMENT

CONTOUR INTERVAL 1m
CONTOURS TO AHD

Denotes Giant Gippsland Earth Worm habitat area

ROSS & WORTH PTY. LTD. LAND & ENGINEERING SURVEYORS 5/61 SMITH STREET WARRAGUL 56232257 26 CONTINGENT ST TRAFALGAR 56339577 2138 PRINCES HIGHWAY MORWELL 51341368	LEGEND GAS MAIN —G— EXISTING DRAIN —D— WATER MAIN —W— PROPOSED DRAIN S.E.C. POLE EXISTING DRAIN PIT S.E.C. CABLE —E— PROPOSED DRAIN PIT S.E.C. PIT SEWERAGE MAIN —S— TELECOM PIT SEWERAGE PIT TELECOM CABLE —T—
ORIGINAL SHEET SIZE A1 · SCALE 1:2000 · SCALE 20 0 20 40 60 80 metres · LENGTHS ARE IN METRES	NOTATIONS DIMENSIONS AND FEATURES SHOWN ARE APPROX ONLY AND ARE SUBJECT TO SURVEY LAND TO BE DEVELOPED IN STAGES VEGETATION ON [redacted] IS NOT NATIVE VEGETATION WARNING ! DO NOT SCA[redacted] DRAWING. REFER TO WRITTEN DIMENSIONS ONLY.
	SHEET 1 OF 2 REF 11941 DRG. NO. 11941PPS[redacted] VERSION 18

PLAN OF PROPOSED SUBDIVISION
PARISH OF KORUMBURRA
PART CROWN ALLOTMENT 26
PART FORMER GOVT ROAD
PARISH OF JEETHO
PART FORMER GOVT ROAD

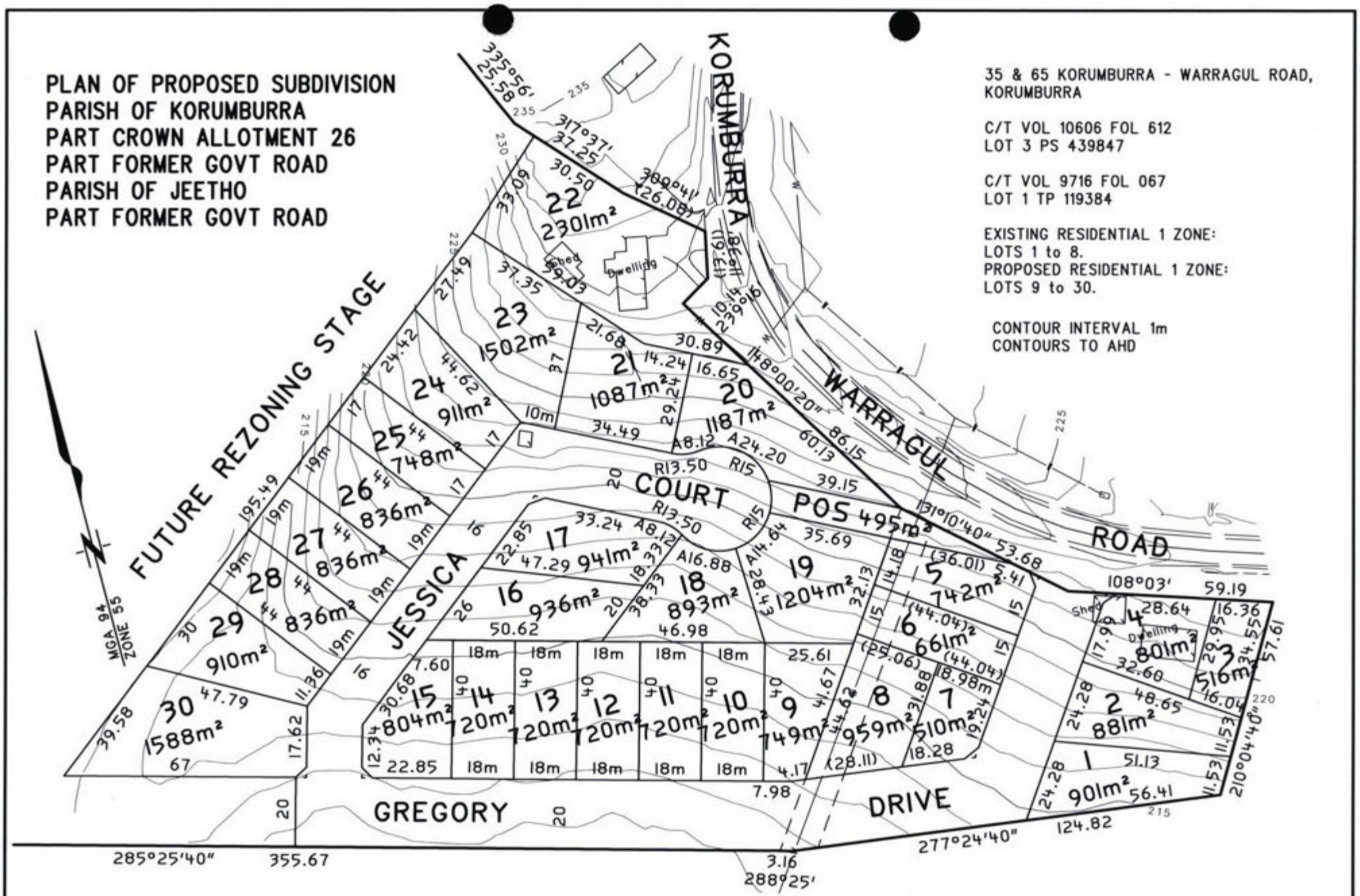
35 & 65 KORUMBURRA - WARRAGUL ROAD, KORUMBURRA

C/T VOL 10606 FOL 612
LOT 3 PS 439847

C/T VOL 9716 FOL 067
LOT 1 TP 119384

EXISTING RESIDENTIAL 1 ZONE:
LOTS 1 to 8.
PROPOSED RESIDENTIAL 1 ZONE:
LOTS 9 to 30.

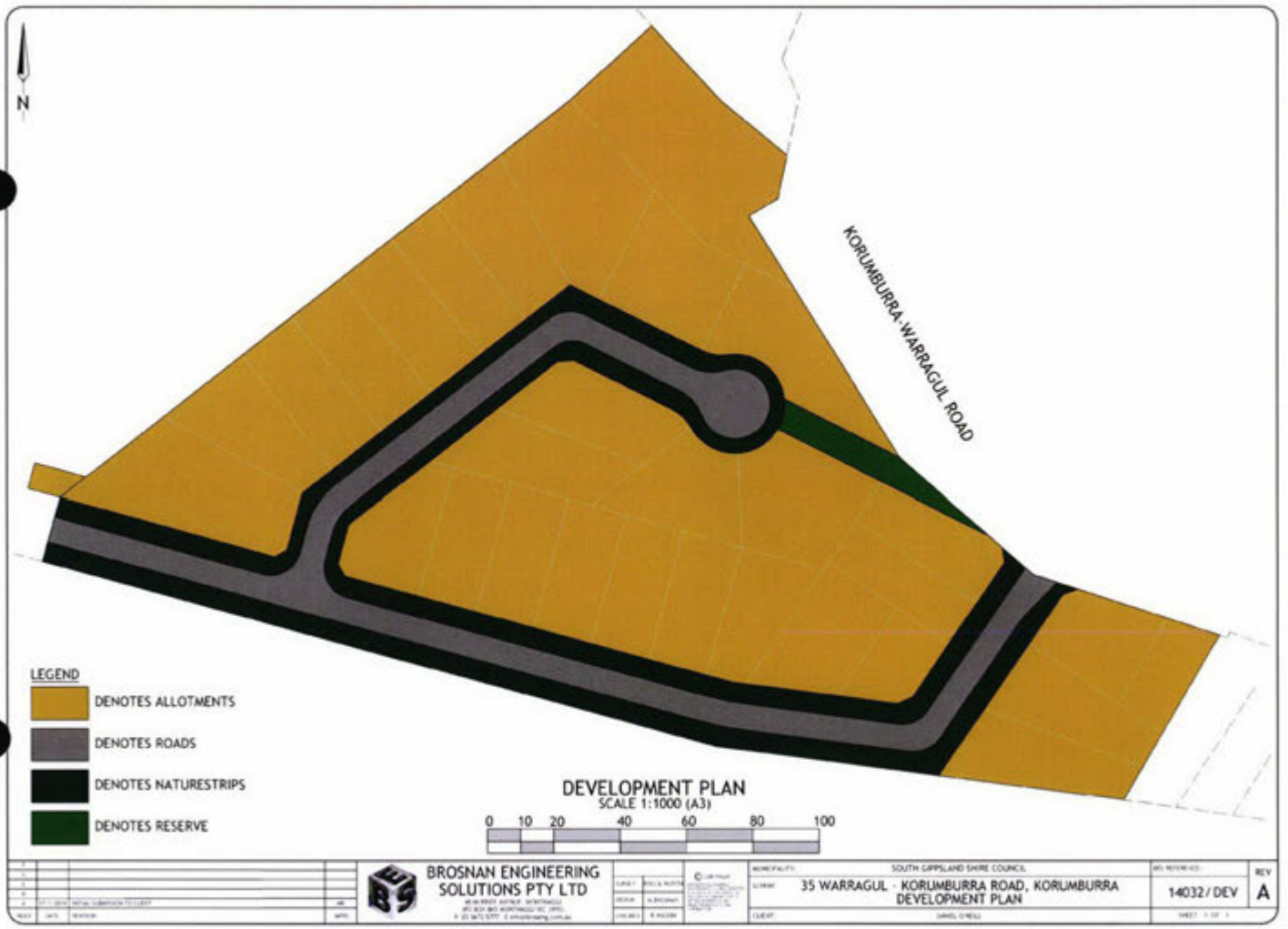
CONTOUR INTERVAL 1m
CONTOURS TO AHD



ROSS & WORTH PTY. LTD. LAND & ENGINEERING SURVEYORS * 5/61 SMITH STREET WARRAGUL 56232257 26 CONTINGENT ST. TRAFALGAR 56331577 213B PRINCES HIGHWAY MORWELL 51341368	ORIGINAL SHEET SIZE: A3 SCALE: 1:1000 SCALE 10 0 10 20 30 40 LENGTHS ARE IN METRES	DIMENSIONS AND FEATURES SHOWN ARE APPROX ONLY AND ARE SUBJECT TO SURVEY LAND TO BE DEVELOPED IN STAGES VEGETATION ON THE SITE IS NOT NATIVE VEGETATION	SHEET 2 OF 2 REF 11941 DRG No. 11941RES 1.LCD VERSION 18

Phillip Island
Planning Services

APPENDIX B – DEVELOPMENT PLAN



BROSNAN ENGINEERING SOLUTIONS PTY LTD

MUNICIPALITY: SOUTH GIPPSLAND SHIRE COUNCIL

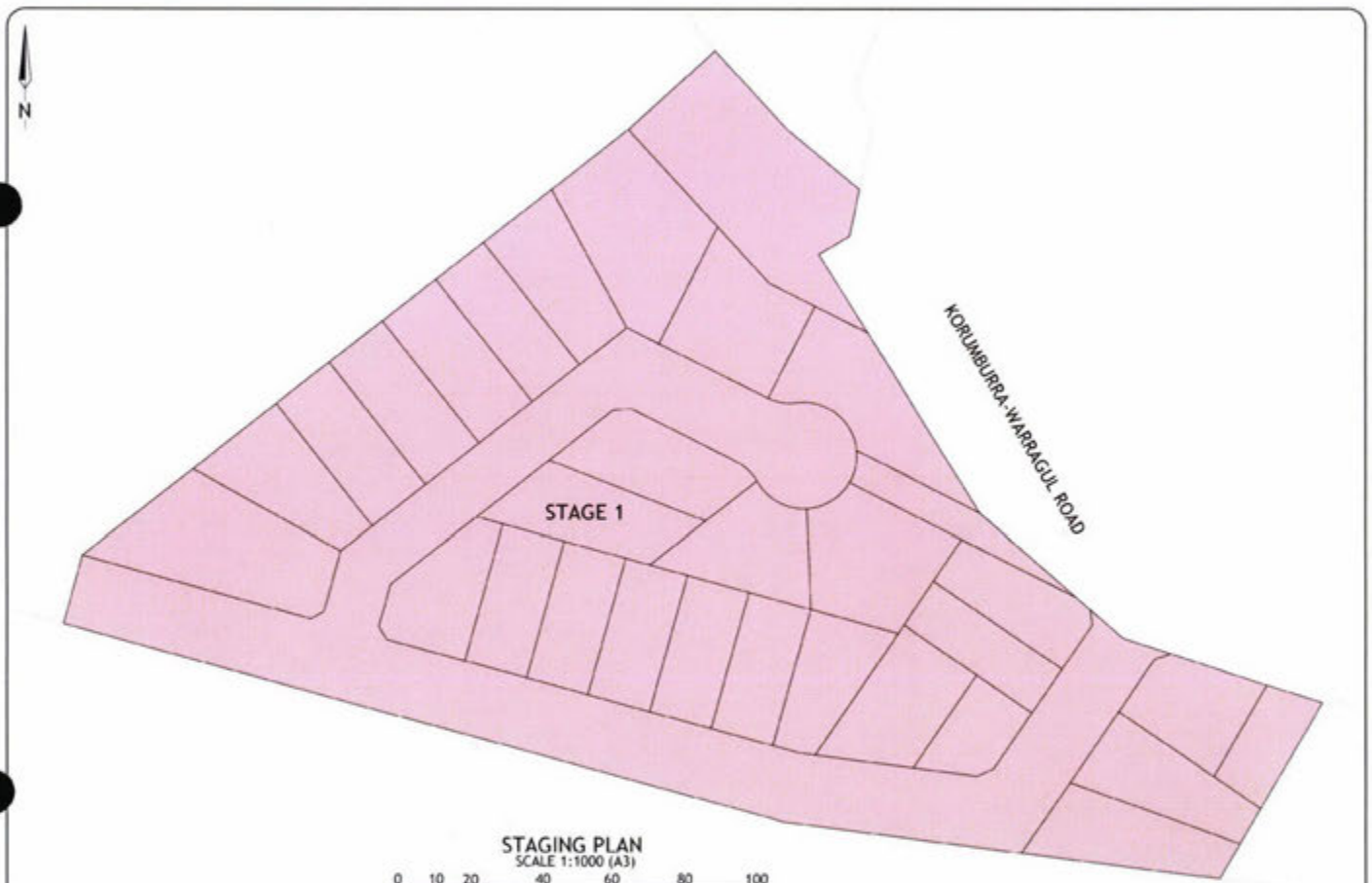
35 WARRAGUL - KORUMBURRA ROAD, KORUMBURRA DEVELOPMENT PLAN

14032/DEV

REV A

Phillip Island
Planning Services

APPENDIX C – STAGING PLAN



STAGING PLAN
SCALE 1:1000 (A3)

0 10 20 40 60 80 100

BROSNAN ENGINEERING SOLUTIONS PTY LTD

SOUTH GIPPSLAND SHIRE COUNCIL

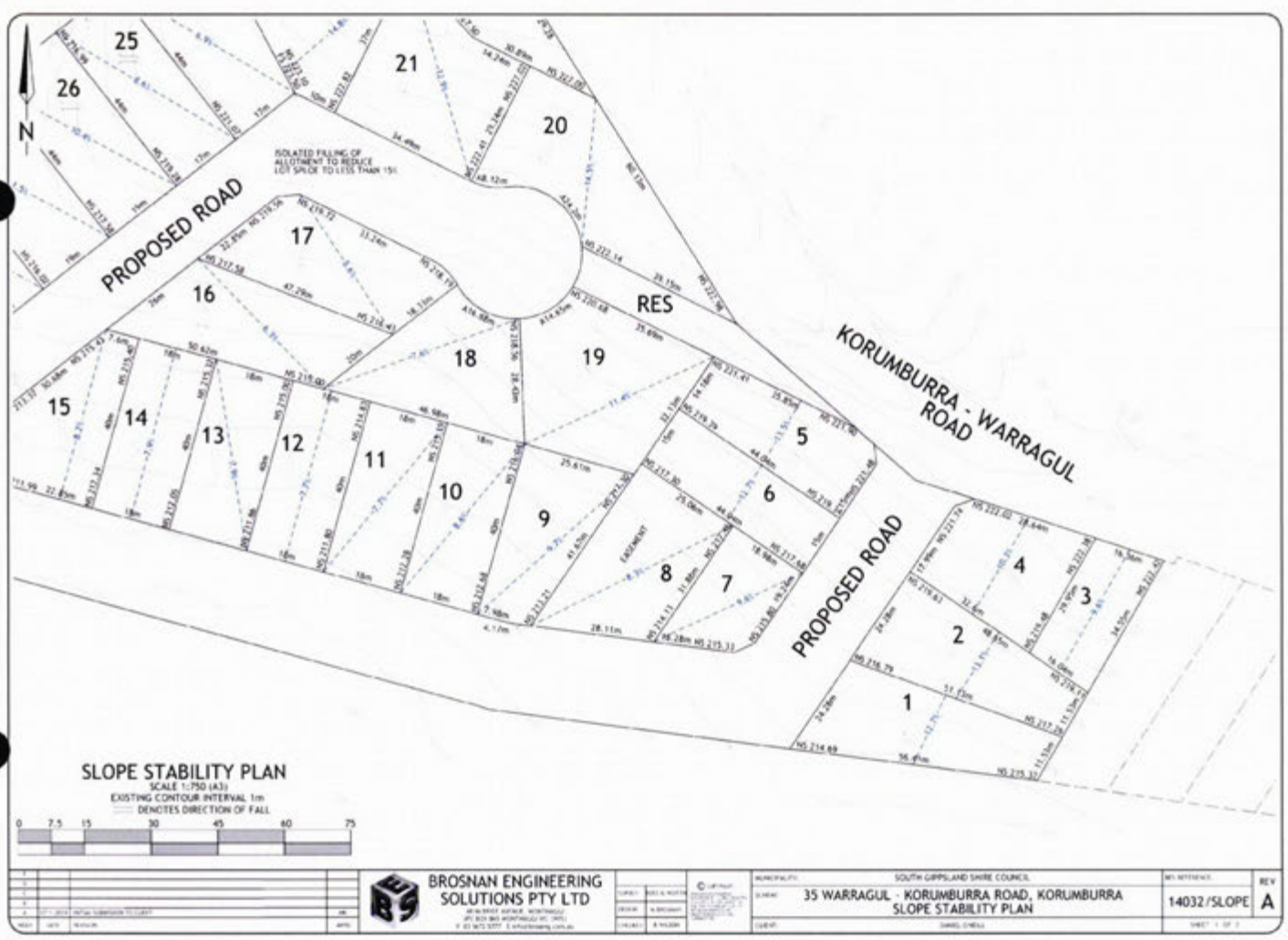
35 WARRAGUL - KORUMBURRA ROAD, KORUMBURRA
STAGING PLAN

14032/STAGING

REV A

Phillip Island
Planning Services

APPENDIX D – SLOPE STABILITY PLAN


N
PROPOSED ROAD
ISOLATED FILLING OF ALLOTMENT TO REDUCE LOT SPLOE TO LESS THAN 15%
RES
KORUMBURRA - WARRAGUL ROAD
PROPOSED ROAD
25
26
21
20
17
16
18
19
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
SLOPE STABILITY PLAN
SCALE 1:750 (A3)
EXISTING CONTOUR INTERVAL 1m
DENOTES DIRECTION OF FALL
0 7.5 15 30 45 60 75
BROSNAN ENGINEERING SOLUTIONS PTY LTD
SOUTH GIPPSLAND SHIRE COUNCIL
35 WARRAGUL - KORUMBURRA ROAD, KORUMBURRA
SLOPE STABILITY PLAN
14032/SLOPE
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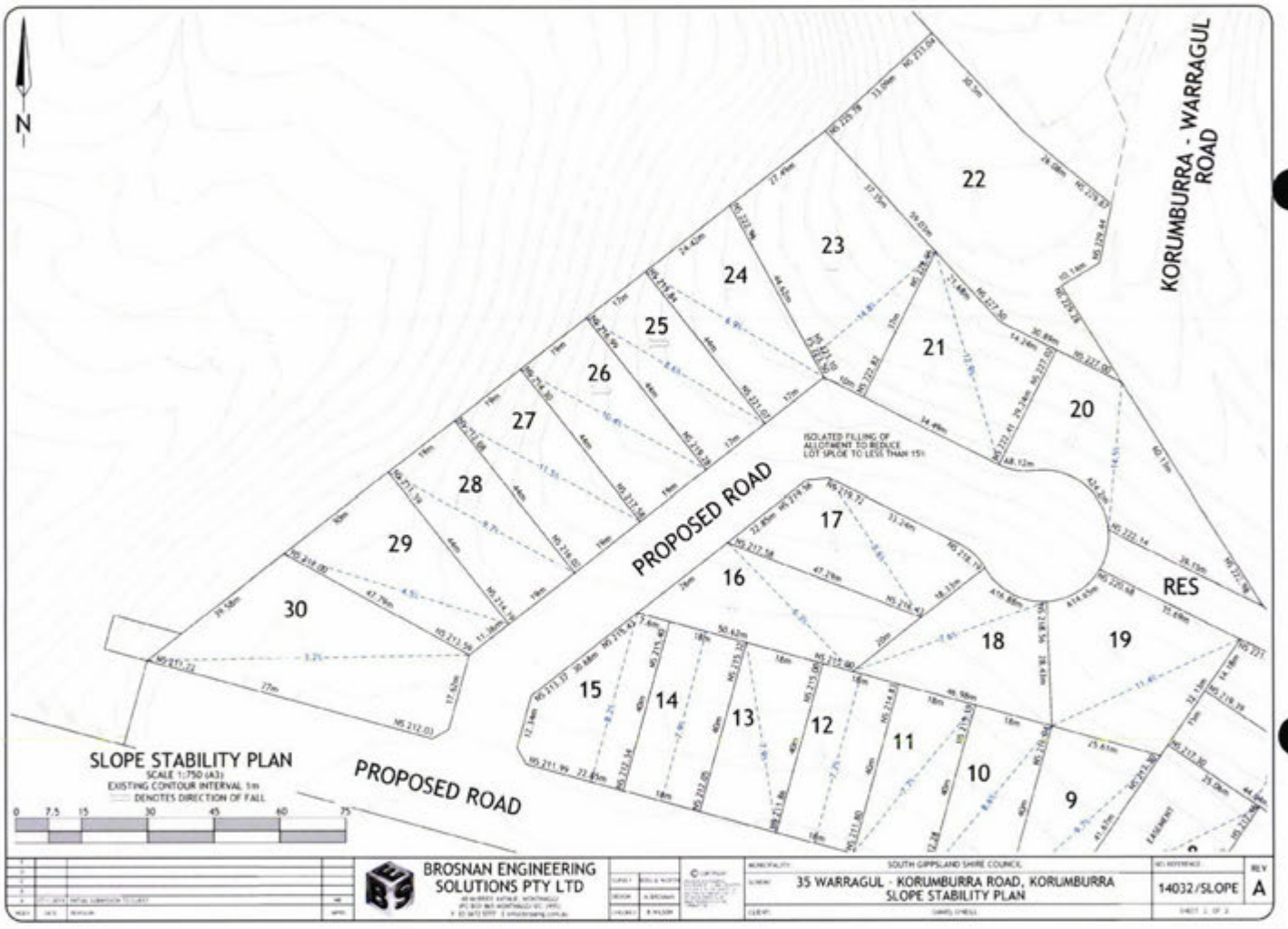
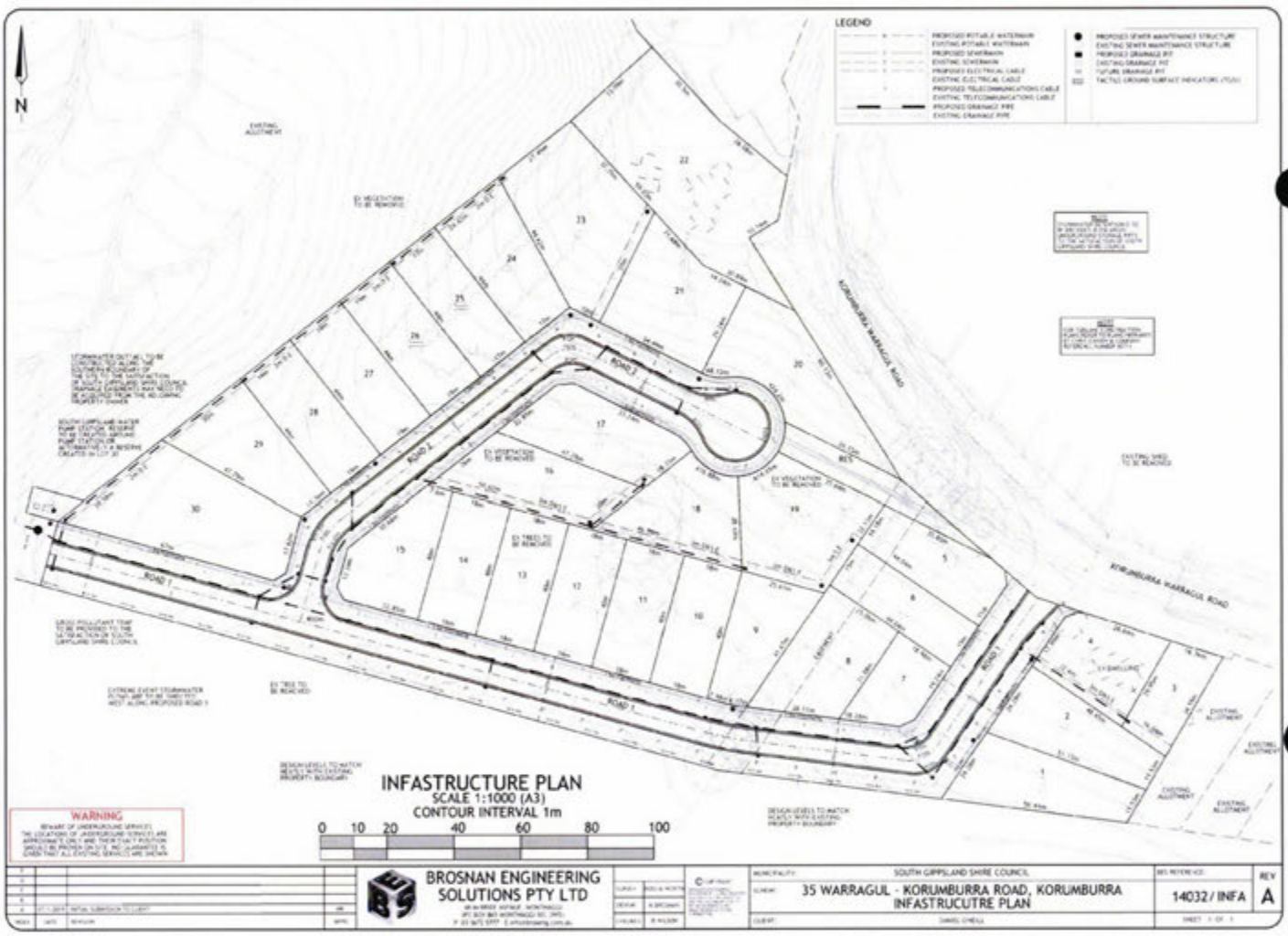

N
KORUMBURRA - WARRAGUL ROAD
PROPOSED ROAD
PROPOSED ROAD
RES
ISOLATED FILLING OF ALLOTMENT TO REDUCE LOT SLOPE TO LESS THAN 15%
22
23
24
25
26
27
28
29
30
21
20
17
16
18
19
15
14
13
12
11
10
9
SLOPE STABILITY PLAN
SCALE 1:750 (A3)
EXISTING CONTOUR INTERVAL 1m
DENOTES DIRECTION OF FALL
0 7.5 15 30 45 60 75
BROSNAN ENGINEERING SOLUTIONS PTY LTD
SOUTH GIPPSLAND SHIRE COUNCIL
35 WARRAGUL - KORUMBURRA ROAD, KORUMBURRA
SLOPE STABILITY PLAN
14032/SLOPE
A

Phillip Island
Planning Services

APPENDIX E – INFRASTRUCTURE PLAN


LEGEND
N
KORUMBURRA WARRAGUL ROAD
ROAD 1
ROAD 2
ROAD 3
INFASTRUCTURE PLAN
SCALE 1:1000 (A3)
CONTOUR INTERVAL 1m
0 10 20 40 60 80 100
WARNING
BROSNAN ENGINEERING SOLUTIONS PTY LTD
SOUTH GIPPSLAND SHIRE COUNCIL
35 WARRAGUL - KORUMBURRA ROAD, KORUMBURRA
INFASTRUCUTRE PLAN
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A

Phillip Island
Planning Services

APPENDIX F – STORMWATER MANAGEMENT STRATEGY

35 KORUMBURRA-WARRAGUL ROAD
KORUMBURRA

STORMWATER MANAGEMENT STRATEGY

BROSNAN ENGINEERING SOLUTIONS

COMMISSION

Brosnan Engineering Solutions has been commissioned by Mr Brian O'Neill to prepare a Stormwater Management Strategy for the development at 35 Korumburra Warragul Road, Korumburra.

STORMWATER TREATMENT

South Gippsland Shire Council's Engineering Department have advised that stormwater from the site does not need to be treated to meet the requirements of Best Practice Environmental Management Guidelines.

As a part of the development and end of line GPT is proposed to provide some minor treatment of the flows. The type and size of the GPT will be determined during the detailed design process.

INTERNAL STORMWATER DRAINAGE

The internal stormwater drainage has been designed to accord with the requirements of the Infrastructure Design Manual. The layout of the internal drainage network is detailed in the Functional Layout Plan in ***Appendix B***.

STORMWATER DETENTION

South Gippsland Shire Council's Engineering Department have confirmed that stormwater detention will be required for the development.

Stormwater detention is required for the subdivision and oversized underground drainage pipes will detain the 1 in 5 year developed flows back to the 1 in 5 year pre-developed flows to a coefficient of 0.35.

The pre-developed flows (Qpsd) for the site is calculated as follows:

- Site Area = 38340m^2 (0.03834km^2)

- Time of Concentration, tc = $0.75A^{0.38}$
- tc = $(0.76)(0.03834)^{0.38}$
- tc = 0.22 hours = 13mins

- $I_{5,\ tc=13\ mins}$ = 53.94mm/hr

- Q_{psd} = CAI/3600
- Q_{psd} = (0.35)(38340)(53.94)/3600
- ***Q_{psd} = 201 l/s***

Considerations	*Area*	*Coefficient*	*CA*
Lots (450-600 sqm)	1026	0.75	769.5
Lots (600-1000 sqm)	17345	0.70	12141.5
Lots (1000-2000 sqm)	6568	0.50	3284.0
Lots (2000-4000 sqm)	2301	0.45	1035.5
Road Reserve	10005	0.75	7503.8
Reserve	495	0.35	173.3
		TOTAL	**24907.6**

Based on the above listed parameters the amount of detention storage required for the development is 135 cubic meters. The detention calculation is attached in ***Appendix A***.

STORMWATER OUTFALL

Stormwater from the development will discharge to the existing property to the west of the development site.

There is a long term proposal for the land to the west is that it will be rezoned into Low Density Residential. The outfall is proposed to discharge to what has been identified as a future road reserve.

The detailed design for the outfall will need to ensure that there is no adverse affects on the land to the west (ie. Erosion) and has impact on surrounding properties.

APPENDIX

A. **Detention Calculations**
B. **Stormwater Outfall Plan**

STORMWATER DETENTION DESIGN: 35 KORUMBURRA-WARRAGUK RD, KORUMBURRA

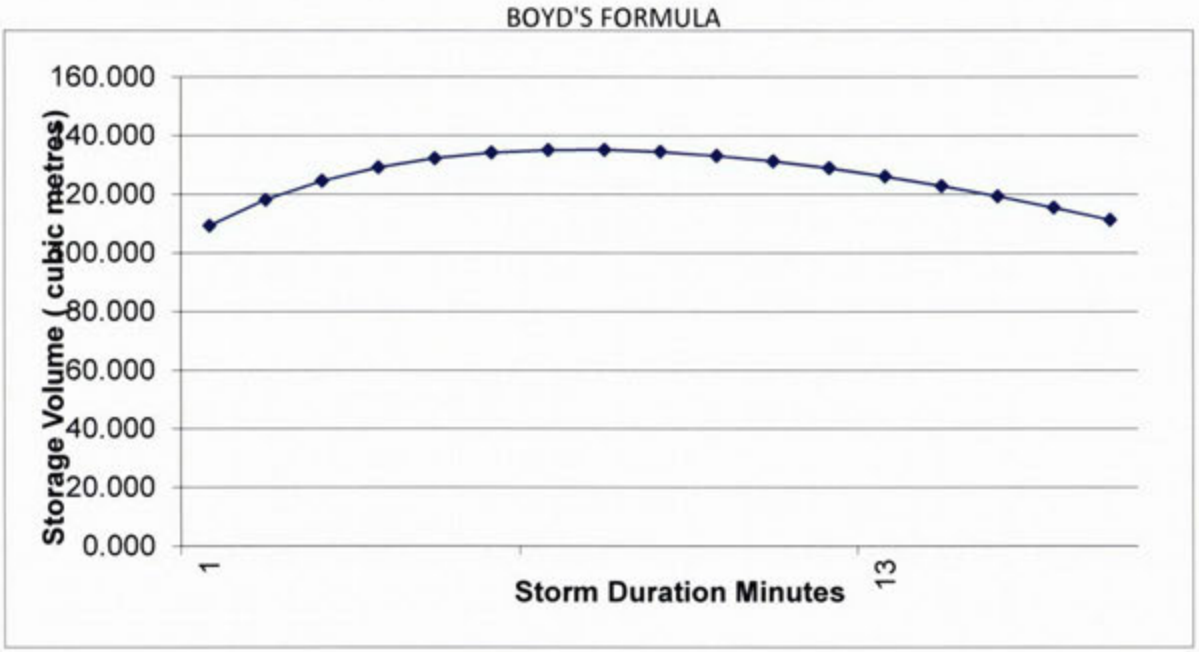
REF: 14032

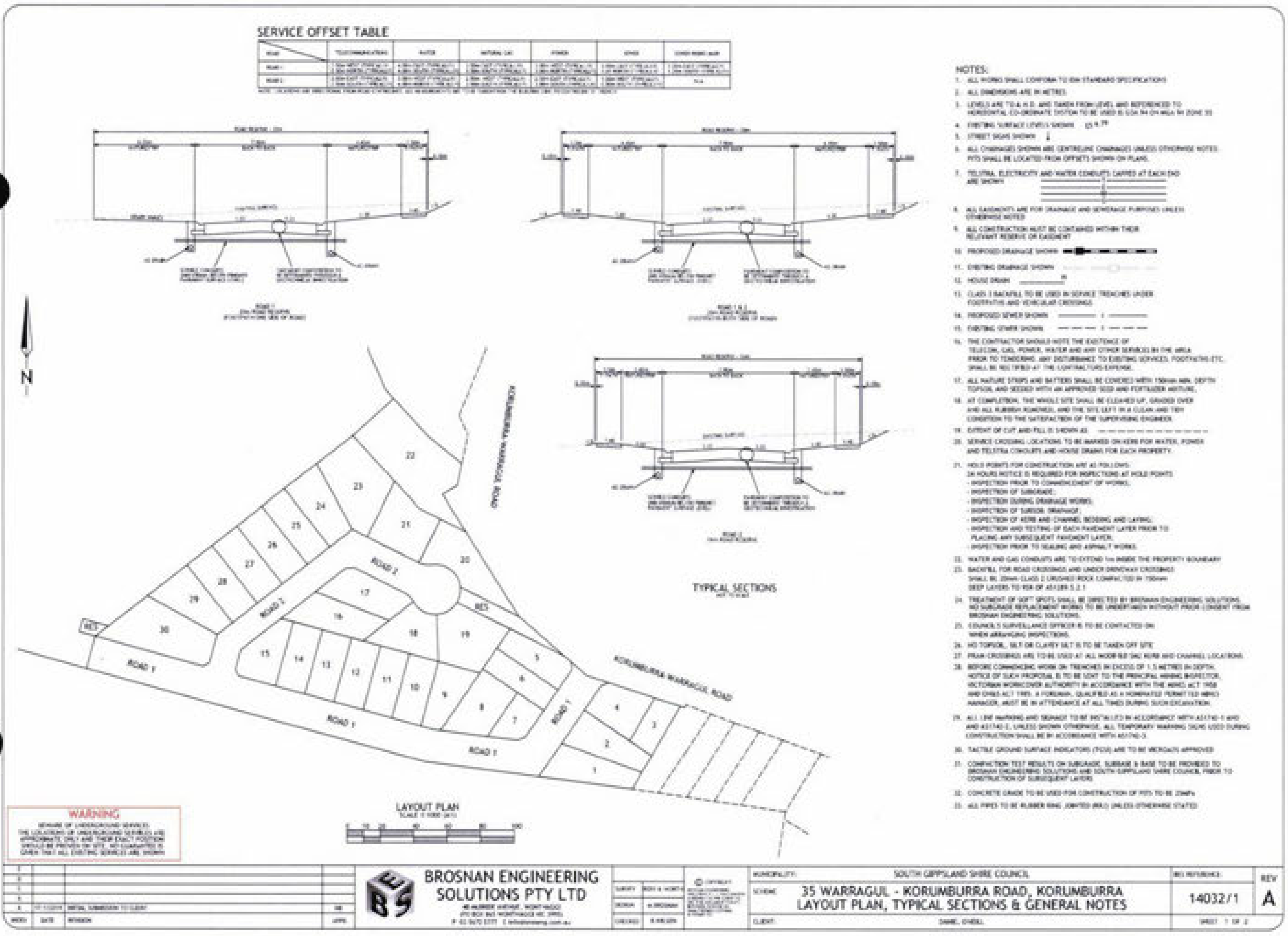
Effective Area	2.49 Ha	24907.6 sq m
Outflow	0.201 cu.m/s	201.000 l/s

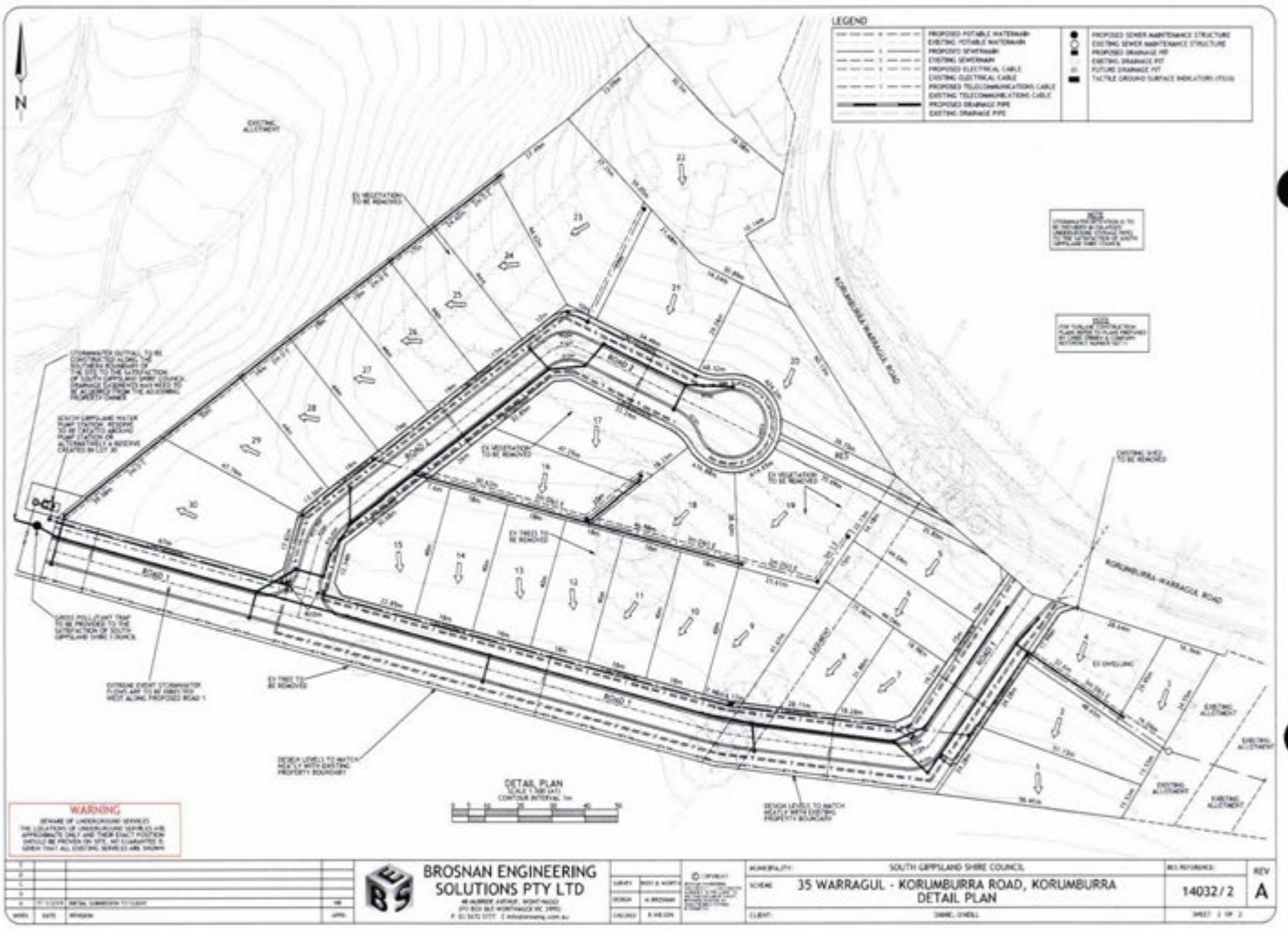
KORUMBURRA

a	b	c	d	e	f	g
3.1276200	-0.5912100	-0.0055614	0.0062123	-0.0014596	0.0000731	-0.0000101

Time	**I**	**I_p**	**Q_p**	**V_1**	**S_{max}**
Min	mm/hr	(m^3/s)	(m^3/s)	(m^3)	(m^3)
5.00	81.62	0.5647	0.2010	169.42	109.118
6.00	76.43	0.5288	0.2010	190.36	118.001
7.00	71.89	0.4974	0.2010	208.89	124.473
8.00	67.92	0.4699	0.2010	225.55	129.075
9.00	64.43	0.4458	0.2010	240.73	132.187
10.00	61.35	0.4245	0.2010	254.68	134.084
11.00	58.61	0.4055	0.2010	267.63	134.971
12.00	56.15	0.3885	0.2010	279.73	135.005
13.00	53.94	0.3732	0.2010	291.09	134.310
14.00	51.93	0.3593	0.2010	301.82	132.983
15.00	50.11	0.3467	0.2010	312.00	131.103
16.00	48.43	0.3351	0.2010	321.70	128.736
17.00	46.90	0.3245	0.2010	330.96	125.935
18.00	45.48	0.3147	0.2010	339.83	122.746
19.00	44.17	0.3056	0.2010	348.35	119.208
20.00	42.94	0.2971	0.2010	356.55	115.352
21.00	41.81	0.2893	0.2010	364.47	111.208
				Max	135.005




SERVICE OFFSET TABLE
TYPICAL SECTIONS
ROAD 1
ROAD 2
ROAD 1 & 2
KORUMBURRA WARRAGUL ROAD
RES
LAYOUT PLAN
SCALE 1:1000 (A1)
N
NOTES:
1. ALL WORKS SHALL CONFORM TO IDM STANDARD SPECIFICATIONS
2. ALL DIMENSIONS ARE IN METRES
3. LEVELS ARE TO A.H.D. AND TAKEN FROM LEVEL AND REFERENCED TO HORIZONTAL CO-ORDINATE SYSTEM TO BE USED IS GDA 94 ON MGA 94 ZONE 55
4. EXISTING SURFACE LEVELS SHOWN
5. STREET SIGNS SHOWN
6. ALL CHAINAGES SHOWN ARE CENTRELINE CHAINAGES UNLESS OTHERWISE NOTED. PITS SHALL BE LOCATED FROM OFFSETS SHOWN ON PLANS.
7. TELSTRA, ELECTRICITY AND WATER CONDUITS CAPPED AT EACH END ARE SHOWN
8. ALL EASEMENTS ARE FOR DRAINAGE AND SEWERAGE PURPOSES UNLESS OTHERWISE NOTED
9. ALL CONSTRUCTION MUST BE CONTAINED WITHIN THEIR RELEVANT RESERVE OR EASEMENT
10. PROPOSED DRAINAGE SHOWN
11. EXISTING DRAINAGE SHOWN
12. HOUSE DRAIN
13. CLASS 3 BACKFILL TO BE USED IN SERVICE TRENCHES UNDER FOOTPATHS AND VEHICULAR CROSSINGS
14. PROPOSED SEWER SHOWN
15. EXISTING SEWER SHOWN
16. THE CONTRACTOR SHOULD NOTE THE EXISTENCE OF TELECOM, GAS, POWER, WATER AND ANY OTHER SERVICES IN THE AREA PRIOR TO TENDERING. ANY DISTURBANCE TO EXISTING SERVICES, FOOTPATHS ETC. SHALL BE RECTIFIED AT THE CONTRACTORS EXPENSE.
17. ALL NATURE STRIPS AND BATTERS SHALL BE COVERED WITH 150mm MIN. DEPTH TOPSOIL AND SEEDED WITH AN APPROVED SEED AND FERTILIZER MIXTURE.
18. AT COMPLETION, THE WHOLE SITE SHALL BE CLEANED UP, GRADED OVER AND ALL RUBBISH REMOVED, AND THE SITE LEFT IN A CLEAN AND TIDY CONDITION TO THE SATISFACTION OF THE SUPERVISING ENGINEER.
19. EXTENT OF CUT AND FILL IS SHOWN AS
20. SERVICE CROSSING LOCATIONS TO BE MARKED ON KERB FOR WATER, POWER AND TELSTRA CONDUITS AND HOUSE DRAINS FOR EACH PROPERTY.
21. HOLD POINTS FOR CONSTRUCTION ARE AS FOLLOWS:
24 HOURS NOTICE IS REQUIRED FOR INSPECTIONS AT HOLD POINTS
- INSPECTION PRIOR TO COMMENCEMENT OF WORKS;
- INSPECTION OF SUBGRADE;
- INSPECTION DURING DRAINAGE WORKS;
- INSPECTION OF SUBSOIL DRAINAGE;
- INSPECTION OF KERB AND CHANNEL BEDDING AND LAYING;
- INSPECTION AND TESTING OF EACH PAVEMENT LAYER PRIOR TO PLACING ANY SUBSEQUENT PAVEMENT LAYER;
- INSPECTION PRIOR TO SEALING AND ASPHALT WORKS.
22. WATER AND GAS CONDUITS ARE TO EXTEND 1m INSIDE THE PROPERTY BOUNDARY
23. BACKFILL FOR ROAD CROSSINGS AND UNDER DRIVEWAY CROSSINGS SHALL BE 20mm CLASS 2 CRUSHED ROCK COMPACTED IN 150mm DEEP LAYERS TO 95% OF AS1289 5.2.1
24. TREATMENT OF SOFT SPOTS SHALL BE DIRECTED BY BROSNAN ENGINEERING SOLUTIONS. NO SUBGRADE REPLACEMENT WORKS TO BE UNDERTAKEN WITHOUT PRIOR CONSENT FROM BROSNAN ENGINEERING SOLUTIONS.
25. COUNCIL'S SURVEILLANCE OFFICER IS TO BE CONTACTED ON WHEN ARRANGING INSPECTIONS.
26. NO TOPSOIL, SILT OR CLAYEY SILT IS TO BE TAKEN OFF SITE
27. PRAM CROSSINGS ARE TO BE USED AT ALL MODIFIED SM2 KERB AND CHANNEL LOCATIONS.
28. BEFORE COMMENCING WORK ON TRENCHES IN EXCESS OF 1.5 METRES IN DEPTH, NOTICE OF SUCH PROPOSAL IS TO BE SENT TO THE PRINCIPAL MINING INSPECTOR, VICTORIAN WORKCOVER AUTHORITY IN ACCORDANCE WITH THE MINES ACT 1958 AND OH&S ACT 1985. A FOREMAN, QUALIFIED AS A NOMINATED PERMITTED MINES MANAGER, MUST BE IN ATTENDANCE AT ALL TIMES DURING SUCH EXCAVATION.
29. ALL LINE MARKING AND SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH AS1742-1 AND AS1742-2, UNLESS SHOWN OTHERWISE. ALL TEMPORARY WARNING SIGNS USED DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH AS1742-3.
30. TACTILE GROUND SURFACE INDICATORS (TGSI) ARE TO BE VICROADS APPROVED
31. COMPACTION TEST RESULTS ON SUBGRADE, SUBBASE & BASE TO BE PROVIDED TO BROSNAN ENGINEERING SOLUTIONS AND SOUTH GIPPSLAND SHIRE COUNCIL PRIOR TO CONSTRUCTION OF SUBSEQUENT LAYERS
32. CONCRETE GRADE TO BE USED FOR CONSTRUCTION OF PITS TO BE 25MPa
33. ALL PIPES TO BE RUBBER RING JOINTED (RRJ) UNLESS OTHERWISE STATED
WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.
BROSNAN ENGINEERING
SOLUTIONS PTY LTD
MUNICIPALITY: SOUTH GIPPSLAND SHIRE COUNCIL
SCHEME: 35 WARRAGUL - KORUMBURRA ROAD, KORUMBURRA
LAYOUT PLAN, TYPICAL SECTIONS & GENERAL NOTES
BES REFERENCE: 14032/1
REV A
SHEET 1 OF 2



BROSNAN ENGINEERING SOLUTIONS PTY LTD

MUNICIPALITY:	SOUTH GIPPSLAND SHIRE COUNCIL	REV
SCHEME:	35 WARRAGUL - KORUMBURRA ROAD, KORUMBURRA DETAIL PLAN	14032/2 A
CLIENT:	SHIRE, O'NEILL	

Phillip Island
Planning Services

APPENDIX G – TRANSPORT REPORT

ratio:

Report
Prepared for
RFT Building Consulting P/L

March 2019

Transport:report

Proposed Residential Subdivision

35 and 65 Korumburra – Warragul Road, Korumburra

r:

ratio:consultants

8 Gwynne Street
Cremorne VIC 3121
ABN 93 983 380 225

Prepared for:

RFT Building Consulting P/L
Our reference 16008T - REP01 - D01

Version	Date	Reason for Issue	Prepare By	Check By
1.0	28/03/2019	Final	E. Constable	J. Sellars

Table of contents:

1 Introduction:

1.1 Introduction

Ratio has been engaged by RFT Building Consulting Pty Ltd to review the transport impacts of the proposed residential subdivision of the land at 35 and 65 Korumburra-Warragul Road, Korumburra.

1.2 Purpose of this Report

It is understood that a development plan requires approval before a subdivision planning permit can be issued. This report has been prepared to accompany a development plan and planning permit application to South Gippsland Shire Council. The report sets out an assessment of the anticipated transport implications of the proposed subdivision, with consideration of the following:

- The adequacy of the proposed pedestrian, bicycle and public transport access arrangements to the site.
- The adequacy of the proposed site access arrangements of the proposed development.
- The car parking requirements of the proposal.
- The adequacy of the proposed waste and emergency vehicle access to the site.
- The acceptability of the traffic impacts of the proposal.

1.3 References

In preparing this report, reference has been made to the following:

- Plans of the proposed residential subdivision prepared by Brosnan Engineering Solutions Pty Ltd.
- South Gippsland Planning Scheme.
- Traffic surveys commissioned by Ratio as referenced in the context of this report.
- An inspection of the subject site and its surrounds.
- Other documents as nominated.

2.1 Site Context

The subject site is located on the southwestern side of Korumburra-Warragul Road, north of the main township of Korumburra, as shown in the locality plan in Figure 2.1.

Figure 2.1: Aerial View of the Site and Surrounds

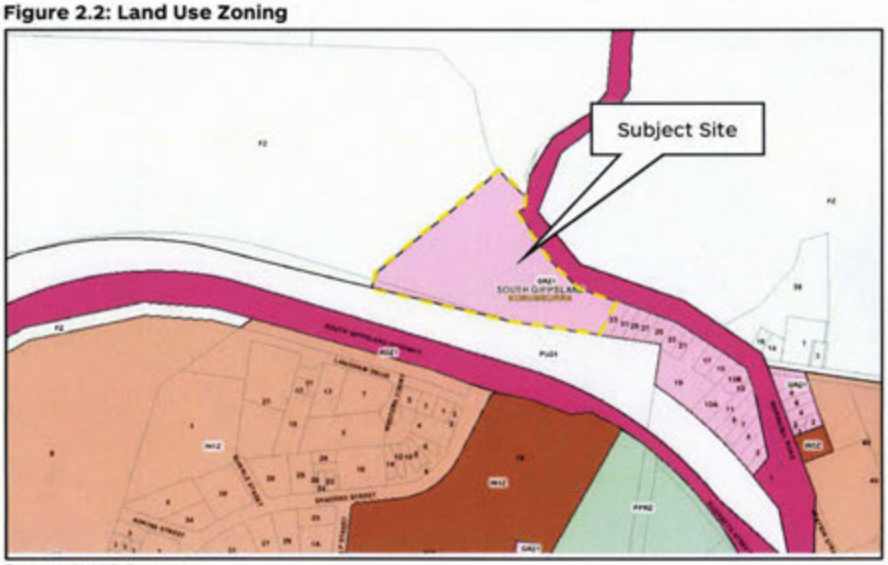
Source: Google Maps

The subject site is located within General Residential Zone – Schedule 1 (GRZ1) and is subject to a Development Plan Overlay – Schedule 8 (DPO8).

Existing land use in the vicinity of the subject site encompasses a mixture of residential and non-urban uses.

Figure 2.2 shows the land use zoning of the subject site and its surrounds.

Figure 2.2: Land Use Zoning

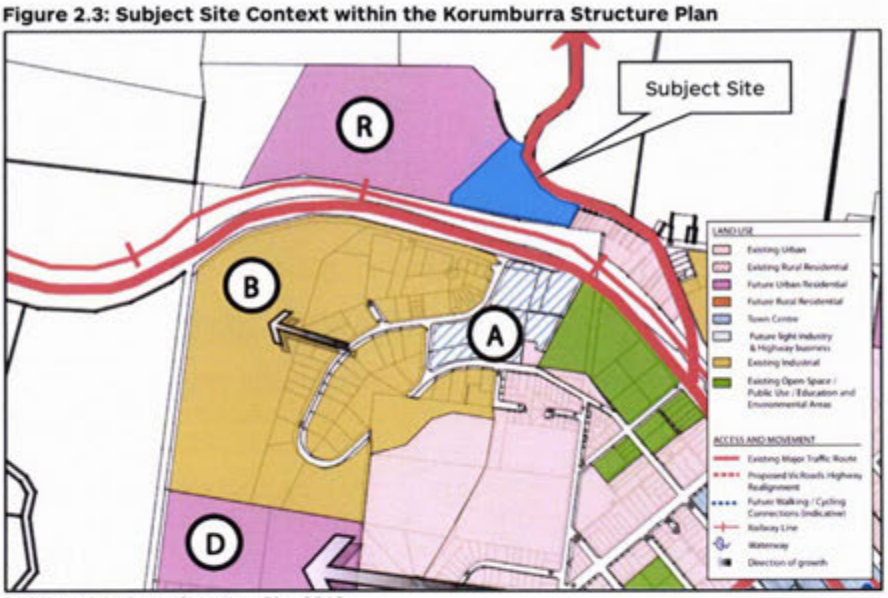


Source: Land.vic.gov.au

2.2 Korumburra Structure Plan

The subject site is nominated within the Korumburra Structure Plan (July 2010) as being an area for future urban residential development. An extract of the Structure Plan is presented in Figure 2.3.

Figure 2.3: Subject Site Context within the Korumburra Structure Plan

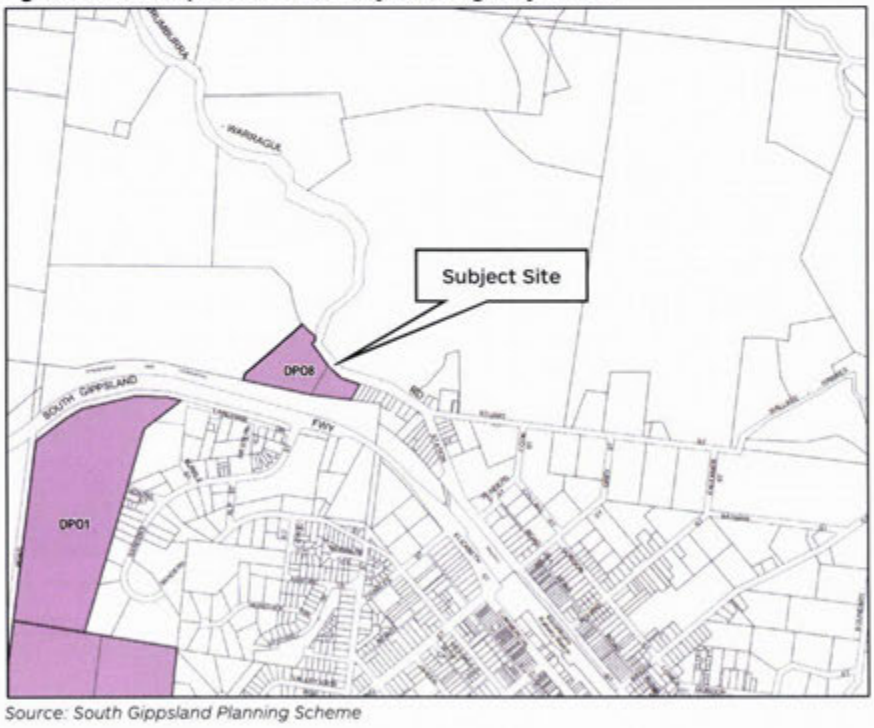


Source: Korumburra Structure Plan 2010

2.3 South Gippsland Planning Scheme

The subject site is covered by a Development Plan Overlay (DPO8) as identified in the South Gippsland Planning Scheme. The overlay is identified in Figure 2.4.

Figure 2.4: Development Plan Overlay Covering Subject Site



Source: South Gippsland Planning Scheme

With respect to transport engineering elements, the development plan requires the following:

— *"A comprehensive Traffic Impact Assessment that identifies:*

- *The pattern and location of the major arterial road network of the area including existing roads and the location and details of any required:*
- *road widening*
- *intersections*
- *access points*
- *pedestrian crossing or safe refuges*
- *cycle lanes"*

These matters are addressed in later sections of this report.

2.4 Existing Road Network

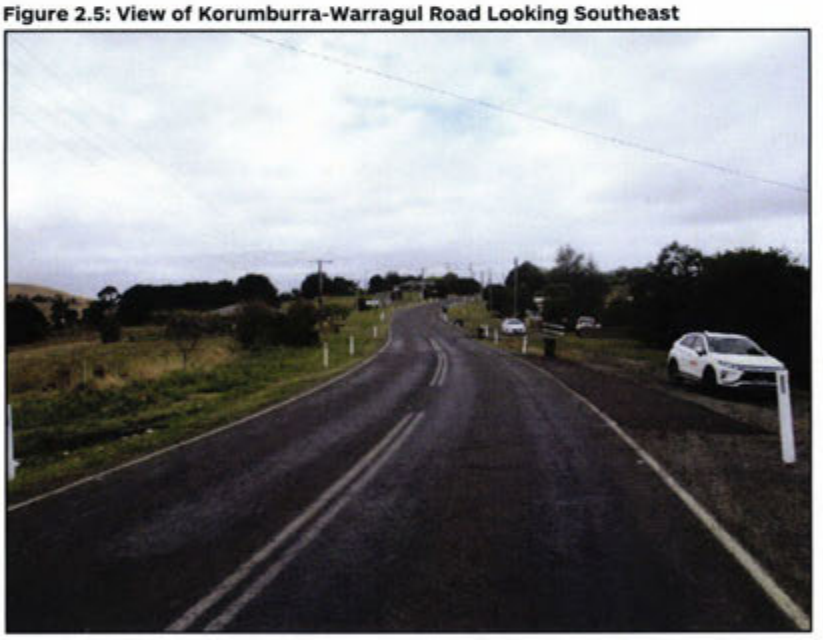
Korumburra-Warragul Road is a secondary arterial road (VicRoads controlled) generally aligned in a north to south direction connecting Warragul to the township of Korumburra.

Adjacent to the site frontage, Korumburra-Warragul Road is aligned in a northwest – southwest direction and accommodates one traffic lane in each direction within a variable width road reserve.

Within the vicinity of the site, Korumburra-Warragul Road has a posted speed limit that varies between 60km/h and 80km/h and carries a weekday average of 1,817 vehicles per day[1].

Views of the road close to the subject site are presented in Figure 2.5 and Figure 2.6.

Figure 2.5: View of Korumburra-Warragul Road Looking Southeast



[1] Based on 24-hour pneumatic tube counts commissioned by Ratio between Thursday 7 February 2019 and Wednesday 13 February 2019.

Figure 2.6: View of Korumburra-Warragul Road Looking Northwest

2.5 Traffic Volumes

Ratio commissioned 24-hour pneumatic tube counts on Korumburra-Warragul for one week between Thursday 7 February 2019 and Wednesday 13 February 2019.

The surveys returned the peak hour and daily traffic volumes presented in Table 2.1.

Table 2.1: Korumburra-Warragul Road Traffic Volumes (February 2019)

Period	Average Weekday Traffic Volume		
	To Northwest	To Southeast	Combined
AM Peak (8.00am – 9.00am)	48vph	91vph	139vph
PM Peak (3.00pm – 4.00pm)	89vph	76vph	165vph
Daily	902vpd	913vpd	1,815vpd

vph denotes vehicles per hour.
vpd denotes vehicles per day.

The 2019 traffic volumes surveyed on Korumburra-Warragul Road are comparable to the traffic volumes recorded on the road in March 2013, as presented in reports prepared by GTA Consultants. The traffic volumes from March 2013 are presented in Table 2.2.

Table 2.2: Korumburra-Warragul Road Traffic Volumes (March 2013)

Period	Average Weekday Traffic Volume		
	To Northwest	To Southeast	Combined
AM Peak (8.00am – 9.00am)	66vph	101vph	167vph
PM Peak (5.00pm – 6.00pm)	101vph	59vph	160vph
Daily	936vpd	988vpd	1,924vpd

2.6 Road Accident Data

A review of the reported casualty accident history for the roads and intersections adjoining the subject site has been sourced from VicRoads CrashStats accident database. This database records all accidents causing injury that have occurred in Victoria since 1987 (as recorded by Victorian Police) and categorises these accidents as follows:

- Fatal injury: at least one person was killed in the accident or died within 30 days as a result of the accident.
- Serious injury: at least one person was sent to hospital as a result of the accident.
- Other injury: at least one person required medical treatment as a result of the accident.

There have been no recorded accidents in the vicinity of the subject site in the last available five-year period.

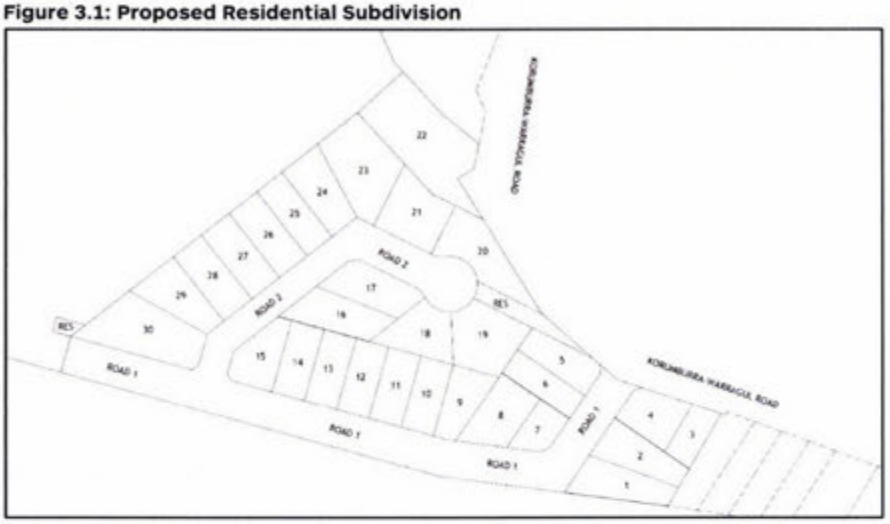
3 Proposed Development:

3.1 Land Use

The proposal is to develop the site for the purpose of a residential subdivision, comprising a total of 30 lots.

The layout of the proposed subdivision is presented in Figure 3.1.

Figure 3.1: Proposed Residential Subdivision



3.2 Vehicle Access Arrangements

Site Access Intersection

Vehicle Access to the development will be via a new unsignalised intersection on Korumburra-Warragul Road, located in the south-east part of the subject site.

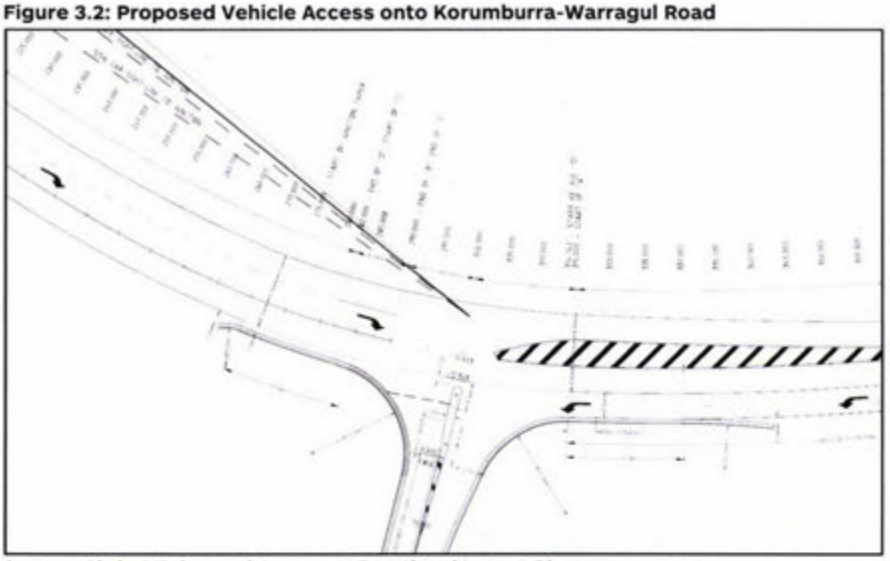
A functional layout plan of the site access intersection has been prepared by Chris O'Brien and Company Pty Ltd, which includes details of an ancillary left turn lane (AUL) and a channalised right turn lane (CHR) on Korumburra-Warragal Road.

The site access design was previously approved by VicRoads in a letter dated 28 June 2012 (refer to Appendix A of this report) subject to the following two conditions being met:

— A concrete splitter island is required to be shown in the detailed design plans at the intersection which allows for bus turning movements; and
— A road safety audit is to be undertaken on the functional layout.

The functional layout plan has been subsequently updated to include details the splitter island. An extract of the vehicle access layout is presented in Figure 3.2, with the full plan presented in Appendix A.

Figure 3.2: Proposed Vehicle Access onto Korumburra-Warragul Road



Source: Chris O'Brien and Company Functional Layout Plan

VicRoads has recently advised that it has no objection to the proposed site access intersection, however a revised functional layout plan will need to be submitted given the age of the previous approval. It is considered that the requirement to obtain VicRoads approval to the revised functional layout plan can be reasonably dealt with as a secondary consent through a permit condition.

The site access intersection proposes an ancillary left turn (AUL) and channalised right turn (CHT) treatment. A review of the relevant Austroads design guidance indicates that, based purely on a traffic volume basis, a lesser intersection design with no dedicated turning lanes (i.e. basic right turn (BAR) and basic left turn (BAL) treatments) could be provided that could satisfactorily accommodate the anticipated post development traffic volumes. However, the relevant Austroads design guidance states the following with respect to the provision of turn lanes:

"If a particular turn from a major road is associated with some geometric minima (for example limited sight distance, steep grade), consideration should be given to the adoption of a turn treatment of a higher order than that indicated by the warrants. For example, if the warrants indicate that a BAR turn treatment is acceptable for the relevant traffic volumes, but limited visibility to the right turning vehicle is available, consideration should be given to the adoption of a CHR(S) or CHR turn treatment"

Given that sight lines are constrained at the proposed site access location, the intersection design has incorporated higher order full turn lane treatments.

Widening of Korumburra-Warragul Road will be required to deliver the turn lane treatments. The widening of the road will occur on the subject site side.

Internal Roads

The primary section of the road network connecting the proposed development to Korumburra-Warragul Road (Road 1) will have a road reserve width of 20m which will accommodate the following:

— A minimum 7.3m wide carriageway.
— 6.0m wide verges on both sides of the carriageway.
— 1.5m wide footpaths contained within the verges.

These dimensions are typically associated with a 'Collector Street - Level 2' as defined in Table C1 of Clause 56.06-8 of the South Gippsland Planning Scheme. This road classification has an indicative daily traffic volume capacity of 3,000 vehicles per day (and around 300 vehicles per hour).

The secondary section of internal road network serving lots 16 – 29 on the current subdivision plan (Road 2) will have a road reserve width of 16m which will accommodate:

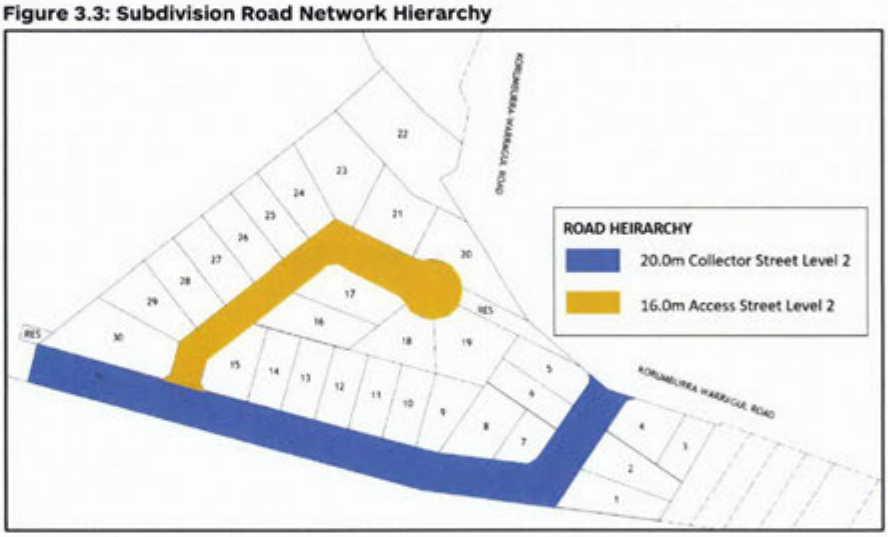
— A 7.0m wide carriageway.
— 4.5m wide verges on both sides of the carriageway.
— 1.5m wide footpaths contained with the verges.

These dimensions are typically associated with an 'Access Street – Level 2' as identified in Table C1 of Clause 56.06-8 of the South Gippsland Planning Scheme. This road classification has an indicative daily traffic volume capacity of 2,000 to 3,000 vehicles per day (and around 200 to 300 vehicles per hour).

Road 2 terminates as a court bowl. At this termination point the road reserve widens to allow for a 20m diameter court bowl.

The subdivision road network hierarchy is shown in Figure 3.3.

Figure 3.3: Subdivision Road Network Hierarchy



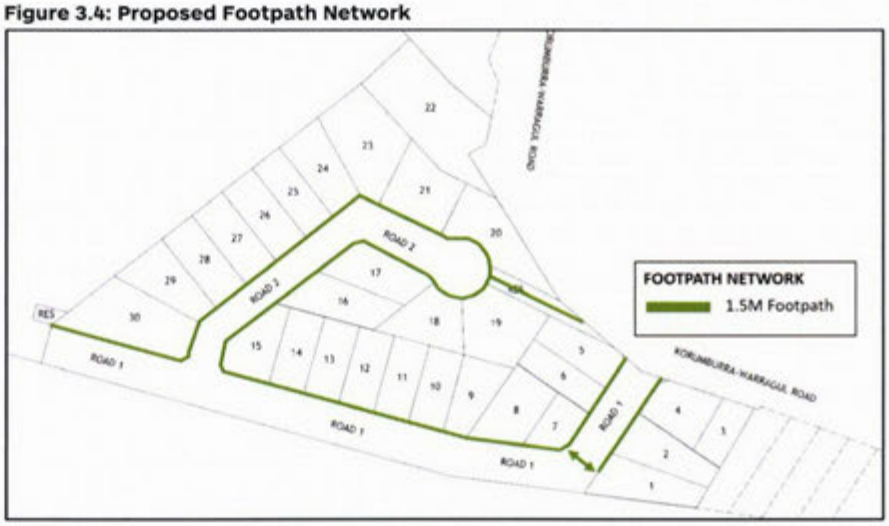
3.3 Pedestrians and Cyclists

All internal roads will include standard 1.5m wide footpaths along lot frontages within the road reserves.

Furthermore, a reserve, located along the northern boundary of Lot 19 and the southern boundary of Lot 20 will provide a 1.5m wide pedestrian connection between the court bowl and Korumburra-Warragul Road.

The proposed subdivision footpath network is shown in Figure 3.4.

Figure 3.4: Proposed Footpath Network



In addition to the internal arrangements, the proposed site access intersection will provide a splitter island on the site access road at its interface with Korumburra-Warragul Road which will assist with pedestrian movements across the intersection.

The internal road network is anticipated to carry relatively low volumes of traffic. As such, it is anticipated that cyclists will be able to comfortably and safely travel on these streets.

It is considered that the proposed internal pedestrian and cyclist arrangements respond to the requirements of the Development Plan Overlay.

3.4 Waste Collection Arrangements

It is expected that waste will be stored on each individual lot and brought kerbside by residents for collection as part of Council's regular service.

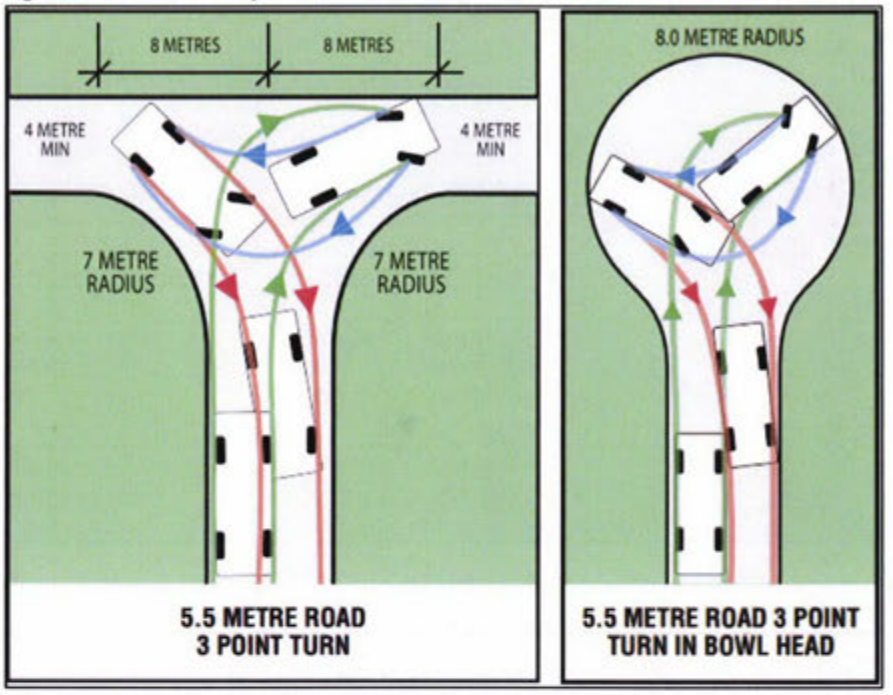
It is considered that the proposed internal road network will not prejudice waste collection vehicle access to any part of the subject site and the court bowl arrangement will permit vehicles of a size up to and including an 8.8m long typical waste collection vehicle to turn in a satisfactory manner (refer to Appendix B for the swept path of this manoeuvre).

3.5 Emergency Vehicle Access

It is considered that the nominated internal road network will not prejudice emergency vehicle access to any part of the subject site. As previously discussed, the court bowl has been designed to allow a vehicle of a size up and including an 8.8m long (typical length of a fire truck) to turn in a satisfactory manner.

The dimensions of the proposed court bowl treatment meet the requirements for a CFA fire truck to make a three point turn as diagrammatically shown in Figure 3.5.

Figure 3.5: Minimum Requirements for Fire Truck Three-Point Turn



4 Statutory Requirements:

4.1 Bicycle Parking Requirements – Clause 52.34

Clause 52.34-3 of the South Gippsland Planning scheme does not specify bicycle parking requirements for residential developments of less than four-storeys.

Each lot is anticipated to be developed with an individual dwelling with individual garages and areas of private open space at ground level that can be used to store a bicycle as required.

4.2 Car Parking Requirements – Clause 52.06

Statutory requirements for the provision of car parking for the development proposal is set out in Clause 52.06 of the South Gippsland Planning Scheme.

The Clause requires the provision of one car parking space to each one and two-bedroom dwelling and two car parking spaces to each three or more-bedroom dwelling. Furthermore, a provision of visitor car parking space for every five dwellings is required.

Each future residential allotment should provide off-street resident car parking that satisfies the Planning Scheme.

On the basis of the subdivision delivering 30 residential dwellings, there is a statutory requirement to provide six visitor car parking spaces. The visitor car parking can be readily accommodated on-street within the 7.0m to 7.3m wide carriageway of the internal roads, with the available carriageway width sufficient for car parking to occur on both sides of the road whilst maintaining a single through lane for traffic.

5.1 Traffic Generation

A single house on a standard lot will typically generate between 0.8 and 1.0 vehicle movements per dwelling in the peak AM and PM peak hour periods and in the order of eight to 10 movements per day.

For the purpose of this assessment, a peak hour traffic generation rate of 1.0 vehicle movement per lot and a daily traffic generation of 10 vehicle movements per lot has been adopted.

The directional split of traffic (i.e. the ratio between inbound and outbound traffic movements) for the proposal is as follows:

- AM peak hour – 80% outbound and 20% inbound movements.
- PM peak hour – 40% outbound and 60% inbound movements.

Table 5.1 sets out a summary of the anticipated peak hour and daily vehicle movements based on 30 residential dwellings.

Table 5.1: Estimated Peak hour and Daily Traffic Generation

Use	AM Peak Hour		PM Peak Hour		Daily Traffic Volumes
	Inbound	Outbound	Inbound	Outbound	
Residential (30 dwellings)	6vph	24vph	18vph	12vph	300vpd

vph denotes vehicles per hour.
vpd denotes vehicles per day.

5.2 Distribution and Assignment

The directional distribution and assignment of traffic generated by the proposed subdivision will be influenced by a number of factors, including the surrounding employment centres, retail centres and schools in relation to the site.

Having consideration to the above and for the purposes of estimating vehicle movements, it has been assumed that 80% of the development traffic will travel to/from the southeast (Korumburra township), with 20% to/from the northwest.

Based on the above, Figure 5.1 and Figure 5.2 have been prepared to show the estimated post development traffic volumes at the proposed site access intersection.

Figure 5.1: AM Peak Hour Post Development Traffic

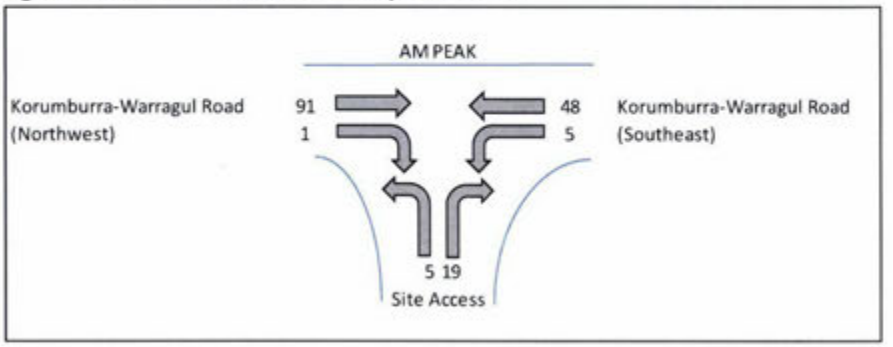
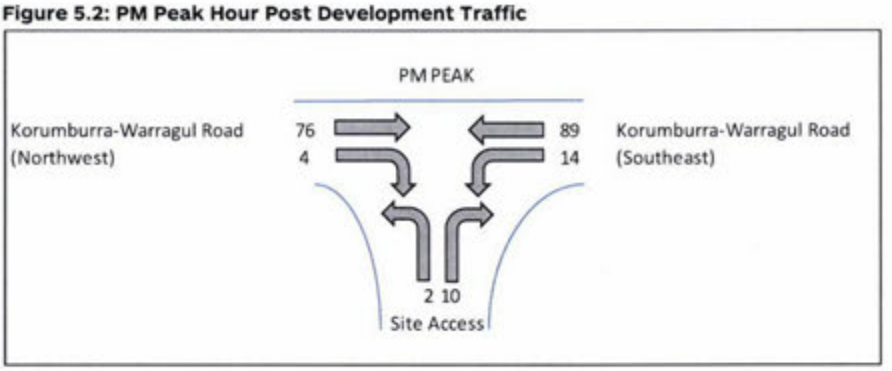


Figure 5.2: PM Peak Hour Post Development Traffic



5.3 Traffic Impact

The performance of the proposed Korumburra-Warragul Road/Site Access intersection has been assessed using SIDRA 8.0, a computer-based modelling package which calculates intersection performance.

The commonly used measure of intersection performance is referred to as the Degree of Saturation (DOS). The DOS represents the flow-to-capacity ratio for the most critical movement on each leg of the intersection.

For unsignalised intersections, A DOS of around 0.9 has been typically considered the 'ideal' limit, beyond which queues and delays increase disproportionately. The operational rating associated with the degree of saturation is summarised in Table 5.2.

Table 5.2 SIDRA Degree of Saturation Ratings

Degree of Saturation (DOS)	Rating
Up to 0.6	Excellent
0.61 – 0.70	Very Good
0.71 – 0.80	Good
0.81 – 0.90	Fair
0.91 – 1.00	Poor
Greater than 1.00	Very poor

Table 5.3 and Table 5.4 presents a summary of the post development performance of the proposed Korumburra-Warragul Road/Site Access intersection.

Table 5.3: Site Access Intersection – AM Peak (Post Development)

Approach	Movement	Performance Output		
		DOS	Average Delay (Sec)	95th Percentile Queue (m)
Site Access (Southwest Approach)	Left	0.03	6	1
	Right	0.03	6	1
Korumburra – Warragul Road (Southeast Approach)	Left	0.00	6	0
	Through	0.03	0	0
Korumburra – Warragul Road (Northwest Approach)	Through	0.05	0	0
	Right	0.00	6	0

Table 5.4: Site Access Intersection – PM Peak (Post Development)

Approach	Movement	Performance Output		
		DOS	Average Delay (Sec)	95th Percentile Queue (m)
Site Access (Southwest Approach)	Left	0.01	6	0
	Right	0.01	7	0
Korumburra – Warragul Road (Southeast Approach)	Left	0.01	6	0
	Through	0.05	0	0
Korumburra – Warragul Road (Northwest Approach)	Through	0.04	0	0
	Right	0.00	6	0

It is estimated that the Korumburra-Warragul Road/Site Access intersection will perform under 'excellent' conditions post development, with acceptable queues and delays.

5.4 10-Year Post Development Assessment

A 10-year post development assessment of the performance of the proposed Korumburra-Warragul Road/Site Access intersection has been undertaken.

The assessment has adopted the following assumptions:

- The potential future development site, located adjacent to the subject site, will yield in the order of 120 dwellings.
- A conservative 3% annual growth factor has been applied to Korumburra-Warragul Road, noting that traffic volumes collected on the road in March 2013 and February 2019 suggest that daily traffic volumes have declined.

Table 5.5 and Table 5.6 presents a summary of the 10-year post development performance of the proposed Korumburra-Warragul Road/Site Access intersection.

Table 5.5: Site Access Intersection – AM Peak (10-Year)

Approach	Movement	Performance Output		
		DOS	Average Delay (Sec)	95th Percentile Queue (m)
Site Access (Southwest Approach)	Left	0.11	6	3
	Right	0.11	7	3
Korumburra – Warragul Road (Southeast Approach)	Left	0.01	6	0
	Through	0.04	0	0
Korumburra – Warragul Road (Northwest Approach)	Through	0.07	0	0
	Right	0.00	6	0

Table 5.6: Site Access Intersection – PM Peak (10-Year)

Approach	Movement	Performance Output		
		DOS	Average Delay (Sec)	95th Percentile Queue (m)
Site Access (Southwest Approach)	Left	0.06	6	2
	Right	0.06	7	2
Korumburra – Warragul Road (Southeast Approach)	Left	0.03	6	0
	Through	0.07	0	0
Korumburra – Warragul Road (Northwest Approach)	Through	0.06	0	0
	Right	0.01	6	0

Based on the preceding assessment, it is evident the proposed site access intersection will continue to operate under 'excellent' conditions 10-years post development, with acceptable queues and delays.

5.5 Internal Road Traffic Assessment

Based on the immediate post development conditions, it is estimated that the primary section of the internal road network (Road 1) will carry up to 300 vehicles per day, and the secondary section serving lots 16-29 (Road 2) will carry up to 140 vehicles per day.

Under the ten-year post development conditions (assuming that the adjacent future development area will yield up to 120 dwellings), it is estimated that the primary section of the internal road network (Road 1) will carry up to 1,500 vehicles per day, with no increase in traffic volumes on the secondary section of internal road network (Road 2).

With reference to Table C1 of Clause 56.06 of the South Gippsland Planning Scheme, the primary section of the internal road network (Road 1) has an indicative daily traffic volume capacity of 3,000 vehicles per day. The estimated daily traffic volumes on this section of road under the

estimated 10-year post development conditions (1,500 vehicles per day) is comfortably below the indicative capacity threshold.

The secondary section of the internal road network (Road 2) has an indicative daily traffic volume capacity of 2,000 to 3,000 vehicles per day. The estimated daily traffic volume on this section of road under the 10-year post development conditions (140 vehicles per day) sits comfortably below this capacity threshold.

5.6 Traffic Impact Summary

Against existing traffic volumes in the vicinity of the subject site, the additional traffic generated by the proposed (and potential future) development could not be expected to compromise the function or safety of the surrounding road network.

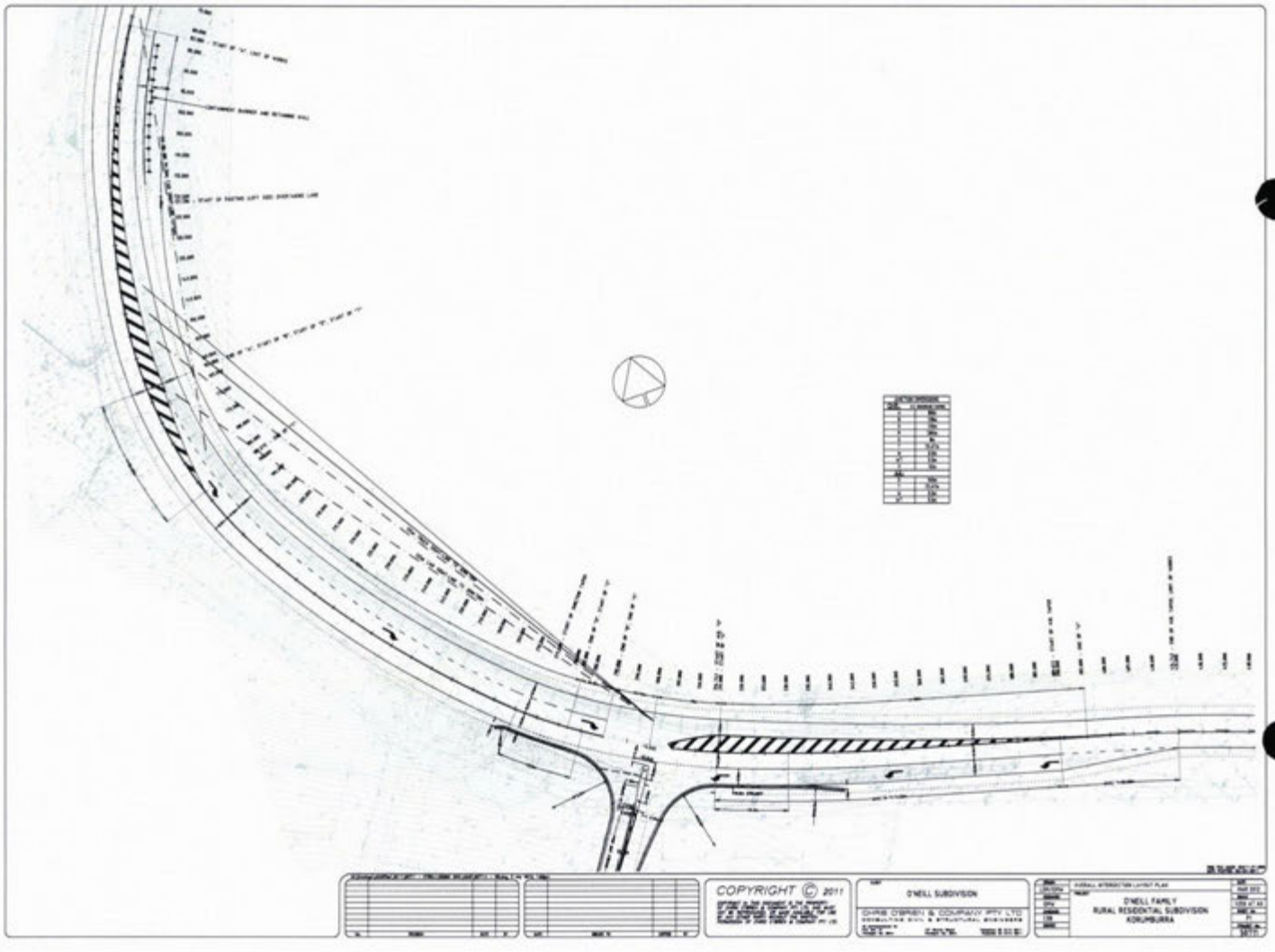
6 Conclusions:

6.1 Conclusions

Based on the analysis and discussion presented in this report, the following conclusions are made:

- Clause 52.34-3 of the South Gippsland Planning scheme does not specify bicycle parking provision requirements for residential developments of less than four storeys. It is considered that residents will be able to store their bicycle within their property envelope.
- Clause 52.06 of the South Gippsland Planning Scheme requires the provision of one car parking space to each one and two-bedroom dwelling and two car parking spaces to each three or more-bedroom dwelling. It is recommended that dwellings on each lot be provided with a car parking provision satisfying the Planning Scheme requirements.
- On the basis of each lot containing a single dwelling, there will be a statutory requirement for six visitor car spaces. This car parking can readily be accommodated on-street.
- The nominated internal road network will not prejudice emergency and waste vehicle access to any part of the site.
- It is estimated that the residential subdivision could on average generate 30 peak hour traffic movements and 300 daily traffic movements.
- It is estimated that the majority of the proposed development traffic will travel to/from Korumburra.
- The proposed Korumburra-Warragul Road/Site Access intersection will perform under 'excellent' conditions immediately post development and 10-years post development, with acceptable queues and delays.
- Against existing traffic conditions in the vicinity of the subject site, the additional traffic generated by the proposed (and potential future) development could not be expected to compromise the function or safety of the surrounding road network.
- VicRoads has advised they have no objection to the proposed site access intersection.
- A revised functional layout plan of the Korumburra-Warragul Road/Site Access intersection will need to be submitted to VicRoads for approval. This requirement can be dealt with as a secondary consent through a permit condition.
- The information presented in this report is considered to appropriately address the reporting requirements of the Development Plan Overlay of the subject site.

Appendix A **Site Access Functional Layout Plan**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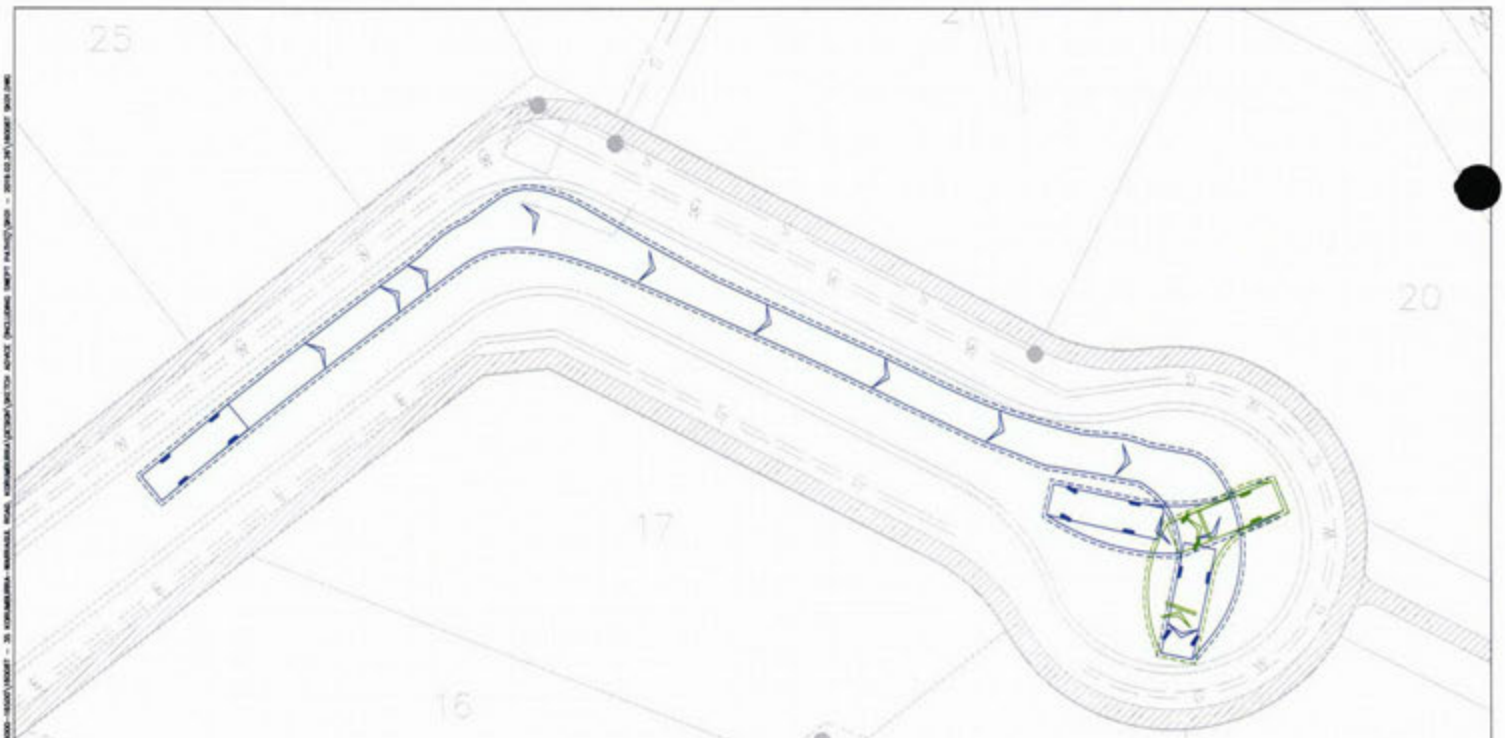
CHRIS O'BRIEN & COMPANY PTY LTD
O'NEILL FAMILY
RURAL RESIDENTIAL SUBDIVISION
KORUMBURRA

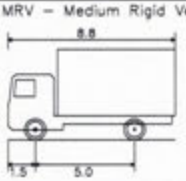
Appendix B **Swept Path Assessment**



NOTE:
1) Base Plan Supplied on 26.02.2019
2) Maximum Design Speed 10km/h

0 4 8

MRV – Medium Rigid Vehicle (AS/NZS2890.2:2002)



VEHICLE ENVELOPE (FORWARD)
500mm CLEARANCE (FORWARD)
VEHICLE ENVELOPE (REVERSE)
500mm CLEARANCE (REVERSE)

Overall Length	8.800m
Overall Width	2.500m
Track Width	2.500m
Lock to Lock Time	4.00 sec
Kerb to Kerb Turning Radius	10.000m

ratio:

RATIO CONSULTANTS PTY LTD
ABN 005 422 104
8 GWYNNE STREET
CREMORNE, VICTORIA 3121
TELEPHONE (03)9429 3111
FACSIMILE (03)9429 3011

Proposed Residential Subdivision
35 Korumburra–Warragul Road, Korumburra
Swept Path Asssessment – Court Bowl Design

RATIO REFERENCE	SHEET No.	SCALE	DATE
16008T SK01/JA	1 of 1	1:400@A4	08/03/2019

Phillip Island
Planning Services

APPENDIX H – FLORA AND FAUNA ASSESSMENT

Flora and Fauna Assessment

35 Korumburra-Warragul Road, Korumburra

V190129

Prepared for
RFT Building Consulting

20 March 2019

Cardno
Shaping the Future

Document Information

Prepared for	RFT Building Consulting
Project Name	35 Korumburra-Warragul Road, Korumburra
File Reference	V190129_KorumbburaWarragulRD_F&F_V02
Job Reference	V190129
Date	20 March 2019

Contact Information

Cardno Victoria Pty Ltd
Trading as Cardno
ABN 47 106 610 913

Level 4
501 Swanston Street
Melbourne
Victoria 3000 Australia

Telephone: (03) 8415 7777
Facsimile: (03) 8415 7788
International: +61 3 8415 7777

victoria@cardno.com.au
www.cardno.com

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Version	Date	Author	Author Initials	Reviewer	Reviewer Initials
V01	20/03/19	Maria Berzunza-Sanchez	MBS	Thomas Wright	TW
V02	20/03/2019	Thomas Wright	TEW		

Executive Summary

Cardno Victoria Pty Ltd was engaged by RFT Building Consulting to undertake a Flora and Fauna Assessment of Lot 1 PS725791 located at 35 Korumburra-Warragul Road, Korumburra (the study area). The purpose of the assessment was to support the Development Plan submission for the proposed subdivision of the study area.

The study area is located on the western outskirts of Korumburra and approximately 100 kilometres south-east of the Melbourne CBD. It is 3.8 hectares (ha), zoned General Residential (GRZ) and has been historically used for cattle grazing.

The assessment consisted of a desktop and field component to ascertain the presence or likely presence of biodiversity values listed under relevant environmental legislation and policy.

The study area is highly degraded and supports limited biodiversity values. No native vegetation (as defined under the Victoria Planning Provisions) was recorded, with the study area dominated by exotic pasture grasses and weeds. Habitat for native fauna is marginal and it is unlikely that threatened species are present.

A summary of the findings in the context of relevant legislation and policy is provided in the table below.

Legislation	Implications
Environment Protection and Biodiversity Conservation Act 1999	Matters of National Environmental Significance unlikely to be present or impacted. Referral not recommended. Impacts on adjoining habitat for Giant Gippsland Earthworm can be managed by ensuring stormwater discharge is at pre-development rates.
Flora and Fauna Guarantee Act 1988	Unlikely to support FFG Act-listed species or communities. Permit not required.
Environment Effects Act 1978	Project is unlikely to trigger an EES referral based on biodiversity values present. Assessment of non-biodiversity EES referral triggers not considered as part of this report.
Planning and Environment Act 1987	A permit is not required to remove native vegetation as none is present. A permit application would be required in response to ESO2 and ESO5 if no exemptions apply.
Catchment and Land Protection Act 1994	Declared noxious weeds (Blackberry) and pests present or likely to be present on site. Any works should be carried out to avoid spread or introducing declared pests and weeds.
Wildlife Act 1975	Removal of planted windrows could potentially impact on native fauna (e.g. possums, ravens). A zoologist with Management Authorisation under the Act should be on site to relocate if native fauna is likely to be injured or harmed.

Table of Contents

1 Introduction

1.1 Purpose

Cardno Victoria Pty Ltd was engaged by RFT Building Consulting to undertake a Flora and Fauna Assessment for land located at Lot 1 PS725791, 35 Korumburra-Warragul Road, Korumburra (the study area). The purpose of the assessment was to support the Development Plan submission for the proposed subdivision of the study area.

The assessment consisted of a desktop and field component to ascertain the presence or likely presence of biodiversity values listed under the following environmental legislation and policy:

- Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
- Victorian *Flora and Fauna Guarantee Act 1988*
- Victorian *Environment Effects Act 1978*
- Victorian *Planning and Environment Act 1987,* including:
    - South Gippsland Shire Planning Scheme
    - *Guidelines for the removal, destruction or lopping of native vegetation* (DELWP 2017)
- Victorian *Catchment and Land Protection Act 1994*
- Victorian *Wildlife Act 1975.*

Results of the assessment are presented within the context of this legislation and policies.

1.2 Project description

RFT Building Consulting are proposing to subdivide the study area into approximately 31 lots (see plan over page).

1.3 Study area description

The study area is located on the western outskirts of Korumburra and approximately 100 kilometres south-east of the Melbourne CBD. It is 3.8 hectares (ha), zoned General Residential (GRZ) and currently used for cattle grazing.

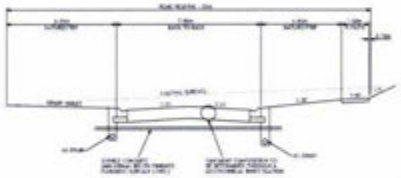
The study area has a steep, south-facing slope. There are no water-bodies within the study area. Two unnamed creek-lines running in a north-south direction, and two farm dams, are located in the paddock immediately west of the study area.

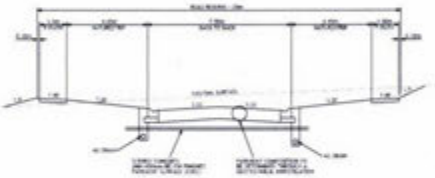
The southern boundary of the study area is adjoined by vacant rail land managed by VicTrack.

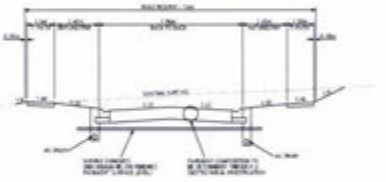
The study area falls within the jurisdiction of the West Gippsland Catchment Management Authority and South Gippsland Shire. It is also located in the Strzelecki Ranges bioregion.

SERVICE OFFSET TABLE

ROAD	TELSTRA/NBN DUCTS	WATER	NATURAL GAS	POWER	SEWER	STORMWATER
ROAD 1						
ROAD 2						n.a.







TYPICAL SECTIONS

LAYOUT PLAN

NOTES:

1. ALL WORKS SHALL CONFORM TO IDM STANDARD SPECIFICATION
2. ALL DIMENSIONS ARE IN METRES
3. LEVELS ARE TO A.H.D. AND TAKEN FROM LEVEL AND REFERENCED TO HORIZONTAL CO-ORDINATE SYSTEM TO BE USED IS GDA 94 ON MGA 94 ZONE 55
4. EXISTING SURFACE LEVEL SHOWN 65.77
5. STREET SIGNS SHOWN
6. ALL CHAINAGES SHOWN ARE CENTRELINE CHAINAGES UNLESS OTHERWISE NOTED. PITS SHALL BE LOCATED FROM OFFSETS SHOWN ON PLANS.
7. TELSTRA, ELECTRICITY AND WATER CONDUIT(S) CAPPED AT EACH END ARE SHOWN
8. ALL EASEMENTS ARE FOR DRAINAGE AND SEWERAGE PURPOSES UNLESS OTHERWISE NOTED
9. ALL CONSTRUCTION MUST BE CONTAINED WITHIN THEIR RELEVANT RESERVE OR EASEMENT
10. PROPOSED DRAINAGE SHOWN
11. EXISTING DRAINAGE SHOWN
12. HOUSE DRAIN
13. CLASS 3 BACKFILL TO BE USED IN SERVICE TRENCHES UNDER FOOTPATHS AND VEHICULAR CROSSINGS
14. PROPOSED SEWER SHOWN
15. EXISTING SEWER SHOWN
16. THE CONTRACTOR SHOULD NOTE THE EXISTENCE OF TELECOM, GAS, POWER, WATER AND ANY OTHER SERVICES IN THE AREA PRIOR TO TENDERING. ANY DISTURBANCE TO EXISTING SERVICES, FOOTPATHS ETC. SHALL BE RECTIFIED AT THE CONTRACTORS EXPENSE.
17. ALL NATURE STRIPS AND BATTERS SHALL BE COVERED WITH 150mm MIN. DEPTH TOPSOIL AND SEEDED WITH AN APPROVED SEED AND FERTILIZER MIXTURE.
18. AT COMPLETION, THE WHOLE SITE SHALL BE CLEANED UP, GRADED OVER AND ALL RUBBISH REMOVED, AND THE SITE LEFT IN A CLEAN AND TIDY CONDITION TO THE SATISFACTION OF THE SUPERVISING ENGINEER.
19. EXTENT OF CUT AND FILL IS SHOWN AS
20. SERVICE CROSSING LOCATIONS TO BE MARKED ON KERB FOR WATER, POWER AND TELSTRA CONDUITS AND HOUSE DRAINS FOR EACH PROPERTY.
21. HOLD POINTS FOR CONSTRUCTION ARE AS FOLLOWS: 24 HOURS NOTICE IS REQUIRED FOR INSPECTIONS AT HOLD POINTS
    - INSPECTION PRIOR TO COMMENCEMENT OF WORKS;
    - INSPECTION OF SUBGRADE;
    - INSPECTION DURING DRAINAGE WORKS;
    - INSPECTION OF SUBSOIL DRAINAGE;
    - INSPECTION OF KERB AND CHANNEL BEDDING AND LAYING;
    - INSPECTION AND TESTING OF EACH PAVEMENT LAYER PRIOR TO PLACING ANY SUBSEQUENT PAVEMENT LAYER;
    - INSPECTION PRIOR TO SEALING AND ASPHALT WORKS.
22. WATER AND GAS CONDUITS ARE TO EXTEND 1m INSIDE THE PROPERTY BOUNDARY
23. BACKFILL FOR ROAD CROSSINGS AND UNDER DRIVEWAY CROSSINGS SHALL BE 20mm CLASS 2 CRUSHED ROCK COMPACTED IN 150mm DEEP LAYERS TO 95% OF AS1289.5.2.1
24. TREATMENT OF 'SOFT' SPOTS SHALL BE DIRECTED BY BROSNAN ENGINEERING SOLUTIONS. NO SUBGRADE REPLACEMENT WORKS TO BE UNDERTAKEN WITHOUT PRIOR CONSENT FROM BROSNAN ENGINEERING SOLUTIONS.
25. COUNCIL'S SURVEILLANCE OFFICER IS TO BE CONTACTED 0H WHEN ARRANGING INSPECTIONS.
26. NO TOPSOIL, SILT OR CLAYEY SILT IS TO BE TAKEN OFF SITE
27. PRAM CROSSINGS ARE TO BE USED AT ALL MODIFIED SAG KERB AND CHANNEL LOCATIONS
28. BEFORE COMMENCING WORK ON TRENCHES IN EXCESS OF 1.5 METRES IN DEPTH, NOTICE OF SUCH PROPOSAL IS TO BE SENT TO THE PRINCIPAL MINING INSPECTOR, VICTORIAN WORKCOVER AUTHORITY IN ACCORDANCE WITH THE MINES ACT 1958 AND OHSG ACT 1985. A FOREMAN, QUALIFIED AS A NOMINATED PERMITTED MINES MANAGER, MUST BE IN ATTENDANCE AT ALL TIMES DURING SUCH EXCAVATION.
29. ALL LINE MARKING AND SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH AS1742-1 AND AS1742-2, UNLESS SHOWN OTHERWISE. ALL TEMPORARY WARNING SIGNS USED DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH AS1742-3.
30. TACTILE GROUND SURFACE INDICATORS (TGSI) ARE TO BE VICROADS APPROVED
31. COMPACTION TEST RESULTS ON SUBGRADE, SUBBASE & BASE TO BE PROVIDED TO BROSNAN ENGINEERING SOLUTIONS AND SOUTH GIPPSLAND SHIRE COUNCIL PRIOR TO CONSTRUCTION OF SUBSEQUENT LAYERS.
32. CONCRETE GRADE TO BE USED FOR CONSTRUCTION OF PITS TO BE 25MPa
33. ALL PIPES TO BE RUBBER RING JOINTED (RRJ) UNLESS OTHERWISE STATED

WARNING

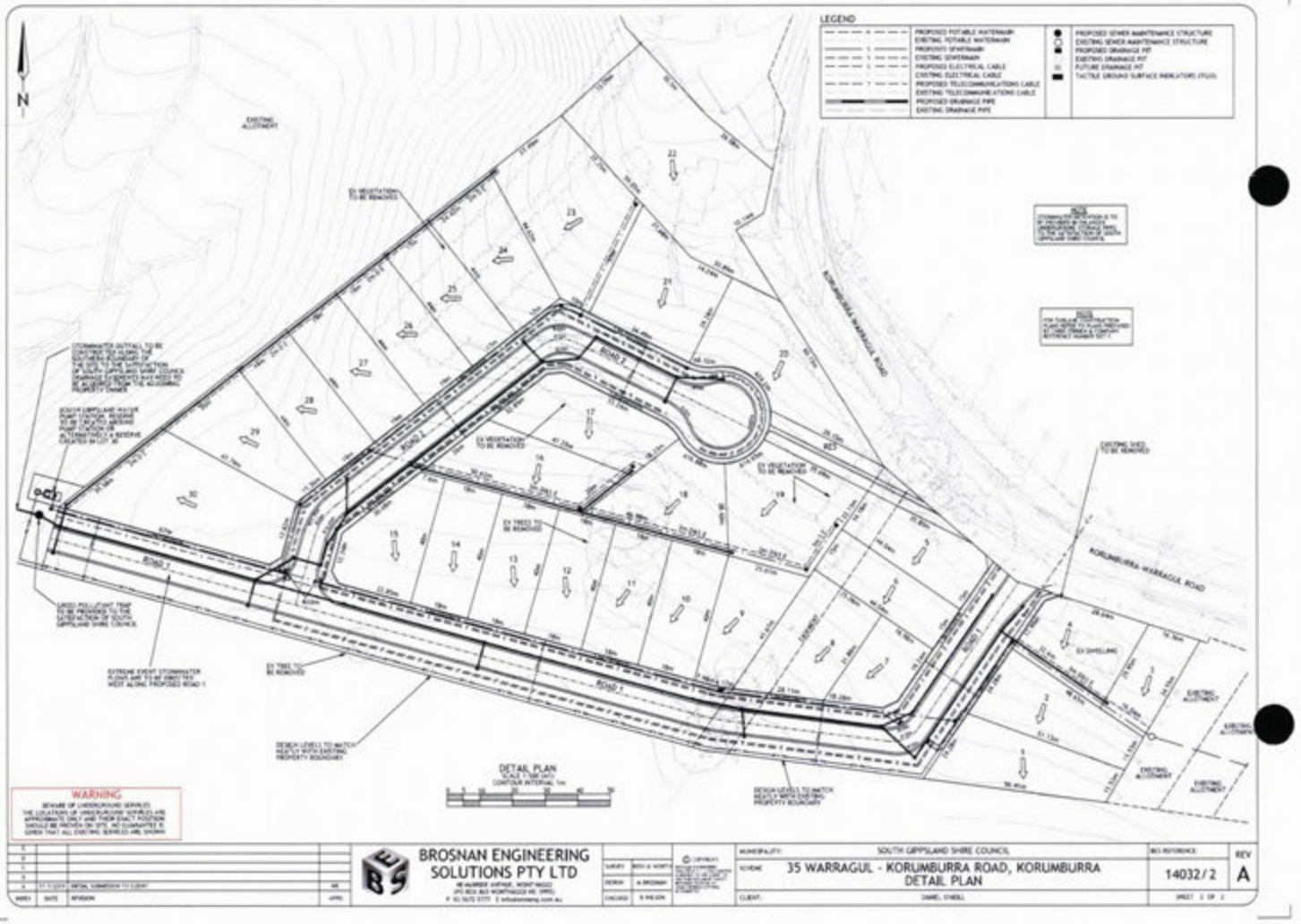
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN

NO.	DATE	REVISION	APP'D
A	17.11.2014	INITIAL SUBMISSION TO CLIENT	HB

BROSNAN ENGINEERING SOLUTIONS PTY LTD
46 HUBERT AVENUE, WONTHAGGI
(PO BOX 867) WONTHAGGI VIC. 3953
P: 03 5672 5777 E: info@brosnaneng.com.au

SURVEY	BOSS & WORTS
DESIGN	M. BROSNAN
CHECKED	R. WILSON

MUNICIPALITY:	SOUTH GIPPSLAND SHIRE COUNCIL
SCHEME:	35 WARRAGUL - KORUMBURRA ROAD, KORUMBURRA LAYOUT PLAN, TYPICAL SECTIONS & GENERAL NOTES
CLIENT:	DANIEL O'NEILL
BES REFERENCE:	14032/1
REV	A
SHEET	1 OF 2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PROPOSED POTABLE WATERMAIN
EXISTING POTABLE WATERMAIN
PROPOSED SEWERMAIN
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PROPOSED ELECTRICAL CABLE
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PROPOSED TELECOMMUNICATIONS CABLE
EXISTING TELECOMMUNICATIONS CABLE
PROPOSED DRAINAGE PIPE
EXISTING DRAINAGE PIPE
PROPOSED SEWER MAINTENANCE STRUCTURE
EXISTING SEWER MAINTENANCE STRUCTURE
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FUTURE DRAINAGE PIT
TACTILE GROUND SURFACE INDICATORS (TGSI)
N
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KORUMBURRA WARRAGUL ROAD
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ROAD 2
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EX DWELLING
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DETAIL PLAN
SCALE 1:500 (A1)
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WARNING
BROSNAN ENGINEERING SOLUTIONS PTY LTD
35 WARRAGUL - KORUMBURRA ROAD, KORUMBURRA
DETAIL PLAN
SOUTH GIPPSLAND SHIRE COUNCIL
14032/2
A

2 Methodology

2.1 Desktop Assessment

The following databases reviewed prior to fieldwork provided a high-level characterisation of the ecology of the area:

- Victorian Biodiversity Atlas (VBA), maintained by the Victorian Department of Environment, Land, Water and Planning (DELWP) for records of significant species within the study area or surrounding 10 km radius
- EPBC Act Protected Matters Search Tool (PMST), maintained by the Commonwealth Department of the Environment and Energy (DoEE), for Matters of National Environmental Significance (MNES) listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), that occur or are likely to occur within the study area or surrounding 10 km radius
- Nature Kit and Native Vegetation Information Management (NVIM) tools maintained by DELWP, for the predicted type and condition of Ecological Vegetation Classes (EVCs) currently present within the study area (EVC 2005), and prior to European Settlement (EVC 1750)
- Current Wetland layer, maintained by DELWP, for the presence of listed wetlands within or in close proximity to the study area
- Flora of Victoria online tool, maintained by the Royal Botanic Gardens of Victoria
- Groundwater Dependent Ecosystems (GDE) Atlas maintained by the Commonwealth Bureau of Meteorology, for the predicted occurrence of aquatic, terrestrial and sub-terrestrial GDEs within the study area
- Publicly available aerial imagery.

2.2 Field Assessment

Native vegetation within the study area was assessed by a botanist on 22 February 2019.

Native vegetation is defined under the Victoria Planning Provisions as 'plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses'. The Guidelines further classify native vegetation as either a patch or a scattered tree, with definitions provided below (Table 2-1).

All areas of native vegetation within the study area were mapped using GIS software (accuracy < 5 metres).

Native vegetation quality was assessed in accordance with the habitat hectares method as described in the Vegetation Quality Assessment manual (DSE 2004). As part of the habitat hectares assessment, each patch of native vegetation was assigned to an Ecological Vegetation Class (EVC) and assessed against the relevant benchmark conditions for that EVC.

Table 2-1 Classification of native vegetation under the Guidelines (DELWP 2017)

Native Vegetation	Definition
Patch	• An area of native vegetation where at least 25 per cent of the total perennial understorey plant cover is native, or • Any area with three or more native canopy trees[1] where the drip line of each tree touches the drip line of at least one other tree, forming a continuous canopy, or • Any mapped wetland included in the Current wetlands map, available in DELWP systems and tools.
Scattered Tree	• A native canopy tree that does not form part of a patch.

[1] A native canopy tree is a mature tree greater than 3 metres and typically found in the upper lay of the relevant vegetation type.

2.3 Assumptions and Limitations

The spatial accuracy of spatial data is accurate to less than 5 metres and is not suitable for detailed design purposes.

Targeted surveys of threatened flora and fauna were not completed.

3 Results

3.1 Field Assessment

3.1.1 Site Overview

The study area is heavily degraded and is dominated by exotic pasture grasses and weeds (Figure 3-1). According to the existing, long-term land-owner, the study area has been subjected to frequent cultivation with the western section recently sewn with Rye Grass *Lolium* spp. Cattle grazing still occurs over much of the study area.

No native vegetation was recorded in the study area.

Figure 3-1 Looking west from eastern boundary of the study area

3.1.2 Native vegetation

3.1.2.1 *Patch*

No Patches of native vegetation were recorded in the study area. Patches of Damp Forest (EVC 29) are modelled by DELWP to occur in the study area, but none were recorded (Figure 3-2).

3.1.2.2 *Scattered Trees*

There are no scattered trees within study area.

3.1.2.3 *Current Wetlands*

There are no Current Wetlands within the study area. The nearest Current Wetland down stream of the study area is two kilometres to the south.

Figure 3-2 Modelled EVCs

3.1.3 Non-native vegetation

The study area is dominated by exotic grasses and weeds. Species recorded are typical of cultivated and grazed paddocks in the bioregion and include Rye Grass, Sweet Vernal *Anthoxanthum odoratum,* Cocksfoot *Dactylis glomerata,* Brown Bent-grass *Agrostis capillaris,* Ribwort *Plantago lanceolata,* Clover *Trifolium* spp, Catsear *Hypochoeris radicata,* Curly Dock *Rumex crispus* and Capeweed *Arctotheca calendula* (Figure 3-3).

Blackberry *Rubus fruticosus* spp. agg. occurs in low-lying areas and creek-lines and is listed as a declared noxious weed under the Victorian *Catchment and Land Protection Act 1994* (CaLP Act).

Two exotic tree species, Radiata Pine *Pinus radiata* and Monterey Cypress *Cupressus macrocarpa* are present as isolated clumps and are likely to have escaped from nearby windrows located within the northern boundary of the study area.

Figure 3-3 Exotic pasture grasses and windrows of Monterey Cypress

3.1.4 Fauna habitat

The study area consists of large areas of open grassland that is heavily disturbed and contains potential foraging habitat for common native marsupials, reptiles and bird of prey.

There are no water-bodies within the study area. Two unnamed creek-lines and two human-constructed dams are located in the paddock immediately east of the study area. Both the creek-lines and dams are heavily degraded, support limited or no native vegetation and provided limited habitat for native fauna (Figure 3-4). The banks of the creek-line may provide potential habitat for the EPBC Act-listed Giant Gippsland Earthworm *Megascolides australis* (see Section 3.2 for further discussion).

Figure 3-4 Creek-line immediately west of study area

3.2 Likelihood of Occurrence

3.2.1 Threatened Flora

The study area is unlikely to support threatened flora. There is only marginal habitat for native vegetation which is unlikely to be suitable for threatened flora. There were also only two VBA records for threatened flora within a ten-kilometre radius of the study area (Filmy Maidenhair *Adiantum diaphanum* and Strzelecki Gum *Eucalyptus strzeleckii*) (Figure 3-5). Of the eight EPBC Act-listed species identified by the PMST (Appendix A), only Strzelecki Gum had previously been recorded within a ten-kilometre radius of the study area.

3.2.2 Threatened Fauna

The study area is unlikely to support threatened fauna. Given the extensive modifications to the study area as a result of historical agricultural practices, there are no significant areas of woodland, shrubland or grassland habitat that is associated with the species identified via the VBA search.

Threatened species recorded within a ten-kilometre radius of the study area include the nationally-significant Giant Gippsland Earthworm and Macquarie Perch *Macquaria australasica*. Macquarie Perch has been recorded upstream of the study area but has not been recorded for several decades and unlikely to persist locally. State-significant Blue-billed Duck *Oxyura australis* and Hardhead *Aythya australis* may use utilise the study area opportunistically to forage in pasture areas when damp, but are unlikely to depend on the study area for significant habitat.

The PMST identified 16 EPBC Act-listed fauna species; however, only Giant Gippsland Earthworm had previously been recorded within a ten-kilometre radius of the study area.

The nationally Vulnerable Giant Gippsland Earthworm has previously been recorded within the paddock to west of the study area, but is unlikely to occur in the study area due to lack of suitable habitat. See below for further discussion.

3.2.2.1 *Giant Gippsland Earthworm*

There are VBA records for Giant Gippsland Earthworm approximately 500 metres west of the study area, within one of the two creek-lines in the adjoining paddock. There are no records in the creek-line closest to the study area, situated approximately 100 metres west of the study area boundary. The VBA records for Giant Gippsland Earthworm were collected by Dr Beverley van Praagh in 2010. Giant Gippsland Earthworm is generally found in the Western Strzelecki Ranges along creek banks, adjacent to soaks and on wet south-facing hillslopes (Van Praagh and Yen 2010). Where the species occurs on steep hill-slopes the topography

is defined by teracettes extending at right angles to the direct of slope. Where the species occurs along creek banks, it can be found up to 40 metres from the creek bank but generally no greater than 5 – 10 metres. The average depth below ground the species is found is 0.5 metres, typically above dairy pastures and the presence of native vegetation is not a reliable prediction of species' presence. Indeed, most of the sites where the species has been found are dominated by exotic pasture grasses.

The three main threats to Giant Gippsland Earthworm habitat are recognised as:

- Alteration to water table or drainage patterns (e.g. flooding, dam building)
- Destruction of soil habitat (e.g. cultivation, pugging by cattle and urbanisation)
- Chemical soil disturbances (e.g. fungicides, weedicides, insecticides and fertilizers) (Van Praagh and Yen 2010).

The study area supports certain habitat features associated with Giant Gippsland Earthworm, such as south-facing slopes, clay soils and open pasture grasses. However, given the extensive nature of disturbance across the study area due to cultivation, dam construction, pugging by cattle and regular application of fertilizers, herbicides etc. the study area is unlikely to be suitable habitat Giant Gippsland Earthworm.

Suitable habitat for the species occurs along the two creek-lines in the paddock to the west. The species could potentially persist within 40 metres of these creek-lines, but most likely with 5 – 10 metres of the creek lines, particularly the creek-line furthest away.

3.2.3 Threatened Ecological Communities

The study area does not support any threatened ecological communities. No EPBC Act or FFG Act-listed ecological communities were identified during the field assessment, and no EPBC Act-listed ecological communities were raised by the PMST (Appendix A).

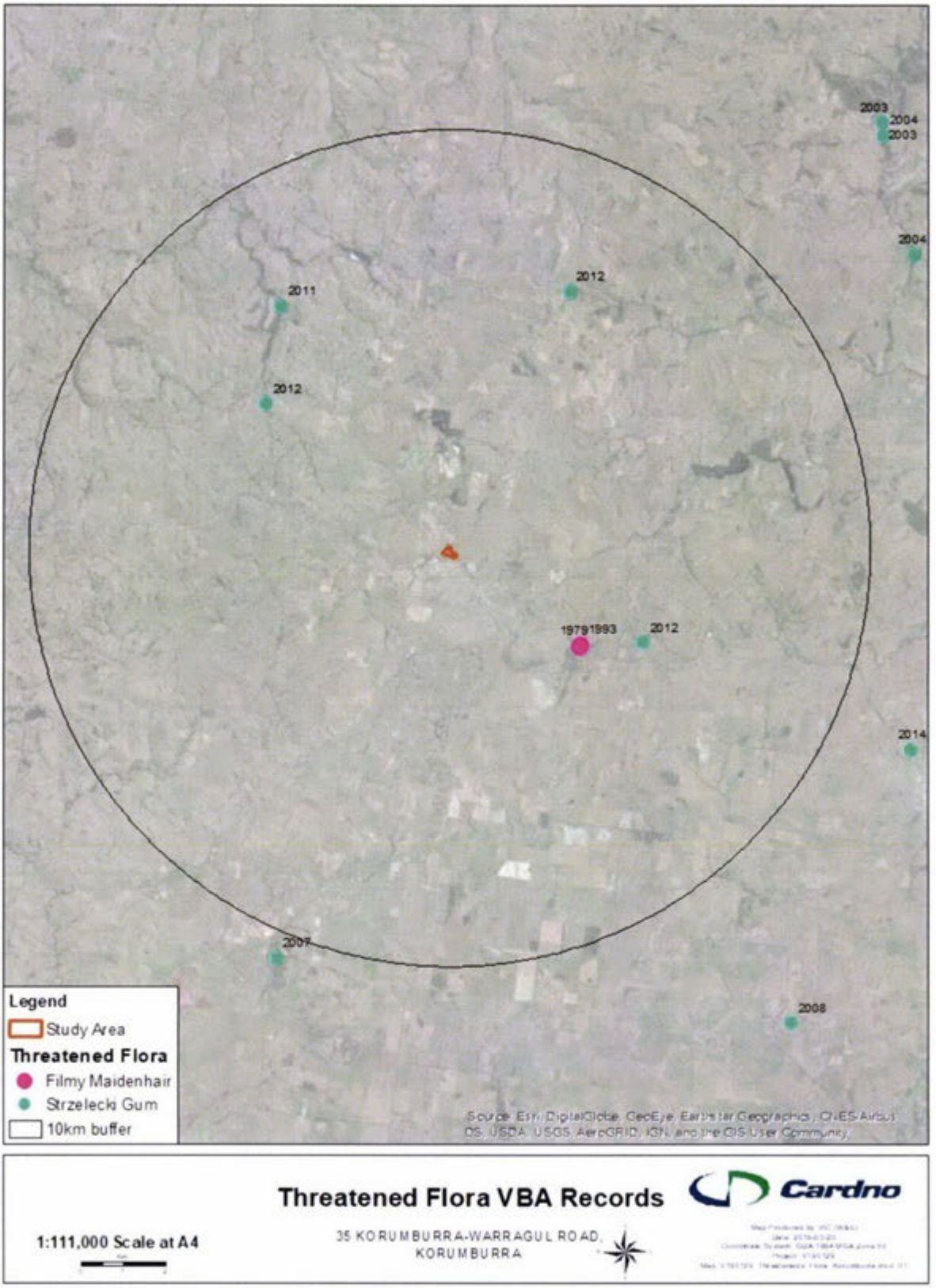

Figure 3-5 VBA Results – Threatened Flora

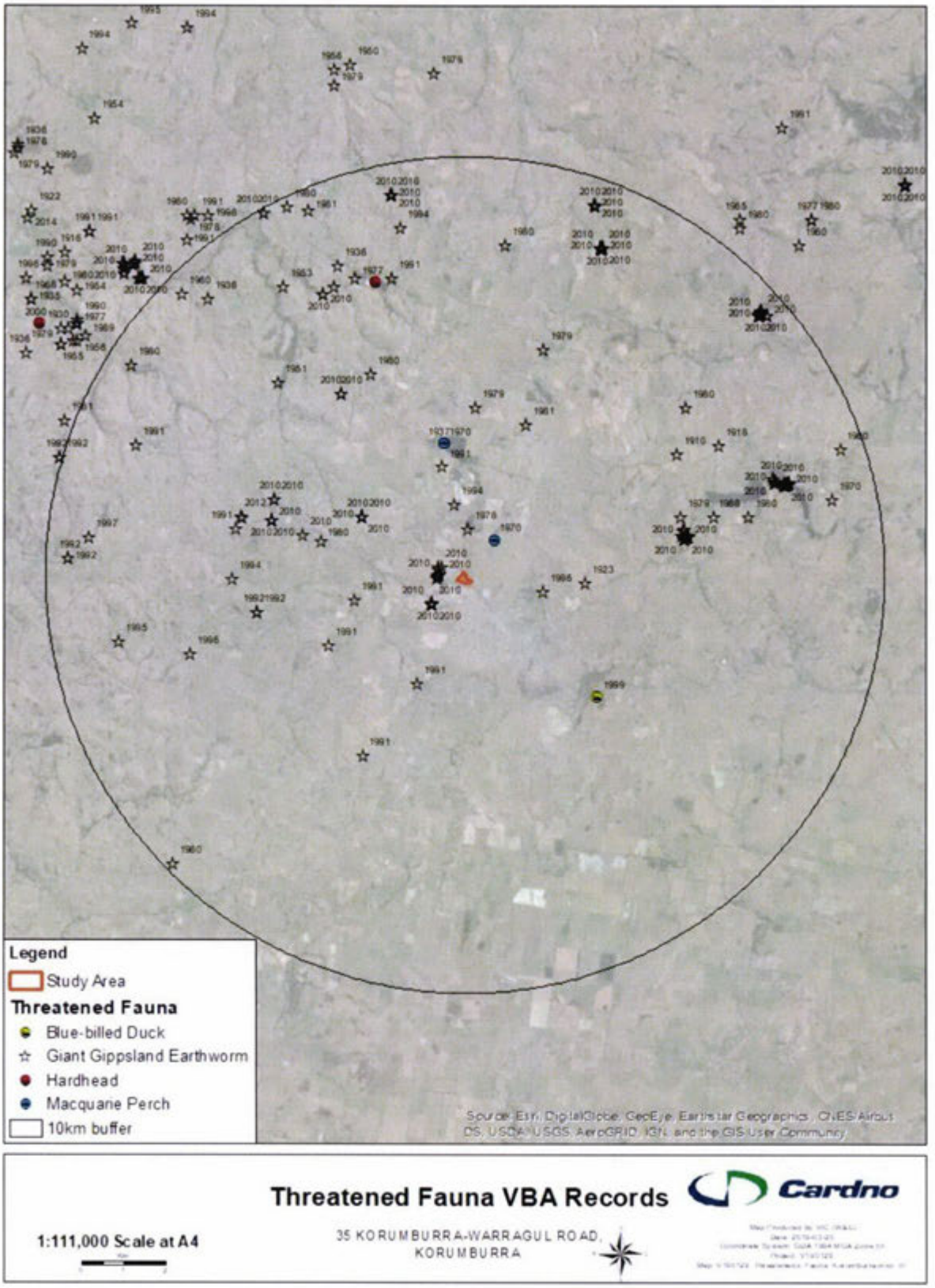

Figure 3-6 VBA Results – Threatened Fauna

4 Legislative implications

4.1 Commonwealth

4.1.1 Environment Protection and Biodiversity Conservation Act 1999

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places — defined in the EPBC Act as Matters of National Environmental Significance. There are nine MNES:

- World heritage properties
- National heritage places
- Wetlands of international importance (Ramsar sites)
- Nationally threatened species and ecological communities
- Migratory species
- Commonwealth marine areas
- The Great Barrier Reef Marine Park
- Nuclear actions (including uranium mining)
- A water resource, in relation to coal seam gas development and large coal mining development.

Any action that is likely to have a significant impact on MNES should be referred to the Commonwealth Minister for the Environment, under Part 9 of the Act. The Minister or delegate will assess the action as either:

- Not controlled action
- Not controlled action in a particular manner
- Controlled action.

4.1.1.1 *Implications*

The study area is unlikely to support any MNES and therefore an EPBC Act-referral is not recommended. The paddock to the west is likely to support the listed-species Giant Gippsland Earthworm. Impacts to the species are unlikely given the closest area of suitable habitat is 100 metres away (and therefore direct disturbance is unlikely). Any stormwater discharge into the creek in the adjoining paddock is unlikely to impact Giant Gippsland Earthworm habitat, as it is expected the Catchment Management Authority would condition the project on maintaining existing flow rates in the creek.

4.2 Victoria

4.2.1 *Flora and Fauna Guarantee Act 1988*

The *Flora and Fauna Guarantee Act 1988* (FFG Act) is the key piece of Victorian legislation for the conservation of threatened species and communities and for the management of potentially threatening processes. Under the FFG Act it is a requirement to attain a permit to 'take' protected flora species from public land. Impacts on private land to FFG Act-listed species and communities are also considered part of the EES process.

4.2.1.1 *Implications*

The study area is unlikely to support any listed threatened flora or threatened ecological communities. As the study area is located on private land, an FFG Act permit is not required to remove listed or protected species or listed ecological communities.

4.2.2 Environment Effects Act 1978

The *Environment Effects Act 1978* provides for assessment of projects that are capable of having a significant effect on the environment. The Minister responsible for administration of the Act makes a decision that an Environment Effects Statement (EES) should be prepared when:

- There is a likelihood of regionally or State significance adverse effects on the environment
- There is a need for integrated assessment of potential environmental effects (including economic and social effects) of a project and relevant alternatives
- Normal statutory processes would not provide a sufficiently comprehensive, integrated and transparent assessment.

A project should be referred to the Minster to determine whether an EES required, if a project that is likely to have adverse environmental effects (individually or in combination) could be significant in a regional or State context. The criteria for referral for individual potential environmental effects, and a combination of potential environmental effects, is listed below in **Table 4-1**.

Table 4-1 EES referral criteria (DSE 2006). Criteria in bold are applicable to the scope of this study.

Referral criteria: individual potential environmental effects	Referral criteria: a combination of potential environmental effects
Individual types of potential effects on the environment that might be of regional or State significance, and therefore warrant referral of a project, are:	*A combination of two or more of the following types of potential effects on the environment that might be of regional or State significance, and therefore warrant referral of a project, are:*
> **Potential clearing of 10 ha or more of native vegetation from an area that:** o **Is of an Ecological Vegetation Class identified as endangered by the Department of Sustainability of Environment (in accordance with Appendix 2 of the Victoria's Native Vegetation Management Framework); or** o **Is, or is likely to be, of very high conservation significant (as defined in accordance with Appendix 3 of Victoria's Native Vegetation Management Framework); and** o **Is not authorized under an approved Forest Management Plan or Fire Protection Plan** > **Potential long-term loss of a significant proportion (e.g. 1 to 5 percent depending on the conservation status of the species) of known remaining habitat or population of a threatened species within Victoria** > **Potential long-term change to the ecological character of a wetland listed under the Ramsar Convention or in 'A Directory of Important Wetlands in Australia'** > **Potential extensive or major effects on the health of biodiversity of aquatic, estuarine or marine ecosystems, over the long term** > Potential extensive or major effects on the health, safety or well-being of a human community, due to emissions to air or water or chemical hazards or displacement of residences > Potential greenhouse gas emissions exceeding 200,000 tonnes of carbon dioxide equivalent per annum, directly attributable to the operation of the facility.	> **Potential clearing of 10 ha or more of native vegetation, unless authorized under an approved Forest Management Plan or Fire Protection Plan** > **Matters listed under the *Flora and Fauna Guarantee Act 1988:*** o **Potential loss of a significant area of a listed ecological community; or** o **Potential loss of a genetically important population of an endangered or threatened species (listed or nominated for listing), including as a result of loss or fragmentation of habitats; or** o **Potential loss of critical habitat; or** o **Potential significant effects on habitat values of a wetland supporting migratory bird species.** > **Potential extensive or major effects on landscape values of regional importance, especially where recognized by a planning scheme overlay or within or adjoining land reserved under the *National Parks Act 1975*** > Potential extensive or major effects on land stability, acid sulphate soils or highly erodible soils over the short or long term > Potential extensive or major effects on beneficial uses of waterbodies over the long term due to changes in water quality, streamflows or regional groundwater levels > Potential extensive or major effects on social or economic well-being due to direct or indirect displacement of non-residential land use activities > Potential for extensive displacement of residences or severance of residential access to community resources due to infrastructure development > Potential significant effects on the amenity of a substantial number of residents, due to extensive or major, long-term changes in visual, noise and traffic conditions > Potential exposure of a human community to severe or chronic health or safety hazards over the short or long term, due to emissions to air or water or noise or chemical hazards or associated transport

Referral criteria: individual potential environmental effects	Referral criteria: a combination of potential environmental effects
	> Potential extensive or major effects on Aboriginal cultural heritage > Potential extensive or major effects on cultural heritage places listed on the Heritage Register or the Archaeological Inventory under the *Heritage Act 1995*.

4.2.2.2 *Implications*

An EES referral is not recommended based on potential impacts to biodiversity. Native vegetation is not present within the study area, and there are unlikely to be any impacts to threatened species. Non-biodiversity related triggers for an EES referral have not been considered as part of this assessment.

4.2.3 *Planning and Environment Act 1987*

4.2.3.1 *Guidelines for the removal, destruction or lopping of native vegetation 'the Guidelines' (DELWP 2017)*

In accordance with Clause 52.17 of the Victorian Planning Provisions (VPP), removal of native vegetation is to be assessed in accordance with 'the Guidelines' (DELWP 2017). The objective of the Guidelines is to ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation. This is achieved by applying the following three step approach:

1. Avoid the removal, destruction or lopping of native vegetation.
2. Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.
3. Provide an offset to compensate for the biodiversity impact if a permit is granted to remove, destroy or lop native vegetation.

The Guidelines set out the policy for the assessment of impacts from removing vegetation on biodiversity and other values, and how offsets are calculated and established to compensate for the loss in biodiversity value from the removal of native vegetation.

Applications to remove native vegetation are assessed under one of three pathways depending on the extent and location of native vegetation to be removed, and the number of large trees (DELWP 2017). Extent of native vegetation is less than 0.5 hectares and is located in Location 1. In accordance with Table 4-2, removal of the patch of Tall Marsh would be assessed under the Basic Pathway.

Table 4-2 Determining the assessment pathway (DELWP 2017)

Extent of native vegetation	Location Category		
	Location 1	**Location 2**	**Location 3**
Less than 0.5 hectares and not including any large trees	Basic	Intermediate	Detailed
Less than 0.5 hectares and including one or more large trees	Intermediate	Intermediate	Detailed
0.5 hectares or more	Detailed	Detailed	Detailed

4.2.3.2 *Victoria Planning Provisions*

Three environmental and landscape planning overlays impact on the study area which are discussed further below in Table 4-3.

Table 4-3 Summary of environmental and landscape planning overlays relevant to the study area.

ESO	Environmental objectives	Decision guidelines
Environmental Significance Overlay – Schedule 2	Protect and maintain water quality and quantity Ensure land development activity and land management practices are consistent with environmental values Minimise impact of residential development Encourage retention of native vegetation and establishment of new vegetation cover particularly within 30 metres of a waterway Consider the cumulative impact of use and development on Special Water Supply Catchments of an extended period of time Minimise impact of development in townships without reticulated sewerage Ensure new development proposals meet best practice guidelines to reduce nutrient, pathogenic and sediment flows Protect public health from risk of waterborne diseases	Likely impact of proposed development on water quality and quantity Potential cumulative impact of development on quality and quantity of water Whether new development proposals will lead to an increase in amount of nutrients, pathogens or other pollutants reaching streams, surface water bodies and groundwater Whether subdivision and intensive farming activities in water supply catchments, especially in the lower areas of water supply catchments near takeoff points are appropriate Any relevant catchment management plan, policy, strategy or Ministerial Decision
Environmental Significance Overlay – Schedule 5	To protect areas prone to erosion by minimising land disturbance and vegetation loss. To prevent increased surface runoff or concentration of surface water runoff leading to erosion or siltation of watercourses	Purpose of overlay Relevant publications: - Environmental Guidelines for Major Construction Sites (EPA 1996) - Construction Techniques for Sediment Pollution Control (EPA 1991 - Control of Erosion on Construction Sites (Soil Conservation Authority) - Your Dam, an Asset or a Liability (DCNR) Proposed minimisation measures Need for engineering works or vegetation to stabilise Is the land capable of providing a building envelope Proposed buildings or works are likely to cause erosion Proposed access and servicing of site is likely to cause erosion or landslip Land Capability Report prepared by DELWP Views of DELWP

4.2.3.3 *Implications*

There is not native vegetation within the study area therefore a permit in accordance with Clause 52.17 of the South Gippsland Shire Planning Scheme is not required.

A planning permit may be required in response to the Environmental Significance Overlays affecting the study area.

4.2.4 *Catchment and Land Protection Act 1994*

The *Catchment and Land Protection Act 1994*, sets up a framework for the integrated management and protection of land, soil and water resources across catchments. It encourages community participation in the management of land and water resources. It is the main legislation in Victoria for the management of noxious

weeds and pest animals and has the objective of protecting primary production, Crown land, the environment and community health from the effects of noxious weeds and pest animals.

Under the Act, land owners have legal obligations regarding the management of declared noxious weeds and pest animals on their land.

4.2.4.1 *Implications*

One declared noxious weed was recorded in the study area, Blackberry. There is also likely to be declared noxious pests utilising the study area (e.g. Cats, Rabbits and Foxes). The landowner/manager has a responsibility under the Act to ensure activities on site do not increase the extent of declared noxious weeds and pest animals within the study area or off site, and where possible the extent of declared species is contained.

4.2.5 *Wildlife Act 1975* and *Wildlife Regulations 2013*

Under the *Wildlife Act 1975*, all native wildlife is protected in Victoria. It is an offence to kill, take, control or harm wildlife under the Act. Anyone wishing to control or handle wildlife must have appropriate authorisation by DELWP.

4.2.5.1 Implications

There is suitable habitat within the study area to support native fauna in the form of large planted windrows of exotic trees (e.g. possums, ravens). A zoologist with Management Authorisation under the Act may need to be on site to assist with fauna relocation if there is potential for harm to native animals.

5 Conclusion and Recommendations

The study area is highly degraded and supports limited biodiversity values. It does not support any native vegetation and is dominated by exotic pasture grasses and weeds. Habitat for native fauna is marginal and it is unlikely that threatened species are present.

Two creek-lines located 100 and 500 metres to the west of the study area are potential habitat for the nationally-significant Giant Gippsland Earthworm. Indirect impacts to the species are unlikely given that stormwater discharge into the creek is expected to maintain existing flows.

Based on the findings of this Flora and Fauna Assessment, the following recommendations are made (Table 5-1).

Table 5-1 Summary of findings and recommendations

Legislation	Implications
Environment Protection and Biodiversity Conservation Act 1999	Matters of National Environmental Significance unlikely to be present or impacted. Referral not required.
Flora and Fauna Guarantee Act 1988	Unlikely to support FFG Act-listed species or communities. Permit not required.
Environment Effects Act 1978	Project is unlikely to trigger an EES referral based on biodiversity values present. Consideration must be given to non-biodiversity triggers for an EES referral.
Planning and Environment Act 1987	A permit is not required to remove native vegetation as none is present. A permit application may be required in response to ESO2 and ESO5 if no exemptions apply.
Catchment and Land Protection Act 1994	Declared noxious weeds (Blackberry) and pests present or likely to be present on site. Any works should be carried out to avoid spread or introducing declared pests and weeds.
Wildlife Act 1975	Removal of planted windrows could potentially impact on native fauna (e.g. possums, ravens). A zoologist with Management Authorisation under the Act should be on site if native fauna are at risk of harm.

6 References

DELWP 2017. Guidelines for the removal, destruction or lopping of native vegetation. Victorian Department of Environment, Land, Water and Planning. Victorian Government, East Melbourne.

DSE 2004. Vegetation Quality Assessment manual. Victorian Department of Sustainability and Environment. Victorian Government, East Melbourne

DOE 2013. Matters of National Environmental Significance. Significant impact guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999. Commonwealth Department of the Environment, Canberra.

Van Praagh B and Yen A 2010. National Recovery Plan for the Giant Gippsland Earthworm *Megascolides australis.* Department of Sustainability and Environment, East Melbourne.

APPENDIX

A

PMST

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

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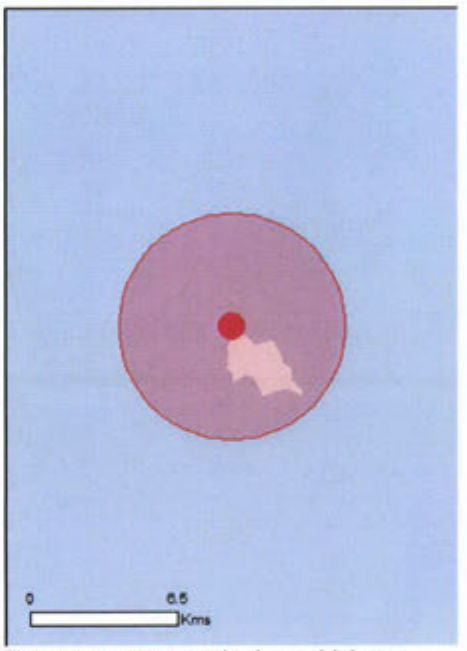

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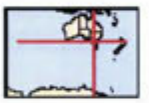

Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	24
Listed Migratory Species:	14

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	1
Commonwealth Heritage Places:	None
Listed Marine Species:	20
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	1
Regional Forest Agreements:	1
Invasive Species:	29
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)	[Resource Information]
Name	Proximity
Western port	10 - 20km upstream

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Anthochaera phrygia		
Regent Honeyeater [82338]	Critically Endangered	Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Lathamus discolor		
Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Rostratula australis		
Australian Painted-snipe, Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Fish		
Galaxiella pusilla		
Eastern Dwarf Galaxias, Dwarf Galaxias [56790]	Vulnerable	Species or species habitat likely to occur within area
Prototroctes maraena		
Australian Grayling [26179]	Vulnerable	Species or species habitat may occur within area
Frogs		
Litoria raniformis		
Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog [1828]	Vulnerable	Species or species habitat likely to occur within area
Mammals		
Dasyurus maculatus maculatus (SE mainland population)		
Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat may occur within area
Isoodon obesulus obesulus		
Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern) [68050]	Endangered	Species or species habitat likely to occur within area
Mastacomys fuscus mordicus		
Broad-toothed Rat (mainland), Tooarrana [87617]	Vulnerable	Species or species habitat likely to occur within area

Name	Status	Type of Presence
Petauroides volans Greater Glider [254]	Vulnerable	Species or species habitat may occur within area
Potorous tridactylus tridactylus Long-nosed Potoroo (SE mainland) [66645]	Vulnerable	Species or species habitat likely to occur within area
Pseudomys fumeus Smoky Mouse, Konoom [88]	Endangered	Species or species habitat likely to occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour may occur within area
Other		
Megascolides australis Giant Gippsland Earthworm [64420]	Vulnerable	Species or species habitat known to occur within area
Plants		
Amphibromus fluitans River Swamp Wallaby-grass, Floating Swamp Wallaby-grass [19215]	Vulnerable	Species or species habitat may occur within area
Caladenia tessellata Thick-lipped Spider-orchid, Daddy Long-legs [2119]	Vulnerable	Species or species habitat may occur within area
Eucalyptus strzeleckii Strzelecki Gum [55400]	Vulnerable	Species or species habitat likely to occur within area
Prasophyllum frenchii Maroon Leek-orchid, Slaty Leek-orchid, Stout Leek-orchid, French's Leek-orchid, Swamp Leek-orchid [9704]	Endangered	Species or species habitat likely to occur within area
Prasophyllum spicatum Dense Leek-orchid [55146]	Vulnerable	Species or species habitat may occur within area
Pterostylis chlorogramma Green-striped Greenhood [56510]	Vulnerable	Species or species habitat may occur within area
Pterostylis cucullata Leafy Greenhood [15459]	Vulnerable	Species or species habitat may occur within area
Xerochrysum palustre Swamp Everlasting, Swamp Paper Daisy [76215]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat likely to occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name
Defence - KORUMBURRA - VACANT LAND (Training Depot)

Listed Marine Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Ardea alba Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat likely to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat likely to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Extra Information

State and Territory Reserves [Resource Information]

Name	State
Coal Creek SS.R.	VIC

Regional Forest Agreements [Resource Information]

Note that all areas with completed RFAs have been included.

Name	State
Gippsland RFA	Victoria

Invasive Species [Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Alauda arvensis Skylark [656]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Carduelis chloris European Greenfinch [404]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Passer montanus Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur

Name	Status	Type of Presence within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Turdus philomelos Song Thrush [597]		Species or species habitat likely to occur within area
Mammals		
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Alternanthera philoxeroides Alligator Weed [11620]		Species or species habitat likely to occur within area
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Cytisus scoparius Broom, English Broom, Scotch Broom, Common Broom, Scottish Broom, Spanish Broom [5934]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species

Name	Status	Type of Presence
		habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Ulex europaeus Gorse, Furze [7693]		Species or species habitat likely to occur within area

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-38.42215 145.81123

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

Department of the Environment
GPO Box 787
Canberra ACT 2601 Australia
+61 2 6274 1111

Phillip Island
Planning Services

APPENDIX I – STAGE 1 PRELIMINARY SITE INVESTIGATION REPORT

Geoaquitards Environmental

ABN 80 683 110 579 *Specialists in Environmental Management*

STAGE 1 PRELIMINARY SITE INVESTIGATION REPORT

35 WARRAGUL ROAD

KORUMBURRA VIC 3950

PREPARED FOR BROSNAN ENGINEERING PTY LTD

PO BOX 865

WONTHAGGI VIC 3995

Report Date: 29 August 2019

Report Number: RM594-M

Prepared/Submitted by:

Emmanuel Ernest

Senior Environmental Scientist

MSc (Geol) BSc (Chem) Grad Dip (Env Mngt)

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164 Australia
Street Address: Suite 23, 160 South Gippsland Highway VIC 3164
T (+61) (3) 9554 3258 F (+61) (3) 9705 7948
e-mail: geoaquitards@iprimus.com.au

29 August 2019 Our Reference: RM594-M

Brosnan Engineering Pty Ltd
PO Box 865
WONTHAGGI VIC 3995

Attention: Matt Brosnan/Brian O'Neill

Dear Matt/Brian

RE: STAGE 1 PRELIMINARY SITE INVESTIGATION 35 WARRAGUL ROAD KORUMBURRA

Geoaquitards Environmental has conducted Stages 1 Preliminary Investigation for 35 Warragul Road Korumburra. This Assessment has been undertaken as part of your correspondence received on 15 July 2019. The report and associated attachments are presented in this document.

Please do not hesitate to contact the undersigned if you require further information.

Prepared / Submitted by

GEOAQUITARDS ENVIRONMENTAL

Emmanuel Ernest

Senior Environmental Scientist

MSc (Geol) BSc (Chem) Grad Dip (Env Mngt)

Geoaquitards Environmental ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164 Australia
Street Address: Suite 23, 160 South Gippsaland Highway VIC 3164
T (+61) (3) 9554 3258 F (+61) (3) 9705 7948
e-mail: geoaquitards@iprimus.com.au

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APPENDICES

No. Of copies	Report File Name	Report Status	Date	Prepared for	Initials
1	RM594-M	Final	29 August 2019	Brosnan Engineering Pty Ltd	EE

EXECUTIVE SUMMARY

This report details the findings of Stage 1 Preliminary Site Investigation conducted by Geoaquitards Environmental for 35 Warragul Road Korumburra (the site). Matt Brosnan from Brosnan Engineering Pty Ltd on behalf of the owner (Brian O'Neill) of the site commissioned the work, by email on 15 July 2019.

Primarily the project works involved a Stage 1 Preliminary Site Investigation (PSI), including desktop site history review, investigation of previous land uses, and a review of the potential for the introduction of contamination to soil through on-site sources.

Following environmental investigation works was required to be undertaken by a suitably qualified environmental professional to the satisfaction of the responsible authority.

Point 4.0 - Requirements for development plan (Land Contamination) of the Schedule 8 to Clause 43.04 Development Plan Overlay within the South Gippsland Planning Scheme is as follows:

- An investigation by an appropriately qualified person is required, which considers the potential location and forms of land contamination resulting from previous land uses, as well as measures to address contamination in areas where sensitive land uses are proposed. The investigation must consider but not be limited to, agricultural chemical use, informal land dumping, industrial & mining activities.
- This can initially take the form of a limited desktop study but further detailed investigation may be required should there be sufficient concern of a risk to sensitive uses of the land, as determined by the Responsible Authority.

Based on the above Matt Brosnan from Brosnan Engineering Pty Ltd on behalf of the owner (Brian O'Neill) engaged Geoaquitards Environmental to undertake Stage 1 Preliminary Site Investigation for the proposed subdivision of the land.

This Stage 1 Preliminary Site Investigation report provides findings of this investigation and further recommendation where necessary to meet above Environmental Requirements.

Stage 1 Preliminary Site Investigation

Following works were undertaken as a part stage 1 preliminary site investigation:

- A review of previous land uses, historical documents and site history;
- A review of site and surrounding geology and hydrogeology;
- Site inspections to observe the site and surrounds;
- Observe any aesthetic effects (such as staining of surface soil and odour);
- A review of the potential contamination to soil and groundwater through on-site and off-site sources; and
- A review of the potential for the introduction of contamination to soil through on-site sources.

Findings

A site history review, including a review of relevant historical aerial photography indicates that site may have been used for farming in the past and currently residential uses.

Title information indicates that approximately twenty different owners or group of owners owned either the land or part of the land from 1895 and the previous owners were generally Teacher, Butter Factory Employee, Agent, Grazier, Dealer, Meat Inspector and Farmers.

The summary of Aerial Photographs search indicates that the subject site appeared to contain two residential building since 1947 and may have been used for grazing or dairy farming activities since 1947. The structure of the main residential building appears to be changed and appears to be a new residential building from 1974. Immediate surrounding land uses were grazing, rural residential and some vacant lands since 1947 and commercial developments were seen to the south of the site since 1982. Residential developments were noticed to the immediate south-east of the site from 1974.

The summary of Google maps indicates that site contains two residential buildings and associated sheds at the site and all other areas appears to be vacant. Surrounding land uses are farming, rural residential, grazing activities and commercial. Residential developments are located to the south of the site significantly increased since 2010.

Geoaquitards Environmental considers that sources related to on site conditions and activities, revealed in the Stage 1 Preliminary Site Investigation have low potential for contamination. The matrix in Table 17 indicates the appropriate assessment level, based on proposed land use. And based on the above General duty under Section 12(2) (b) and Section 60(1) (a) (iii) of the Planning and Environment Act 1987 applies to the site.

In Summary site is considered suitable for the proposed use and does not require further site assessment or audit.

1 INTRODUCTION

This report details the findings of Stage 1 Preliminary Site Investigation conducted by Geoaquitards Environmental for 35 Warragul Road Korumburra (the site). Matt Brosnan from Brosnan Engineering Pty Ltd on behalf of the owner (Brian O'Neill) of the site commissioned the work, by email on 15 July 2019.

Primarily the project works involved a Stage 1 Preliminary Site Investigation (PSI), including desktop site history review, investigation of previous land uses, and a review of the potential for the introduction of contamination to soil through on-site sources.

2 ENVIRONMENTAL REQUIREMENTS

Environmental Requirement for the site as per the point 4.0 - Requirements for development plan (Land Contamination) of the Schedule 8 to Clause 43.04 Development Plan Overlay within the South Gippsland Planning Scheme is as follows:

- An investigation by an appropriately qualified person is required, which considers the potential location and forms of land contamination resulting from previous land uses, as well as measures to address contamination in areas where sensitive land uses are proposed. The investigation must consider but not be limited to, agricultural chemical use, informal land dumping, industrial & mining activities.
- This can initially take the form of a limited desktop study but further detailed investigation may be required should there be sufficient concern of a risk to sensitive uses of the land, as determined by the Responsible Authority.

This Stage 1 Preliminary Site Investigation report provides findings of this investigation and further recommendation where necessary to meet above Environmental Requirements.

3 OBJECTIVE AND WORK ELEMENTS

Objectives and work elements undertaken as part of this report is as follows:

3.1 Objective

The principal objective was to undertake the sufficient site investigation works and remediation works to determine the site suitability for the protected beneficial uses of the land as specified in the State Environment Protection Policy – Prevention and Management of Contamination of Land [SEPP (PMCL)] and to support the development of the land for the proposed multi-lot subdivision of land (residential subdivision with garden and accessible soil) and associated works.

3.2 Work Elements

The following work elements were undertaken as part of Stage 1 Preliminary Site Investigation.

3.2.1 Stage 1 Preliminary Site Investigation

Following works were undertaken as a part stage 1 preliminary site investigation:

- A review of previous land uses, historical documents and site history;
- A review of site and surrounding geology and hydrogeology;

- Site inspections to observe the site and surrounds;
- Observe any aesthetic effects (such as staining of surface soil and odour);
- A review of the potential contamination to soil and groundwater through on-site and off-site sources; and
- A review of the potential for the introduction of contamination to soil through on-site sources.

4 SITE DESCRIPTION

4.1 Site Information

The summary of site information is as follows:

TABLE 1 – SITE INFORMATION

Site Information	
Site Address	35 Warragul Road Korumburra 3950
Council Property Number	202693
Standard Parcel Identifier (SPI)	1\PS725791
Lot and Plan Number:	Lot 1 PS725791
Local government	South Gippsland Shire Council
VicRoads Reference	709 N6
Planning zone	Farming Zone (FZ) Schedule To The Farming Zone (FZ) General Residential Zone (GRZ) General Residential Zone - Schedule 1 (GRZ1)
Planning Overlay:	Development Plan Overlay (DPO) Development Plan Overlay - Schedule 8 (DPO8) Environmental Significance Overlay (ESO) Environmental Significance Overlay - Schedule 2 (ESO2) Environmental Significance Overlay - Schedule 5 (ESO5)
Site area	Approximately 3.9 hectares
Current site use	Residential

The site (35 Warragul Road Korumburra) measures approximately 3.9 hectares. 35 Warragul Road Korumburra is located west of the Warragul Road and north of the Korumburra railway line in Korumburra. 35 Warragul Road Korumburra is located approximately 100 kilometres to the south-east of the Melbourne CBD and approximately 1 kilometre to the north-west of the Korumburra Train Station at Korumburra.

4.2 Proposed Site Use

The proposed land use is to develop the land for multi-lot subdivision in stages and associated works.

A summary of new proposed site uses is as follows (Refer to Figure 8 – Proposed Subdivision Concept plan):

TABLE 2 – SUMMARY OF PROPOSED SITE USE

Proposed Site Use	Description
Residential Subdivision	Proposed to develop 30 lots residential subdivisions.
Roads	Proposed to develop 2 roads to provide access to 30 lots.

4.3 Site Visits

A Geoaquitards Environmental representative visited the site on the following dates as part of the Stage 1 Site Investigation.

TABLE 3 – SITE VISITS

Site visit date	Description
29 July 2019	- Site Walkover. - Site meeting with Brian O'Neill (Owner of the site).

4.4 Site Condition

The site inspection was carried out by a Geoaquitards Environmental Scientist. (Refer to Appendix A for Site and Surround Aerial Views, Appendix H for Site and Site Surrounds Photographs).The site description is as follows:

TABLE 4 – SITE CONDITION

Site visit dates	Description
29 July 2019	- Main single story brick dwelling located north-west corner of the site. - Two sheds located south of the main dwelling. - Second single story weather board dwelling located north-east corner of the site. - A car shed is located north-west of the second dwelling. - A stockpile (approximately less than 25 cubic metre) containing dead wood and tree branches located in the middle of site. - Number of trees were seen north and western boundaries and in the middle of the site. - Contours of the site show site slopes north-west to south-east and south. - All the other areas of the subject land are vacant and covered in grass.

4.5 Surrounding Land Uses

The site surrounding information is described in Table 5. Refer to Appendix A for Figure 6 – VicRoad Map, Figure 7 - Site and Surround Aerial Views.

TABLE 5 – SITE SURROUNDING INFORMATION

Direction	Comments
North	- Warragul Road is located to the immediately north of the site. - Rural residential developments and farm lands are located north of the site. - Korumburra Golf Club located to the far north of the site. - Some vacant blocks located north of the site.
East	- Residential developments are located to the immediate east of the site. - Commercial developments located further east of the site. - Farm lands are located further north-east of the site. - Some vacant blocks located east of the site.
South	- Korumburra railway line located to the immediate south of the site. - Commercial developments located south of the site. - Residential developments are located to further south of the site. - Farm Lands located far south of the site. - Korumburra town centre is located south-east of the site.
West	- Farm lands and vacant blocks of land located to the west of the site; - Rural residential, farm lands and vacant lands are located north-west of the site. - Farm Lands located to the south-west of the site.

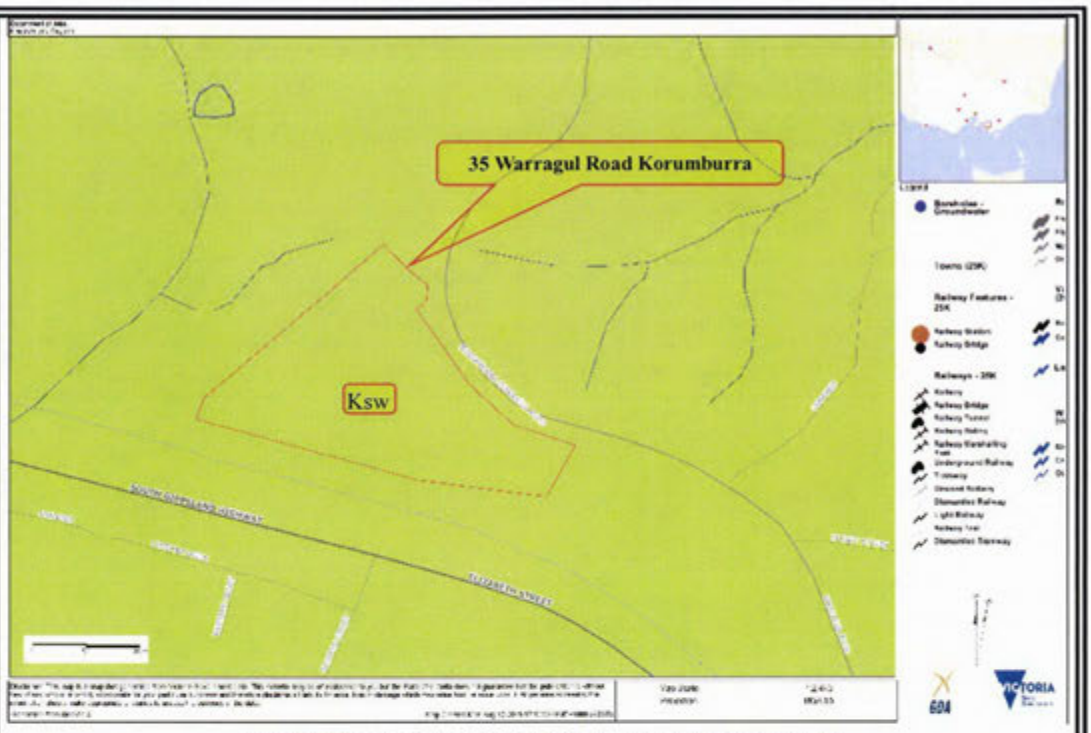
5 GEOLOGY

The geology of the site as mapped on Department of Economic Development, Jobs, Transport and Resources, Geological units represented as two dimensional polygons (1:250,000) produced by the Geological Survey of Victoria indicates that the site is located on the Wonthaggi Formation (Ksw) geological unit (area as shown as Ksw in Figure 1).

TABLE 6 - GEOLOGICAL INFORMATION

Geological Description	
Name:	Wonthaggi Formation(Ksw): generic
Description	Lithic Volcaniclastic sandstone, arkose, siltstone, minor conglomerate and coal; fluvial
Geologic Unit Type	Lithostratigraphic
Rank	Formation [lithostratigraphic]
Lithology:	sandstone (major [proportion]); siltstone (minor [proportion]); conglomerate (minor [proportion]); coal (minor [proportion])
Geologic History	Early Cretaceous to Early Cretaceous (channelled stream flow - fluvial [environment]; over-bank stream flow - fluvial [environment])
Generic Symboliser:	Ksw

FIGURE 1 - GEOLOGICAL MAP



Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM594-M	Figure	Geological Map
Location	35 Warragul Road Korumburra	Project	Stage 1 Preliminary Site Investigation
Date	12 August 2019	Source	The Earth Resources web mapping application - Geovic

6 TOPOGRAPHY

The topography of the site is sloping south to south-westerly direction towards watercourse stream located 43 meters (closest point) to the west of the site. Highest point of the site is located on the northern boundary of the site and lowest point is located south-west corner of the site. The site lies approximately 240 to 210 meters above sea level.

Regional topographies are moderate and high sloping undulating hills. Regional topography to the south and west of the site slopes to the south-westerly direction towards a watercourse stream which ultimately flows in to the Foster Creek. (Refer to Appendix L for Regional Contour Map).

7 FLOODING

As part of the site history review a Flood level search was conducted by Geoaquitards Environmental through West Gippsland Catchment Management Authority on 12 August 2019 (Ref No: WGCMA-F-2019-00555) and following Flood level information were provided by West Gippsland Catchment Management Authority on 15 August 2019.

West Gippsland Catchment Management Authority ('the Authority') does not have any official record of flooding for the property on which to base its assessment. Information available to the Authority indicates that the property is not likely to be subject to riverine inundation during a 1% Annual Exceedance Probability (AEP^3) flood event (commonly known as the 1 in 100 year flood). The property is located on a ridge and is more than 30 metres from the nearest designated waterway. (Refer to Appendix M).

8 HYDROGEOLOGY

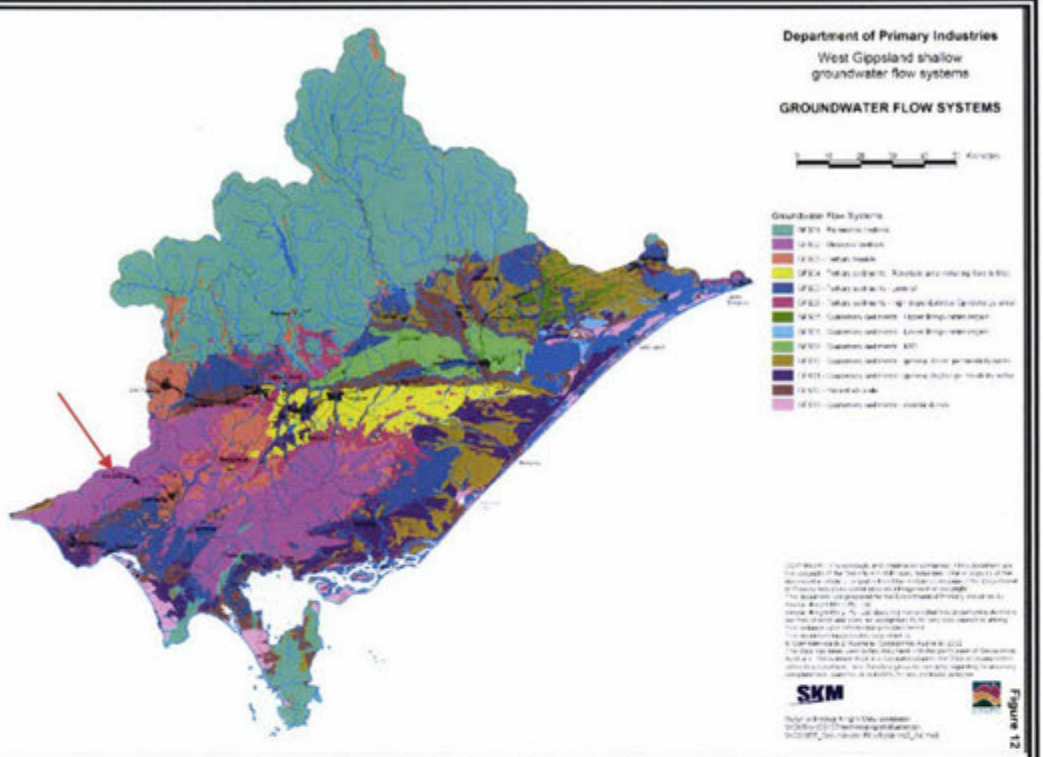
Based on the regional geology and the information obtained from publication of Shallow Groundwater Flow Systems of the West Gippsland Region and the Implications for Salinity Management, Department of Primary Industries, June 2005 the subject land is correlated to the Groundwater Flow Systems 2 (GFS2) - Mesozoic Bedrock and the details are as follows:

8.1 GFS 2 - Mesozoic Bedrock

GFS defined to separate bedrock fractured rock aquifer from unconsolidated sediments. Mesozoic rocks are differentiated from Paleozoic fractured rock aquifers because of their different weathering profile resulting in different potential recharge, discharge and salt store characteristics.

- Aquifer type is fractured rock.
- Aquifer transmissivity is Low and Aquifer storage coefficient is 0.005-0.3 (Source: Warragul/Sale hydrogeological map (1995)).
- Hydraulic conductivity is Low (0.5-10m/day) (Source: Warragul/Sale hydrogeological map (1995)).
- Hydraulic gradient is unknown.
- Temporal recharge distribution is Likely to follow rainfall pattern (ie most recharge in winter and spring).
- Spatial recharge distribution is Likely to be influenced by rainfall and slope – high recharge on the upland, low slope peaks
- Annual Rainfall is highly variable, 800-1900mm (Source: West Gippsland Annual Rainfall GIS layer).
- Aquifer uses are Stock and domestic.
- Groundwater salinity is variable, 1000-1500mg/L, 3000-7000mg/L, local areas of better quality, varies from potable quality in the Warragul area to stock quality only in the South Gippsland Highlands. (Source: Warragul/Sale Hydrogeological Map (1995)).

FIGURE 2 - GROUNDWATER FLOW SYSTEM MAP – GFS15



Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM594-M	Map Description	Groundwater Flow Systems Map
Location	35 Warragul Road Korumburra	Source	Shallow Groundwater Flow Systems of the West Gippsland Region – GFS2
Date	12 August 2019	Project	Stage 1 Preliminary Site Investigation

8.2 Ground Water Desktop Assessment

Determination of groundwater pollution requires a comparison of groundwater quality with the groundwater quality objectives for the protected beneficial uses, as set out in the SEPP (Groundwaters of Victoria). In some cases the identification of beneficial uses may be confined to a desktop assessment, contingent on existing reliable data in the same hydrogeological setting in the local area of the site. The following desktop study and historical search was carried out based on this principle.

- A search of the Earth Resources web mapping application (GeoVic) was undertaken within a 5 kilometre radius. The majority were listed for irrigation;
- A search of the Visualising Victoria's Groundwater database identified 50 bores within two (2) kilometres surrounding the site.

8.2.1 The Earth Resources Web Mapping Application – GeoVic

Groundwater bore search undertaken through The Earth Resources web mapping application (GeoVic) indicates four (4) bores within the 5km radius form the subject. (Refer to Appendix G for Groundwater Database Search Information and Summary of these groundwater bore usage is provided in the Table 7).

TABLE 7 - SUMMARY OF THE GEOVIC GROUNDWATER BORE USAGE

Groundwater Bore Usage	Number of Bores
Domestic & Stock water supply	3
Usage Unidentified Groundwater Bores	1

Summary of Groundwater bores closest to the site is as follows; (Refer to Appendix G for Groundwater Database Search Information):

- **Bore ID - 68203** - located west of the site, distance 3072m from the site, measured depth: 177.08m and the bore usage is for Domestic & Stock water supply.
- **Bore ID - 73361** - located north-east of the site, distance 4874m from the site, measured depth: 85.344m and the bore usage is for Domestic & Stock water supply.
- **Bore ID – 73363** – located south-east of the site, distance 5041m from the site, measured depth: 15.4m and the bore usage is unknown.
- **Bore ID – 73349** – located south-east of the site, distance 5145m from the site, measured depth: 117.653m and the bore usage is for Domestic & Stock water supply.

8.2.2 Visualising Victoria's Groundwater (VVG)

A groundwater bore search was undertaken through Visualising Victoria's Groundwater (VVG) to confirm all of the nearby groundwater bores located surrounding the site; 50 bores were identified within 2000 metres surrounding the site. A summary of this groundwater bore usage available is provided in Table 8 and the details are provided in Appendix G.

TABLE 8 – SUMMARY OF THE VVG GROUNDWATER BORE USAGE

Groundwater Bore Usage	Number of Bores
Usage Unidentified Groundwater Bores	50

Summary of closest groundwater bores to the subject site is as follows.

- **Bore ID – 311352** – located north-east of the site, distance from the site 586m; measured depth: 337.71m; SWL: not available; Initial TDS: not available and the bore usage is unknown.
- **Bore ID – 311375** – located north of the site, distance from the site 438m; measured depth: 370.02m; SWL: not available; Initial TDS: not available and the bore usage is unknown.
- **Bore ID – 311347** – located south-east of the site, distance from the site 1162m; measured depth: 394.10m, SWL: not available; Initial TDS: not available and the bore usage is unknown.
- **Bore ID – 311365** – located South of the site, distance from the site 1910m measured depth: 406.81m; SWL: not available; Initial TDS: not available and the bore usage is unknown.
- **Bore ID – 311388** – located south-east of the site, distance from the site 1919m; measured depth: 126.33m; SWL: not available; Initial TDS: not available and the bore usage is unknown.

8.3 Anticipated Groundwater Salinity and Segment

The Visualising Victoria's Groundwater (VVG) online map indicates the aquifer beneath the site is likely to have salinity between 1000mg/L - 3500mg/L. The groundwater environment based on the Visualising Victoria's Groundwater (VVG) online map study indicates that the site is suitable for Segment A2, B and C (SEPP) as shown in with a Table 14 (Refer to Appendix G for Figure 18 - VVG Watertable Salinity).

8.4 Anticipated Depth to Water Table

Based on the Visualising Victoria's Groundwater (VVG) online map study the anticipated depth to watertable beneath the site and surrounding area is likely to be between 10 to 50 metres below ground level. Refer to Appendix G for Figure 19 - VVG Depth to Watertable Map.

8.5 Anticipated Groundwater Flow Direction

The topography of the site is sloping south to south-westerly direction towards watercourse stream located to the west of the site.

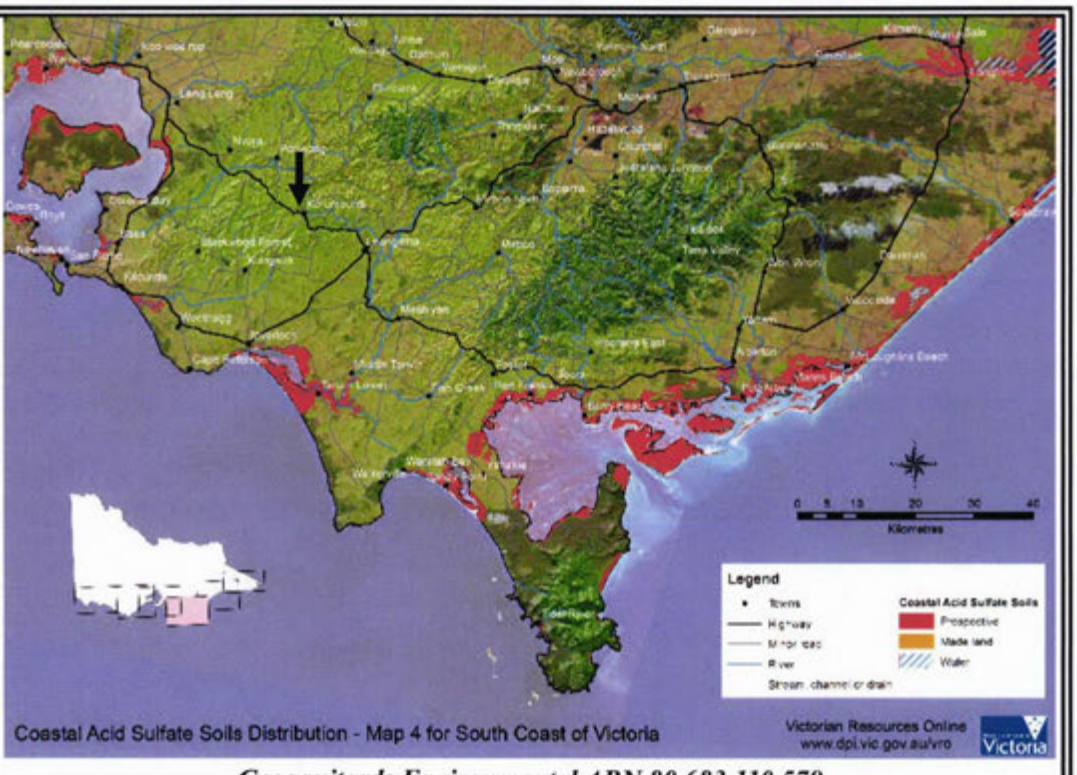
Regional topographies are moderate and high sloping undulating hills. Regional topography to the south and west of the site slopes to the south-westerly direction towards a watercourse stream which ultimately flows in to the Foster Creek.

Based on the site topography anticipated groundwater flow direction at the site is considered to be in south to south-westerly direction towards the watercourse stream. (Refer to Appendix L for Site Contour Map and Appendix G for Watercourse and Lakes Map)

9 REVIEW OF ACID SULFATE SOIL (ASS) HAZARD MAP

As part of the site history a review of Coastal Acid Sulfate Soil Maps were undertaken on 13 August 2019 (Ref: Victorian Coastal Acid Sulfate Soil Strategy, Published by the Victorian Government Department of Sustainability and Environment, Melbourne 2009). The results indicated that 35 Warragul Road Korumburra is not included as prospective land that has the potential to contain Coastal Acid Sulfate Soil. Referenced Map 4 of South Coast of Victoria shown below.

FIGURE 3 - ACID SULFATE SOIL (ASS) HAZARD MAP



Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM594-M	Map Description	Coastal Acid Sulfate Soil Map
Location	35 Warragul Road Korumburra	Project	Stage 1 Preliminary Site Investigation
Date	12 August 2019	Source	Coastal Acid Sulfate Soils Distribution - Map 4 for South Coast of Victoria, Department of Economic Development, Jobs, Transport and Resources 2010

10 SITE HISTORY

10.1 History of Korumburra

- Korumburra, a rural town in west Gippsland's Strzelecki Ranges, is 105 km south-east of Melbourne and 33 km south of Warragul. According to Bunce's Language of the Aborigines of the Colony of Victoria (1859), Korumburra is an Aboriginal word meaning maggot, possibly relating to the giant earthworms found in the district. The name was given to the survey parish before the town.
- The Korumburra district was part of the vast Wild Cattle pastoral run (1846) stretching inland from Venus Bay to Poowong. In 1878 coal was discovered at Coal Creek near the future town of Korumburra.
- In 1878 farm selections began in the Coal Creek area. They were at the eastern limit of settlement, as towns and villages were established at Jeetho, Nyora and Loch. Construction began for proposed Great Southern railway in 1888 from Dandenong and the final section from Loch to Korumburra opened in 1891. The project was sufficient incentive for the Korumburra Township to be surveyed in 1887.
- In 1892 the first coal was railed to Korumburra from the Coal Creek mine. Another line was built to Jumbunna (1894) and Outtrim (1896), both coal towns. Korumburra had a busy rail yard.
- In 1901 a dairy factory was opened at Korumburra and it had a life of 70 years. The dairy factory outlasted the Coal Creek mines which faced decline as mines at Jumbunna, Outtrim and Wonthaggi came into peak production. A few were worked spasmodically until the 1950s.
- The country around Korumburra was cleared and saw-milled, assisted by severe bushfires in 1898. As well as dairy produce there was livestock sold through the Korumburra shire saleyards (1901).
- From 1891, Korumburra was part of Poowong and Jeetho Shire. Due to the town's increasing importance, the administrative centre was moved from Jeetho to Korumburra in 1908 and in 1922, the shire took Korumburra's name.
- The town progressed steadily. A bush nursing hospital was set up in the early 1930s. Higher elementary school classes were commenced in 1920 and a high school instituted in 1954. Housing shortages after World War II were remedied by the gradual construction of over 100 houses by the Housing Commission.
- The butter factory expanded, continually modernising operations and becoming a major employer in the town. During the 1960s and 1970s, several mergers left Murray Goulburn in control, production at Korumburra was reduced in 1973 and in 1975 the Korumburra factory's laboratory, the last activity kept going, was closed. Operations were transferred to nearby Leongatha. A cordial factory, established in the 1890s, produced Joe's soft drinks from 1948. Joe's was well known through South Gippsland until its closure in 1986. Timber preservation works commenced operations in 1960.
- Burra Foods (1990) from the Goulburn Valley acquired the butter factory and produces cheese, whole and powdered milk and related food ingredients.
- Korumburra is still important as a market and service centre for the surrounding

prosperous farming area. The South Gippsland Highway passes through Korumburra but the railway line closed in 1993.

- Korumburra has State and Catholic primary schools, a secondary college, a hospital, a showground, golf, bowls and swimming venues and a shopping centre along the Commercial Street Boulevard.

10.2 Royal Historical Society of Victoria Inc Information

Geoaquitards Environmental contacted Rosemary Cameron, Executive Officer from Royal Historical Society. The site historical activities and the following historical information and text were provided by Royal Historical Society of Victoria Inc (Refer to Appendix E):

- The site is located to the south of Warrigal Road, between it and the railway line to the south, and east to the houses at Number 34.
- Royal Historical Society of Victoria Inc does not have specific information on the subject site. The Sands and McDougall Directories (1858-1974) list Korumburra as a country town and have the residents listed under surname by alphabetical order. In 1910 and again in 1963 most residents are farmers, with all town businesses listed as well.
- The Victorian Municipal Directories, published to 1994, first list Korumburra in 1892. This is when the Great Southern Railway Line came through: to Loch in November 1890, to Korumburra in June 1891, to Leongatha in December 1891 and to Coal Creek in October 1892, and other branch lines to the mines in 1894 and 1896. The town grew from then. Before 1890 the area was settled by farmers and timber cutters with two sawmills in the area.
- With the discovery of black coal deposits in the area it became the centre of the coal mining district after 1890. Various schools opened in 1889 in the surrounding areas and the Korumburra State School No. 3077 opened in 1891, to cater for the miners' children.
- In 1900 and 1910 the population of the town was 2,000, the main industry was coal mining. In 1922 the area became the Korumburra Shire. In 1930 the population was 3000 and it was described as the centre of a prosperous agricultural, dairying and coal mining area, with a butter factory. It was the main railway depot for South Gippsland. In 1960 the description was the same as 1930.
- In 1994 the Shire of Korumburra has a population of 8,550; the town has 4,200 people. A prosperous dairying and agricultural district (beef, sheep and horses), with first class saleyards, sales held twice a week. The coal industry has dissipated and in its place, The Coal Creek Historical Park attracts tourists.
- Google Earth shows the subject site to be farmland with a farm house and sheds on it near to the road, indication that the only land use has been farming.

The above research was undertaken by Margaret Fleming from Royal Historical Society of Victoria Inc. The summary of Royal Historical Society of Victoria Inc indicates that site may have been used for farming in the past and currently residential uses.

10.3 Historical Council Records Search

Council records search for historical records of planning permits and building permits records for the subject property was requested by Geoaquitards Environmental with South Gippsland Shire Council on 6 August 2019.

In relation to the subject site and council contains no historical records following Planning however three (3) Building permits were obtained for the site (Refer to Appendix F):

Building Permits Issued for the site:

1. Permit No 4488 – Building Approval for Shed/Garage, dated 6 May 1987, Site: 35 Warragul Road, Korumburra, Shire of Korumburra;
2. Permit No 5956 – Building Approval for Re-Cladding, dated 31 October 1991, Site: 35 Warragul Road, Korumburra, Shire of Korumburra; and
3. Permit No 5965 – Building Approval for Installation of Stove, dated 13 November 1991, Site: 35 Warragul Road, Korumburra, and Shire of Korumburra.

10.4 Aerial Photographs

As part of the site history review, Historical aerial photographs of the site (Year 1947, 1974, 1982 and 1990) and Google aerial photographs (Year 2010, 2015 and 2019) were reviewed. The site history summary, drawn from the aerial photography is presented in Table 9 and Google map review summary in Table 10. Copies of the aerial photographs reviewed are provided in Appendix C.

TABLE 9 – SUMMARY OF HISTORICAL AERIAL PHOTOGRAPH SITE HISTORY OBSERVATIONS

Date	Site History Details
01/1947	**On-site:** - Residential building located north-west corner of the site. - Number of sheds seen north-west of the building. - Second residential building and associated shed seen north-east corner of the site. - Numbers of trees are seen around the residential buildings and in the middle of the site. - All other areas of the site appear to be vacant and used for grazing activities. **Off-site:** - Lands located to the north, west and south of the site appears to be vacant blocks and grazing lands. - Land located to the east of the site appears to be rural residential and vacant lands. - Surrounding land uses are generally farming, rural residential and grazing. - A Playground/showground is seen south-east of the site. - Commercial developments are seen far south-east of the site. - Residential developments seen far south-east of the site.

Date	Site History Details
10/1974	**On-site:** - Structure of the residential building located north-west corner of the site has been replaced by a new residential building. - Number of sheds located north-west of the building has been removed. - Numbers of trees located to the west of the main residential building had been removed - No changes seen in the second residential building located north-east corner of the site. - New trees are seen south of the second residential building. - No other changes noticed from the previous aerial photo. **Off-site:** - No significant changes seen from the earlier aerial photographs. - Surrounding land uses are grazing, rural residential and vacant lands. - New commercial developments are seen to the south-east of the site. - New residential developments seen to east and south-east of the site.
03/1982	**On-site:** - Appears to be no changes from the earlier aerial photographs. - Site features are not clearly visible due to the scale of the photograph. **Off-site:** - Surrounding land uses to the north and west are grazing and vacant lands - New commercial/industrial buildings seen to the south of the site. - Number of new residential buildings seen further south-east of the site
02/1990	**On-site:** - No significant changes noticed from the previous aerial photo. - Two dwellings still appears be located at the site. - Number of new sheds seen south of the main residential building. - A shed is seen north-west of the second dwelling **Off-site:** - Surrounding land uses north and west are grazing, rural residential and vacant lands - Number of new commercial/industrial buildings seen to the south of the site. - Number of new residential building can be seen to the further south and south-east of the site

TABLE 10 – SUMMARY OF GOOGLE AERIAL PHOTOGRAPH SITE HISTORY OBSERVATIONS

Date	Site History Details
14/03/2010	**On-site:** - No significant changes noticed from the previous aerial photo - Two dwellings, sheds and garage still appears be located at the site. - Trees are located at the north and west boundaries and to the middle of the site. - All the other areas of the subject land are vacant and covered in grass. **Off-site:** - Land uses to the west, north and further south are still grazing, rural residential and vacant lands. - Residential developments to the south of the site significantly increased. - Number of new commercial developments can be seen to the far south of the site.
17/12/2015	**On-site:** - No significant changes from earlier Google aerial photo. - Trees which were located to the middle and south of the site have been cleared and stockpile of remains of trees removed are seen in the middle of the site. **Off-site:** - Surrounding land uses to the north, west and north-east are grazing, rural residential and vacant lands - Some of the commercial/industrial buildings seen south of the site in earlier Google aerial photo have been removed. - Number of new residential building seen further south of the site
1/1/2019	**On-site:** - No changes from earlier Google aerial photo. - Site still appears to contain same two dwellings, sheds and garage. **Off-site:** - Some new commercial/industrial buildings can be seen to the south of the site. - Some new residential developments can be seen to the further south of the site. - Surrounding land uses to the north, west and north-east are grazing, rural residential and vacant lands

The summary of Aerial Photographs search indicates that the subject contained two residential building since 1947 and may have been used for grazing or dairy farming activities since 1947. The structure of the main residential building appears to have been changed and appears to be a new residential building from 1974. Immediate surrounding land uses are generally grazing, rural residential and some vacant lands are seen since 1947 and commercial developments are seen south of the site since 1982. Residential developments were noticed immediate south-east of the site from 1974.

The summary of Google maps indicates that site contains two residential buildings and associated sheds at the site and all other areas appears to be vacant. Surrounding land uses are farming, rural residential, grazing activities and commercial. Residential developments are located to the south of the site significantly increased since 2010.

10.5 Title Information

Geoaquitards Environmental contacted Feigl & Newell Title Searchers with the aim of tracing ownership details through a search of title records. Summary of the Title information for 35 Warragul Road Korumburra is provided in the following Tables and copies of the Title information reviewed are provided in Appendix D.

TABLE 11 – SUMMARY OF TITLE INFORMATION

Date	Volume/Folio No.	Proprietor/ Lease/Profession	Title Status
21/11/2016	**Vol. 11834 Fol. 734** Derived from Vol. 10606 Fol. 612 Vol. 9713 Fol. 067	**Brian Raymond O'Neill** **Christina Ann O'Neill**	**Current**
8/10/2001	**Vol. 10606 Fol. 612** Derived from Vol. 10472 Fol. 032 Vol. 9447 Fol. 416 Vol. 9498 Fol. 629	Brian Raymond O'Neill Christina Ann O'Neill	History
30/05/2008	**Vol. 9713 Fol. 067** Derived from Vol. 5743 Fol. 520	Brian Raymond O'Neill Christina Ann O'Neill	History
27/08/2003		Annette Patricia Perry	History
23/07/2002		Barry John Whitehead Geraldine Leone Whitehead	History
26/08/1987		Stanley Oscar Saario Burnice May Saario	History
11/09/1986		Sylvia Lillian Twite	History
1/04/1981	**Vol. 9447 Fol. 416** Derived from Vol. 5854 Fol. 635 Vol. 5854 Fol. 636 Vol. 8574 Fol. 201	Brian Raymond O'Neill (Meat Inspector) Christina Ann O'Neill	History
14/08/1958	**Vol. 5854 Fol. 635** Derived from Vol. 5609 Fol. 694	Ruth O'Neill	History
25/09/1950		Charles John O'Neill (Dealer & Grazier)	History
21/08/1934		Lawrence Edward Carter Holmes (Farmer)	History
15/08/1933		John Western (Grazier) Flora Edith Turner Philip Henry Minchin (Agent)	History
18/09/1942	**Vol. 5743 Fol. 520** Derived from Vol. 4631 Fol. 149	James Thornton Twite (Butter Factory Employee)	History
31/07/1942		Lawrence Carter Holmes (Farmer)	History
14/07/1931		Agnes Adelaide Holmes	History
2/07/1932	**Vol. 5609 Fol. 694** Derived from Vol. 4631 Fol. 149	John Tonkin Holland (Farmer)	History
19/11/1929		Henry Charles Goad (Farmer)	History

Date	Volume/Folio No.	Proprietor/ Lease/Profession	Title Status
7/03/1929	**Vol. 4631 Fol. 149** Derived from Vol. 2639 Fol. 705	Agnes Adelaide Holmes	History
20/10/1922		William Henry Carter Holmes (Farmer)	History
22/10/1895	**Vol. 2639 Fol. 705**	George Mackay (Teacher)	History

The summary of the above Title information indicates that approximately twenty different owners or group of owners owned either the land or part of the land from 1895 and the previous owners were generally teachers, butter factory employee, commercial or business agents, grazier, dealer, meat inspector and farmers.

10.6 Priority Sites Register Extract

As part of the site history review a search was conducted through Victoria Environment Protection Authority to ascertain whether the site was registered on the Priority Sties Register.

Priority Sites are sites for which EPA has issued a Clean-up Notice pursuant to section 62A, or a Pollution Abatement Notice pursuant to section 31A or 31B (relevant to land and/or groundwater) of the Environment Protection Act 1970 ('the Act'). Typically these are sites where pollution of land and/or groundwater presents an unacceptable risk to human health or to the environment.

Results of these searches conducted on 12 August 2019, found that the site is not listed on the priority site register and also the subject site is not in the vicinity of a sites listed on the priority site register at the date last notified by the EPA. A copy of the Victoria Environment Protection Authority's Priority Sites Register search is provided in Appendix B.

10.7 Cathodic Protection Systems Register Search

Cathodic protection systems provide insulation to fuel pipelines and underground petroleum storage tanks and users of cathodic insulations are required to register with Energy Safe Victoria to maintain these facilities.

As part of the site history review a cathodic protection register search was conducted on 22 July 2019 through Energy Safe Victoria to identify any cathodic protection systems that may have been registered with for the site at 35 Warragul Road Korumburra. Results of these database search conducted by Energy Safe Victoria on 24 July 2019 failed to identify any cathodic protection systems that have been registered for the site (Refer to Appendix I for Energy Safe Victoria letter).

10.8 Review of Dangerous Goods Storage Licences by WorkSafe Victoria

As part of the site history a dangerous good storage licences search was conducted by Geoaquitards Environmental on 22 July 2019 through the WorkSafe Victoria.

Michael Smith, Senior Licensing Officer of WorkSafe Victoria advised that the result of these searches conducted by WorkSafe Victoria on 1 August 2019 has not found any record for a noticeable quantity of dangerous goods (Dangerous Goods Storage and Handling) for the 35 Warragul Road Korumburra. (Refer to Appendix J).

10.9 Trade Waste (Water Authority) Search

As part of the site history a trade waste search was conducted by Geoaquitards Environmental on 22 July 2019 through the South Gippsland Water and the results of these searches undertaken by Helen Hender, Customer Service Officer from South Gippsland Water has found no records of current or historical trade waste consents or agreement at 35 Warragul Road Korumburra. (Refer to Appendix K for Trade Waste Information).

10.10 Review of Melway historic maps and records

As part of the site history review a historical Melway maps earlier edition search was conducted through digital map collection from the university library website of The University of Melbourne and search results of these searches found that Melway editions from 1966 (1st Edition) did not extend to the Drouin and did not show the existence 35 Warragul Road Korumburra.

10.11 Melbourne Metropolitan Board of Works (MMBW) Historical Record Search

As part of the site history review a search was conducted through the State Library of Victoria digitised maps of Melbourne Metropolitan Board of Works (MMBW) web search. Results of these searches indicated that the MMBW Melbourne Sewerage Plans was not available online for the site during the time of this report preparation.

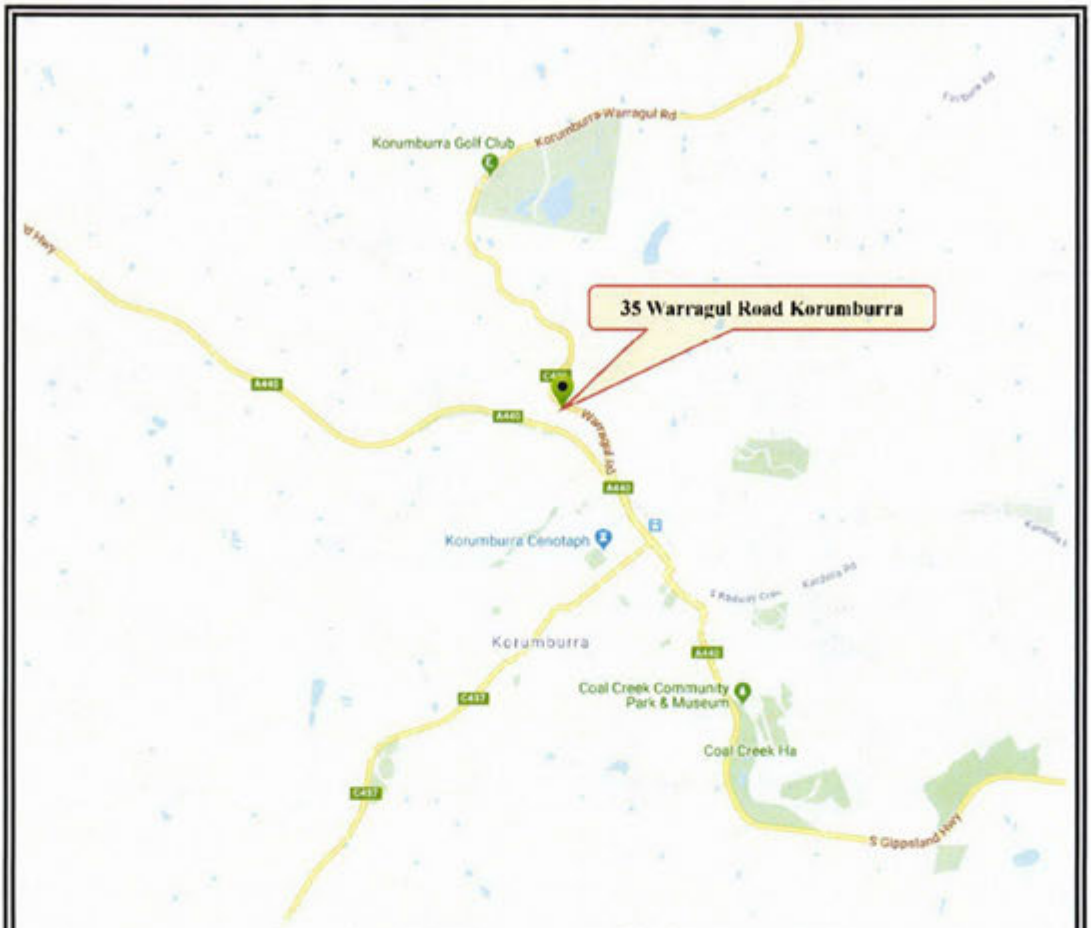
11 PREVIOUS AUDITS REVIEW

As part of Stage 1 Preliminary Site Investigation Geoaquitards Environmental reviewed completed Statutory Environmental Audits (Refer to Figure 4 for VVG map) in the Vicinity of the site in order to obtain background data in relation to groundwater quality and flow direction.

A Search for completed Environmental Audits within the 3 km radius form the subject was undertaken through Visualising Victoria's Groundwater (VVG) website and EPA Victoria website by Geoaquitards Environmental and did not find any completed Environmental Audits within the 3 km radius form the subject site during the time of this report preparation.

Statements and Certificates of Environmental Audit are issued after a statutory environmental audit has been conducted for a property under Part IXD of the Environment Protection Act 1970.

FIGURE 4 - SITE SURROUND EPA AUDIT REPORTS



Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM594-M	Map Legend	EPA Priority Sites Register EPA Audit Reports
Location	35 Warragul Road Korumburra	Source	Visualising Victoria's Groundwater
Date	12 August 2019	Project	Stage 1 Preliminary Site Investigation

12 PROTECTED BENEFICIAL USES OF LAND

The State Environment Protection Policy (Prevention and Management of Contamination of Land) (Land SEPP) sets out the regulatory framework for the prevention and management of contaminated land within the State of Victoria. The intent of this framework is to maintain and maximise (to the extent practicable) the quality of the land environment in Victoria, in order to protect its existing and potential beneficial uses. The Land SEPP was declared in June 2002 in accordance with Section 16 of the Environment Protection Act 1970. The Environment Protection Authority (EPA) is responsible for its implementation. The Land SEPP identifies specific land use categories as well as a number of protected beneficial uses associated with each of the land use categories.

In accordance with the SEPP protected beneficial uses of land are as follows:

- Maintenance of ecosystems.
- Human health.
- Buildings and structures
- Aesthetics and
- Production of Food, Flora and Fibre

TABLE 12 - PROTECTED BENEFICIAL USES OF LAND*

Beneficial Uses	Land Use						
	Parks & reserves	Agricultural	Sensitive Use		Recreational /Open Space	Commercial	Industrial
			High Density	Other			
Maintenance of Ecosystems							
Natural Ecosystems	✓						
Modified Ecosystems	✓	✓		✓	✓		
Highly Modified Ecosystems		✓	✓	✓	✓	✓	✓
Human Health	✓	✓	✓	✓	✓	✓	✓
Buildings & Structures	✓	✓	✓	✓	✓	✓	✓
Aesthetics	✓		✓	✓	✓	✓	
Production of Food, Flora & Fibre	✓	✓		✓			

Note: * The above table is a reproduction from the SEPP Prevention *and Management of Contamination of Land* (June 2002)

12.1 Soil Quality Objectives

Soil quality objectives for the protected beneficial uses of the land are as follows:

TABLE 13 – INDICATORS AND OBJECTIVE FOR BENEFICIAL LAND USES

Beneficial Land Use	Indicators	Objectives
Maintenance of Ecosystems	Chemical substances or waste identified in NEPM Schedule B (2), 2013	Level of indicator must not be greater than the ecological investigation level (EIL), other appropriately derived risk based criteria or levels approved by the EPA
Protection of Human Health	Chemical substances or waste identified in NEPM Schedule B (2), 2013	Level of indicator chemical must not be greater than the health risk-based threshold levels (HIL Criteria) for specified land uses HIL A for this site or other appropriately derived risk based criteria or levels approved by the EPA
Buildings & Structures	pH, sulphate, Redox potential, salinity or any potentially detrimental chemical substance or waste	Contamination must not cause the land to be corrosive to or adversely affect the integrity of structures or building materials*
Aesthetics	Offensive substances - visual or olfactory	Contamination not to cause the land to be offensive to the senses of human beings
Production of Food, Flora and Fibre	Chemical substances or waste identified through the application of the National Environment Protection, 2013 Schedule B2-Guideline on Investigation Levels for Soil and Groundwater	Contamination of land must not: (a) adversely affect produce quality or yield; and (b) affect the level of any indicator in food, flora and fibre produced at the site (or that may be produced) such that the level of that indicator is greater than that specified by the Australia New Zealand Food Authority, Food Standards Code

12.1.1 Maintenance of Ecosystems

The SEPP states that the level of a chemical substance or waste (indicator) must not be greater than any regional Ecological Investigation Level (EIL) developed in accordance with the National Environment Protection (Assessment of Site Contamination) Measure (The NEPM" NEPC, 2013).

Ecological investigation levels (EILs) have been developed for selected metals and organic substances and are applicable for assessing risk to terrestrial ecosystems. EILs depend on specific soil physicochemical properties and land use scenarios and generally apply to the top 2 m of soil.

Ecological investigation levels (EILs) for the protection of terrestrial ecosystems have been derived for common contaminants in soil based on a species sensitivity distribution (SSD) model developed for Australian conditions. These include:

- Generic level for aged arsenic (As);
- Generic level for fresh DDT;

- Generic level for fresh naphthalene;
- Added contaminant limit for lead (Pb);
- Added contaminant limit for nickel (Ni) using cation exchange capacity (CEC);
- Added contaminant limit for copper (Cu) using CEC or pH;
- Added contaminant limit for chromium III (Cr III) using %clay;
- Added contaminant limit for aged zinc (Zn) using CEC and pH

NEPM (2013) based EILs for CrIII, Cu, Ni, Pb, Zn are background concentration (inferred from site data based on Olszowy et al. (1995)) + added concentration limit (ACL) based on Average soil pH, Average CEC and Organic carbon content of OC.

In addition to this Ecological screening levels (ESLs) were considered for petroleum hydrocarbons in soil (BTEX, benzo (a) pyrene, TPH). ESLs broadly apply to coarse- and fine-grained soils and various land uses. They are generally applicable to the top 2 m of soil and are applicable for assessing risk to terrestrial ecosystems.

EILs and ESLs have been developed for three generic land use settings. Generic land uses and the protection levels for the generic land use settings are as follows.

- Areas of ecological significance – 99% protection level;
- Urban residential areas and public open space - 80% protection level; and
- Commercial and industrial land uses - 60% protection level.

EILs and ESLs for urban residential areas and public open space have been adopted for the site. For analytes where there are no EILs published in the NEPM 2013 following criteria have been adopted for the site.

- ANZECC (1992) Environmental Investigation Levels;
- USEPA Ecological Soil Screening Levels (as amended from time to time);
- Canadian CCME SQC for Residential/Parkland Land Use; and
- The upper limit for fill material for selenium from EPA Publication IWRG621.

12.1.2 Human health

The investigation level specified for human health in the NEPM (NEPC, 2013). Schedule A (1) of the NEPM (NEPC, 2013) provides a range of investigation levels for the protection of human health, referred to as Health-based Investigation Levels (HILs).

HILs are provided for following exposure settings based on land use:

- **HIL A:** residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake, (no poultry), also includes children's day care centres, preschools and primary schools);
- **HIL B:** residential with minimal opportunities for soil access includes dwellings with fully and permanently paved yard space such as high-rise buildings and flats;
- **HIL C:** public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. It does not include undeveloped public open space (such as urban bushland and reserves) which should be subject to a site-specific assessment where appropriate; and

- **HIL D:** commercial/industrial such as shops, offices, factories and industrial sites.

The exposure setting **HIL A** is adopted for the unrestricted land uses.

NEPM HILs are not intended for use as default remediation trigger criteria, but are intended to prompt an appropriate site-specific assessment of risk when they are exceeded. This is consistent with Table 2 of the SEPP (PMCL), which allows for objectives derived using a risk-based methodology to be adopted in place of HILs.

For chemicals for which HILs are not specified in the NEPM, screening levels published by the alternative national and/or international sources and Health Screening Levels (HSLs) derived by Friebel and Nadebaum (2011) were adopted for the site.

The values adopted were the lowest of those derived for vapour intrusion and direct contact pathways for the relevant land use(s). The screening levels for vapour intrusion are derived for a range of soil types and contamination source depths.

Where relevant the most conservative of the derived values (those derived for sand lithology and with contamination at depths of 0 to <1 m depth) were adopted.

The HSLs for BTEX and naphthalene (which are not saturation or solubility limited) are considered appropriate for use at sites where the source of contamination includes petroleum and/or non-petroleum based activities (e.g. coal gas manufacture).

The HSLs for TPH fractions have been derived for typical petroleum mixtures (petrol and diesel) and therefore considered appropriate for the assessment of petroleum contamination. Based on the source of TPH at the site, application of the TPH HSLs to the site are considered appropriate. Assessment of soil contamination has also been based on other indicator/target compounds associated with the source of contamination (e.g. PAHs and BTEX).

12.1.3 Buildings and structures

The SEPP states "Contamination must not cause the land to be corrosive to or adverse effect the Integrity of structures or building materials".

Relevant indicators are stated by the SEPP to be "pH, sulphate, redox potential, salinity or any chemical substance or waste that may have a detrimental impact on the structural integrity of buildings or other structures."

Objectives for these key indicators have primarily been sourced from Australian Standard 2159-2009 Piling Design and Installation, in which levels of pH, chloride and sulphate which are considered to represent mild and/or non-aggressive conditions for concrete or steel piles are specified. The values adopted for initial screening (<1,666.67 mg/kg sulphate as S, pH >5.5 and <5,000 mg/kg chloride) are the most conservative of those reported in AS2159 for concrete and steel piles, and are considered to be associated with mild or non-aggressive conditions only where all objectives are met.

The potential for organic compounds (e.g. solvents or petroleum hydrocarbons) to corrode or adversely impact (e.g. permeate) non-metal underground services should also be considered, particularly where saturated concentrations or free phase product are in contact with buildings and/or structures.

12.1.4 Aesthetics

Currently there are no concentration based aesthetic criteria for soil and SEPP states "Contamination must not cause the land to be offensive to the senses of human beings". Aesthetic observations are subjective, it is considered that if there is discolouration,

noticeable odour from the soil on the site or if there are obvious component of waste, such as rubble or similar, then there is a potential aesthetic concern.

12.1.5 Production of Food, Flora and Fibre

The SEPP states contamination of land must not adversely affect produce quality or yield and affect the level of any indicator in food, flora and fibre produced at the site (or what may be produced) such that the level of that indicator is greater than the specified by *Australia New Zealand Food Authority Food Standard Code*. The NEPM EILs/ESLs criteria's are adopted to assess the SEPP protected beneficial uses of land - Production of Food, Flora and Fibre.

13 PROTECTED BENEFICIAL USES OF GROUNDWATER AND SURFACE WATER

The State Environment Protection Policy (Waters), Victoria Government Gazette No S499 dated 23 October 2018 establishes a comprehensive statutory framework for the protection of all groundwater in Victoria. The policy outlines the roles and responsibilities of individuals, industry and government in protecting and maintaining groundwater for the benefit of existing and future users and the environment. The policy divides groundwater into seven segments based on salinity levels as measured by the background level of Total Dissolved Solids (TDS) in the groundwater. The seven segments are as follows:

TABLE 14 - SUMMARY OF FIVE SEGMENTS

Segment	A1	A2	B	C	D	E	F
TDS range (mg/L)	0-600	601-1,200	1,201-3,100	3,101-5,400	5,401-7,100	7,101-10,000	>10,001

13.1 Beneficial Uses of Groundwater

The SEPP identifies beneficial uses of groundwater to be protected in each groundwater segment and these beneficial uses specified in Table 15 should be protected in each segment (as marked with a tick).

The Authority may determine that a beneficial use specified in Table 15 does not apply to groundwater if any of the following apply:

a) There is insufficient aquifer yield to sustain the beneficial use;

b) The application of groundwater, such as for irrigation, may be a risk to beneficial uses of land or the broader environment due to the soil properties;

c) The beneficial use specified in the definition of water dependent ecosystems and species relates to stygofauna and troglofauna;

d) The background level of an environmental quality indicator would not provide for the protection of the beneficial use.

When making a determination under sub clause (2) (a) of the SEPP waters (2018), the Authority;

a) May take into account possible variations within the aquifer and reasonable bore development techniques to improve yield; and

b) Must be satisfied that-

i. The beneficial use for water dependent ecosystems and species is protected; and

ii. There will be no risk to beneficial uses; and

iii. Preferential flow through fractures or naturally formed cavities is not the dominant mode of permeability.

When making a determination under subclause (2) (c) of the SEPP waters (2018), the Authority may require an applicant to conduct an assessment of stygofauna and troglofauna.

Note:

- Clause 15 of SEPP waters (2018) sets out the beneficial uses that apply to groundwater and the circumstances in which the Authority may determine that a beneficial use does not apply. Schedule 2 Table 5 of the SEPP waters (2018) lists exclusions to beneficial uses.
- TDS is used as the primary indicator for segment definition as the salinity of groundwater affects what it can be used for and it has proven to be an effective way to classify groundwater for beneficial uses.

13.2 Beneficial Uses of Surface Water

Subject to sub clauses (2) and (3), The State Environment Protection Policy (Waters), protects the beneficial uses of Surface Water set out in Table 3 and Table 4 of Schedule 2 of the SEPP waters (2018) in each segment marked by a tick.

The following beneficial uses apply in each segment marked with a tick, only to the extent indicated below –

a) *Water dependent ecosystems and species* applies to all surface water segments at the defined level of protection as shown in Tables 3 and 4 of Schedule 2 of the SEPP waters (2018);

b) *Aquaculture* only applies to those surface water segments where the environmental quality is suitable and an aquaculture license has been approved in accordance with the Fisheries Act 1995;

c) *Human consumption after appropriate treatment* only applies to those surface water segments-

i. In a special water supply catchment area listed in Schedule 5 of the Catchment and Land Protection Act 1994; or

ii. Where water is sourced for supply in accordance with the Safe Drinking Water Act 2003.

Specific exclusions to the protection of a beneficial use within a segment are marked with an asterisk in Tables 3 and 4 of Schedule 2 of the SEPP waters (2018) and the exclusions are set out in Table 5 of Schedule 2 of the SEPP waters (2018).

The Authority may determine that a beneficial use in a surface water segment does not apply-

a) If the background level of an environmental quality indicator would not provide for the protection of the beneficial use; or

b) If it is prohibited by any law or where it is otherwise not a permitted activity.

The beneficial uses of groundwater to be protected in each groundwater segment are as follows:

TABLE 15 – BENEFICIAL USES OF GROUNDWATER

BENEFICIAL USE	SEGMENT (TDS mg/L)						
	A1 (0-600)	A2 (601-1,200)	B (1,201-3,100)	C (3,101-5,400)	D (5,401-7,100)	E (7,101-10,000)	F (>10,001)
Water dependent ecosystems and species	✓	✓	✓	✓	✓	✓	✓
Potable water supply (desirable)	✓						
Potable water supply (acceptable)		✓					
Potable mineral water supply	✓	✓	✓	✓			
Agriculture and irrigation (irrigation)	✓	✓	✓				
Agriculture and irrigation (stock watering)	✓	✓	✓	✓	✓	✓	
Industrial and commercial	✓	✓	✓	✓	✓		
Water-based recreation (primary contact recreation)	✓	✓	✓	✓	✓	✓	✓
Traditional Owner cultural values	✓	✓	✓	✓	✓	✓	✓
Cultural and spiritual values	✓	✓	✓	✓	✓	✓	✓
Buildings and structures	✓	✓	✓	✓	✓	✓	✓
Geothermal properties	✓	✓	✓	✓	✓	✓	✓

13.3 Groundwater quality indicators and objectives

In accordance with The State Environment Protection Policy (SEPP, Groundwaters of Victoria), Victoria Government Gazette No S 160, December 1997 the levels of groundwater quality required to protect beneficial uses are specified by the groundwater quality indicators and objectives in Table 16.

The groundwater quality indicators and objectives specified in Table 16 will apply to all groundwater except where

1. The Authority designates an attenuation zone in any works approval, licence or notice under the Environment Protection Act 1970;
2. The groundwater is within a polluted groundwater zone;

3. The background level of a groundwater quality indicator is greater than the objective, in which case the background level will become the objective; or
4. The groundwater is within a groundwater protection zone for which more stringent objectives have been developed.
5. Notwithstanding sub-clauses (1) and (2), water quality is to be maintained as close as practicable to background levels.

The details of groundwater quality objectives area shown the following (Tables 16):

TABLE 16 - GROUNDWATER QUALITY INDICATORS AND OBJECTIVES

Beneficial Use	Indicators	Objectives
Maintenance of ecosystems	- Those specified in the relevant State environment protection policy for surface waters	- Groundwater shall not cause receiving waters to be affected to the extent that the level of any water quality indicator is greater than the level of that indicator specified in the relevant State environment protection policy for surface waters
Potable water supply: desirable	- Those specified for raw water for drinking water supply in the Australian Water Quality Guidelines for Fresh and Marine Waters	- TDS shall be less than 501 mg/L - Groundwater shall not be affected to the extent that the level of any water quality indicator is greater than the level of that indicator specified for raw water for drinking water supply in the Australian Water Quality Guidelines for Fresh and Marine Waters - The constituents of groundwater shall not be affected in a manner or to an extent that leads to tainting
Potable water supply: acceptable	- Those specified for raw water for drinking water supply in the Australian Water Quality Guidelines for Fresh and Marine Waters	- Groundwater shall not be affected to the extent that the level of any water quality indicator is greater than the level of that indicator specified for raw water for drinking water supply in the Australian Water Quality Guidelines for Fresh and Marine Waters - The constituents of groundwater shall not be affected in a manner or to an extent that leads to tainting
Potable mineral water supply	- Those specified for potable mineral water in the Australian Food Standards Code (1987) - Standard 08 Mineral Water	- Groundwater shall not be affected to the extent that the level of any water quality indicator is greater than the level of that indicator specified in the Australian Food Standards Code (1987) - Standard 08 Mineral Water. - The constituents of groundwater shall not be affected in a manner or to an extent that leads to tainting
Agricultural water supply: irrigation	- Those specified for irrigation in the Australian Water Quality Guidelines for Fresh and Marine Waters	- Groundwater shall not be affected to the extent that the level of any water quality indicator is greater than the level of that indicator specified for irrigation in the Australian Water Quality Guidelines for Fresh and Marine Waters

Beneficial Use	Indicators	Objectives
Agricultural water supply: stock watering	- Those specified for livestock in the Australian Water Quality Guidelines for Fresh and Marine Waters	- Groundwater shall not be affected to the extent that the level of any water quality indicator is greater than the level of that indicator specified for livestock in the Australian Water Quality Guidelines for Fresh and Marine Waters
Industrial water use	- Those specified for industrial use in the Australian Water Quality Guidelines for Fresh and Marine Waters	- Groundwater shall not be affected to the extent that the level of any water quality indicator is greater than the level of that indicator specified for industrial water quality in the Australian Water Quality Guidelines for Fresh and Marine Waters
Primary contact recreation	- Those specified for primary contact recreation in the Australian Water Quality Guidelines for Fresh and Marine Waters	- Groundwater shall not be affected to the extent that the level of any water quality indicator is greater than the level of that indicator specified for primary contact recreation in the Australian Water Quality Guidelines for Fresh and Marine Waters
Buildings and Structures	- pH sulphate redox potential	- Introduced contaminants shall not cause groundwater to become corrosive to structures or building materials

The Visualising Victoria's Groundwater (VVG) online map indicates the aquifer beneath the site is likely to have salinity between 1000mg/L - 3500mg/L.

Based on the site VVG it is considered Segment A2, B and C (SEPP) (as shown in with a tick in Table 15) can be appropriately adopted for the site under the SEPP waters (2018).

14 CONCEPTUAL SITE MODEL

The purpose of a Conceptual Site Model (CSM) is to identify potential risks present at the site relative to the surrounding environment. The potential sources, transport mechanisms and exposure pathways, and potential sensitive receptors in close proximity to the subject property—based on the findings of this investigation and previous investigations—are presented in the sections below.

14.1 Potential Source for any Contamination

The surrounding land uses are grazing, rural residential and some vacant lands. The site in the past site may have been used for farming/grazing and residential uses in the past.

During the site inspection carried out by Geoaquitards Environmental on 29 July 2019, identified that site contained two residential buildings and associated sheds.

Based on the current and historical search carried out for the site no potential sources of contamination was identified.

14.1.1 Potential Off-site Receptors

Potential off-site receptors in the surrounding area are as follows:

- The nearest off-site receptors are residents of the neighbouring properties located in the surrounding of the site;
- Workers, customers and visitors of the neighbouring farm lands; and
- Watercourse stream located to the west of the site.

14.1.2 Potential On-site Receptors

Based on the proposed Residential Subdivision the following human and ecological receptors have been identified:

- Residents of the proposed residential properties;
- People playing and walking in proposed communal Public Areas;
- Child and adult residents/visitors consuming produce at the site; and
- Child and adult residents/visitors playing, working etc.in areas of open, accessible soil.

In addition, following ecological receptors has been identified:

- Plants and animals associated with areas of open, accessible soil.

15 CONCLUSIONS

The summary of Royal Historical Society of Victoria Inc indicates that site may have been used for farming in the past and currently residential uses.

Title information indicates that approximately twenty different owners or group of owners owned either the land or part of the land from 1895 and the previous owners were generally Teacher, Butter Factory Employee, Agent, Grazier, Dealer, Meat Inspector and Farmers.

The summary of Aerial Photographs search indicates that the subject site appeared to contain two residential building since 1947 and may have been used for grazing or dairy farming activities since 1947. The structure of the main residential building appears to be changed and appears to be a new residential building from 1974. Immediate surrounding land uses were grazing, rural residential and some vacant lands since 1947 and commercial developments were seen to the south of the site since 1982. Residential developments were noticed to the immediate south-east of the site from 1974.

The summary of Google maps indicates that site contains two residential buildings and associated sheds at the site and all other areas appears to be vacant. Surrounding land uses are farming, rural residential, grazing activities and commercial. Residential developments are located to the south of the site significantly increased since 2010.

Geoaquitards Environmental considers that sources related to on site conditions and activities, revealed in the Stage 1 Preliminary Site Investigation have low potential for contamination. The matrix in Table 17 indicates the appropriate assessment level, based on proposed land use. And based on the above General duty under Section 12(2) (b) and Section 60(1) (a) (iii) of the Planning and Environment Act 1987 applies to the site.

In Summary site is considered suitable for the proposed use and does not require further site assessment or audit.

The general practice note *Potentially Contaminated Land General Practice Note June 2005*, DSE provides guidance to identify if land is potentially contaminated and the appropriate level of assessment of contamination for a planning scheme amendment or planning permit application and appropriate conditions on planning permits.

TABLE 17 – ASSESSMENT MATRIX

PROPOSED LAND-USE	POTENTIAL FOR CONTAMINATION		
Sensitive Uses	***High***	***Medium***	***Low***
Child care center, pre-school or primary school	*A*	*B*	*C*
Dwellings, residential buildings etc.	*A*	*B*	*C*
Other Uses			
Open space	*B*	*C*	*C*
Agriculture	*B*	*C*	*C*
Retail or office	*B*	*C*	*C*
Industry or warehouse	*B*	*C*	*C*

A: *Require an environmental audit as required by Ministerial Direction No. 1 or the Environmental Audit Overlay when a planning scheme amendment or planning permit application would allow a sensitive use to establish on potentially contaminated land.*

An environmental audit is also strongly recommended by the SEPP where a planning permit application would allow a sensitive use to be established on land with 'high potential' for contamination.

B: *Require a site assessment from a suitably qualified environmental professional if insufficient information is available to determine if an audit is appropriate. If advised that an audit is not required, default to C.*

C: *General duty under Section 12(2) (b) and Section 60(1) (a) (iii) of the Planning and Environment Act 1987.*

16 LIMITATION OF THIS REPORT

This report has been provided by Geoaquitards Environmental for the sole use of the client and only for the purpose for which it was prepared. Any representation contained in the report is made only for the client.

The work was conducted, and the report has been prepared, in response to specific instructions from Matt Brosnan from Brosnan Engineering Pty Ltd on behalf of the owner (Brian O'Neill) of the site to whom this report is addressed, within the time and budgetary requirements of the client, and in reliance on certain data and information made available to Geoaquitards Environmental.

The findings contained within this Site Investigation are the result of standard investigation techniques used in accordance with normal practices and standards. To the best of our knowledge, they represent a reasonable interpretation of the current conditions and previous land uses for the site.

It is also noted that sub-surface conditions can change with time, and the report is based on data that was gathered at the time of the report. This services performed by Geoaquitards Environmental have been conducted in a manner consistent with the level of quality and skill generally exercised by members of its profession and consulting practice.

This document does not purport to provide legal advice and any conclusions or recommendations herein must not be relied as substitute for such advice. This report shall only be presented in full and may not be used to support any other objective than those set out in the report, except where written approval with comments are provided by Geoaquitards Environmental. The advice provided herein relates only to these purposes and must be

reviewed by a competent Environmental Scientist/Engineer, experienced in contaminated site investigation, before being used for any other purpose and Geoaquitards Environmental accept no responsibility for other use of the advice. No warranties, expressed or implied, are offered to any third parties. No liabilities will be accepted for use of this report by any third party. This report should not be altered, amended or abbreviated, issued in part and issued incomplete in any way without prior checking and approved by Geoaquitards Environmental. Geoaquitards Environmental accepts no responsibility for any circumstances that arise from issue of the report that has been modified in any way as outlined above.

Prepared /Submitted by

GEOAQUITARDS ENVIRONMENTAL

Emmanuel Ernest
Senior Environmental Scientist
MSc (Geol) BSc (Chem) Grad Dip (Env Mngt)

17 REFERENCES

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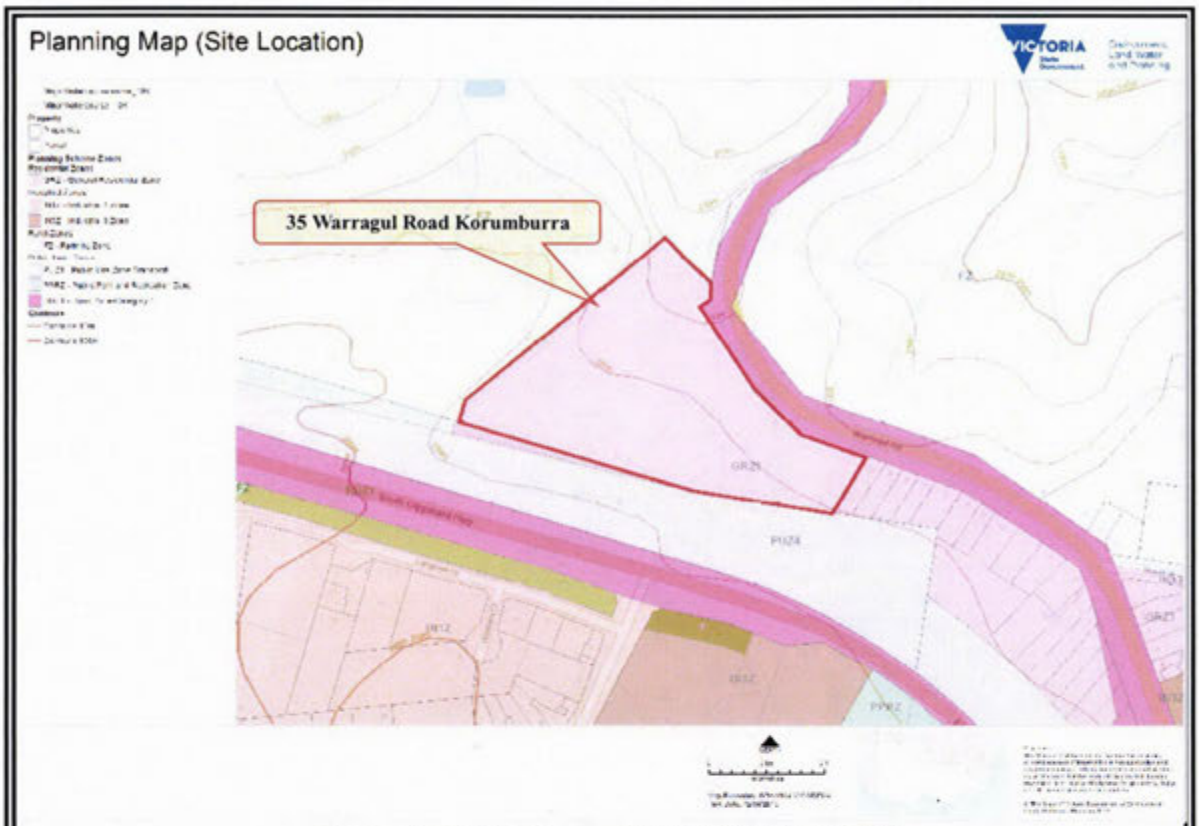
APPENDIX A

SITE LOCATION, VICROAD MAP, SITE AND SURROUNDING AERIAL VIEWS AND PROPOSED SUBDIVISION PLAN

FIGURE 5 – SITE LOCATION



Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM594-M	Figure Description	Site Location
Location	35 Warragul Road Korumburra		
Date	12 August 2019	Project	Stage 1 Preliminary Site Investigation

FIGURE 6 – VICROAD MAP

Geoaquitards Environmental ABN 80 683 110 579

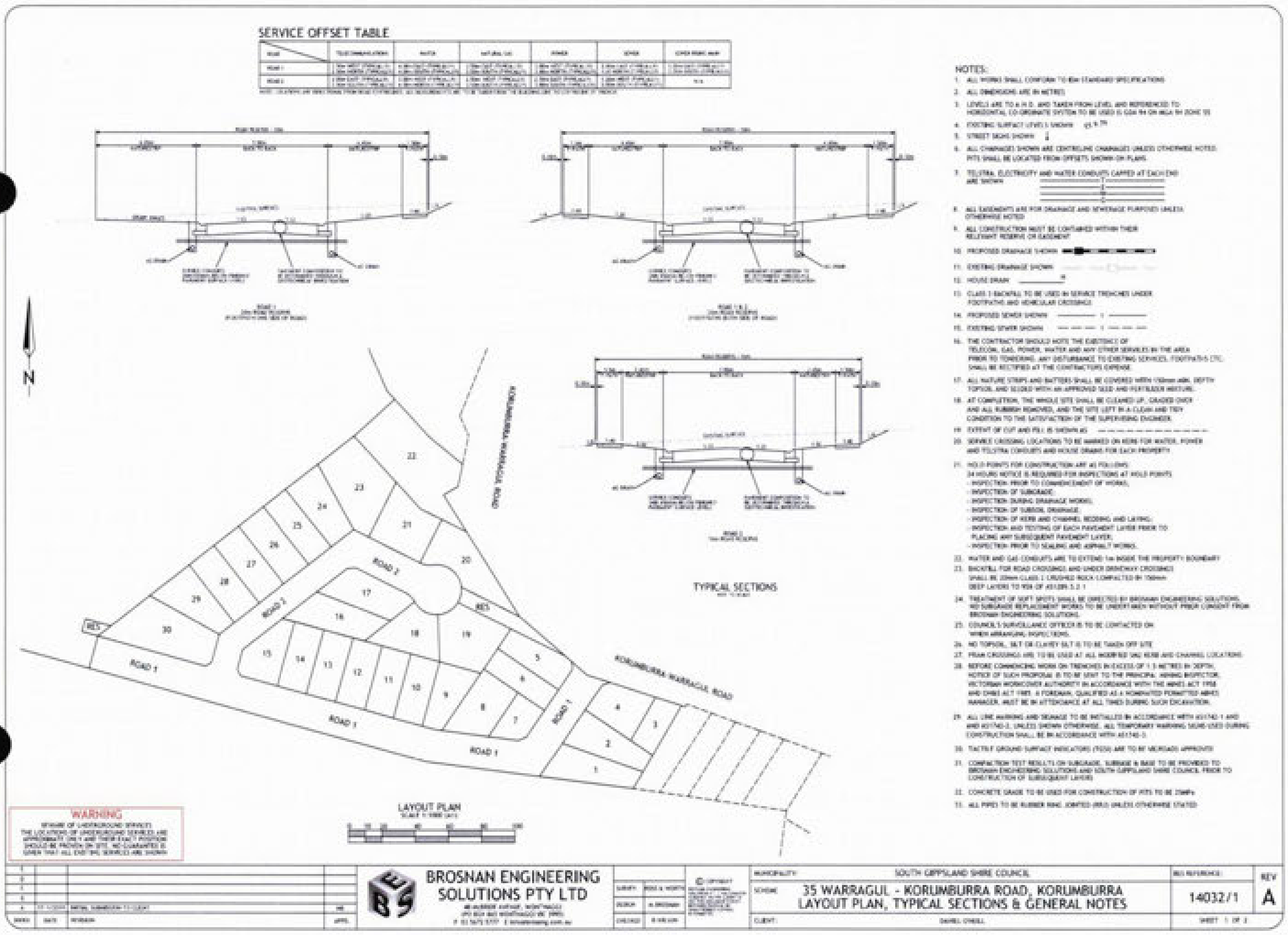
Job Number	RM594-M	VicRoad Edition	9
Location	35 Warragul Road Korumburra	Map Reference	96 F8 (709 N6)
Date	12 August 2019	Project	Stage 1 Preliminary Site Investigation

FIGURE 7 - SITE AND SURROUND AERIAL VIEWS

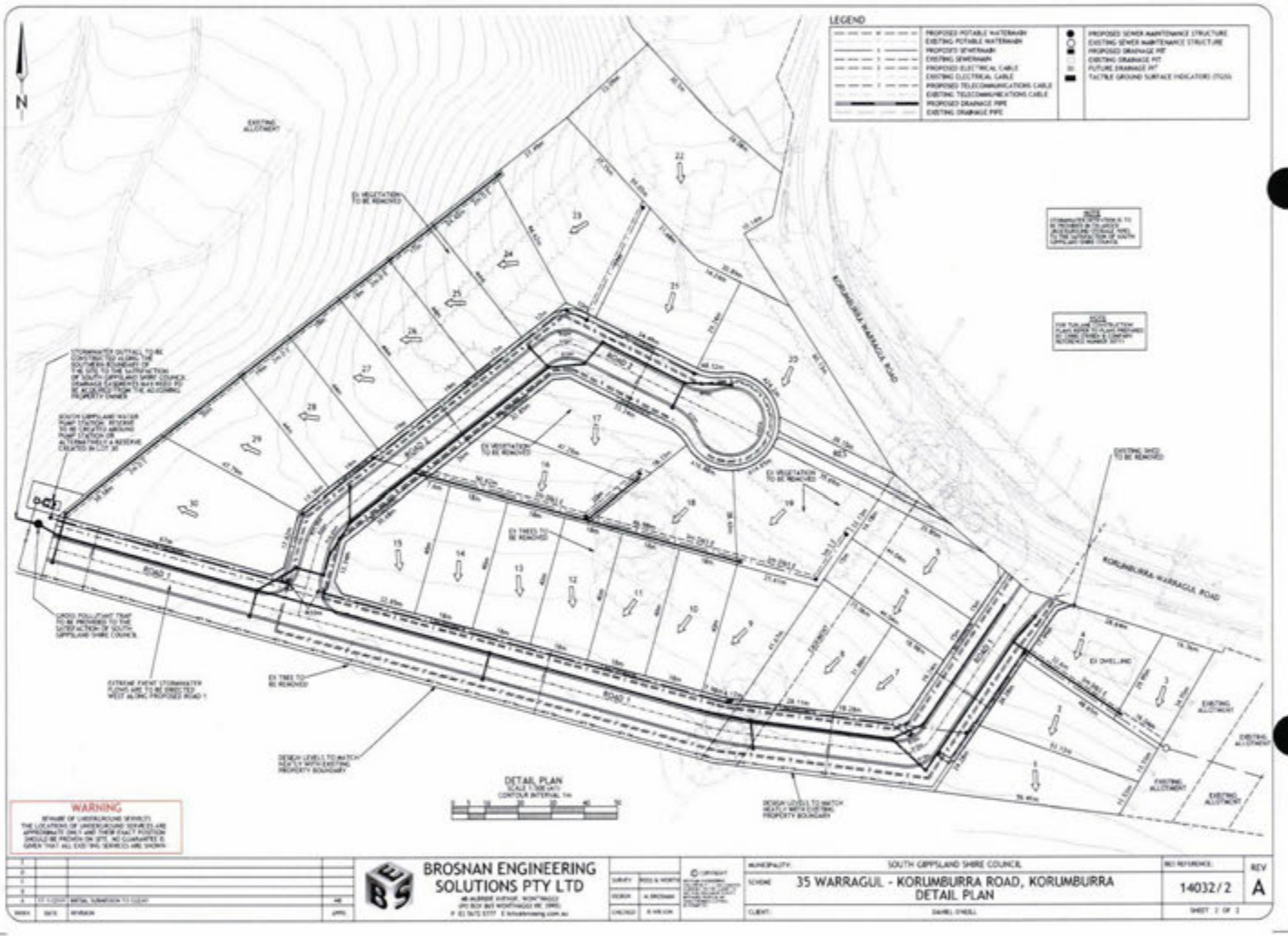
Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM594-M		
Location	35 Warragul Road Korumburra	Figure Description	Site Aerial View
Date	12 August 2019	Project	Stage 1 Preliminary Site Investigation

FIGURE 8 – SUBDIVISION CONCEPT PLAN



SERVICE OFFSET TABLE
ROAD 1
24m ROAD RESERVE
ROAD 1 & 2
TYPICAL SECTIONS
N
KORUMBURRA-WARRAGUL ROAD
ROAD 1
ROAD 2
RES
LAYOUT PLAN
WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN
NOTES:
1. ALL WORKS SHALL CONFORM TO BSM STANDARD SPECIFICATIONS
2. ALL DIMENSIONS ARE IN METRES
3. LEVELS ARE TO A.H.D. AND TAKEN FROM LEVEL AND REFERENCED TO HORIZONTAL CO-ORDINATE SYSTEM TO BE USED IS GDA 94 ON MGA 94 ZONE 55
4. EXISTING SURFACE LEVELS SHOWN
5. STREET SIGNS SHOWN
6. ALL CHAINAGES SHOWN ARE CENTRELINE CHAINAGES UNLESS OTHERWISE NOTED. PITS SHALL BE LOCATED FROM OFFSETS SHOWN ON PLANS
7. TELSTRA, ELECTRICITY AND WATER CONDUITS CAPPED AT EACH END ARE SHOWN
8. ALL EASEMENTS ARE FOR DRAINAGE AND SEWERAGE PURPOSES UNLESS OTHERWISE NOTED
9. ALL CONSTRUCTION MUST BE CONTAINED WITHIN THEIR RELEVANT RESERVE OR EASEMENT
10. PROPOSED DRAINAGE SHOWN
11. EXISTING DRAINAGE SHOWN
12. HOUSE DRAIN
13. CLASS 3 BACKFILL TO BE USED IN SERVICE TRENCHES UNDER FOOTPATHS AND VEHICULAR CROSSINGS
14. PROPOSED SEWER SHOWN
15. EXISTING SEWER SHOWN
16. THE CONTRACTOR SHOULD NOTE THE EXISTENCE OF TELECOM, GAS, POWER, WATER AND ANY OTHER SERVICES IN THE AREA PRIOR TO TENDERING. ANY DISTURBANCE TO EXISTING SERVICES, FOOTPATHS ETC. SHALL BE RECTIFIED AT THE CONTRACTORS EXPENSE.
17. ALL NATURE STRIPS AND BATTERS SHALL BE COVERED WITH 150mm MIN. DEPTH TOPSOIL AND SEEDED WITH AN APPROVED SEED AND FERTILISER MIXTURE.
18. AT COMPLETION, THE WHOLE SITE SHALL BE CLEANED UP, GRADED OVER AND ALL RUBBISH REMOVED, AND THE SITE LEFT IN A CLEAN AND TIDY CONDITION TO THE SATISFACTION OF THE SUPERVISING ENGINEER.
19. EXTENT OF CUT AND FILL IS SHOWN AS
20. SERVICE CROSSING LOCATIONS TO BE MARKED ON KERB FOR WATER, POWER AND TELSTRA CONDUITS AND HOUSE DRAINS FOR EACH PROPERTY
21. HOLD POINTS FOR CONSTRUCTION ARE AS FOLLOWS:
24 HOURS NOTICE IS REQUIRED FOR INSPECTIONS AT HOLD POINTS
- INSPECTION PRIOR TO COMMENCEMENT OF WORKS;
- INSPECTION OF SUBGRADE;
- INSPECTION DURING DRAINAGE WORKS;
- INSPECTION OF SUBSOIL DRAINAGE;
- INSPECTION OF KERB AND CHANNEL BEDDING AND LAYING;
- INSPECTION AND TESTING OF EACH PAVEMENT LAYER PRIOR TO PLACING ANY SUBSEQUENT PAVEMENT LAYER;
- INSPECTION PRIOR TO SEALING AND ASPHALT WORKS.
22. WATER AND GAS CONDUITS ARE TO EXTEND 1m INSIDE THE PROPERTY BOUNDARY
23. BACKFILL FOR ROAD CROSSINGS AND UNDER DRIVEWAY CROSSINGS SHALL BE 20mm CLASS 2 CRUSHED ROCK COMPACTED IN 150mm DEEP LAYERS TO 95% OF AS1289.5.2.1
24. TREATMENT OF SOFT SPOTS SHALL BE DIRECTED BY BROSNAN ENGINEERING SOLUTIONS. NO SUBGRADE REPLACEMENT WORKS TO BE UNDERTAKEN WITHOUT PRIOR CONSENT FROM BROSNAN ENGINEERING SOLUTIONS.
25. COUNCIL'S SURVEILLANCE OFFICER IS TO BE CONTACTED ON WHEN ARRANGING INSPECTIONS.
26. NO TOPSOIL, SILT OR CLAYEY SILT IS TO BE TAKEN OFF SITE
27. PRAM CROSSINGS ARE TO BE USED AT ALL MODIFIED SM2 KERB AND CHANNEL LOCATIONS
28. BEFORE COMMENCING WORK ON TRENCHES IN EXCESS OF 1.5 METRES IN DEPTH, NOTICE OF SUCH PROPOSAL IS TO BE SENT TO THE PRINCIPAL MINING INSPECTOR, VICTORIAN WORKCOVER AUTHORITY IN ACCORDANCE WITH THE MINES ACT 1958 AND OHBS ACT 1985. A FOREMAN, QUALIFIED AS A NOMINATED PERMITTED MINES MANAGER, MUST BE IN ATTENDANCE AT ALL TIMES DURING SUCH EXCAVATION.
29. ALL LINE MARKING AND SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH AS1742-1 AND AND AS1742-2, UNLESS SHOWN OTHERWISE. ALL TEMPORARY WARNING SIGNS USED DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH AS1742-3.
30. TACTILE GROUND SURFACE INDICATORS (TGSI) ARE TO BE VICROADS APPROVED
31. COMPACTION TEST RESULTS ON SUBGRADE, SUBBASE & BASE TO BE PROVIDED TO BROSNAN ENGINEERING SOLUTIONS AND SOUTH GIPPSLAND SHIRE COUNCIL PRIOR TO CONSTRUCTION OF SUBSEQUENT LAYERS
32. CONCRETE GRADE TO BE USED FOR CONSTRUCTION OF PITS TO BE 25MPa
33. ALL PIPES TO BE RUBBER RING JOINTED (RRJ) UNLESS OTHERWISE STATED
BROSNAN ENGINEERING SOLUTIONS PTY LTD
MUNICIPALITY: SOUTH GIPPSLAND SHIRE COUNCIL
SCHEME: 35 WARRAGUL - KORUMBURRA ROAD, KORUMBURRA
LAYOUT PLAN, TYPICAL SECTIONS & GENERAL NOTES
CLIENT: DANIEL O'NEILL
BES REFERENCE: 14032/1
REV A
SHEET 1 OF 2


LEGEND
PROPOSED POTABLE WATERMAIN
EXISTING POTABLE WATERMAIN
PROPOSED SEWERMAIN
EXISTING SEWERMAIN
PROPOSED ELECTRICAL CABLE
EXISTING ELECTRICAL CABLE
PROPOSED TELECOMMUNICATIONS CABLE
EXISTING TELECOMMUNICATIONS CABLE
PROPOSED DRAINAGE PIPE
EXISTING DRAINAGE PIPE
PROPOSED SEWER MAINTENANCE STRUCTURE
EXISTING SEWER MAINTENANCE STRUCTURE
PROPOSED DRAINAGE PIT
EXISTING DRAINAGE PIT
FUTURE DRAINAGE PIT
TACTILE GROUND SURFACE INDICATOR (TGSI)
N
EXISTING ALLOTMENT
EXISTING SHED TO BE REMOVED
KORUMBURRA-WARRAGUL ROAD
ROAD 1
ROAD 2
DETAIL PLAN
SCALE 1:500 (A1)
CONTOUR INTERVAL 1m
WARNING
BROSNAN ENGINEERING SOLUTIONS PTY LTD
MUNICIPALITY: SOUTH GIPPSLAND SHIRE COUNCIL
SCHEME: 35 WARRAGUL - KORUMBURRA ROAD, KORUMBURRA
DETAIL PLAN
CLIENT: DANIEL O'NEILL
BG REFERENCE: 14032/2
REV: A
SHEET 1 OF 1

APPENDIX B
VIC EPA PRIORITY SITES REGISTER EXTRACT

EPA Priority Sites Register Extract

EPA VICTORIA

Client: Geoaquitards Environmental
Suite 49 160 Gippsland Highway
Dandenong South 3175

Client Ref: RM594-M
Certificate No: 58262315:90258273

Property Inquiry Details:

Street Address: 35 Warragul Road
Suburb: KORUMBURRA
Map Reference: VicRoads Edition 7, Map No:96, Grid Letter: F, Grid Number: 8

Date of Search: 12/08/2019

Priority Sites Register Report:

A search of the Priority Sites Register **for the above map reference**, has indicated that this **site is not listed on, and is not in the vicinity of a site listed on the Priority Sites Register** at the date last notified by the EPA.

Important Information about the Priority Sites Register:

You should be aware that the Priority Sites Register lists only those sites for which EPA has requirements for active management of land and groundwater contamination. Appropriate clean up and management of these sites is an EPA priority, and as such, EPA has issued either a: Clean Up Notice pursuant to section 62A, or a Pollution Abatement Notice (related to land and groundwater) pursuant to section 31A or 31B of the Environment Protection Act 1970 on the occupier of the site to require active management of these sites.

The Priority Sites Register does not list all sites that are known to be contaminated in Victoria. A site should not be presumed to be free of contamination just because it does not appear on the Priority Sites Register.

Persons intending to enter into property transactions should be aware that many properties may have been contaminated by past land uses and EPA may not be aware of the presence of contamination. Municipal planning authorities hold information about previous land uses, and it is advisable that such sources of information also be consulted.

For sites listed on the Priority Sites Register, a copy of the relevant Notice, detailing the reasons for issue of the Notice, and management requirements, is available on request from EPA for $8 per Notice.

For more information relating to the Priority Sites Register, refer to EPA information bulletin: Priority Sites Register (EPA Publication 735, December 2000). For a copy of this publication, copies of relevant Notices, of for more information relating to sites listed on the Priority Sites Register, please contact EPA as given below:
EPA Information Centre
200 Victoria Street, Carlton 3053
Tel: (03) 9695 2722 Fax: (03) 9695 2610

The information contained in this Extract of the Priority Sites Register may not be used for resale or for the preparation of mailing lists or for direct marketing. Any contravention of this notice will result in immediate revocation of access (including future access) to information contained on the Priority Sites Register.

The Environment Protection Authority does not warrant the accuracy or completeness of information in this Extract and any person using or relying upon such information does so on the basis that the Environment Protection Authority shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information.

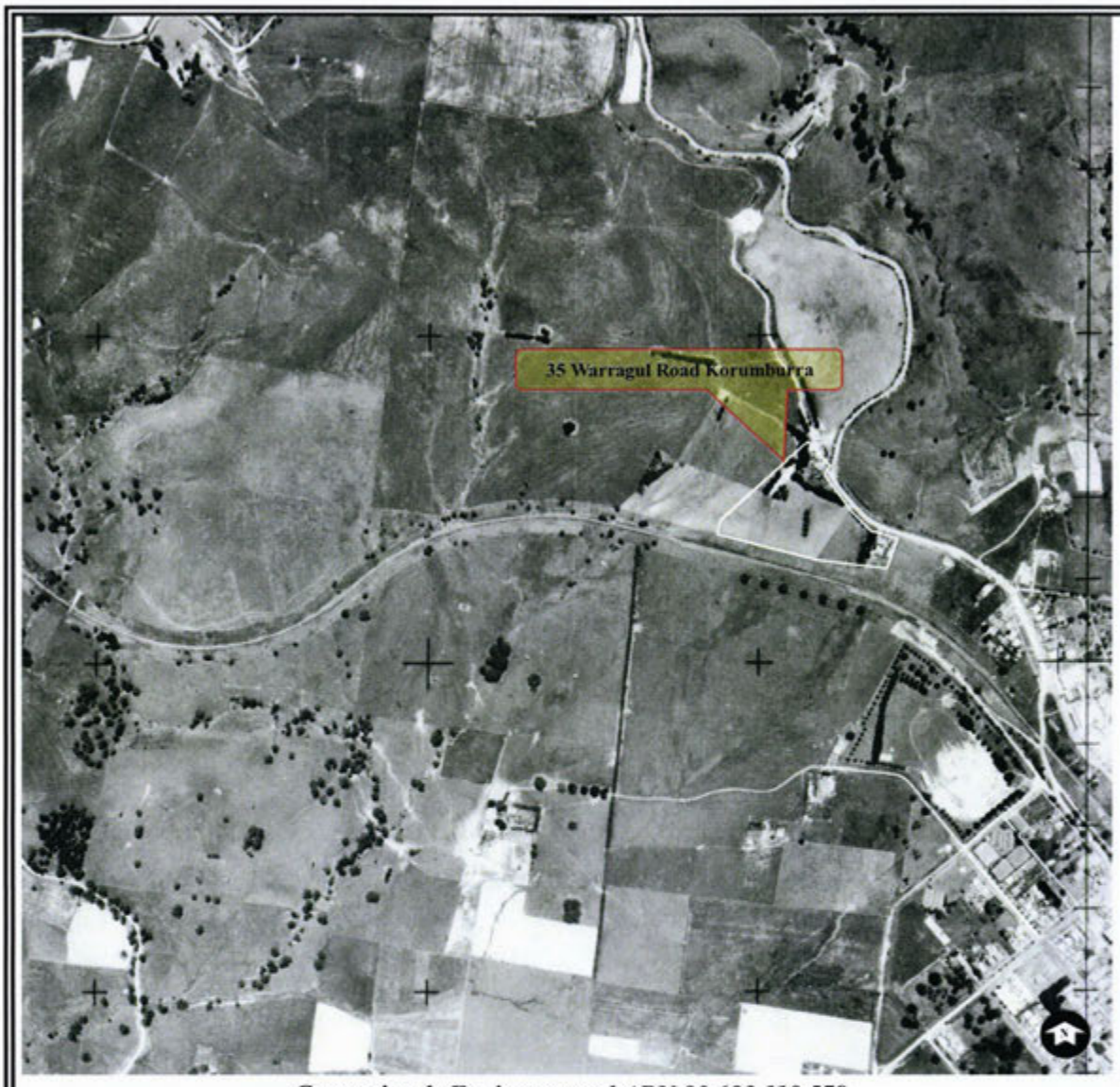
The information contained in this document has been sourced from the Environment Protection Authority who provides the Priority Sites Register information based only on the map reference entered when ordering this extract. Please ensure that you have used the correct edition of the directory and have entered the map reference correctly. SAI Global Property Division Pty Ltd does not warrant the accuracy or completeness of information provided by the EPA and therefore expressly disclaim liability arising from the use of this information.

SAI Global Property Division Pty Ltd ACN 089 586 872
Level 3, 355 Spencer St, West Melbourne 3003 T: 1300 730 000 E: epropertysupport@saiglobal.com

APPENDIX C

HISTORICAL AERIAL PHOTOGRAPHS AND GOOGLE AERIAL PHOTOGRAPH

FIGURE 9 - HISTORICAL AERIAL PHOTOGRAPH 1947



Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM594-M	Aerial Photograph Reference	Project No : 869/7, Project : Mapsheet Photography - Korumburra, Run : 9, Frame : 76, Scale : 1: 15840 Film Number : 777
Location	35 Warragul Road Korumburra	Aerial Photograph Number	1
Year of Photograph	01/1947	Project	Stage 1 Preliminary Site Investigation

FIGURE 10 - HISTORICAL AERIAL PHOTOGRAPH 1974

Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM594-M	Aerial Photograph Reference	Project No : 1190, Project : Korumburra Bypass, Run : 1, Frame : 219, Scale : 1:4000, Film Number : 2917
Location	35 Warragul Road Korumburra	Aerial Photograph Number	2
Year of Photograph	10/1974	Project	Stage 1 Preliminary Site Investigation

FIGURE 11 - HISTORICAL AERIAL PHOTOGRAPH 1982

Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM594-M	Aerial Photograph Reference	Project No : 1620, Project : Korumburra 1982, Run : 1, Frame : 173, Scale : 1:13000 Film Number : 3662
Location	35 Warragul Road Korumburra	Aerial Photograph Number	3
Year of Photograph	03/1982	Project	Stage 1 Preliminary Site Investigation

FIGURE 12 - HISTORICAL AERIAL PHOTOGRAPH 1990

Geoaquitards Environmental ABN 80 683 110 579

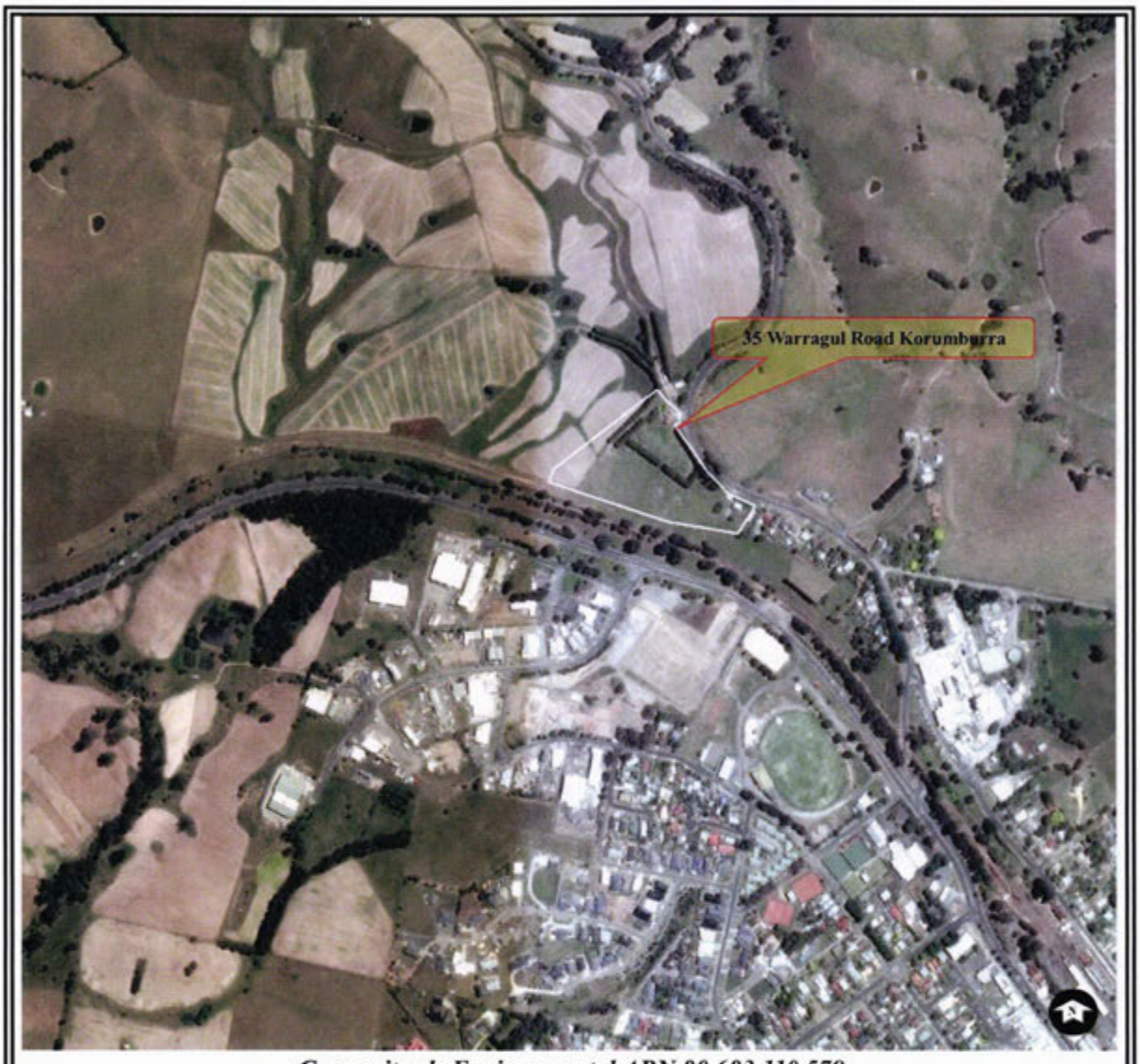
Job Number	RM594-M	Aerial Photograph Reference	Project No : 2034, Project : Melbourne 1989 Ext East, Run : 49A, Frame : 61, Scale : 1:15000 Film Number : 4325
Location	35 Warragul Road Korumburra	Aerial Photograph Number	4
Year of Photograph	02/1990	Project	Stage 1 Preliminary Site Investigation

FIGURE 13 - GOOGLE AERIAL PHOTOGRAPH 2009

Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM594-M		
Location	35 Warragul Road Korumburra	Google Aerial Photograph Number	1
Year of Photograph	2010	Project	Stage 1 Preliminary Site Investigation

FIGURE 14 - GOOGLE AERIAL PHOTOGRAPH 2015



Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM594-M		
Location	35 Warragul Road Korumburra	Google Aerial Photograph Number	2
Year of Photograph	2015	Project	Stage 1 Preliminary Site Investigation

FIGURE 15 - GOOGLE AERIAL PHOTOGRAPH 2019

Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM594-M		
Location	35 Warragul Road Korumburra	Google Aerial Photograph Number	3
Year of Photograph	2019	Project	Stage 1 Preliminary Site Investigation

APPENDIX D
TITLE INFORMATION

Historical Search

HISTORICAL SEARCH STATEMENT Land Use Victoria

Produced 22/07/2019 09:02 PM

Volume 11834 Folio 734
Folio Creation: Created as a computer folio

Parent titles :
Volume 10606 Folio 612 Volume 09713 Folio 067

RECORD OF HISTORICAL DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged	Dealing Type and Details

RECORD OF VOTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged
18/10/2016	30/11/2016	AN187971F	N

MORTGAGE OF LAND
MORTGAGE AN187971F 18/10/2016
BENDIGO AND ADELAIDE BANK LTD

11/04/2017	11/04/2017	AN734639S	Y

APPLICATION RE NOTICE OF INTENTION TO ACQUIRE LAND
NOTICE as to part Section 10(1) Land Acquisition and Compensation Act 1986
SOUTH GIPPSLAND REGION WATER CORPORATION
ADDRESS FOR SERVICE OF NOTICES
RUSSELL KENNEDY of LEVEL 12 469 LA TROBE STREET MELBOURNE VIC 3000
AN734639S 11/04/2017

14/08/2017	15/09/2017	AQ140776R	Y

NOTIFICATION OF EASEMENT OR RIGHT
AND REMOVAL OF NOTICE AN734639S

STATEMENT END

VOTS Snapshot

VOLUME 11834 FOLIO 734
124063384376S
Produced 21/11/2016 07:50 am

LAND DESCRIPTION

Lot 1 on Plan of Subdivision 725791W.
PARENT TITLES :
Volume 09713 Folio 067 Volume 10606 Folio 612
Created by instrument PS725791W 21/11/2016

REGISTERED PROPRIETOR

Estate Fee Simple
Joint Proprietors
BRIAN RAYMOND O'NEILL
CHRISTINA ANN O'NEILL both of 65 KORUMBURRA-WARRAGUL ROAD KORUMBURRA VIC 3950
PS725791W 21/11/2016

ENCUMBRANCES, CAVEATS AND NOTICES

MORTGAGE as to part AH395591H 30/07/2010
BENDIGO AND ADELAIDE BANK LTD

MORTGAGE as to part AJ431095G 13/01/2012
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 set out under DIAGRAM LOCATION below.

AGREEMENT Section 173 Planning and Environment Act 1987
AK839059D 14/01/2014

DIAGRAM LOCATION

SEE PS725791W FOR FURTHER DETAILS AND BOUNDARIES

Historical Search

HISTORICAL SEARCH STATEMENT Land Use Victoria

Produced 22/07/2019 08:56 PM

Volume 10606 Folio 612
Folio Creation: Created as paper folio continued as computer folio

Parent titles :
Volume 10472 Folio 032 Volume 09447 Folio 416 Volume 09498 Folio 629

RECORD OF HISTORICAL DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged	Dealing Type and Details

RECORD OF VOTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged
19/09/2006	19/09/2006	AE613165S	Y

DISCHARGE OF MORTGAGE
MORTGAGE(S) REMOVED
W060494E
W060497U

29/12/2011	29/12/2011	AJ397345V	N

RECTIFICATION-PROPRIETOR NAME/ADDRESS

RESULTING PROPRIETORSHIP:
Estate Fee Simple
As to the land formerly contained in Volume 10472 Folio 032
Sole Proprietor
BRIAN RAYMOND O'NEILL of WARRAGUL ROAD, KORUMBURRA 3950
As to the land formerly contained in Volume 09447 Folio 416
Joint Proprietors
BRIAN RAYMOND O'NEILL
CHRISTINA ANN O'NEILL both of WARRAGUL ROAD, KORUMBURRA 3950
PS439847Q 08/10/2001

13/01/2012	13/01/2012	AJ431095G (O)	Y

MORTGAGE OF LAND
MORTGAGE AJ431095G 13/01/2012
NATIONAL AUSTRALIA BANK LTD

14/01/2014	14/01/2014	AK839059D	Y

AGREEMENT SECTION 173 PLANNING AND ENVIRONMENT ACT 1987
AGREEMENT Section 173 Planning and Environment Act 1987

AK839059D 14/01/2014

16/08/2016 16/08/2016 AN020567X N

NOMINATE PCT TO PAPER INSTRUMENT OR LODGEMENT CASE

18/10/2016 21/11/2016 PS725791W (S) Y

PLAN OF SUBDIVISION, SUBDIVISION ACT 1988
Cancelled by PS725791W

STATEMENT END

VOTS Snapshot

Volume 10606 Folio 612
1240191438406
Produced 19/09/2006 11:08 am

LAND DESCRIPTION

Lot 3 on Plan of Subdivision 439847Q.
PARENT TITLES :
Volume 09447 Folio 416 Volume 09498 Folio 629 Volume 10472 Folio 032
Created by instrument PS439847Q 08/10/2001

REGISTERED PROPRIETOR

Estate Fee Simple
As to the land formerly contained in Volume 10472 Folio 032
Sole Proprietor
BRIAN RAYMOND O'NEILL of WARRAGUL ROAD, KORUMBURRA 3950
As to the land formerly contained in Volume 09447 Folio 416
Joint Proprietors
BRIAN RAYMOND O'NEILL
CHRISTIAN ANN O'NEILL both of WARRAGUL ROAD, KORUMBURRA 3950
PS439847Q 08/10/2001

ENCUMBRANCES, CAVEATS AND NOTICES

MORTGAGE as to part W060494E 21/05/1999
WESTPAC BANKING CORPORATION

MORTGAGE as to part W060497U 21/05/1999
WESTPAC BANKING CORPORATION

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 PS439847Q FOR FURTHER DETAILS AND BOUNDARIES

ORIGINAL

NOT TO BE TAKEN FROM THE OFFICE OF TITLES

REGISTER BOOK

VOL 10606 FOL 612

VICTORIA

Certificate of Title

UNDER THE "TRANSFER OF LAND ACT"

BRIAN RAYMOND O'NEILL of Warragul Road Korumburra 3950 (as to the land formerly contained in Certificate of Title Volume 10472 Folio 032) and BRIAN RAYMOND O'NEILL and CHRISTINA ANN O'NEILL both of Warragul Road Korumburra 3950 as joint propietors (as to the land formerly contained in Certificate of Title Volume 9447 Folio 416) are the proprietors of an estate in fee simple subject to the encumbrances notified hereunder in all that piece of land in the Parish of Korumburra being Lot 3 on Plan of Subdivision No 439847Q

Derived From
Vol. 9447 Fol. 416 and Vol. 9498 Fol. 629 and Vol. 10472 Fol. 032
08/10/2001

OFFICE OF TITLES VICTORIA

Assistant Registrar of Titles

ENCUMBRANCES REFERRED TO

As to the land formerly contained in Certificate of Title Vol. 10472 Fol. 032
MORTGAGE W060494E Westpac Banking Corporation 21/05/1999

As to the land formerly contained in Certificate of Title Vol. 9447 Fol. 416
MORTGAGE W060497U Westpac Banking Corporation 21/05/1999

Any encumbrances created by Section 98 of the Transfer of Land Act 1958 or Section 24 of the Subdivision Act 1988

Any other encumbrances shown or entered on the said Plan

SEE PS439847Q FOR BOUNDARIES AND OTHER DETAILS

T10606-612-1-5

VOL FOL

Historical Search

HISTORICAL SEARCH STATEMENT Land Use Victoria

Produced 22/07/2019 08:56 PM

Volume 9713 Folio 067
Folio Creation: Created as paper folio continued as computer folio
Parent title Volume 05743 Folio 520

THE IMAGE OF THE FOLIO CEASED TO BE THE DIAGRAM LOCATION ON 24/09/2002 07:31:35 AM

RECORD OF HISTORICAL DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged	Dealing Type and Details

RECORD OF VOTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged
23/07/2002	23/07/2002	AB433151H	Y

TRANSFER OF LAND BY ENDORSEMENT
FROM:
STANLEY OSCAR SAARIO
BURNICE MAY SAARIO
TO:
BARRY JOHN WHITEHEAD
GERALDINE LEONE WHITEHEAD

RESULTING PROPRIETORSHIP:
Estate Fee Simple
Joint Proprietors
BARRY JOHN WHITEHEAD
GERALDINE LEONE WHITEHEAD both of 34 BRANAGAN DRIVE ASPENDALE GARDENS VIC 3195
AB433151H 23/07/2002

23/07/2002	23/07/2002	AB433152F	Y

MORTGAGE OF LAND
MORTGAGE AB433152F 23/07/2002
COMMONWEALTH BANK OF AUSTRALIA

27/08/2003	27/08/2003	AC292107J	Y

DISCHARGE OF MORTGAGE
MORTGAGE(S) REMOVED
AB433152F

27/08/2003 27/08/2003 AC292108G Y

TRANSFER OF LAND BY ENDORSEMENT
FROM:
BARRY JOHN WHITEHEAD
GERALDINE LEONE WHITEHEAD
TO:
ANNETTE PATRICIA PERRY

RESULTING PROPRIETORSHIP:
Estate Fee Simple
Sole Proprietor
ANNETTE PATRICIA PERRY of 20 ATHOL COURT RYE VIC 3941
AC292108G 27/08/2003

27/08/2003 27/08/2003 AC292109E Y

MORTGAGE OF LAND
MORTGAGE AC292109E 27/08/2003
WESTPAC BANKING CORPORATION

14/09/2004 14/09/2004 AD112237V Y

DISCHARGE OF MORTGAGE
MORTGAGE(S) REMOVED
AC292109E

14/09/2004 14/09/2004 AD112238T Y

MORTGAGE OF LAND
MORTGAGE AD112238T 14/09/2004
WILLIAM JOHN LAWS
PAULINE ANDREA LAWS

07/02/2006 07/02/2006 AE165678F Y

DISCHARGE OF MORTGAGE
MORTGAGE(S) REMOVED
AD112238T

08/08/2006 08/08/2006 AE530329Y Y

CAVEAT
CAVEAT AE530329Y 08/08/2006
Caveator
BRIAN RAYMOND O'NEILL
CHRISTINA ANN O'NEILL
Capacity PURCHASER/FEE SIMPLE
Lodged by
MCDOWELL & CO
Notices to
MCDOWELL & CO of 39 MCBRIDE AVENUE WONTHAGGI VIC 3995

30/05/2008 30/05/2008 AF876289T Y

TRANSFER OF LAND BY ENDORSEMENT
FROM:
ANNETTE PATRICIA PERRY
TO:
BRIAN RAYMOND O'NEILL
CHRISTINA ANN O'NEILL

RESULTING PROPRIETORSHIP:
Estate Fee Simple
Joint Proprietors
BRIAN RAYMOND O'NEILL

CHRISTINA ANN O'NEILL both of 65 KORUMBURRA-WARRAGUL ROAD KORUMBURRA VIC 3950
AF876289T 30/05/2008
AND LAPSING OF CAVEAT AE530329Y

30/05/2008 30/05/2008 AF876290K Y

MORTGAGE OF LAND
MORTGAGE AF876290K 30/05/2008
WESTPAC BANKING CORPORATION

30/07/2010 30/07/2010 AH395590K Y

DISCHARGE OF MORTGAGE
AFFECTED ENCUMBRANCE(S) AND REMOVED MORTGAGE(S)
MORTGAGE AF876290K

30/07/2010 30/07/2010 AH395591H Y

MORTGAGE OF LAND
MORTGAGE AH395591H 30/07/2010
BENDIGO AND ADELAIDE BANK LTD

14/01/2014 14/01/2014 AK839059D Y

AGREEMENT SECTION 173 PLANNING AND ENVIRONMENT ACT 1987
AGREEMENT Section 173 Planning and Environment Act 1987
AK839059D 14/01/2014

18/10/2016 18/10/2016 AN187798S N

NOMINATE PCT TO PAPER INSTRUMENT OR LODGEMENT CASE

18/10/2016 21/11/2016 PS725791W (S) Y

PLAN OF SUBDIVISION, SUBDIVISION ACT 1988
Cancelled by PS725791W

STATEMENT END

VOTS Snapshot

Volume 09713 Folio 067
124002431846S
Produced 23/07/2002 07:59 am

LAND DESCRIPTION

Lot 1 on Title Plan 119384D (formerly known as Lot 2 on Plan of Subdivision 075143).
PARENT TITLE Volume 05743 Folio 520
Created by instrument M470507J 11/09/1986

REGISTERED PROPRIETOR

Estate Fee Simple
Joint Proprietors
STANLEY OSCAR SAARIO
BURNICE MAY SAARIO both of 27 MINE RD KORUMBURRA
N008852N 26/08/1987

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 DIAGRAM ON IMAGED FOLIO VOLUME 9713 FOLIO 067 FOR FURTHER DETAILS AND BOUNDARIES

M470507J

ORIGINAL

NOT TO BE TAKEN FROM THE OFFICE OF TITLES

VICTORIA

REGISTER BOOK

VOL. 9713 FOL. 067

Certificate of Title

UNDER THE "TRANSFER OF LAND ACT"

SYLVIA LILLIAN TWITE of 35 Warragul Road Korumburra is the proprietor of an estate in fee simple subject to the encumbrances notified hereunder in all that piece of land in the Parish of Korumburra County of Mornington being Lot 2 on Plan of Subdivision No.75143 and being part of Crown Allotment 26 which land is shown enclosed by continuous lines on the map on the sheet annexed hereto - - - - - - - -

FOL.

VOL.

DATE: 11/9/86
DERIVED FROM VOL.5743 FOL.520 M470507J

ENCUMBRANCES

As to the land shown marked E-1

THE EASEMENTS (if any) existing over the same by virtue of Section 98 of the Transfer of Land Act

THE EASEMENT to Korumburra Waterworks Trust created by Instrument 2616460

OFFICE OF TITLES VICTORIA

Assistant Registrar of Titles

T09713-067-1-1

MEASUREMENTS ARE IN METRES

VOL. 9713 FOL. 067

JOINT PROPRIETORS

STANLEY OSCAR SAARIO & BURNICE MAY SAARIO

OF 27 MINE RD. KORUMBURRA

REGISTERED 26/8/87

N8852N

MORTGAGE

COMPASS BUILDING SOCIETY

REGISTERED 26/8/87

N8853K

DISCHARGED 12 FEB 1988

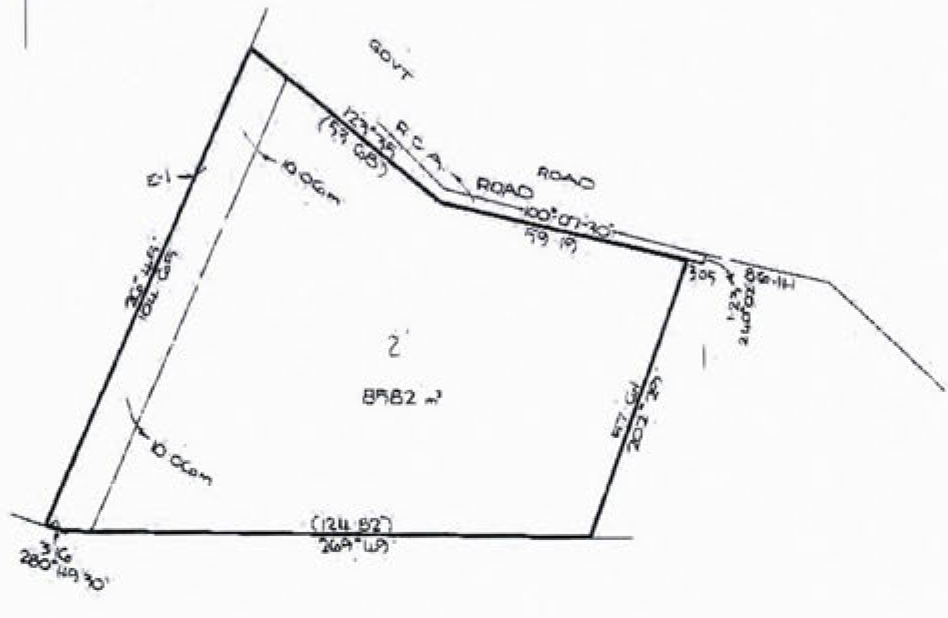
OFFICE OF TITLES M.L.T. VICTORIA

OFFICE OF TITLES L.R.S. VICTORIA

OFFICE OF TITLES M.L.T. VICTORIA

ANNEXED SHEET REFERRED TO IN
CERTIFICATE OF TITLE VOL. 9713 FOL. 067

ASSISTANT REGISTRAR OF TITLES



T09713-067-2-9

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Historical Search

HISTORICAL SEARCH STATEMENT Land Use Victoria

Produced 22/07/2019 08:56 PM

Volume 9447 Folio 416
Folio Creation: Details Unknown

Parent titles :
Volume 05854 Folio 635 to Volume 05854 Folio 636
Volume 05854 Folio 635 to Volume 05854 Folio 636Volume 08574 Folio 201

RECORD OF HISTORICAL DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged	Dealing Type and Details
08/10/2001	08/10/2001	PS439847Q	Y	Cancelled by PS439847Q

RECORD OF VOTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged

STATEMENT END

Delivered from the LANDATA® System by InfoTrack Pty Ltd.

J405067

ORIGINAL

NOT TO BE TAKEN FROM THE OFFICE OF TITLES

VICTORIA

CANCELLED

REGISTER BOOK VOL. 9447 FOL. 416

Certificate of Title

UNDER THE "TRANSFER OF LAND ACT"

BRIAN RAYMOND O'NEILL Meat Inspector and CHRISTINA ANN O'NEILL Married Woman both of Warragul Road Korumburra are JOINT PROPRIETORS of an estate in fee-simple subject to the encumbrances notified hereunder in all that piece of land in the Parish of Korumburra County of Mornington being Lot One on Plan of Subdivision No.130125 and being part of Crown Allotment 26 and part of a former Government Road which land is shown enclosed by continuous lines on the map hereon The land shown marked A and B being so much as lies above the depth of 15.24 METRES below the surface- - - - - - - - - - - - - - - - - - -

VOL. FOL.

DATED the 1st day of April 1981

Assistant Registrar of Titles

OFFICE OF TITLES VICTORIA

ENCUMBRANCES REFERRED TO

As to the land shown marked B and C- -

THE EASEMENTS (if any) existing over the same by virtue of Section 98 of the Transfer of Land Act- - - - - -

PLAN PS439847Q AFFECTS LAND HEREIN

TD9447-416-1-1

Derived from Vols.5854 Fols.635
636
8574 201

J405067

MEASUREMENTS ARE IN METRES

AREA IS IN HECTARES (ha)

440

VOL 9447 FOL 416 | INSTRUMENT | APPLICATION | 10665/80-FL-6

MORTGAGE to MANCHESTER UNITY (VICTORIA) PERMANENT BUILDING SOCIETY
Registered 1st April 1981
No. J405068
DISCHARGED 26 JUN 1987
OFFICE OF TITLES R.J.J. VICTORIA
OFFICE OF TITLES C.M.C. VICTORIA

MORTGAGE to GENERAL CREDITS LIMITED
Registered 7th June 1982
No. J958850
DISCHARGED 4 SEP 1984
OFFICE OF TITLES I.P.C. VICTORIA
OFFICE OF TITLES P.B. VICTORIA

MORTGAGE to THE COMMISSIONERS OF THE STATE BANK OF VICTORIA
Registered 4th September 1984
No. L239655M
DISCHARGED 26 JUN 1987
OFFICE OF TITLES I.P.C. VICTORIA
OFFICE OF TITLES C.M.C. VICTORIA

MORTGAGE TO WESTPAC BANKING CORPORATION
Registered 12 SEP 1988
No. N700983M
DISCHARGED 8 MAR 1993
OFFICE OF TITLES D.J.H. VICTORIA
OFFICE OF TITLES J.D.H. VICTORIA

MORTGAGE
QUEENSLAND INDUSTRY DEVELOPMENT CORPORATION
S403568E 18/3/1993
DISCHARGED W604958 21 MAY 1999
OFFICE OF TITLES E.TU. VICTORIA
OFFICE OF TITLES J.D.H. VICTORIA

MORTGAGE
QUEENSLAND INDUSTRY DEVELOPMENT CORPORATION
S403569B 18/3/1993
DISCHARGED W604959 21 MAY 1999
OFFICE OF TITLES E.TU. VICTORIA
OFFICE OF TITLES J.D.H. VICTORIA

MORTGAGE
NATIONAL AUSTRALIA BANK LIMITED
T411324R 14/11/94
DISCHARGED W604966 21 MAY 1999
OFFICE OF TITLES E.TU. VICTORIA
OFFICE OF TITLES R.A. VICTORIA

MORTGAGE
WESTPAC BANKING CORPORATION
W604970 21/05/99
OFFICE OF TITLES E.TU. VICTORIA

CANCELLED
PS439847Q
OFFICE OF TITLES K.M.B. VICTORIA

CANCELLED

Entered in the Register Book

Vol. 5854 Fol. 1170635

VICTORIA.

Certificate of Title,

UNDER THE "TRANSFER OF LAND ACT 1928."

John Western of Kardella Grazier Flora Edith Turner of Keilor Road Essendon -- Married Woman and Philip Henry Minchin of Korumburra Agent are now the -------- proprietors as tenants in common in equal shares - - - - - - - - - - - - - - - - - ~~now the proprietor~~ of an Estate in Fee-simple, subject to the Encumbrances notified hereunder in All that piece of Land, delineated and coloured red on the map in the margin containing One hundred and forty-four acres Three roods and ~~Twelve~~ Eight perches or thereabouts being part of Crown Allotment Twenty-six and part of a former Government Road Parish of Korumburra County of Mornington - - - - - -

ORIGINAL CERTIFICATE.
Not to be dealt with outside the Titles Office.

PLAN 130125
AFFECTS LAND HEREIN

Dated the Fifteenth *day of* August *One thousand nine hundred and* thirty-three.

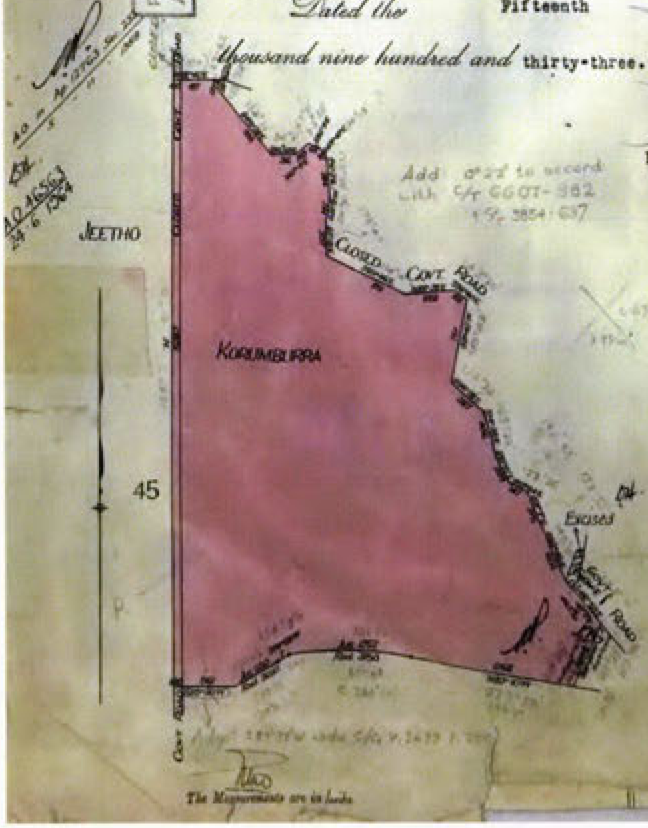
J. McLennan
Assistant Registrar of Titles.

OFFICE OF TITLES VICTORIA

ENCUMBRANCES REFERRED TO.

MORTGAGE No.634525 in the Register Book --

The above mortgage is
DISCHARGED
Assistant Registrar of Titles
14th November 1934



T05854-635-1-1

Vol. 5609 *Fol.* 1121694 *Transfer.* 1529867 *Application.*

Laurence Edward Carter Holmes of Korumburra Farmer is
now the proprietor of the within described estate by
transfer registered on 21st August 1934
and numbered 1556608
Assistant Registrar of Titles

MORTGAGE to Anne Maria Octavia Motton registered
on 19 November 1934 numbered 708988
Assistant Registrar of Titles
DISCHARGED

MORTGAGE to The Bank of Australasia registered
on 5 November 1937 numbered 746938
Assistant Registrar of Titles
DISCHARGED

Charles John O'Neill of Korumburra Dealer and Grazier is
now the proprietor of the within described estate by
transfer registered on 25th September 1950
and numbered 2343279.
Assistant Registrar of Titles

No.A.586464.
CHARLES JOHN O'NEILL died on 13th September 1957.---
Probate of his Will has been granted to RUTH O'NEILL
of Korumburra Widow.
DATED 14th August 1958.
Assistant Registrar of Titles.

RUTH O'NEILL of Korumburra Widow is now the -----
proprietor of the within described estate by transfer
registered on 14th August 1958 and numbered A.586465.
17 OCT 1958
Assistant Registrar of Titles.

COUNTRY ROADS BOARD
has, pursuant to section 57 of Transfer of Land Act
lodged a Notification relating to the compulsory acquisition
of part of C/A 26 being part of
the land comprised herein.
Dated 10 AUG 1961
No. 61/25189 (Plan with letter)

TRANSFER AS TO PART No. C 564
registered 5th August 1964
CANCELLED AS TO PART
See Vol. 8524 Fol. 862

MORTGAGE to THE COMMERCIAL BANKING COMPANY OF
SYDNEY LIMITED
Registered 26th November 1965
No.D257618
DISCHARGED 5 SEP 1979

MORTGAGE as to part to THE COMMISSIONERS
OF THE STATE SAVINGS BANK OF VICTORIA
Registered 5th September 1979
No.H670782

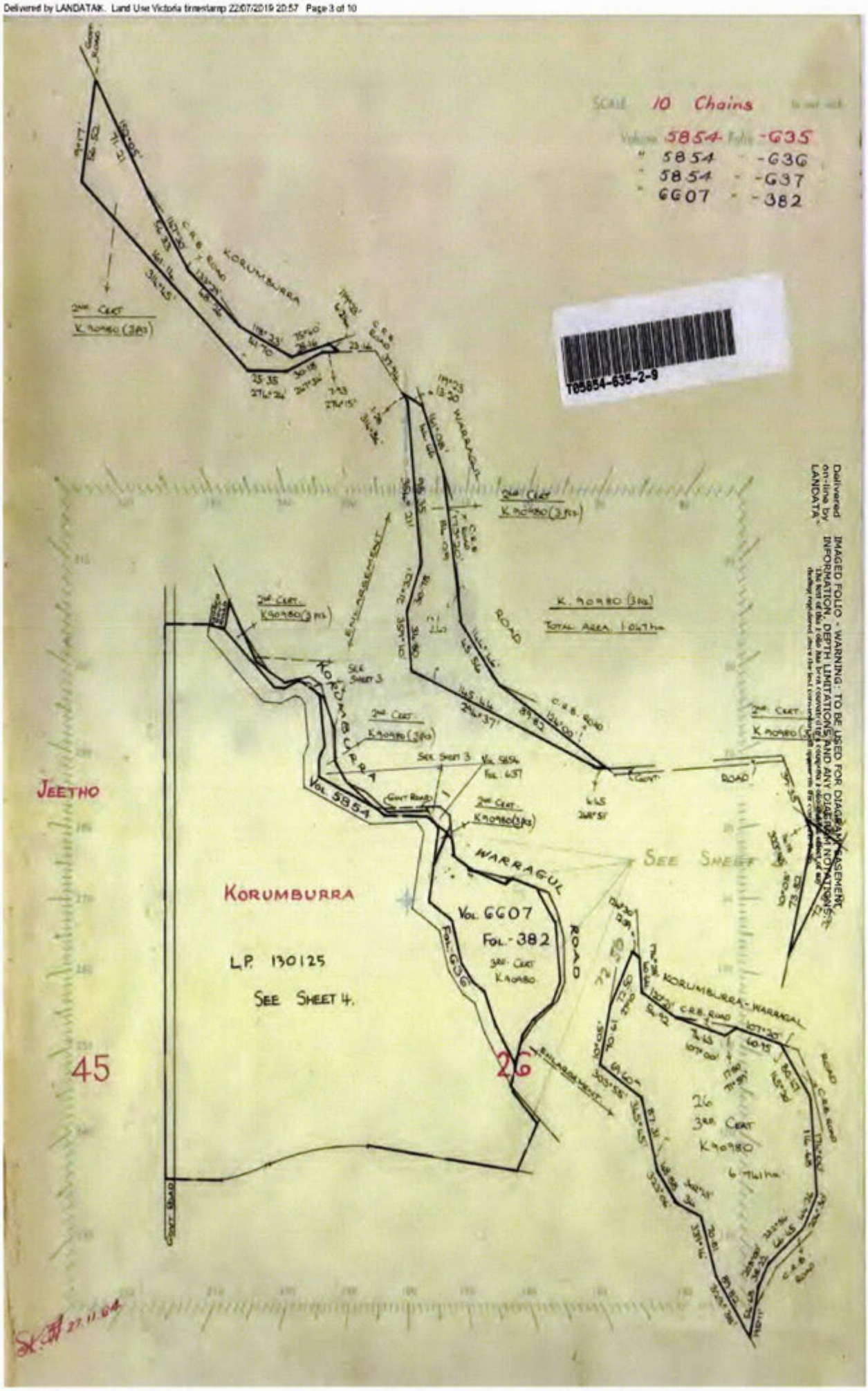
CAVEAT No. H334946. LODGED 16 JAN 1980
Affecting part of the land herein
CAVEAT WILL LAPSE ON
REGISTRATION OF J405067
16 NOV 1981

TRANSFER AS TO PART No. J405067
registered 1st April 198
CANCELLED AS TO PART
See Vol. 9447 Fol. 416

Ruth O'Neill DIED
on 11th April 1982 PROBATE OF her WILL
HAS BEEN GRANTED TO John Francis O'Neill
and Brian Raymond O'Neill
Registered 17th September 1982
No. K90978

TRANSFER AS TO BALANCE No. K90980
registered 17th September 1982
CANCELLED See Vol. 9498 Fol. 627

CANCELLED



INTENTIONALLY
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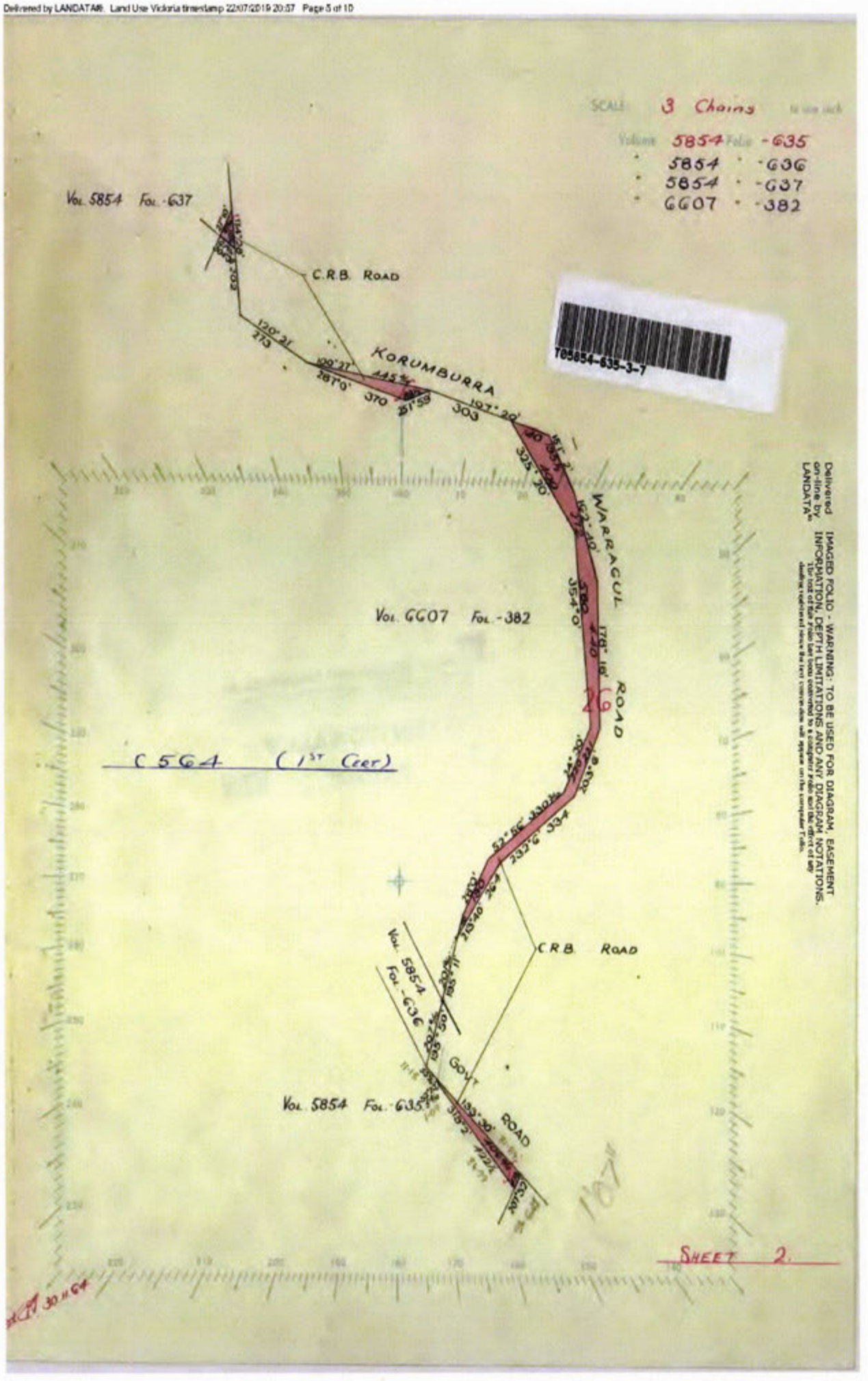

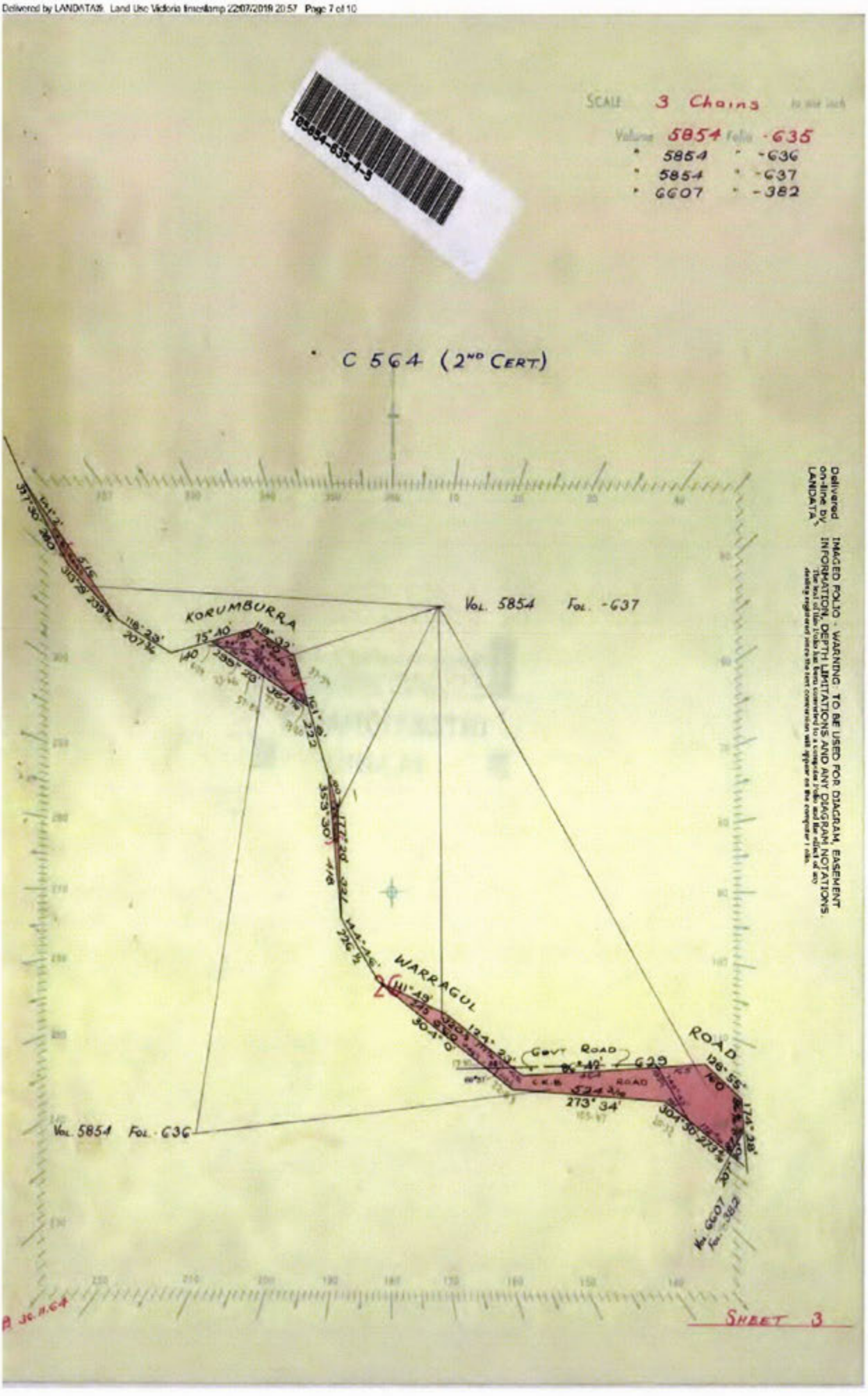

Natural Resources and Environment

AGRICULTURE • RESOURCES • CONSERVATION • LAND MANAGEMENT

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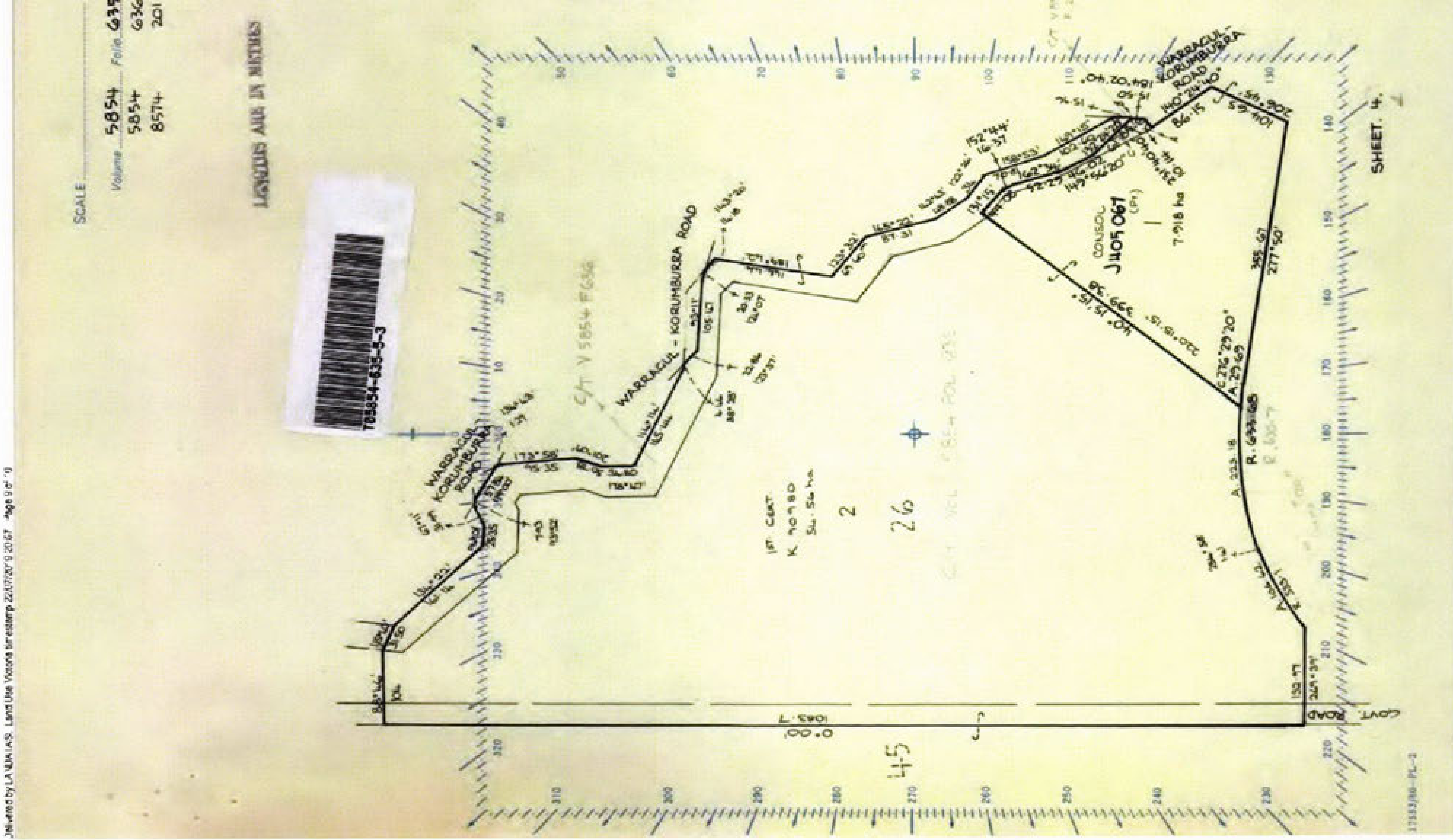

Natural Resources and Environment

AGRICULTURE • RESOURCES • CONSERVATION • LAND MANAGEMENT

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Entered in the Register Book

Vol. 5743 Fol. 1148520

VICTORIA.

Certificate of Title,

UNDER THE "TRANSFER OF LAND ACT 1928."

CANCELLED

ORIGINAL CERTIFICATE.
Not to be dealt with outside the Titles Office.

Agnes Adelaide Holmes of Korumburra Widow is - - - - - - - - - - - - - - - - - - *now the proprietor of an Estate in Fee-simple, subject to the Encumbrances notified hereunder in* **All** *that piece of Land, delineated and coloured* red and blue on the map in the margin containing Three acres Two roods and Thirty-one perches or thereabouts being part of Crown Allotment Twenty-six Parish of Korumburra County of Mornington -

Dated the Fourteenth *day of* July *thousand nine hundred and* thirty-one.

Assistant Registrar of Titles.

OFFICE OF TITLES

ENCUMBRANCES REFERRED TO.

As to the land colored blue ---
THE EASEMENT created by Instrument No. 381396 in the Register Book - - - - - - - - - - - - -

THE WHOLE/OR PART OF THE WITHIN LAND HAS BEEN SUBDIVIDED See Deposited Plan
Misc. Plan
L.P. 30280
75143

The Measurements are in Links

705743-520-1-7

4631-1471

Vol. 4631. Fol. 926149. Transfer. 1484909. Application.

Dealing No. 4038334
Agnes Adelaide Holmes who died on 13th May 1942 Probate of her will has been granted to Laurence Carter Holmes of Korumburra Farmer
Dated 31st July 1942
Assistant Registrar of Titles

Laurence Carter Holmes of Korumburra Farmer is now the proprietor of the within described estate by transfer registered on 31st July 1942 and numbered 1863576
Assistant Registrar of Titles

MORTGAGE to The Bank of Australasia registered ... July 1942 numbered 822340
Assistant Registrar of Titles
DISCHARGED

James Thornton Twite of Korumburra Butter Factory Employee is now the proprietor of the within described estate by transfer registered on 11th September 1942 and numbered 1867706
Assistant Registrar of Titles

MORTGAGE to James Just Coleman registered on 11th September 1942 numbered 824134
Assistant Registrar of Titles
DISCHARGED 12th October 1945

MORTGAGE to Laurence Carter Holmes registered on 11th September 1942 numbered 824135
Assistant Registrar of Titles
DISCHARGED 25th June 1948

TRANSFER AS TO PART No. 2447190, registered 26th November 1953
CANCELLED AS TO PART
See Vol. 8265 Fol. 929

CREATION OF EASEMENT registered on 7th January 1954 numbered 2616460

TRANSFER AS TO PART No. 2681714 registered 12th October 1954.
CANCELLED AS TO PART
See Vol. 8282 Fol. 773
Lot 2 LP 44374

TRANSFER AS TO PART No. 2700223 registered 22nd December 1954
CANCELLED AS TO PART
See Vol. 8282 Fol. 774
Lot 4

TRANSFER AS TO PART No. 2700224 registered 22nd December 1954.
CANCELLED AS TO PART
See Vol. 8282 Fol. 775
Lot 3

TRANSFER AS TO PART No. A17998 registered 4th August 1955
CANCELLED AS TO PART
See Vol. 8282 Fol. 776
Part Lot 2 LP 39983

TRANSFER AS TO PART No. A17999 registered 4th August 1955.
CANCELLED AS TO PART
See Vol. 8282 Fol. 777
Part Lot 1 LP 39983

TRANSFER AS TO PART No. A132810 registered 27th March 1956
CANCELLED AS TO PART
See Vol. 8282 Fol. 778
Lot 1 LP 44374.

COUNTRY ROADS BOARD has pursuant to section 5A of Transfer of Land Act served a Notification relating to the compulsory acquisition of part of the land comprised herein.
Date 10 AUG 1961
Notice No. 61/25189 (Plan with letter)

TRANSFER AS TO PART No. C112793 registered 17th December 1964.
CANCELLED AS TO PART
See Vol. 8548 Fol. 112

TRANSFER AS TO PART No. C637990 registered 14th NOVEMBER 1966
CANCELLED AS TO PART
See Vol. 8652 Fol. 069

S.O.
JAMES THORNTON TWITE DIED ON 13/5/86 PROBATE OF HIS WILL HAS BEEN GRANTED TO SYLVIA LILLIAN TWITE OF 35 WARRAGUL RD. KORUMBURRA NEIL JOHN TWITE OF 26 EDWARD ST. DONVALE & GEOFFREY THORNTON TWITE OF 13 NERRENA RD. DUMBALK
REGISTERED 11/9/86
M470506M

TRANSFER No. M470505 registered
CANCELLED See Vol. 9713 Fol. 067
CANCELLED

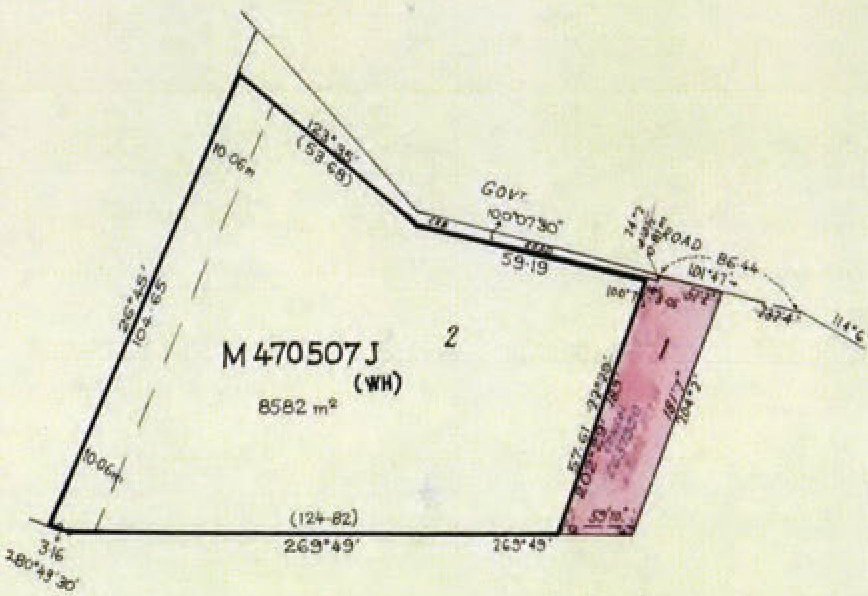
1:1200

~~100 Feet~~

5743 - 520
Fol 8282 Fol 774

METRIC MEASUREMENTS
SHOWN FOR M470507J

T05743-520-2-5



LP 75143

SHEET 4

Natural Resources and Environment
AGRICULTURE • RESOURCES • CONSERVATION • LAND MANAGEMENT

INTENTIONALLY BLANK

Scale : 100 Feet to one inch
Vol. 5743 Fol. 520

L.P. 44374
Sheet 2

1/3/10

Natural Resources and Environment

AGRICULTURE • RESOURCES • CONSERVATION • LAND MANAGEMENT

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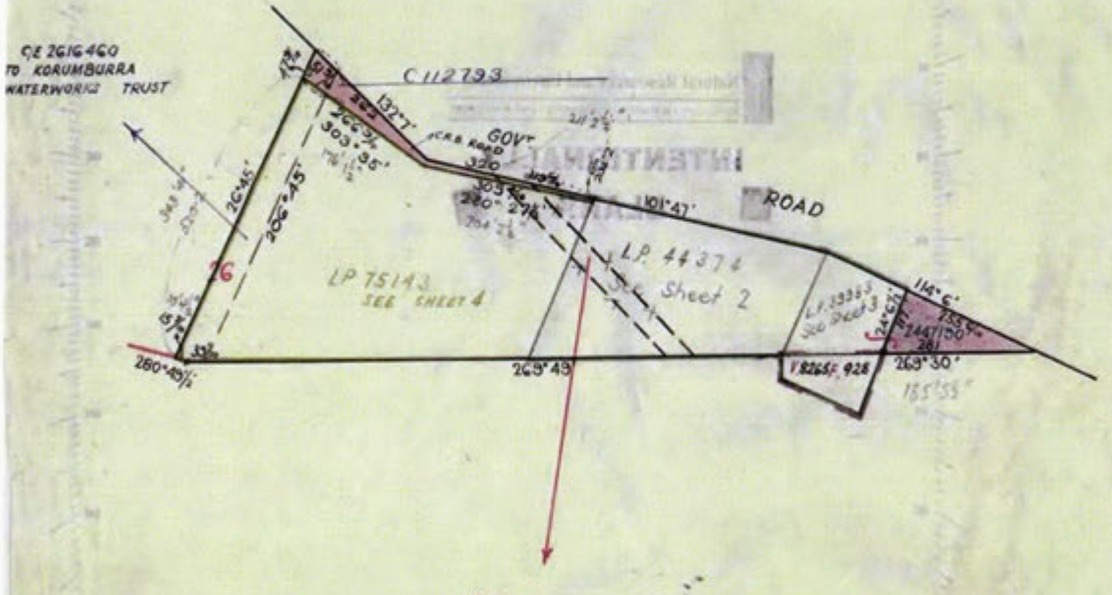
SCALE: 2 chains to one inch

Vol. 5743 Fol. - 520
Vol. 8265 Fol. 928



S/E :

EMENT CREATED BY INSTR. N° 381336 SURRENDERED
VIDE S/E 2G16439

T05743-520-4-1

Sheet 1

Ex. 5/2/59

Natural Resources and Environment

AGRICULTURE • RESOURCES • CONSERVATION • LAND MANAGEMENT

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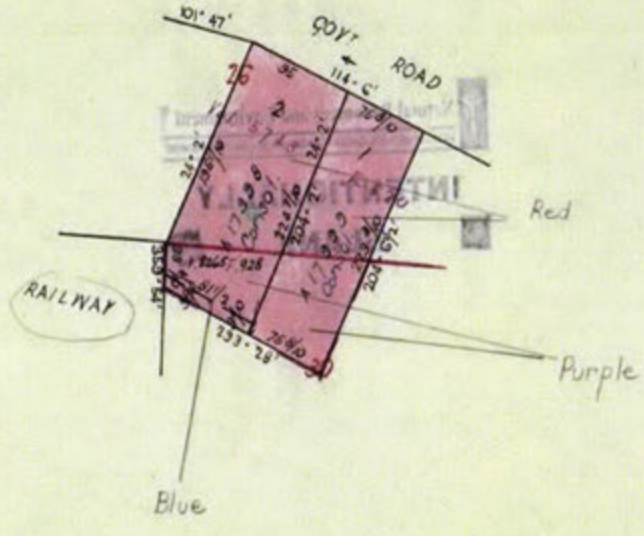
SCALE: 1 Chain to one inch

Vol. 5743 Fol. 620
V. 8265 F. 928



L.P. 39983
Sheet 3

T05743-520-S-0

7/3/61.

Natural Resources and Environment

AGRICULTURE • RESOURCES • CONSERVATION • LAND MANAGEMENT

INTENTIONALLY BLANK

CANCELLED

Entered in the Register Book

VICTORIA.

Vol. 5609 Fol. 112169[illegible]

Certificate of Title,

UNDER THE "TRANSFER OF LAND ACT 1915."

Henry Charles Goad of Reservoir Road Korumburra Farmer is - - - - - - - - - - - -

now the proprietor of an Estate in Fee simple subject to the Encumbrances notified hereunder in All that piece of Land delineated and coloured red on the map in the margin containing One hundred and forty-four acres Three roods and Twelve perches or thereabouts being part of Crown Allotment Twenty-six and part of a former Government Road Parish of Korumburra County of Mornington - - - - - - - -

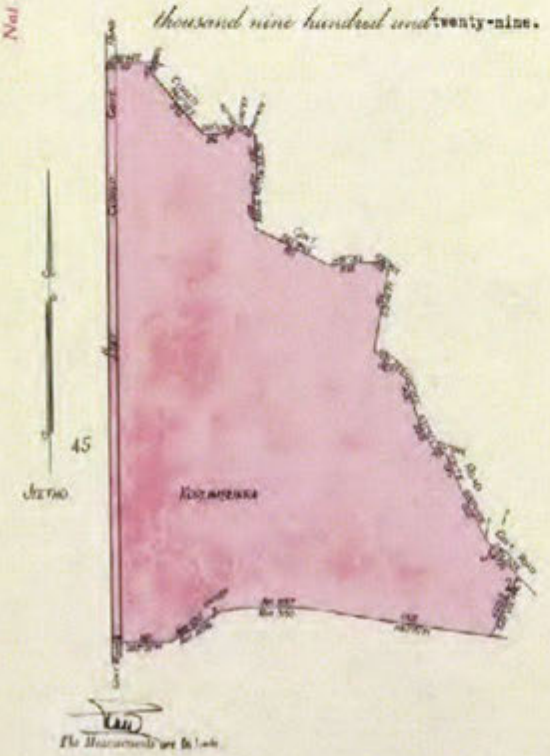
ORIGINAL CERTIFICATE.
Not to be dealt with outside the Titles Office.

Dated the Nineteenth day of November One thousand nine hundred and twenty-nine.

Assistant Registrar of Titles.

ENCUMBRANCES REFERRED TO.

OFFICE OF TITLES VICTORIA



The Measurements are in Links

T0609-604-1-9

Vol. 11241 Fol. 126149 Transfer. 1437562 Application

MORTGAGE to John James Eagle Knight

registered

on 5th November 1927 numbered 631/335

Assistant Registrar of Titles

John Jonkin Holland of Korumburra

Farmer is

now the proprietor of the within described estate by

transfer registered on 2nd July 1932

and numbered 1584497

L. Kennedy.

Assistant Registrar of Titles

TRANSFER to John Western, Flora Edith Turner and Philip Henry Minchin

registered

on 15th August 1933 numbered 1529867.

CANCELLED See Certificate of Title

Vol 5854 Fol 1170635

L. M. Lennan

Assistant Registrar of Titles

CANCELLED

CANCELLED

Entered in the Register Book Vol. 4631 Fol. 926149

VICTORIA.

Certificate of Title,

UNDER THE "TRANSFER OF LAND AOT 1915."

William Henry Carter Holmes of Korumburra Farmer is - - - - - - - - - - - - -

now the proprietor of an Estate in Fee-simple, subject to the Encumbrances notified hereunder in All th at piece of Land, delineated and coloured red and blue on the map in the margin containing One hundred and forty-eight acres- One rood and Thirty perches or thereabouts being part of Crown Allotment Twenty-six- and part of a former Government Road Parish of Korumburra County of Mornington ---

ORIGINAL CERTIFICATE.
Not to be dealt with outside the Titles Office.

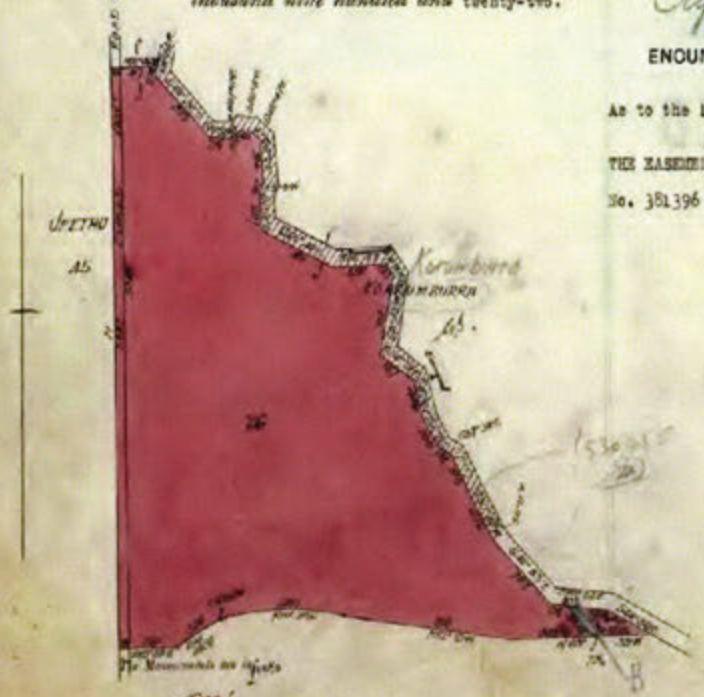
Co 20035 B. Dated the Twentieth day of October One thousand nine hundred and twenty-two.

Alfred Comport
Assistant Registrar of Titles.

ENCUMBRANCES REFERRED TO.

As to the land colored blue ---

THE EASEMENT created by Instrument ---
No. 381396 in the Register Book - - --



TG4631-149-1-1

CERTIFICATE AMENDED.

CO 20035

Vol. 2639 Fol. 527705 / 3529 705761 Transfer. 1072113. Application.

DISCHARGED
[stamp, struck through] ... TRUSTEES EXECUTORS AND AGENCY COMPANY OF AUSTRALASIA LIMITED registered on 22nd November 1924 and numbered 500872
J Brawin Assistant Registrar of Titles
Thos Peterson Assistant Registrar of Titles

Reg. Int. No. 3007943. William Henry Carter Holmes died on 6th November 1928 Probate has been granted to Agnes Adelaide Holmes of Korumburra Widow
DATED 7th March 1929
25.3.29 T.H. Hocking Assistant Registrar of Titles.

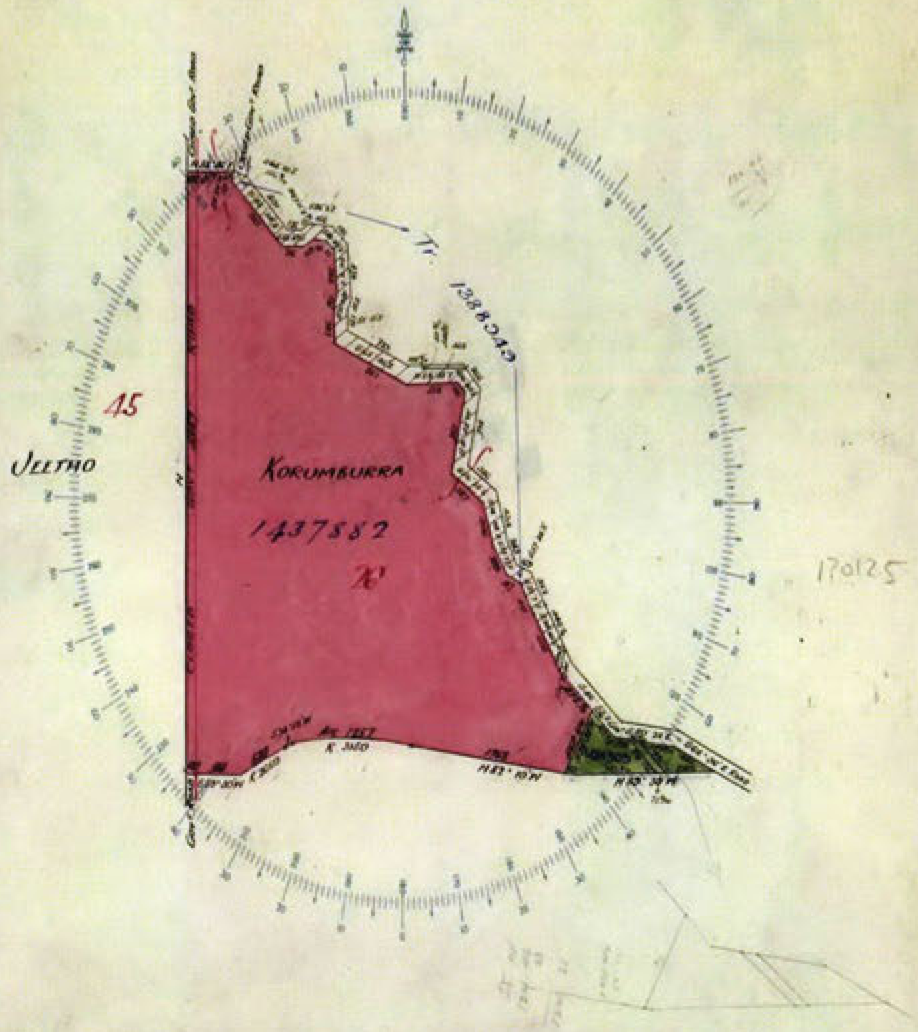
TRANSFER AS TO PART to Henry Charles Lord registered on 17th November 1929 numbered 1437562
CANCELLED AS TO PART See Certificate of Title Vol. 5600 Fol. 1121694
J Brawin
Assistant Registrar of Titles

TRANSFER AS TO BALANCE to Agnes Adelaide Holmes. registered on 14th July 1931 numbered 1484909.
CANCELLED See Certificate of Title Vol. 5743 Fol. 1148520
J McRae
Assistant Registrar of Titles

CANCELLED

SCALE: 10 chs to one inch.

Vol. 1631 fol. - 149



170125

T04631-149-2-0

5309 / 19 20

CANCELLED

Entered in the Register Book

Vol. 2639 Fol. 527705

Edw. J. Duncombe

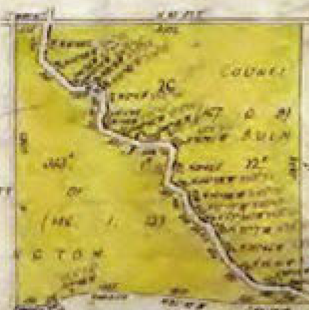
Assistant Registrar of Titles

ORIGINAL CROWN GRANT.

Not to be dealt with outside the Titles Office

Victoria

by the Grace of God of the United Kingdom of Great Britain and Ireland Queen Defender of the Faith to all to whom these presents shall come Greeting **Whereas** in conformity with the laws relating to the Sale and Occupation of Crown Lands in our Colony of Victoria the person hereinafter named ha*s* in consideration of the sum of *Three hundred and fourteen pounds* which sum has been duly paid to us become entitled to a grant in fee simple of the land hereinafter described **Now know ye** that in consideration of the sum so paid and in pursuance of the *Land Act 1890* We do hereby grant unto *George Mackay of Ensendon Butcher* *his* heirs and assigns **All that piece of Land** in the said Colony containing *three hundred and thirteen acres one rood and twenty two perches more or less being Allotment twenty six in the Parish of Koorumburra Counties of Buln Buln and Mornington* delineated with the measurements and abuttals thereof in the map drawn in the margin of these presents and therein coloured yellow **To hold** unto the said *George Mackay* *his* heirs and assigns for ever. Excepting however unto us our heirs and successors all gold and silver and auriferous and argentiferous earth or stone and all mines containing gold silver copper tin antimony coal lignite and all other metals and mineral ores whatsoever and all mines seams lodes and deposits containing gold silver copper tin antimony coal lignite and other metals and minerals and mineral ores in upon or under and within the boundaries of the said land And also reserving to us our heirs and successors free liberty and authority for us our heirs and successors and our and their agents and servants at any time or times hereafter to enter upon the said land and to search and mine therein for gold silver copper tin antimony coal lignite and other metals and minerals and mineral ores and to extract and remove therefrom any gold silver and any auriferous and argentiferous earth or stone copper tin antimony coal lignite and other metals and minerals and mineral ores and to search for and work dispose of and carry away the gold silver copper tin antimony coal lignite metals minerals and their ores and the mines metals and minerals in upon and under the land hereby granted and for the purposes aforesaid to sink shafts erect machinery carry on any works and do any other things which may be necessary or usual in mining Provided always that it shall be lawful for us our heirs and successors at any time on paying full compensation to the said *George Mackay* *his* heirs executors administrators or assigns for the full value other than that due to any metals or minerals or mineral ores being thereon or thereunder of the said piece of land or so much thereof as may be resumed as hereinafter mentioned and of the improvements upon the said piece of land or the part so resumed such value in case of disagreement to be ascertained by arbitration to resume the said piece of land or any part thereof for mining purposes And that the terms conditions and events upon which such land may be resumed and the manner in which such arbitration may be conducted may be determined by regulations in such manner as the Governor in Council may from time to time direct or if at any time no such regulations shall be in force then by the regulations concerning the resumption of land for mining purposes in force at the date of this Grant unless Parliament shall otherwise determine.



Note.—The bearings and measurements are approximately given in this plan. The measurements are in links.

What portion of land

Dated the *twenty second* day of *October* in the year of our Lord One thousand eight hundred and *ninety five* being the day the person herein named became entitled to this Grant.

In testimony whereof we have caused this our Grant to be sealed at Melbourne with the Seal of the said Colony **Witness** our trusty and well-beloved The Right Honourable Thomas, Baron Brassey, Knight Commander of the Most Honourable Order of the Bath Governor and Commander-in-Chief in and over the said Colony of Victoria and its Dependencies.

Brassey

A 5809

T02639-705-1-6

MEMORIALS OF INSTRUMENTS.

Nature of Instrument.	Time of its Production for Registration.	Names of the Parties to it.	Number or Symbol thereon.
Creation of Easement	The 22nd day of April 1897, at 10 25 o'clock in the fore noon.	George Mackay to Korumburra Waterworks Trust. [signature] Asst Regr of Titles	38189
Mortgage. DISCHARGED	The 26th October 1897 at 11.40 am	George Mackay to John McIntyre and James Dent Oswald. Edw. J. Duncombe Asst Regr of Titles	180634
Mortgage. Discharged as to part. DISCHARGED AS TO PART	The 7th May 1907	George Mackay to The Bank of Australasia. [signature] ASST. REGR. OF TITLES.	250794.
Transfer as to part cancelled as to the land in Certificate of Title. 3915 Fol. 782972	8th September 1915 at 2.20 pm	George Mackay to THE PRESIDENT COUNCILLORS AND RATEPAYERS OF THE SHIRE OF Poowong and Jeetho. Alfred W. Comport Assistant Registrar of Titles	784916

Caveat No 54704 lodged 11 February 1921 at 11 a.m. affecting part of the land herein

CAVEAT No 54704 LAPSED 20 September 1921

Nature of Instrument.	Time of its Production for Registration.	Names of the Parties to it.	Number or Symbol thereon.
Transfer as to part. Cancelled as to part. See Certificate of Title 4445 Fol. 888801	9th March 1921	to Talbot Adkins. Alfred W. Comport Assistant Registrar of Titles	988187

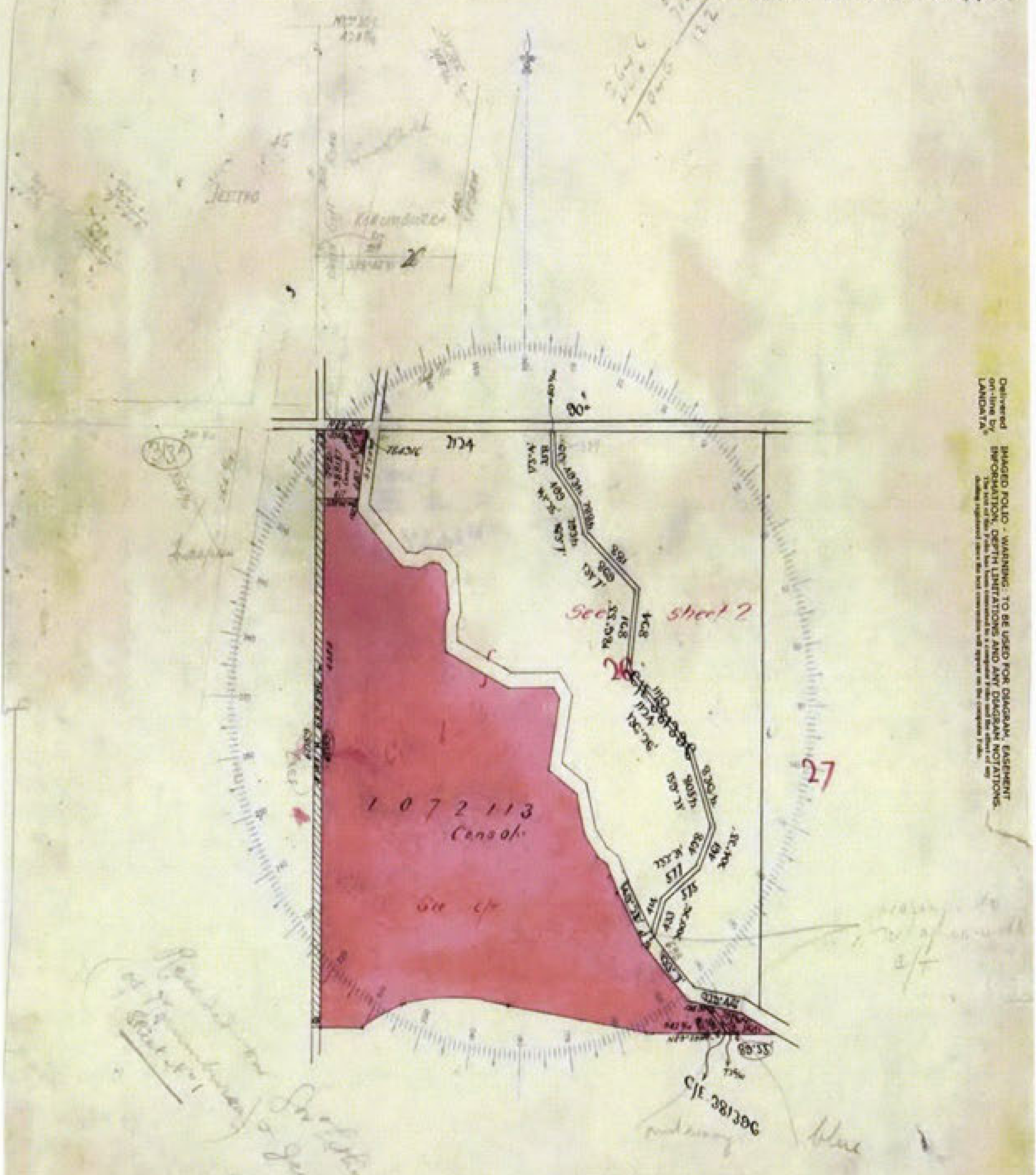
For continuation of Entries see annexed sheet marked A. REGR OF TITLES

By Authority: Robt. S. Brain, Government Printer, Melbourne.

Titles Office Record of Subdivision

SCALE
10 Chs to one inch

Register Book Vol. 2639 Fol. 527705



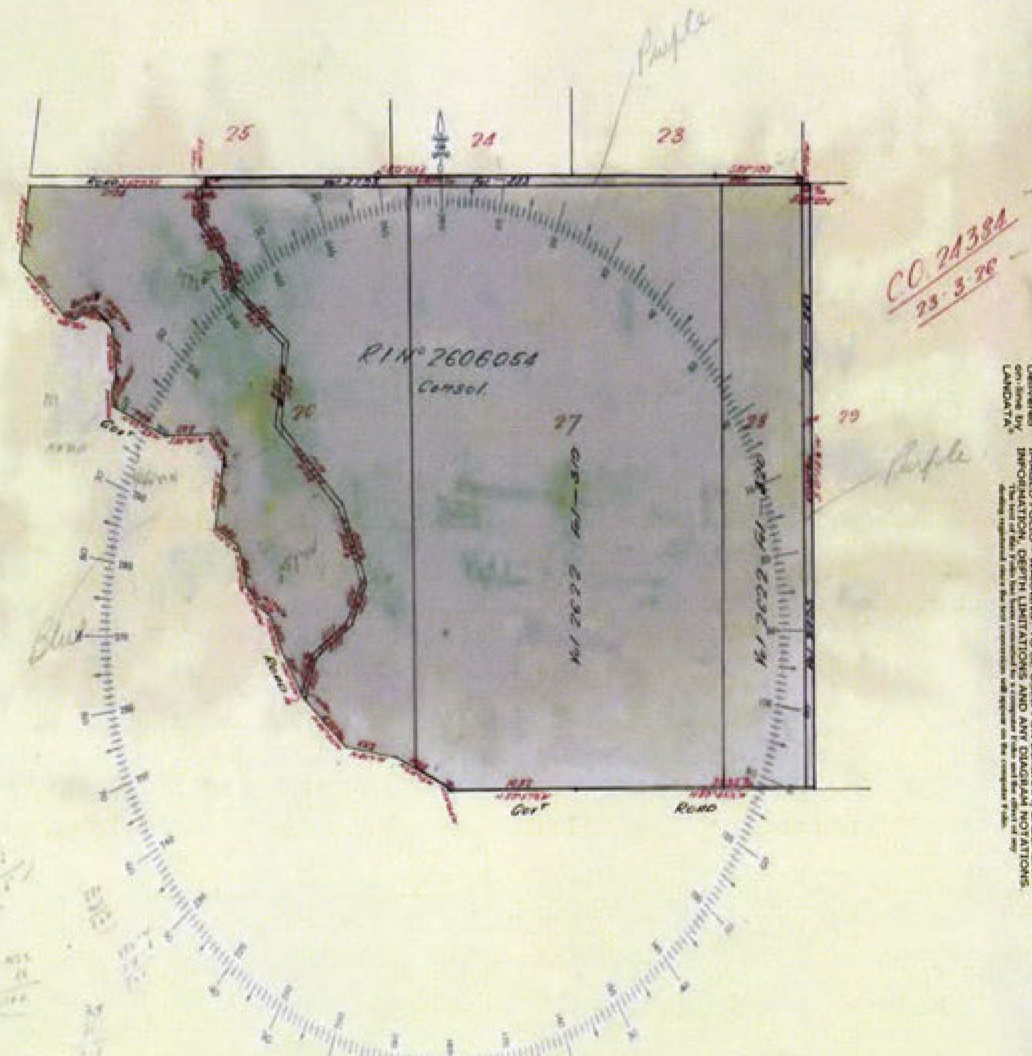
T82639-705-2-4

SHEET 1

Sb. Ch. 22/5/97

SCALE: 12 chains to one inch.

Vol. 2639 fol. 705
2705 — 883
2677 — 319
2677 — 320



T02639-705-3-2

SHEET 2

This is the Sheet marked A referred to in ~~Certificate of Title~~ Crown Grant entered in the Register Book Vol. 2639 Fol. 527705.

ORIGINAL

Alfred W. Comport Assistant Registrar of Titles.

Nature of Instrument.	Time of its Production for Registration.	To whom given.	Number or Symbol thereon.
TRANSFER as to part ~~and CREATION of EASEMENT~~ to William Henry Carter Holmes registered on 20th October 1922 and numbered 1072113. CANCELLED as to part See Certificate of Title Vol. 4631 Fol. 926149 Alfred W. Comport. Assistant Registrar of Titles.			
Red Ink No. 2507320. George Mackay died on 1st June 1923. Probate has been granted to Flora Mackay Widow and Alfred Blakeley Mackay Clerk both of 189 Auburn Road Auburn and Andrew Mackay of Minyip Solicitor. DATED 18th July 1924. Assistant Registrar of Titles.			
CANCELLED See Certificate of Title Vol. 5111 Fol. 1022041 Red Ink No. 2606082 Assistant Registrar of Titles CANCELLED			

This endorsement must be made on the duplicate. Made on 6 November 1924

T02639-705-4-1

Nature of Instrument.	Time of its Production for Registration.	To whom given.	Number or Symbol thereon.

APPENDIX E

ROYAL HISTORICAL SOCIETY OF VICTORIA INC INFORMATION

ROYAL HISTORICAL SOCIETY OF VICTORIA INC.

239 A'Beckett Street, Melbourne 3000

Date: 24 July 2019

Attention: Emmanuel Ernest

Company: Geoaquitards Environmental

Email: emmanuelernest@iprimus.com.au

From: Rosemary Cameron (Executive Officer)

NOTE: Email address: sitesearch@historyvictoria.org.au

SITE SEARCH: 35 Warrigal Road, Korumburra, 3950

The site is located to the south of Warrigal Road, between it and the railway line to the south, and east to the houses at Number 34.

We do not have specific information on your site. The Sands and McDougall Directories (1858-1974) list Korumburra as a country town and have the residents listed under surname by alphabetical order. In 1910 and again in 1963 most residents are farmers, with all town businesses listed as well.

The Victorian Municipal Directories, published to 1994, first list Korumburra in 1892. This is when the Great Southern Railway Line came through: to Loch in November 1890, to Korumburra in June 1891, to Leongatha in December 1891 and to Coal Creek in October 1892, and other branch lines to the mines in 1894 and 1896. The town grew from then. Before 1890 the area was settled by farmers and timber cutters with two sawmills in the area.

With the discovery of black coal deposits in the area it became the centre of the coal mining district after 1890. Various schools opened in 1889 in the surrounding areas and the Korumburra State School No. 3077 opened in 1891, to cater for the miners' children.

ROYAL HISTORICAL SOCIETY OF VICTORIA INC.

239 A'Beckett Street, Melbourne 3000

In 1900 and 1910 the population of the town was 2,000, the main industry was coal mining. In 1922 the area became the Korumburra Shire. In 1930 the population was 3000 and it was described as the centre of a prosperous agricultural, dairying and coal mining area, with a butter factory. It was the main railway depot for South Gippsland. In 1960 the description was the same as 1930.

In 1994 the Shire of Korumburra has a population of 8,550; the town has 4,200 people. A prosperous dairying and agricultural district (beef, sheep and horses), with first class saleyards, sales held twice a week. The coal industry has dissipated and in its place, The Coal Creek Historical Park attracts tourists.

Google Earth shows your site to be farmland with a farm house and sheds on it near to the road, indication that the only land use has been farming.

Research by Margaret Fleming.

APPENDIX F
COUNCIL RECORDS

1152098980 5,4990,98980. Permit No. 4438 2400

BUILDING PLANS APPROVED & RECORDS

Owner: S. Savio,
Location: 35 Warragul Road
Class: Shed / Garage

Builder: Geoffs Home Improvements, 24 Inows Rd, K'Burn
~~Town~~ Parish: Korumburra
Issued: 6/10/1987

Section:
Allot.: Pt 26
L.P. No.: 75143
Lot No.: 2

HISTORY	DATE	REMARKS
Commenced	3.6.87	Pad inspection 450 x 415 m^2 concrete floor going in [illegible]
Foundations		
Framing		
Ext. Covering		
Roof		
Int. Lining		
Flashing		
Completed		

RECEIVED AMOUNT PRINTED
BY CASH REGISTER

D. F. ROCHE
Shire Secretary, Per Collector.

CHEQUE
CASH
M/O
P/N

SHIRE OF KORUMBURRA

No 4488

BUILDING PERMIT

Issued to Geoffs Home Improvements, 29 Inches Road,

Korumburra — FOR: S. Saario,

Building Fees	$	20 :00
Temporary Crossing	$	:
	$	20 :00

RECEIVED AMOUNT PRINTED
BY CASH REGISTER

D. F. ROCHE
Shire Secretary, Per Collector.

CHEQUE
CASH
M/O
P/N

SHIRE OF KORUMBURRA № 4488

BUILDING PERMIT

Issued to .....

.....

Building Fees	$	:
Temporary Crossing	$	:
	$	

SHIRE OF KORUMBURRA

VICTORIA BUILDING REGULATIONS

BUILDING PERMIT ..... 19....

Mr..... on behalf of the

Owner, Mr. .....

of .....
is hereby authorized to proceed with the construction/demolition/removal of .....

on land being Lot(s) ..... Plan Subdivision.....

Crown Allotment .....Section..... Parish

.....being number.....in

..... Street, Township

of .....

In accordance with the plans and specifications which have been lodged, examined and approved and subject to conformity with the requirements of the Victoria Building Regulations and to the conditions (if any) endorsed.

FEES RECEIVED

	$	c
Building Fee		:
Temporary Crossing		:
.....		:
	$	

.....
Development Approvals
Co-ordinator.

BP 4488

"Office Copy"

FORM 5

Building Control Act 1981
SHIRE OF KORUMBURRA
VICTORIA BUILDING REGULATIONS 1983
Regulations 8.2 (1), 8.4 (1) and 8.6 (1)

APPLICATION FOR BUILDING APPROVAL

To the Development Approvals Co-Ordinator, 5,459,998980
Shire of Korumburra,
Shire Office,
KORUMBURRA. 3950.

I hereby apply for an approval * to Construct a Dwelling
~~to Demolish~~
~~to Remove~~
~~for a stage of building work~~ on

* Lots ..2..... Plan Subdivision ..7514.3.....
Crown Allotment Pt 26..... Section ..... Parish ..Korra.....
Being Number ..35... in ..Warragul Rd. Street, Township of Korumburra..
NATURE OF CONSTRUCTION - * New Building, ~~Alteration, Addition, Repair.~~

Owner of Land { Name ..Stan Saaria.....
Address ..35 Warragul Rd Korumburra 3950

Superintending Architect and/or Engineer { Name .....
Address .....

Builder { Name ..Geoff's Home Improvements.....
Address ....29 Inches rd. Kbr.....

Purpose for which building is to be used.
.....Shed/Garage.....
Estimated Cost of Building Work. $ ..3400.....

If purpose is for a Dwelling-House -

* Builders Registration Number .....

Recognized by "Housing Guarantee Fund Ltd".

Attached herewith is Certificate of Registration of Dwelling house issued under section 918 F of the Local Government Act 1958; or *The owner-builder declaration pursuant to section 23(4) of the Building Control Act 1981.

I hereby undertake that the *construction, demolition, or removal will be carried out in conformity with the requirements of the Victoria Building Regulations 1983 and of the By-Laws of the municipality.

Dated ..22.4.87.... 19 87.....
Signature S.C. Nelson..... Owner, Agent of Owner*

NOTE: Pursuant to section 20(22) of the Building Control Act 1981 a person shall not act as the agent of an owner unless he is authorized in writing by the owner to do so.

* Strike out words which are inapplicable.

FOR OFFICE USE ONLY

This plan and specification is hereby approved subject to the provisions of Victoria Building Regulations, and Council By-Laws complied with and subject to:
..See attached sheets re. Footings and Truss details.....
.....
.....
Date ....
Development Approvals Co-Ordinator

FEES	$	¢
Building Approval ..	20	. 00
.. ..		
TOTAL	20	. 00

Receipt No. ..8190.....

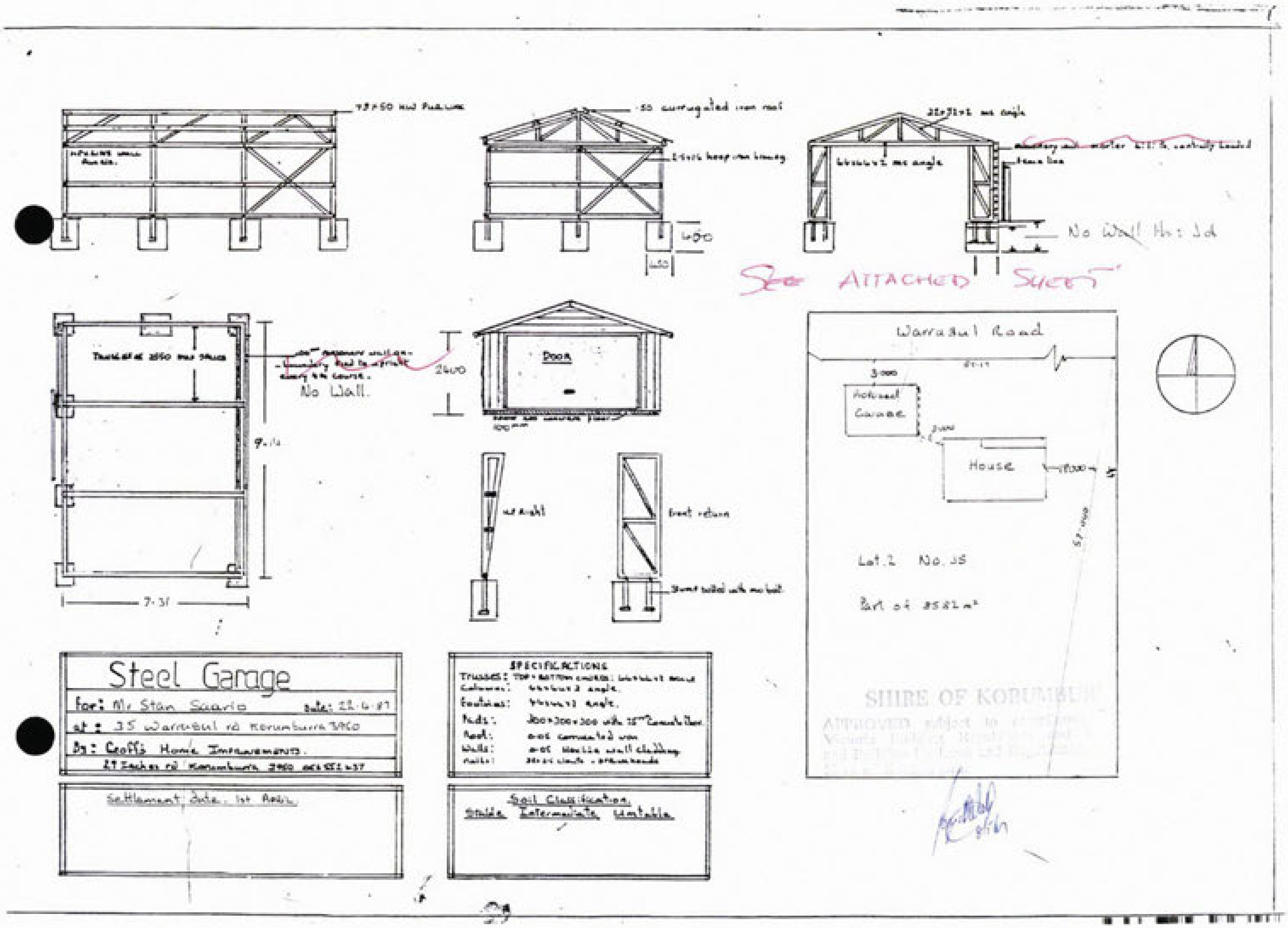
In sewered areas it is necessary to comply with requirements of Sewerage Authorities By-Laws relative to plumbing and draining works.

A copy of plans has been forwarded to the Korumburra Water Board.

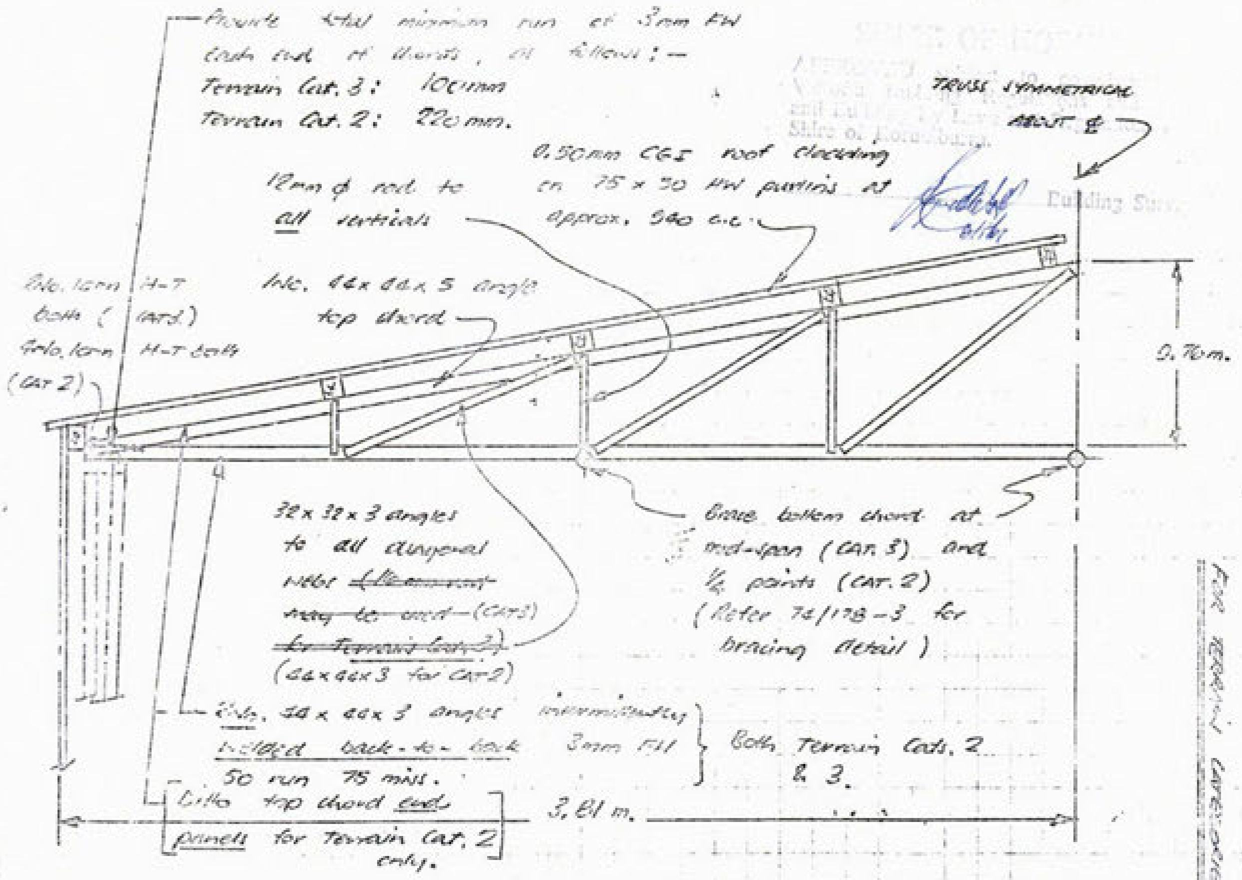
BP. Number ....4488....
At ....35 Warragul Road....
....Korumburra 3950.
Owner:/Builder ....Geoffs Home Improvements....
For ....S. Saario....

Julie Little

Date ....7/5/87....



.50 corrugated iron roof
No Wall
SEE ATTACHED SHEET
2400
Door
7.31
Warragul Road
3.000
Proposed Garage
House
Lot 2 No. 35
SHIRE OF KORUMBURRA
Steel Garage
for: Mr Stan Saario date: 22.6.87
at: 35 Warragul rd Korumburra 3950
By: Geoff's Home Improvements.
SPECIFICATIONS
Soil Classification.
Stable Intermediate Unstable



NOTE: 1. Min. 32 x 32 x 3 Angle may be used in lieu 12mm rod.
2. Use 3mm FW to all web-chord connections:—
Terrain Cat. 3 — total 30mm run each end.

TRUSS DETAILS

FOR 7.62 m (25'0") OVERALL WIDTH DOMESTIC GARAGE BUILDINGS

(NOTE: TRUSSES SPACED AT 2.54 m. MAX. C.C.)

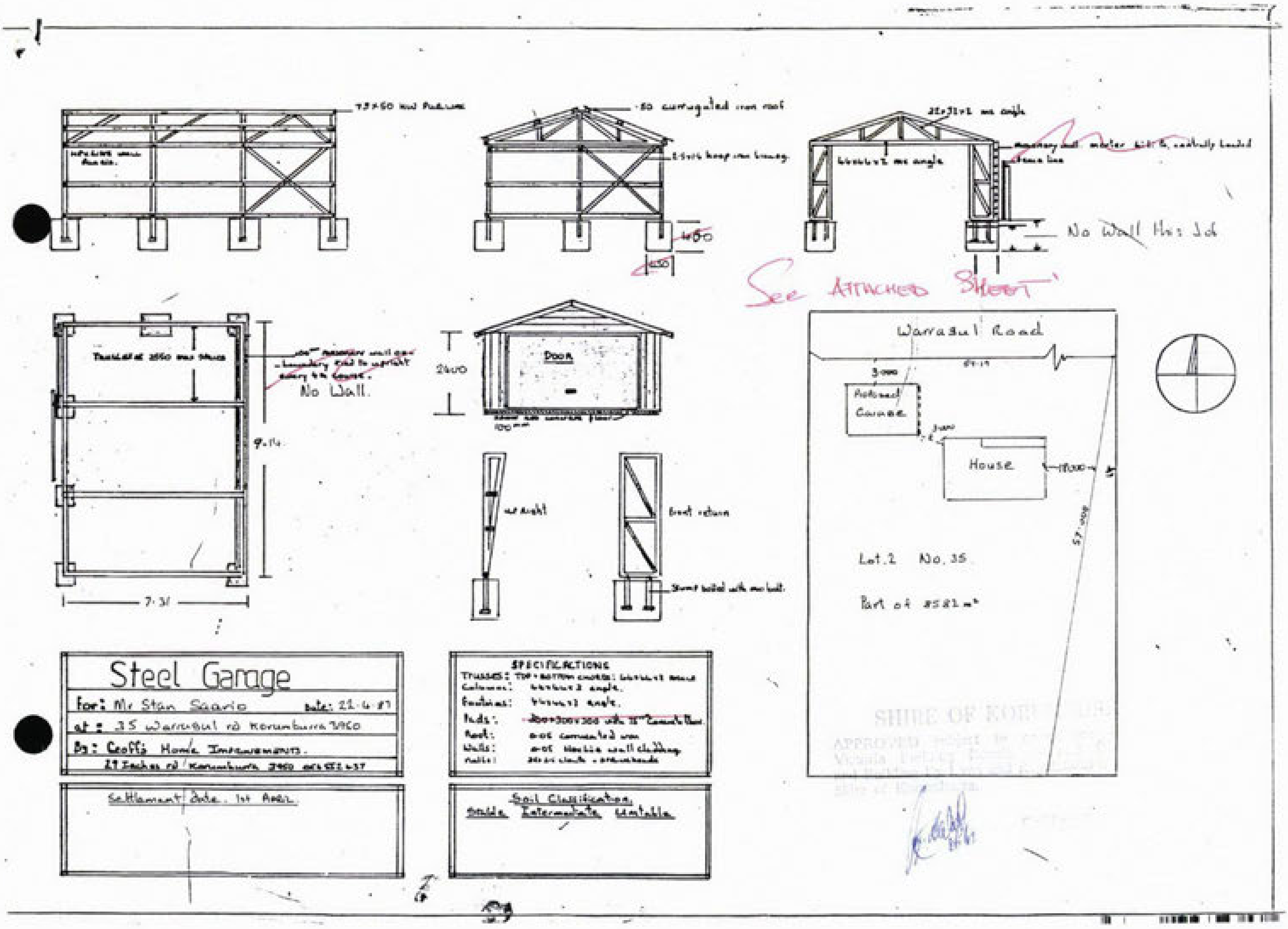
FOR TERRAIN CATEGORIES 2 & 3

REX M. NORRISH & ASSOCIATES

COMPUTATIONS

SHEET 9 OF 9

SHIRE OF KOR... APPROVED ... Victoria Building Regulations ... and Building By-Laws ... Shire of Korumburra. Building Surveyor



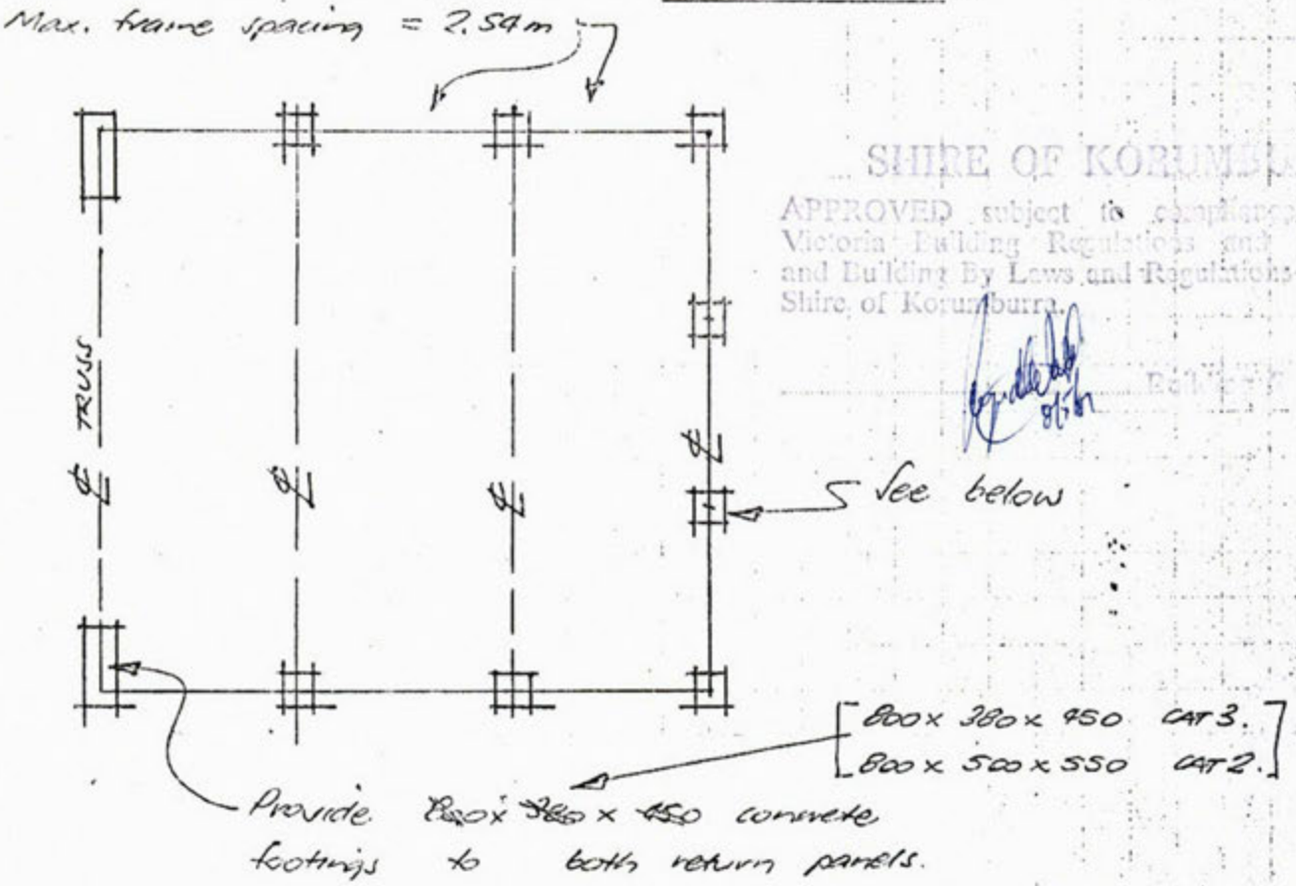
75 x 50 Hw Purlins
50 corrugated iron roof
No Wall.
2400
Door
Warragul Road
Proposed Garage
House
Lot 2 No. 35
No Wall this side
See Attached Sheet
Steel Garage
For: Mr Stan Saario
Date: 22-6-87
at: 35 Warragul rd Korumburra 3950
By: Geoff's Home Improvements.
Settlement Date. 1st April
SPECIFICATIONS
Soil Classification
SHIRE OF KOR

REX M. NORRISH & ASSOCIATES
233 BLACKBURN ROAD, SYNDAL, VICTORIA, 3149. TELEPHONE: 232 9511

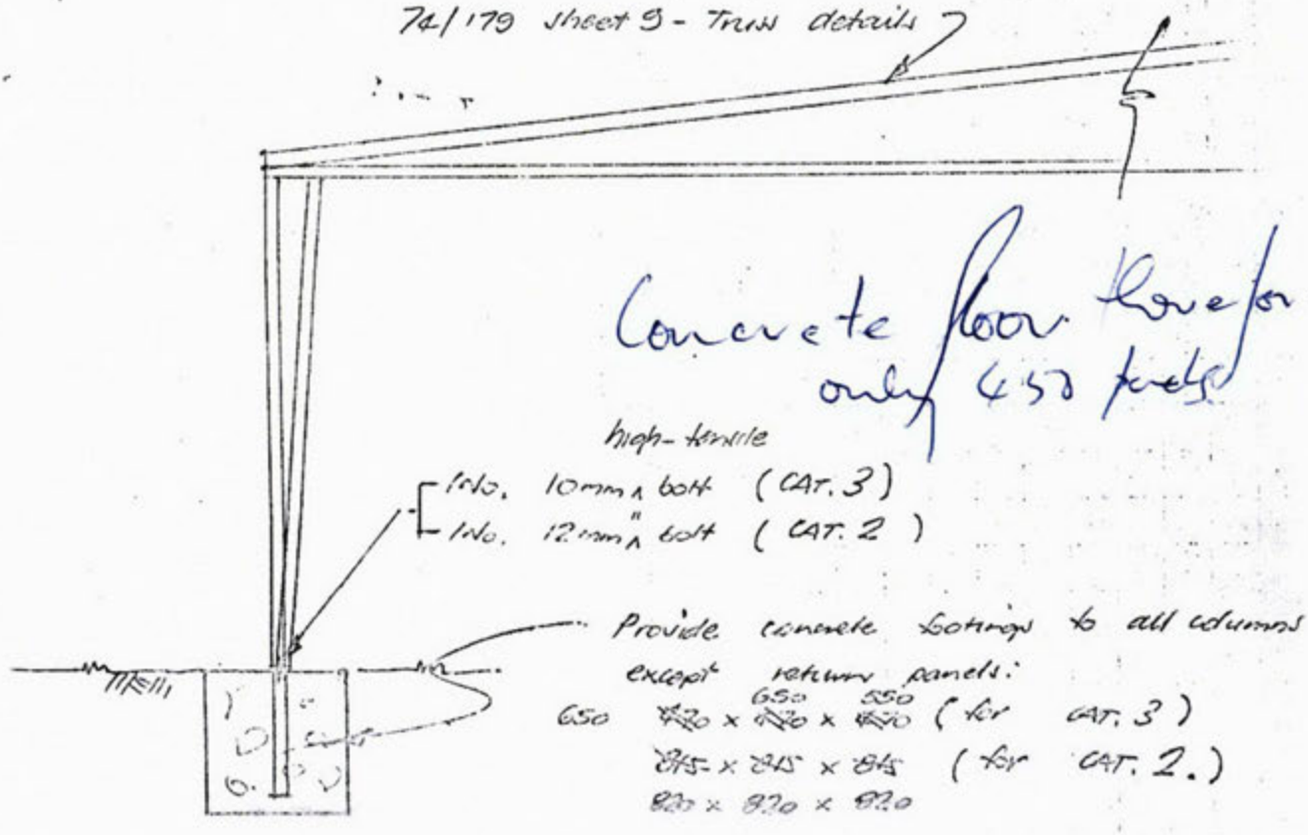
COMPUTATIONS

SHEET 9A OF 9.

FOOTING REQUIREMENTS – 7.62 TRUSS WITH 2.13 OR 2.74 COLUMNS.



74/179 sheet 9 - Truss details



Rate Assessment No. 1153098980 Permit No. 5956

598

BUILDING PLANS APPROVED & RECORDS

Owner: S Sasino Location: 35 Vernon Rd, Kba Class: Re-clad

Builder: J Jovanovic Town-Parish: Kba Issued: 8/3/81

Section: Allot.: Pr 26

L.P. No.: 5143 Lot No.: 2

HISTORY	DATE	REMARKS
Commenced		
Foundations		
Framing		
Ext. Covering		
Roof		
Int. Lining		
Flashing		
Completed		

CREDITS:

BUILDING APPROVAL № 5956

Receipt No. 17863 Date 31/10/91

Application No. 5956

Amount $20.00

Owner Saano

Receipt No. ..... Amount ..... Date .....

Authorised Officer .....

№ 5956

P.O. BOX 69
KORUMBURRA
VIC., 3950.

SHIRE OF KORUMBURRA

BUILDING APPROVAL

The Council of the Shire of Korumburra hereby approves and permits

J Jovanovic
35 Darragal Road
Korumburra. 3950

To construct / demolish / re- erect / remove / install Re-clad

Property No 1152018980 Parish of Korumburra

on (Crown) Allot Pt 26 Lot No./Sec. 2 Class .....

fronting 35 Darragal St. / Rd. / Ave. in Korumburra (Dist.)

Pursuant to the provisions of the Victoria Building Regulations 1983, Building Control Act 1981, Scaffolding Regulations, Town and Country Planning Act and Planning Schemes made thereunder, the relative By-Laws of the Council and in accordance with the plans and specifications accompanying application.

Date .....

Development Approvals Co-ordinator

NOTE: Detach below inspection application and send to Shire Office or phone, giving 24 hours notice for inspections.

---

5. APPROVAL ..... The building is now complete and inspection is requested before occupation. I am aware that occupying prior to a certificate of occupancy is an offence and I may be prosecuted.

Date ..... (Signature)

4. APPROVAL ..... Inspection of flashings to sanitary fixtures is requested prior to tiling.

Date ..... (Signature)

3. APPROVAL No. ..... Framework is completed and inspection is requested prior to cladding.

Date ..... (Signature)

2. APPROVAL No. ..... Slab preparation is complete and inspection is requested prior to concrete being poured OR the building is completed to floor level and inspection is requested prior to flooring being fitted.

Date ..... (Signature)

1. APPROVAL No. ..... Trenches for footings are ready for inspection prior to concrete being poured or stumps being placed OR inspection of foundation for slab is requested prior to any filling, polythene or reinforcement being placed in position.

Date ..... (Signature)

NO. 5956

BUILDING PERMIT APPLICATIONS

Owner ...S. Sarno..... **Builder** ...J. Jovanovic.....

Type of Building ...Re-clad.....**Date** ...9/10/91....

INFORMATION RECEIVED:

		Tick & No. of Copies
Building Approval Forms	-	✓
Building Plans	-	✓
Site Plan	-	✓
Fees (Crossing Deposit - If Required)	-	✓
Specifications	-	
Soil Tests	-	
Computations	-	
Truss Details	-	
Copy of Title	-	
Town Planning Permit (If Required)	-	
H.G.F.L. Forms	-	

Comments .....

.....

Assistant Building Surveyor.

Matters Require Attention .....

.....

.....

Suggested Conditions .....

.....

.....

Comments on Computations .....

.....

Total Fees - Building ...$.20.....

Temp Cross .....

Signature .....

Date ...24-10-91.....

31/10/91

SHIRE OF KORUMBURRA
Building Control Act 1981
VICTORIA BUILDING REGULATIONS 1983
Regulations 8.2(1) and 8.6(1)

BP 5956

APPLICATION FOR BUILDING APPROVAL

*Strike out words which are inapplicable.

To the Development Approvals Co-ordinator

SHIRE OF KORUMBURRA,
Shire Offices,
P.O. Box 69,
KORUMBURRA. 3950.

I hereby apply for an approval

*to Construct Reclad.
to demolish
to Install Heater
to remove
for a stage of
building work on

a building on Street *Allotment No 35 in WARRAGUL ~~Street~~/Road KORUMBURRA
Nature of Construction -*~~new building~~, ~~alteration~~, ~~addition~~, ~~repair~~ reclad.

Owner of Land — Name _____ Address _____

Super. Architect / or Engineer — Name _____ Address _____

Builder — Name Joseph Journovic Address 3 Fraser St., Sunshine.

Purpose for which building is to be used Residential

If purpose is for a Dwelling-house - Attached herewith is Certificate of Guarantee Status of Domestic Building Work issued by the Housing Guarantee Fund Limited under the House Contracts Guarantee Regulations 1988.

Estimated Cost of Building Work $1452.00

I hereby undertake that the *construction, demolition, or removal will be carried out in conformity with the requirements of the Victoria Building Regulations 1983 and of the by-laws of the municipality.

Dated 30 day of Sept 1991.

Signature Josip Journovic
* Owner/Agent of Owner

Fee	$ 20.00	Receipt No: 17863
Crossing Bond	$	
Total	$ 20.00	

NOTE: Pursuant to section 20 (22) of the Building Control Act 1981 a person shall not act as the agent of an owner unless he is authorised in writing by the owner to do so.

This plan and specification is hereby approved subject to the provisions of the Victoria Building Regulations, and Council By-Laws.

Date 16/9/91

Development Approvals Co-ordinator

Form 5

PARTICULARS OF BUILDING TO BE ERECTED

It is advised that this form be used only for small works; full plans and specifications for large works should be submitted (in duplicate), but the following information must be supplied in all cases.

NOTE: Where trusses are used full details must be given:-

If building requires foundations, give:

(a) Dimensions of Footings — External {..... deep by ..... wide: No of rods ....
Internal {..... deep by ..... wide: No of rods.....

(b) Material to be used in footings {.....parts gravel ..... parts sand
to ..... parts cement .....

Wall Coverings: (a) Outer .....

(b) Inner .....

Stumps - Material Size by Spaced not more than centres

Sole Plate- Material Size by by length Min depth in ground

Bearers Timber Size by spaced not more than centres

Floor Joists " " " spaced not more than centres
and not less than above ground

Plates- Bottom " " "

Plates- Top " " "

Studs " " " spaced not more than centres

Trusses " " " spaced not more than centres

Exposed " " " spaced not more than centres

Rafters

Braces Timber Size By Ridges, Valleys & Hips, Timber Size by

Hanging Beams " " " Unsupported span of Ceiling Joists Max

Purlins " " " Unsupported span of Rafters Max

Struts " " " Unsupported Span of Purlins Max

Flooring **Roof Covering**

Spouting **Down Piping**

Drains: Type **Min grade of**

OUTBUILDINGS -

Stumps- Material Size By spaced not more than centres

Sole Plate- Material " " by length Min depth in ground

Plates- Bottom By

Plates- Top By

Studs By spaced centres

Rafters By spaced centres

Roof Covering **Outer Wall Covering**

BOUNDARY FENCES -

*Specification of new fences Front Height..... type .....
Others Height..... type .....

DIMENSIONS OF EACH ROOM, HALL PASSAGE, VERANDAH, OUTBUILDING ETC.

Description of rooms etc.	Dimensions	Area in Sq.m	Height	Window Sizes (No. in each room	Vents (Clear air space in sq. m.
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....

A BUILDING APPLICATION HAS BEEN RECEIVED FROM

NAME.......S Saario.......

ADDRESS.......35 Warragul Rd,.......

.......Korumburra.......

Parish/Town.................................

Section...........Crown Allotment...........

L.P.................Lot. No..................

PLEASE INDICATE IF TOWN PLANNING APPROVAL IS REQUIRED..No...

HAVE TOWN PLANNING FORMS BEEN SENT TO APPLICANT.............

IF TOWN PLANNING HAS BEEN GRANTED...........

TOWN PLANNING PERMIT NO.........................

TPA FILE NO.....................................

ARE THERE ANY PRIOR T/P REQUIREMENTS ON THIS PROPERTY...................................

IF SO, WHAT AND AT WHAT STAGE ARE THOSE REQUIREMENTS AT...

OTHER..

....

....

Signed.............................

31/6/91

WHERE PAYMENT IS MADE BY CHEQUE
THIS RECEIPT IS VALID WHEN THE CHEQUE
IS CLEARED BY THE BANK

OFFICIAL RECEIPT

17863

SHIRE OF KORUMBURRA
165 COMMERCIAL STREET
P.O. BOX 69, KORUMBURRA 3950.
Telephone: (056) 55 1444
FAX: (056) 55 2687

DATE	RECEIPT No.	DETAILS	AMOUNT

OWNERS CONSENT

BUILDING SURVEYOR

DEAR SIR,

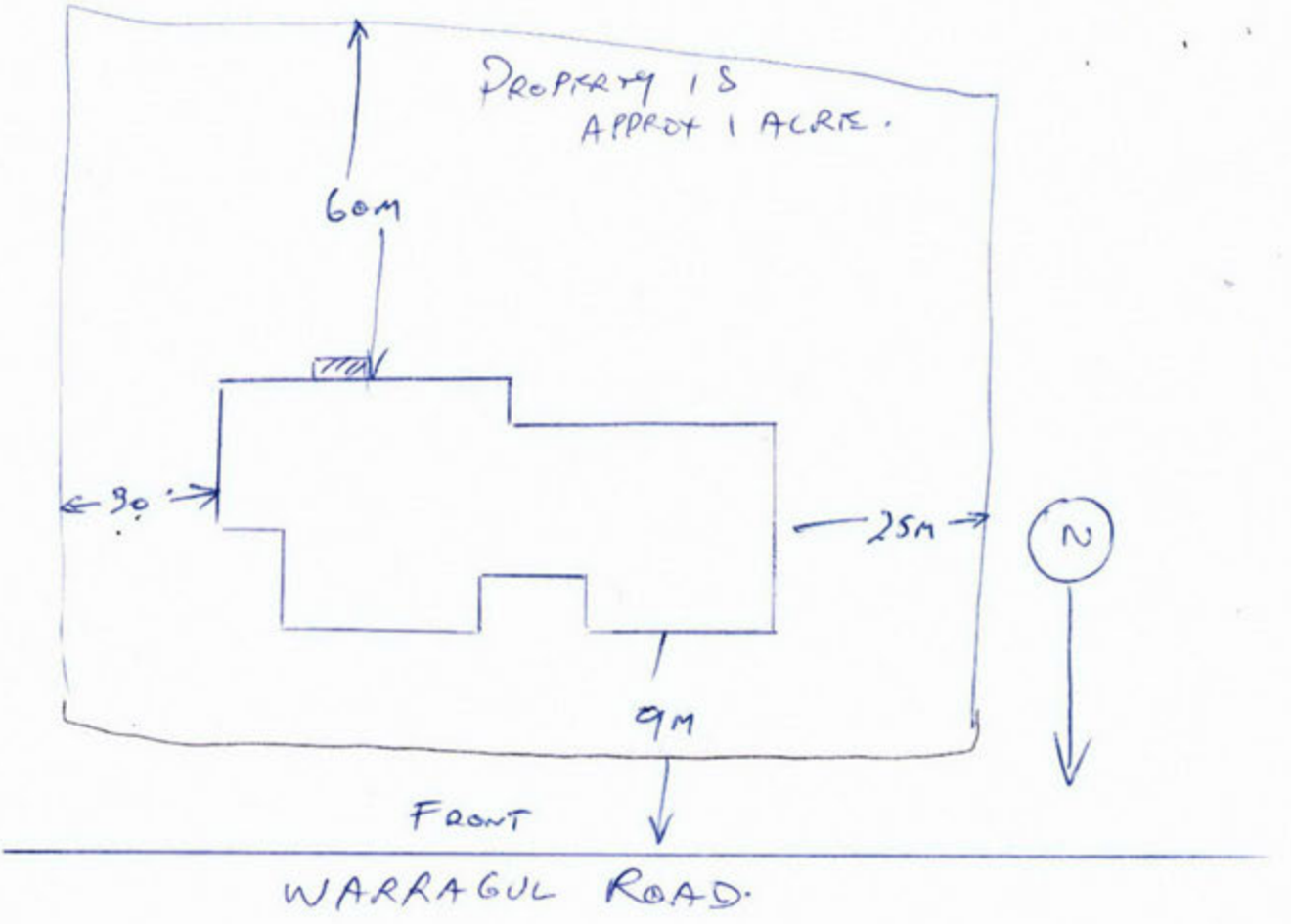
I HEREBY AUTHORISE **TO TAKE OUT THE NECESSARY BUILDING PERMIT FOR THE RENOVATION OF THE EXTERIOR WALLS OF MY HOUSE.**

NAME.....

ADDRESS.....

DATE.....

OWNERS SIGNATURE..... S.O. Saario. B & N Saario


PROPERTY IS
APPROX 1 ACRE.
60M
9.0
25M
N
9M
FRONT
WARRAGUL ROAD.

27/9/91

3 FRAZER ST
SUNSHINE 3020
VIC

DEAR SIR

I AM APPLING FOR A CLADDING PERMIT FOR MR SARRIO AT 35 WARRAGUL RD MORUMBURRA HE HAS BOUGHT VINYL FROM A MELBOURNE CO WAREHOUSE. THE WHOLE JOB THAT I AM DOING IS WORTH ONE THOUSAND FOUR HUNDRED & FIFTY TWO DOLLARS.

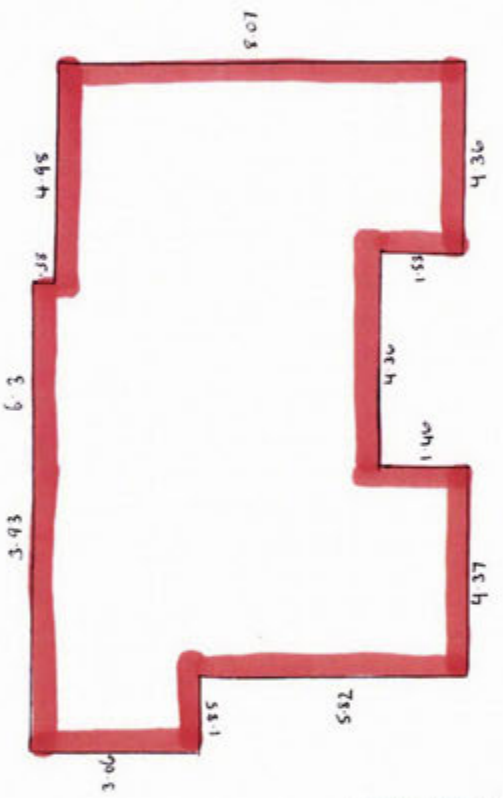
YOURS FAITHFULY
JOSIP JOVANOVIC

MR. & MRS. SARIO

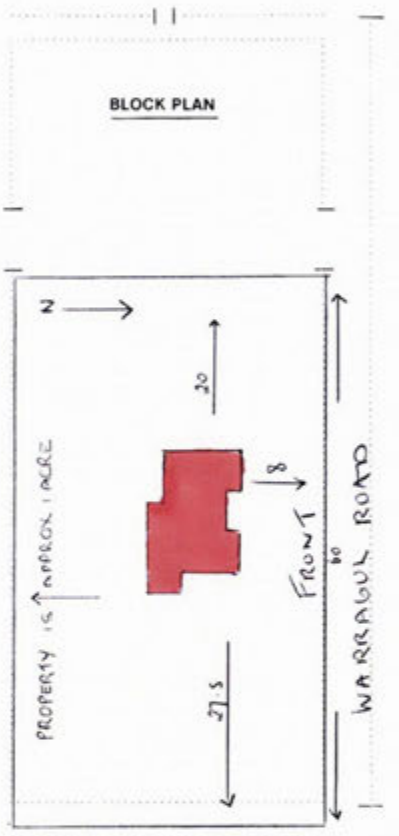
ADDRESS 35 WARRAGUL RD, KORUMBURRA.

PROPOSED: TO RECLAD THE HOME WITH ALSIDE PREMIUM SOLID VINYL WEATHERBOARDS TO ALL AREAS SHOWN ON PLAN AT RIGHT FROM FLOOR L[illegible]D UNDER EAVE HEIGHT AS PER AUSTRALIAN S[illegible]ARDS ASSOCIATION OPINION NO "2910".

BUILDING PLAN



BLOCK PLAN



PREPARATION:

Fibro: Remove as necessary cover mould, angle moulds and battens to present an even surface.

Weatherboards: Renail any loose weatherboards to studs (50mm flat head nails or approved gun nails). Remove any rotten weatherboards. Remove and replace defective structural timber. All openings are to be effectively flashed. Fix 50mm x 12mm (or heavier according to wall line) wooden battens vertically along the walls using 50mm flat head nails or approved gun nails (or heavier according to batten thickness) at 300mm centres.

Fix 50mm x 12mm wooden battens longitudinally around the base of the wall and around window and door openings to vermin proof the finished product.

GENERAL: Replace defective weatherboard (dry rot affected area where removed) with suitable good quality new or secondhand boards.

Replace broken Fibro sheeting, with new or good secondhand sheeting. Inspect window flashing and make good and reflash if required. Battens are usually fixed at 300mm centres as specified. It is important that battens (between studs) are fixed essentially as spacer strips to ensure better wall line and solidarity when required.

FIXING: Fix U channel around soffits and all openings.
Fix starter strip to longitudinal batten around base of wall.
Fix "VINYL" siding in a tradesmanlike manner using 25mm to 6mm flat head nails.

(a) Over existing fibro, and/or
(b) Over existing weatherboards, and/or
(c) Over existing plates and studs — using 32mm x 12 gauge galvanised clouts.

Affix top panels to U channel around soffit, fix finishing trims, internal and external corners to the siding, where required.

FINISHING: Clean all surfaces, refit downpipes (or arrange to refit). Clean up site and remove all surplus materials, waste and debris.

Rate Assessment No. 115209895D

Permit No. 5965

589

BUILDING PLANS APPROVED & RECORDS

MEL1908269

Owner: S. Saario

Location: 35 Varragul Rd, Kba

Class: Install Stove

Builder: I Wilkinson

Town-Parish: Kba

Issued:

Section:

Allot.: Pt 26

L.P. No.: 75143

Lot No.: 2

HISTORY	DATE	REMARKS
Commenced		
Foundations		
Framing		
Ext. Covering		
Roof		
Int. Lining		
Flashing		
Completed		

CREDITS:

BUILDING APPROVAL **№ 5965**

Receipt No. 17780 Date 13/11/91

Application No. 5965

Amount $20.00

Owner Saario

Receipt No. ..... Amount ..... Date .....

Authorised Officer .....

№ 5965

P.O. BOX 69
KORUMBURRA
VIC., 3950.

SHIRE OF KORUMBURRA

BUILDING APPROVAL

The Council of the Shire of Korumburra hereby approves and permits

S Saario.
35 Warragul Road,
Korumburra. 3950

To construct / demolish / re-erect / remove / install Install Stove

Property No 1152098980 Parish of Kiba

on (Crown) Allot Pt 26 Lot No./Sec. 2 Class .....

fronting 35 Warragul St / Rd. / Ave. in Kiba (Dist.)

Pursuant to the provisions of the Victoria Building Regulations 1983, Building Control Act 1981, Scaffolding Regulations, Town and Country Planning Act and Planning Schemes made thereunder, the relative By-Laws of the Council and in accordance with the plans and specifications accompanying application.

Date 14/11/91 .....

Development Approvals Co-ordinator

NOTE: Detach below inspection application and send to Shire Office or phone, giving 24 hours notice for inspections.

---

5. APPROVAL ..... The building is now complete and inspection is requested before occupation. I am aware that occupying prior to a certificate of occupancy is an offence and I may be prosecuted.

Date ..... (Signature)

4. APPROVAL ..... Inspection of flashings to sanitary fixtures is requested prior to tiling.

Date ..... (Signature)

3. APPROVAL No. ..... Framework is completed and inspection is requested prior to cladding.

Date ..... (Signature)

2. APPROVAL No. ..... Slab preparation is complete and inspection is requested prior to concrete being poured OR the building is completed to floor level and inspection is requested prior to flooring being fitted.

Date ..... (Signature)

1. APPROVAL No. ..... Trenches for footings are ready for inspection prior to concrete being poured or stumps being placed OR inspection of foundation for slab is requested prior to any filling, polythene or reinforcement being placed in position.

Date ..... (Signature)

NO. 5965

BUILDING PERMIT APPLICATIONS

Owner ..S. Sanio..... **Builder** ..Wilkinson.....

Type of Building ..Install Stove.....**Date** .31/10/91...

INFORMATION RECEIVED:

		Tick & No. of Copies
Building Approval Forms	-	✓
Building Plans	-	✓
Site Plan	-	
Fees (Crossing Deposit - If Required)	-	✓
Specifications	-	✓
Soil Tests	-	
Computations	-	
Truss Details	-	
Copy of Title	-	
Town Planning Permit (If Required)	-	
H.G.F.L. Forms	-	

Comments .....

.....

Assistant Building Surveyor.

Matters Require Attention .....

.....

.....

Suggested Conditions ..As per Test Report.....

.....

.....

Comments on Computations .....

.....

Total Fees - Building ..$20.....

Temp Cross .....

Signature .....

Date ..8/11/91.....

$20 3/11/91

SHIRE OF KORUMBURRA
Building Control Act 1981
VICTORIA BUILDING REGULATIONS 1983
Regulations 8.2(1) and 8.6(1)

BP 5965

APPLICATION FOR BUILDING APPROVAL

*Strike out words which are inapplicable.

To the Development Approvals Co-ordinator

SHIRE OF KORUMBURRA,
Shire Offices,
P.O. Box 69,
KORUMBURRA. 3950.

I hereby apply for an approval

*~~to Construct~~
~~to demolish~~
to Install Heater
~~to remove~~
~~for a stage of~~
~~building work on~~

a building on Street *Allotment No 35 in WARRAGUL ~~Street~~/Road KORUMBURRA
Nature of Construction -*new building, alteration, addition, repair

Owner of Land — Name MR S SPARIO
Address 35 WARRAGUL RD

Super. Architect / or Engineer — Name
Address

Builder — Name I WILKINSON 552077
Address 8 Mc QUEEN AVE KORUMBURRA

Purpose for which building is to be used SLOW COMBUSTION STOVE

If purpose is for a Dwelling-house - Attached herewith is Certificate of Guarantee Status of Domestic Building Work issued by the Housing Guarantee Fund Limited under the House Contracts Guarantee Regulations 1988.

Estimated Cost of Building Work _____

I hereby undertake that the *construction, demolition, or removal will be carried out in conformity with the requirements of the Victoria Building Regulations 1983 and of the by-laws of the municipality.

Dated _____ day of _____ 19__.

Signature S.O. Sparo
* Owner/Agent of Owner

Fee $ 20—
Crossing Bond $
Total $ 20—

Receipt No: 7780

NOTE: Pursuant to section 20 (22) of the Building Control Act 1981 a person shall not act as the agent of an owner unless he is authorised in writing by the owner to do so.

This plan and specification is hereby approved subject to the provisions of the Victoria Building Regulations, and Council By-Laws.

Date _____

13/11/91
Development Approvals Co-ordinator

Form 5

PARTICULARS OF BUILDING TO BE ERECTED

It is advised that this form be used only for small works; full plans and specifications for large works should be submitted (in duplicate), but the following information must be supplied in all cases.

NOTE: Where trusses are used full details must be given:-

If building requires foundations, give:

(a) Dimensions of Footings
External {..... deep by ..... wide: No of rods ....
Internal {..... deep by ..... wide: No of rods.....

(b) Material to be used in footings
{.....parts gravel ..... parts sand
{to ..... parts cement .....

Wall Coverings: (a) Outer .....

(b) Inner .....

Stumps - Material Size by Spaced not more than centres

Sole Plate- Material Size by by length Min depth in ground

Bearers Timber Size by spaced not more than centres

Floor Joists " " " spaced not more than centres
and not less than above grou

Plates- Bottom " " "

Plates- Top " " "

Studs " " " spaced not more than centres

Trusses " " " spaced not more than centres

Exposed " " " spaced not more than centres

Rafters

Braces Timber Size By Ridges, Valleys & Hips, Timber Size by

Hanging Beams " " " Unsupported span of Ceiling Joists Max

Purlins " " " Unsupported span of Rafters Max

Struts " " " Unsupported Span of Purlins Max

Flooring **Roof Covering**

Spouting **Down Piping**

Drains: Type **Min grade of**

OUTBUILDINGS -

Stumps- Material Size By spaced not more than centres

Sole Plate- Material " " by length Min depth in ground

Plates- Bottom By

Plates- Top By

Studs By spaced centres

Rafters By spaced centres

Roof Covering **Outer Wall Covering**

BOUNDARY FENCES -

*Specification of new fences Front Height..... type .....
Others Height..... type .....

DIMENSIONS OF EACH ROOM, HALL PASSAGE, VERANDAH, OUTBUILDING ETC.

Description of rooms etc.	Dimensions	Area in Sq.m	Height	Window Sizes (No. in each room	Vents (Clea air space i sq. m.
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....

A BUILDING APPLICATION HAS BEEN RECEIVED FROM

NAME.....S. Saano.....

ADDRESS.....35 Darragh Rd.....

.....Korumburra.....

Parish/Town.....

Section.....Crown Allotment.....

L.P.....Lot. No.....

PLEASE INDICATE IF TOWN PLANNING APPROVAL IS REQUIRED. No....

HAVE TOWN PLANNING FORMS BEEN SENT TO APPLICANT.....

IF TOWN PLANNING HAS BEEN GRANTED.....

TOWN PLANNING PERMIT NO.....

TPA FILE NO.....

ARE THERE ANY PRIOR T/P REQUIREMENTS ON THIS

PROPERTY.....

IF SO, WHAT AND AT WHAT STAGE ARE THOSE REQUIREMENTS

AT.....

OTHER.....

.....

.....

Signed.....

13/4/91

NOTE BEFORE LIGHTING COOKER:

WATER JACKET

Under no circumstances may a fire be lit in the cooker fitted with a water jacket until the entire water system is filled with water. Refer to hot water installation instructions.

Failure to observe these warnings will result in damage to the appliance, which will not be covered by our guarantee.

Everhot Solid Fuel Products
2/11 Gatwick Road
Bayswater North, Vic. 3153
Australia
Telephone: (03) [illegible]
Facsimile: (03) 720 4416
International
Telephone: +61 3 729 6888
Facsimile: +61 3 720 4416

New South Wales
Everhot Solid Fuel Products
C/- Vulcan Chef
2-8 Baker Street
East Botany, NSW 2019
Telephone: (02) 666 0121
Facsimile: (02) 666 9239

Western Australia
Vulcan-Chef
81 Robinson Avenue, Belmont 6104
Telephone: (09) 277 7199

Tasmania
Vulcan-Chef
125 Albert Road, Moonah 7009
Telephone: (002) 28 0038

South Australia
Vulcan-Chef
51 Holden Street, Hindmarsh 5007
Telephone: (08) 46 9521

Queensland
Everhot Solid Fuel Products
C/- Vulcan-Chef
Love Street, Bulimba 4171
Telephone: (07) 399 9033
Facsimile: (07) 399 5958

New Zealand
Harris Steele Company Ltd.,
254 Church Street,
Penrose, Auckland
Telephone: (09) 640 213
Facsimile: (09) 640 345

EVERHOT

EVERHOT SOLID FUEL PRODUCTS

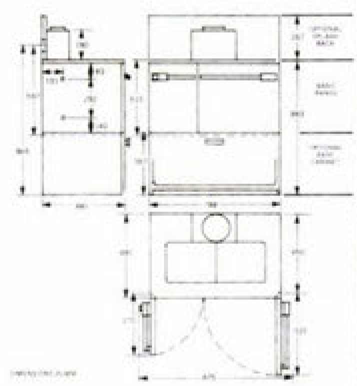
AUSTRALIAN MADE

EVERHOT

SOLID FUEL PRODUCTS

INSTALLATION INSTRUCTIONS

HAMILTON
Slow Combustion Range



These instructions have been prepared in accordance with Draft Australian Standard for installation of Solid Fuel Burning Appliances.

TRACEY

27/9/91

P/N 3191-30 Reissued 3/90

IMPORTANT NOTICE TO AGENTS, INSTALLERS AND PURCHASERS

Although Everhot endeavours to provide appliances of a high standard it is important that you be aware that problems can occur if the equipment is not properly installed. There are standards covering installation which have been set down by the Australian Standards Association and the guide-lines for installation as set out in this leaflet are in accordance with those standards. If an appropriately qualified person is not used to install the equipment or if the equipment is not installed according to the guide-lines provided then Everhot will not be able to accept responsibility for any problems which occur as a result.

GENERAL INFORMATION

IMPORTANT

Read these instructions carefully. The safety and efficient operation of your Everhot Cooker is dependent upon correct installation.

Failure to adhere to these instructions may result in operating or safety deficiencies beyond the control of the manufacturer.

Installation of appliance and flue must comply with Australian Standard 2918-1987 Domestic Solid Fuel Burning Appliances — Installation and be in accordance with the appropriate requirements of the relevant regulatory authority. Outside the Commonwealth of Australia the appropriate local standards and regulations must be complied with.

The EVERHOT HAMILTON has been tested to AS2918 to allow concessional clearances from heat sensitive surfaces (refer below for definitions).

To achieve these clearances which are detailed in the following instructions, only EVERHOT accessories (e.g. flue assy — refer table 1) may be used.

HOT WATER INSTALLATION

This cooker must not be connected to an unvented hot water system. It is prohibited to connect this appliance directly into a mains pressure hot water system. Under no circumstances are valves, cocks or any restrictive devices to be connected into the flow and return lines to the cooker. Failure to comply with these requirements will result in a POTENTIALLY DANGEROUS INSTALLATION. Under no circumstances must a fire be lit in a cooker fitted with a water heater until the entire system is filled with water. Failure to fill the system will result in damage to the water heater.

Due to the high water temperature that can be generated by continuous high firing, it is recommended that a tempering valve be installed.

FLUE KITS

Insulated flue kits for top or rear exit are available.

NOTE: Slow combustion cookers operate with low flue gas temperature. This results in a build up of ash and creosote in the cooker and flue. To minimise this problem Everhot supply insulated flue kits. These kits are designed to keep the flue gas above its dew point temperature. **Standard triple skin flues will not do this.**

An uninsulated flue will result in:

Lower efficiency
More maintenance
Shorter product life

An insulated EVERHOT flue kit is an excellent investment. The use of an uninsulated flue may result in claims under guarantee being rejected.

DESIGNING THE COOKER INSTALLATION

There are three major factors to consider which determine installation requirements:-

1. Whether flue is to be a top or rear exit assembly. Be sure to check within the roof space that the area through which the flue is to pass is clear of structural timbers and other heat sensitive materials.
2. Whether wall at back of cooker and cupboard surfaces at sides are constructed of heat resistant or heat sensitive materials.
3. Whether the floor and floor surfaces on which the cooker is to be installed are of heat resistant or heat sensitive materials.

DEFINITIONS

HEAT RESISTANT MATERIAL

Is a material which when heated to 600°C does not exhibit cracking, flaming, glowing, smouldering or smoking, e.g. bricks, masonry, sheet metal (refer AS2918 section 2.1)

HEAT SENSITIVE MATERIAL

Is a material which does not comply with the requirements for heat resistant material e.g. timber, plaster board, laminates or particle board.

Hot Water Installation

NOTE: VENTED SYSTEM ONLY TO BE USED.

IMPORTANT

This unit is not designed for connection to mains pressure water supply.

Before using the range check that the following two items are observed.

Under no circumstances must a fire be lit in a range fitted with a water jacket, until the entire system is filled with water.

HOT WATER STORAGE CYLINDER – VENTED.

It is strongly recommended that a well insulated, good quality hot water storage cylinder of 160 litre minimum capacity be installed.

Cylinder must be vented to atmosphere.

GENERAL

Bore or mineral water must not be used as it can cause blockages and damage.

All hot water connections (i.e. flow and return lines to range) must be copper with brass fittings. Galv. iron fittings will cause blockages and damage to range and cylinder.

Under no circumstances should a relief valve be fitted in lieu of an open vent pipe. A secondary flow and return recirculation must not be used.

SERVICE – CAUTION

For ease of service a drain and sludge cock should be fitted at lowest point in return line.

Under no circumstances should a stop cock be fitted to flow and return lines as inadvertent shutting of these cocks will result in severe damage to your range with the attendant possibility of personal injury.

Always retain access to water connections on range for future service.

CONNECTION

The flow pipe (from top fitting of range to top fitting of hot water storage cylinder) should be of 20mm nominal size and the return pipe (from lowest fitting of cylinder to lower fitting of range) should be 20mm nominal size. These sizes are important for correct heat flow from water jacket. The flow pipe must rise continuously and the return pipe must fall continuously to the fittings to which they are connected except in accordance with Figure 17. Sharp bends should be avoided. Both flow and return pipes must be insulated.

POSITION OF HOT WATER STORAGE CYLINDER

To obtain the maximum amount of hot water, position the storage cylinder as close as possible to range. Maximum horizontal distance of cylinder from range six metres.

MAXIMUM HEAD PRESSURE

1. **Range.** The hot water circulator in the Everhot Hamilton range is constructed to withstand a head pressure of up to 12 metres vertical height measured from the base of the range to the water level in the cold supply tank.
2. **Hot Water Storage Cylinder.** The vertical height measured from the base of the hot water cylinder when installed to the water level in the cold water tank must not exceed that as specified by the manufacturer.

HOT WATER RETICULATION (Storage cylinder to taps etc.)

Copper – 20mm nominal size to bathroom, 15mm nominal to kitchen and laundry etc. The hot water storage cylinder must have a vent pipe of 20mm Copper direct from the top of the cylinder to at least 450mm above the level of the cold water supply tank. This pipe should be insulated and weatherproofed where exposed. It is preferable to return the vent pipe back into the cold water tank.

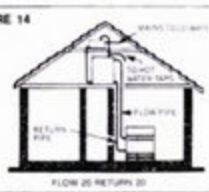
INITIAL STORAGE OF HOT WATER

When first installed, considerable heat is absorbed in the insulation. It is essential that the hot water cylinder be fully charged with hot water by operating the Range for 24 hours before drawing hot water.

IMPORTANT

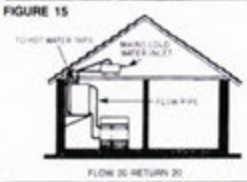
DEPARTURE FROM THE SIZES RECOMMENDED WILL SERIOUSLY AFFECT THE EFFICIENCY OF THE HOT WATER SYSTEM.

FIGURE 14



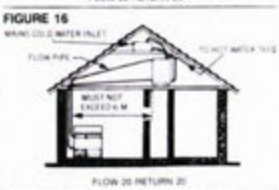
FLOW 20 RETURN 20

FIGURE 15



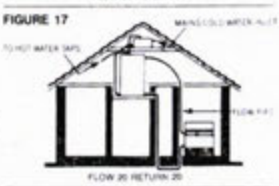
FLOW 20 RETURN 20

FIGURE 16



FLOW 20 RETURN 20

FIGURE 17



FLOW 20 RETURN 20

FIGURE 18

FLOW 20 RETURN 20

FIG. 13

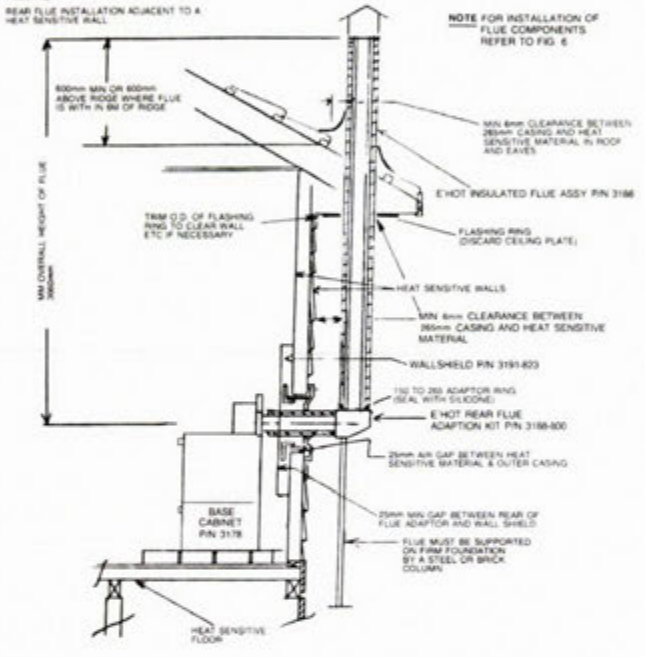


TABLE 1 INSTALLATION ACCESSORY SELECTION GUIDE

The following accessories are available from your EVERHOT AGENT to assist with installation and ensure safe and efficient operation.

DESCRIPTION OF INSTALLATION	INSTALLATION ACCESSORIES							Total Rec. Retail Price for Instn. Access.
	Insulated Flue ASSY 3188	Flue Shield 3188-802	Rear Flue Adaption Kit 3188-800	Wall Shield Hamilton 3191-823		Cupboard Shield 3188-806	Base Cabinet Hamilton 3178	
TOP FLUE/heat sensitive rear wall, cupboards & floor	✓	✓		✓		OPT REF NOTE 1		
PRICE								
REAR FLUE/heat sensitive rear wall, cupboards & floor	✓		✓	✓		OPT REF NOTE 1	✓	
PRICE								
TOP FLUE/heat sensitive rear wall & side cupboards, heat resistant base	✓	✓		✓		OPT REF NOTE 1	OPT	
PRICE								
REAR FLUE/heat sensitive rear wall & side cupboards, heat resistant base	✓		✓	✓		OPT REF NOTE 1	OPT	
PRICE								
TOP FLUE/heat resistant rear wall & base, heat sensitive side cupboards	✓					OPT REF NOTE 1	OPT	
PRICE								
REAR FLUE/heat resistant rear wall & base, heat sensitive side cupboards	✓		✓			OPT REF NOTE 1	OPT	
PRICE								

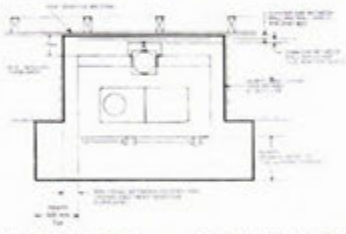
REPLACEMENT OR EXTENSION FLUE COMPONENTS

3188-809 — 150mm x 900mm long vitreous enamelled flue — brown.
3188-803 — 150mm x 900mm long stainless flue.
3188-804 — 206/256mm x 900mm long insulated casing extension assy.

NOTE 1 The cupboard shield is necessary if a cupboard clearance of less than 100mm is required (150mm for Hamilton)
NOTE 2 This chart covers installation accessories only not optional features such as hot water jacket (refer to brochure and price list for these). An exception is the Hamilton Base Cabinet which serves as a multi purpose accessory.

SITE PREPARATION

FIG 1



SITING OF COOKER

Position of cooker relative to wall at back and walls or cupboards at the side is determined by clearance requirements for the cooker.

Check position of timbers within roof space relative to proposed flue prior to finalizing unit position.

REAR WALL

A heat sensitive wall behind the appliance requires protection. Part Number 3191 823 Hamilton Wall Shield must be fixed to the wall as specified in Figure 1 and 7. In addition, a cooker fitted with a top flue assy requires flue shield as specified in Figures 1 and 7.

A heat resistant wall does not require shielding but in order to avoid the ceiling penetration treatment detailed in AS2918 for an untested installation, the Everhot insulated flue assy (P/N 3188) must be used.

Any heat sensitive floor coverings within the area defined in Figure 1 must be removed.

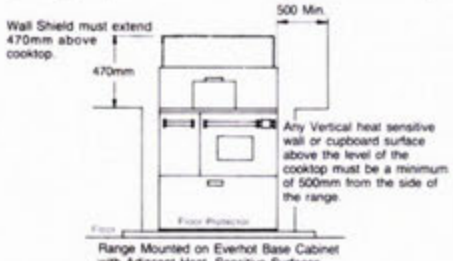
CUPBOARD (OR SIDE WALLS)

Using Everhot cupboard shields P/N 3188-806, cupboards constructed of heat sensitive materials maybe positioned to within 30mm of the sides of the Hamilton cooker.

Unshielded cupboards can be positioned to within 150mm of either side of the cooker. The top of these cupboards must not be above top surface of the cooking hob (refer Figure 2).

NOTE: Where cooker is fitted with a water heating jacket allow access for pipe connections.

Fig. 2



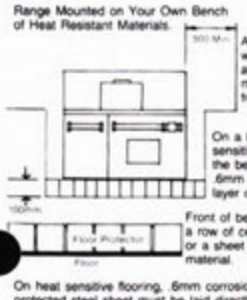
Range Mounted on Everhot Base Cabinet with Adjacent Heat Sensitive Surfaces

On heat sensitive flooring, .6mm corrosion protected steel sheet must be laid directly on floor and overlaid with ceramic or quarry tiles, brick or masonry.

It is not necessary to tile underneath the range base cabinet. Where floor is concrete slab, area specified as floor protector must be clear of heat sensitive floor coverings.

Fig. 3

Range Mounted on Your Own Bench of Heat Resistant Materials.



Any vertical heat sensitive wall or cupboard surface above the level of the cooktop must be a minimum of 500mm from the side of the range.

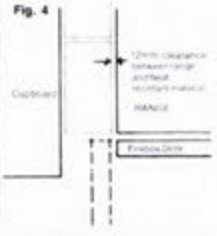
On a bench constructed of heat sensitive materials, the top of the bench must be covered with .6mm galvabond overlaid with a layer of brick.

Front of bench must be protected with a row of ceramic tiles, or a sheet of approved heat resistant material.

On heat sensitive flooring, .6mm corrosion protected steel sheet must be laid directly on floor and overlaid with ceramic or quarry tiles, brick or masonry.

Where floor is a concrete slab, area specified as floor protector must be clear of heat sensitive floor coverings.

Fig. 4



The range may be installed within heat resistant material with minimum clearance of 12mm. Be sure to allow for door opening if heat resistant material extends beyond front of range. Allow sufficient clearance on left hand side for access to pipe connections if range is fitted with a water heater.

INSTALLATION WITH REAR FLUE

Refer to Page 4 for details of floor protector construction, and clearances at sides of Range. Cut a 350mm dia. hole through wall in position shown.

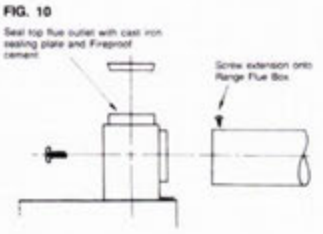
An inner wall panel is provided in the Everhot rear flue kit to trim hole in wall. If the wall is heat sensitive, a wall shield must be fitted and the inner wallpanel is not necessary.

Cut holes in roof and eaves lining sized according to clearance requirements for 275mm dia. outer casing.

Fit horizontal section of flue to range as follows:

1. Apply Fireproof cement to flue outlet at rear of range. Fix elbow extension with screws and nuts.

FIG. 10



2. Screw Flue Box to Range Top, sealing between the two with Fire Proof Cement. If wall behind range is heat sensitive, fit wall shield to wall, making sure top of shield is 470mm above cooktop punch out clearance hole for horizontal flue section. Position range of floor protector or bench.
3. Determine length of horizontal flue section required to comply with clearances from wall faces. Cut insulation sleeve to length allowing for a gap of 35mm from the back of the flue box.
4. Assemble flue elbow, insulation, insulation sleeve and insulation end cap. Screw or pop rivet end cap to sleeve.
5. Cut outer casing to length and fit into wall cavity. Fix outer wall plate to wall. Fit elbow assembly to extension. Seal joint with fireproof cement from inside. Seal insulation casing to wall plate and insultation end cap to elbow with silicone sealant. Fit cleaning access plate. Support horizontal flue assembly either to wall or ground (where a suitable foundation is provided). Support must be strong enough to take the weight of the vertical flue. Assemble and fit up vertical section of flue in accordance with instructions in Figure 13. The full vertical length of the flue should be insulated.

FIG. 9

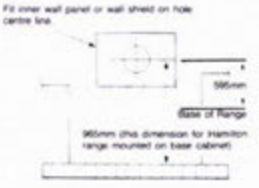


FIG. 11

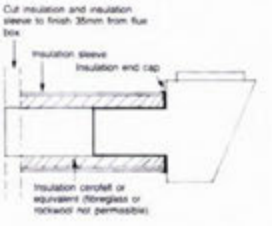
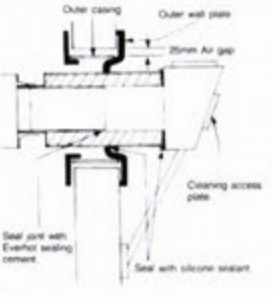


FIG. 12



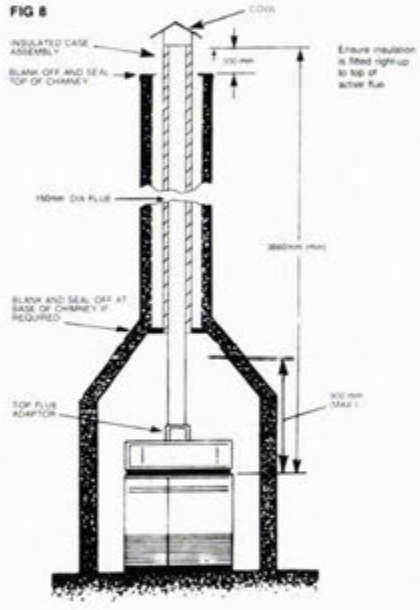
INSTALLATION IN A CHIMNEY

Many chimneys will not accommodate a 265mm dia. casing and a special flue assy may have to be prepared.

The 150mm active flue must be insulated with rockwool 450 and sleeved where possible with a 200mm casing.

NOTE: Top of chimney must be sealed off with a register plate (refer Figure 8).

FIG 8



IMPORTANT

The flue must be taken through the entire length of the chimney to a minimum height of 300mm above the top of the chimney or 3660mm above the top of the stove, whichever is the greater.
Where the ridge of the roof is within 6 metres the flue should be extended at least 600mm above the ridge.

INSTALLATION WITH TOP FLUE

INSTALLATION OF RANGE

1. Screw flue box to Range top, sealing between the two with Fireproof cement. (Removing and refitting 4 screws provided.) Fit rear flue cover casting in rear outlet and seal also with Fireproof cement. Block 3 holes in back of flue box with screws and nuts and washers provided.
2. If wall behind range is heat sensitive, fit wall shield to wall making sure that the top of it is 470mm above the cooktop. Position range on bench or Range and Base Cabinet on prepared floor protector, distanced from wall according to clearance requirements.
3. Suspend a plumb line from the ceiling to the centre of the flue outlet. From the suspension point, mark and cut a 320mm circular hole in the ceiling. Vertically above the hole in the ceiling cut a hole or remove tiles, sufficient to clear 265mm diameter insulated flue casing and provide a minimum 6mm clearance to any heat sensitive material.
   NOTE 1: Ensure that there is no heat sensitive material between the ceiling and the roof, within 6mm of the flue casing.
   NOTE 2: For installation where the ceiling is not horizontal, a drop down ceiling box should be fitted (Figure 5). These are available upon request from your LOCAL EVERHOT AGENT.
4. Attach the ceiling ring to ceiling with self tappers or clamps (not supplied).
5. Install the EVERHOT insulated flue kit as follows (refer Figures 6 & 7). Fit active flue sections together, the two brown enamelled sections at bottom with the joints lapped inward and downwards, sealing each joint with Fireproof cement. Fit stainless sections at the top (and seal joints). (A can of Fireproof cement is supplied in each Everhot flue kit.) Slide active flue into position on flue adaptor and seal with Fireproof cement.
   NOTE: Minimum overall length of active flue must be 3660mm including flue adaptor (refer Figure 7).
6. If wall behind cooker is of heat sensitive material assemble flue heat shield P/N 3188-802 as per instruction sheet in kit.
7. Assemble insulated casing assembly together with the joint of the top sections over the outside of the lower section for weather proofing.
   NOTE: Spacers welded to bottom end of lower casing assy.
   Position casings over active flue, supporting the weight of flue with two flue support brackets across ceiling joists. Attach with screws or pop rivets (not supplied in kit).
   NOTE: Where ceiling height is below 2700mm an extension of the insulated outer casing will be required to ensure that the active flue is fully covered to the minimum length requirement of 3660mm. Insulated outer casing extension assy's may be purchased from your local Everhot agent.
   Any casing extension must be placed in between upper and lower sections. Ensure that slots in the top end of the outer casings are blocked by rockwool. This will stop air venting up through the inner casing and out through the slots mentioned above. Any air movement reduces the insulating effect of the flue casing, thus lowering the flue gas temperature and increasing the build up of creasote in the flue.
8. Fit the snap lock cowl into position — do not attach with fasteners. (For ease of cleaning the cowl is a snap lock system.)
9. Flash outside as required.
   NOTE: Offsets in the flue system are **not recommended**. If installation is such that an offset is unavoidable the flue must be constructed in accordance with all insulation, heat shielding and clearance requirements. Provision must be made for access for cleaning the total length of the flue. Additional vertical flue will be required to achieve sufficient draught. The offset section should not be less than 45° to the horizontal.
   Draught in any flue system should not exceed 0.1 in. WG. If draught is greater than 0.1 in WG an anti down draught cowl or an 'H' cowl should be fitted.

Fig 5

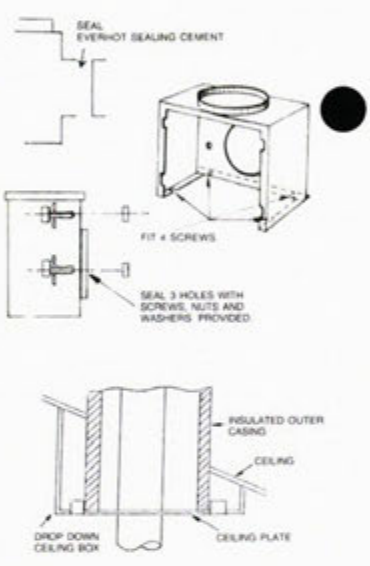


FIG. 6 EVERHOT INSULATED FLUE. (P/N NO. 3188)

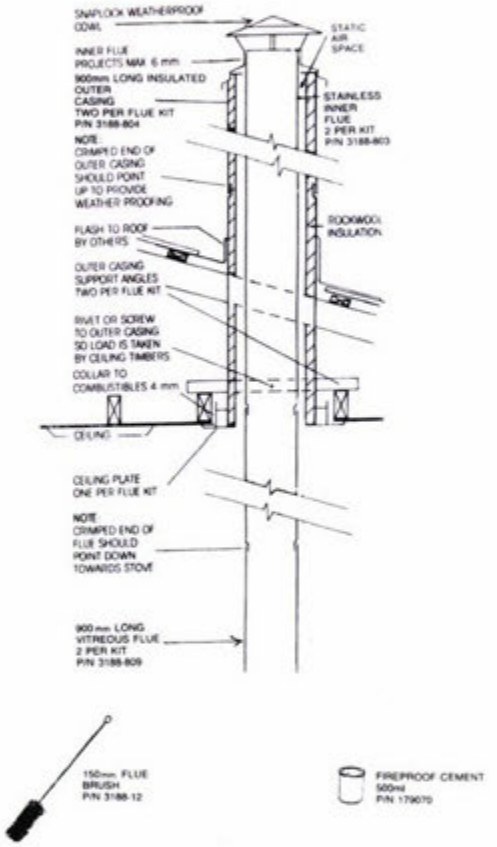
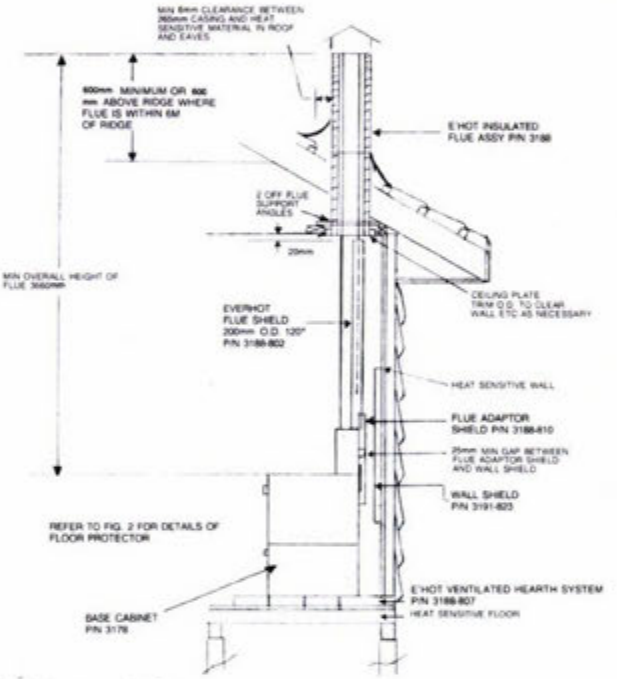


FIG. 7 TOP FLUE INSTALLATION ADJACENT TO A HEAT SENSITIVE WALL

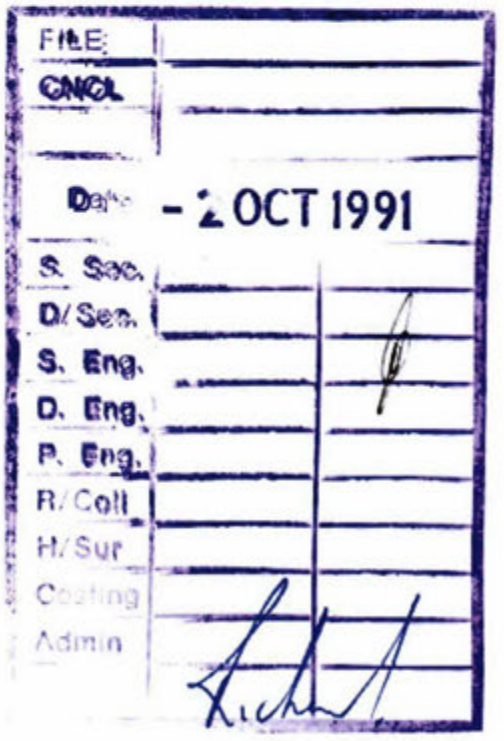


VULCAN
So advanced...it's simple

VULCAN AUSTRALIA LIMITED A.C.N. 004 253 605 (incorporated in Victoria)
841 Mountain Highway Bayswater, Vic. 3153 P.O. Box 161, Bayswater, Vic. 3153
Telephone (03) 721 1222 Telex 31627 Fax (03) 720 2785

Hope this is
what you
requested

Graeme Lind
30/9/91



Solid-fuel Burning Appliances
CERTIFICATE OF TEST FOR INSTALLATION CLEARANCES

The Vulcan 'Hamilton' model

domestic solid-fuel burning appliance manufactured by

Vulcan Industries, Victoria.

has been tested in accordance with

Appendix B Thermal Testing of Installation Clearance

Australian Standard AS2918-1987

Domestic Solid-Fuel Burning Appliances — Installation

at the Home Heating Laboratory,
Centre for Environmental Studies,
University of Tasmania.

The stove *was found to meet the conditions specified in the Standard for reduced clearances for the installation configuration detailed in Environmental Studies Test Report Number* C 1987 - 8

Test Supervisor: J Modal.

Date: 24 November, 1987.

Building Surveyor

Centre for Environmental Studies

University of Tasmania

Box 252C, GPO Hobart, Tasmania, Australia 7001
Telephone: 20 2642 or 20 2643. Cables: 'Tasuni'. Telex: 58150 UNTAS

THERMAL TESTING OF INSTALLATION CLEARANCES

OF THE VULCAN 'HAMILTON'

TEST REPORT NUMBER C1987-8

This report contains 13 pages (including four graphs and this summary).

1. SUMMARY

The Vulcan 'Hamilton' model was tested in accordance with AS2918 for use with firewood and briquettes. The appliances complied with the Standard at the following minimum clearances:

Tests of the appliance when fitted with a 125 mm flue were conducted in 1986 in accordance with the draft Australian Standard for solid-fuel burning appliance installations, the test method outlined in the draft being equivalent to the AS2918 test method.
The appliance complied with the Standard at the following minimum clearances:

- 75 mm (rear of appliance to rear wall; a vented metal wall shield must be fitted to the wall);
- 150 mm (side of appliance to side cupboard);
- 500 mm (side of appliance to side wall).

A minimum hearth, consisting of a non-combustible material (metal sheet or tiles would be adequate, providing they extended 300 mm in front of, and 200 mm to each side of the firebox door).

At the ceiling penetration the minimum tested clearance between the ceiling plate collar and the ceiling is 4 mm (Flo-Met insulated flue kit) or 25 mm to the outer flue casing when using the 125 mm flue kit supplied by Vulcan.

The minimum tested clearance between the outer flue casing and any heat sensitive part of the rear wall penetration (rear flue installation) is 25 mm.

The maximum observed temperature rises for the test enclosure surfaces were:

	125 mm diam. flue			150 mm diam. flue		
TOP FLUE	wood (flash)		briquettes	wood (flash)		briquettes
rear wall	51°	66°	45°	37°	42°	40°
side cupboard	49°	63°	59°	55°	64°	62°
floor	39°	35°	40°	19°	24°	29°
ceiling	37°	53°	45°	48°	58°	53°
REAR FLUE						
rear wall	41°	36°	56°	39°	48°	39°
internal frame	16°	19°	35°	46°	55°	44°

2. INTRODUCTION

This report provides details of the safety clearance test performed at the Home Heating Laboratory, Centre for Environmental Studies, University of Tasmania. The test method used was that specified in the Standards Association of Australia AS2918-1987: 'Domestic Solid Fuel Burning Appliances - Installation, Appendix B'.

The tests were conducted between 28 September and 14 October, 1987 by Dr J.J. Todd and Mr I. Gothard. The test was commissioned by Vulcan Industries, Australia, and the test results remain the property of this company.

Tests of the appliance, when fitted with a 125 mm flue were conducted between 22 May 1986 and 25 August 1986 by Dr J.J. Todd and Mr I. Gothard, in accordance with the test method specified in the SAA Draft Australian Standard for Domestic Solid-Fuel Burning Appliances - Installation, this test method being equivalent to the AS2918 test method. These earlier tests were reported in the University of Tasmania's 'In-house Fuelwood Report Number 35: Thermal Testing of Installation Clearances: Vulcan 'Hamilton' Stove, September 1986'.

3. DETAILS OF APPLIANCE

The details of the appliance given in this section include features which might affect safety clearances. Changes in the appliance dimensions, combustion air inlet size, heat shielding, etc. would invalidate the results of these clearance tests.

3.1 Stove. Vulcan 'Hamilton' model slow combustion cooking stove. The appliance was a prototype and did not have a serial number.

Manufacturer: Vulcan Industries, Bayswater, Victoria.

3.2 Firebox. a. Cast iron firebox
b. Firebox lined with firebrick, thickness 35 mm to

25 mm (thicker around lower section of firebox)

c. Internal dimensions of the firebox:
   - width 155 mm
   - depth (front to back) 325 mm
   - height (top of grate to hot plate) 280 mm

3.3 Combustion air. Combustion air enters the firebox from underneath the grate. A spring mounted stainless steel plate forms a seal between the door and a machined front face of the ash removal opening. A hole in this plate has an adjustable cover which allows a maximum air inlet opening of about 11.5 cm^2. The combustion air inlet can be fully closed. Some pre-heating of the combustion air occurs as the air passes through the door baffle system.

The metal to metal seal around the fuel loading opening probably allows a small amount of above grate air to enter the firebox. Inspection of the seal showed no deterioration during testing.

The cast iron grate has seven open slots with a total area of approximately 135 cm^2.

3.4 Combustion products. Combustion products can pass directly to the flue box over the top of the oven or they can be diverted partially or totally around the oven.

3.5 External dimensions. Stove dimensions, excluding handles, splash back and flue box: height to cooking surface (when installed on standard base cupboard) 505 + 385 = 890 mm, width 795 mm, depth (front to back) 490 mm. The splash back extends 270 mm above the cooking surface across the full width of the stove. The stove can be installed with or without the splash back.

3.6 Base. The appliance was placed on the metal base cabinet supplied with the appliance. The dimensions of the base cabinet were 795 mm wide, 490 mm deep (front to back) and 385 mm high. The appliance itself cannot be installed directly on heat sensitive material and must be used with the metal base cabinet or an equivalent base cabinet constructed of heat resistant materials.

3.7 Fuel and ash doors. The fuel loading opening is rectangular, and is 155 mm wide, 182 mm high. The ash box opening is 197 mm wide, 126 mm high and is situated directly under the fuel loading opening.

3.8 Heat shields. The appliance was supplied with a metal wall to be used if the appliance is placed within 1200 mm of a heat sensitive wall. The shield is 900 mm high, 795 mm wide and designed to be fixed 25 mm frm the wall with full ventilation of the air gap top and bottom. The top of the shield must extend 460 mm above the top cooking surface of the stove.

4. INSTALLATION OF APPLIANCE

The appliance was installed in the test enclosure, with thermocouples located in accordance with AS 2918, enclosure clearances being determined by discussion with the manufacturer, and prior experiments. Two installation configurations were tested: top exit flue and rear exit flue.

4.1 Hearth. The floor under the appliance and 300 mm in front of the appliance was covered with a thin galvanised metal sheet (about 1.6 mm thick). (Any non-combustible hearth extending under the appliance, 300 mm in front of the appliance and 200 mm to either side of the fuel loading door, would be adequate.) This hearth was used for all tests.

4.2 Ceiling and wall penetration. The appliance was tested with a 150 mm diameter flue. The flue kit was the Flo-met Flue Systems Insulated Kit which has been tested in accordance with AS2918 Appendix C. The kit consists of a 150 mm diameter flue, a 200 mm diameter casing providing a 25 mm air gap with limited ventilation, and a 250 mm diameter casing with the 25 mm gap packed with rockwool insulation. The ceiling plate was circular, 390 mm diameter, contacting the ceiling at its circumference, and fitted with a collar extending 100 mm above the plate. The circular collar had a diameter of 311 mm with an air gap of about 30 mm to the outer casing. The minimum distance from the collar to the ceiling was 4 mm.

For wall penetration a nominal 150 mm diameter section of flue extended horizontally from the flue box through the rear wall. The section of flue is surrounded by a 200 mm diameter casing with the 25 mm gap filled with cero-felt high temperature insulation. A 300 mm diameter casing extends from a 200 mm diameter hole in the wall shield through the wall. The 50 mm air gap has minimal ventilation. The minimum distance from the outer casing to any part of the wall is 25 mm, i.e. there is a 350 mm hole through the wall.

4.3 Flue. The flue exit was 4.6 m above the hearth for both top and rear flue configurations. The flue above ceiling and the vertical flue section in the rear wall installation was the double cased (one air gap, one insulated layer) flue described in paragraph 4.2.

4.4 Flue shield. The flue shield extended from the appliance to the ceiling plate, and described and arc of 180° around the flue. It was reflective, made of stainless steel, and was spaced 25 mm from the flue pipe.

5. CLEARANCES

The appliance was installed in the enclosure such that the distance from the rear wall to the closest part of the appliance, i.e. the rear edge of the hotplate surround was 75 mm.

The distance to the side wall from the edge of the hotplate surround was 500 mm, and 150 mm from the edge to the side cupboard. The maximum height of the side cupboard was 883 mm, i.e. the top of the cupboard was level with the stove hotplates.

6. TEST RESULTS

6.1 The following series of tests were carried out as required in the Australian Standard AS2918-1987:

150 mm diameter flue

A. 28/9/87 Top flue, high fire with briquettes
B. 1/10/87 Top flue, high fire and flash fire with wood
C. 14/10/87 Rear flue, high fire with briquettes
D. 14/10/87 Rear flue, high fire and flash fire with wood

Preliminary testing had established that test enclosure surfaces attained the highest temperatures when the appliance was operated with the air control fully open, the flue damper fully open, and the oven bypassed. The stove was operated in this manner during all clearance tests.

6.2 Test A, 28/9/87

Top flue, high fire with briquettes
The relative humidity was 80 per cent at an air temperature of 13°C and the barometric pressure was 753 mmHg, measured at the start of the test. The test fuel was 'L' type briquettes.

The average fuel loading rate was 4.06 kg/h with an average of 677 g being added every 10 minutes. The level of embers was maintained between 50 and 75 per cent of the full volume level of the fuel chamber throughout the test.

Ambient room temperatures ranged from 25°C to 35°C during the test.

The maximum temperature rise above ambient room temperatures for each surface of the test enclosure was as follows:

Rear wall. The maximum temperature rise was 40°C, which occurred at a point 1600 mm above the floor, directly above the hotplate covering the firebox.

Side. The maximum temperature rise was 62°C, which occurred at a point 890 mm above the floor, 230 mm forward of the rear wall, on the top edge of the side cupboard adjacent to the firebox.

Ceiling. The maximum temperature rise was 53°C, which occurred at a point 400 mm forward of the centre line of the flue, and 200 mm to the side of the flue, directly above the hotplate covering the firebox.

Floor. The maximum temperature rise was 29°C, which occurred at a point 150 mm rearwards of the centre of the firebox.

The maximum allowable temperature rise of 65°C above ambient air temperature, as specified in the SAA AS2918-1987, was not exceeded on any surface of the test enclosure.

6.3 Test B, 1/10/87

Top flue, high fire, and flash fire with wood.
The relative humidity was 50 per cent, at an air temperature of 18°C and the barometric pressure was 763 mmHg, measured at the start of the test. The test fuel was Pinus radiata, dressed to 45 mm x 90 mm,with a moisture content of 11.7 per cent of the wet mass.

High fire component of test

The average fuel loading rate was 4.42 kg/h, with an average of 737 g being added every 10 minutes. The level of embers was maintained between 50 and 75 per cent of the full volume level of the fuel chamber during the high fire test. Ambient room temperatures ranged from 29°C to 31°C during the test.

The maximum temperature rise above ambient room temperature for each surface of the test enclosure was as follows:

Rear wall. The maximum temperature rise was 37°C, which occurred at a point 1600 mm above the floor, directly above the hotplate covering the firebox.

Side wall. The maximum temperature rise was 55°C, which occurred at a point 890 mm above the floor, 430 mm forward of the heat wall, on the top edge of the side cupboard adjacent to the firebox.

Ceiling. The maximum temperature rise was 48°C, which occurred at a point 400 mm forward of the centre line of the flue, and 200 mm to the side of the flue, directly above the hotplate covering the firebox.

Floor. The maximum temperature rise was 19°C, which occurred at a point 150 mm rearwards of the centre of the firebox.

The maximum allowable temperature rise of 65°C above ambient air temperature, as specified in the SAA AS2918-1987, was not exceeded on any surface of the test enclosure.

Flash fire component of test

Immediately following the high fire test, burning wood and some embers were removed from the appliance and 2.12 kg of test fuel was added. The door was left open, in a position such that the door latch prevented the door from closing completely. the fuel change was allowed to burn without interference.

Ambient room temperatures ranged from 29°C to 33°C during the test.

The maximum temperature rise above ambient room temperature for each surface of the test enclosure was as follows:

Rear wall. The maximum temperature rise was 42°C, which occurred at a point 1600 mm above the floor, directly above the hotplate covering the firebox,

Side wall. The maximum temperature rise was 64°C, which occurred at a point 890 mm above the floor, 430 mm forward of the rear wall, on the top edge of the side cupboard adjacent to the firebox.

Ceiling. The maximum temperature rise was 58°C, which occurred at a point 400 mm forward of the centre line of the flue, and 200 mm to the side of the flue, directly above the hotplate covering the firebox.

Floor. The maximum temperature rise was 24°C, which occurred at a point 150 mm rearwards of the centre of the firebox.

The maximum allowable temperature rise of 85°C above ambient air temperature, as specified in the SAA 2918-1987, was not exceeded on any surface of the test enclosure.

6.4 Test C, 14/10/87

Rear flue, high fire with briquettes.
The relative humidity was 50 per cent, at an air temperature of 15.5°C and the barometric pressure was 763 mmHg, measured at the start of the test. The test fuel was 'L' type briquettes.

The average fuel loading rate was 3.88 kg/h, with an average of 647 g being added every 10 minutes. The level of embers was maintained between 50 and 75 per cent of the full volume level of the fuel chamber throughout the test.

Ambient room temperatures ranged from 17°C to 32°C during the test.

The maximum temperature rise above ambient room temperature for each surface of the test enclosure was as follows:

Rear wall penetration. The maximum temperature rise was 44°C, which occurred at a point where the flue penetrated the external wall, directly above the flue.

External wall. The maximum temperature rise was 39°C, which occurred at a point 75 mm directly abvoe the 340 mm diameter flue penetration.

Previous floor and ceiling test figures i.e. test 'A' apply for this test.

The maximum allowable temperature rise of 65°C above ambient air temperature, as specified in the SAA 2918-1987, was not exceeded on any surface of the test enclosure.

6.5 Test D, 14/10/87

Rear flue, high fire and flash fire with wood.
The relative humidity was 50 per cent, at an air temperature of 18°C and the barometric pressure was 763 mmHg measured prior to the test. The test fuel was Pinus radiata, dressed to 45 mm x 90 mm, with a moisture content of 10.8 per cent of the wet mass.

High fire component of test

The average fuel loading rate was 3.18 kg/h, with an average of 530 g being added every 10 minutes. The level of embers was maintained between 50 and 75 per cent of the full volume level of the fuel chamber during the high fire test. Ambient room temperatures ranged from 24°C to 26°C during the test.

The maximum temperature rise above ambient room temperature for each surface of the test enclosure was as follows:

Rear wall penetration. The maximum temperature rise was 46°C, which occurred at a point where the flue penetrated the external wall, directly above the flue.

External wall. The maximum temperature rise was 39°C, which occurred at a point 75 mm directly above the 340 mm diameter flue penetration.

Previous floor and ceiling test figures i.e. test 'B' apply for this test.

The maximum allowable temperature rise of 65°C above ambient air temperature, as specified in the SAA AS2918-1987 was not exceeded on any surface of the test enclosure.

Flash fire component of test

Immediately following the high fire test, burning wood and some embers were removed from the appliance and 2.21 kg of test fuel was added. The door was left open, in a position such that the door latch prevented the door from closing completely. The fuel change was allowed to burn without interference.

Ambient room temperatures ranged from 26°C to 27°C during the test.

The maximum temperature rise above ambient room temperature for each surface of the test enclosure was as follows:

Rear wall penetration. The maximum temperature rise was 55°C, which occurred at a point where the flue penetrated the external wall, directly above the flue.

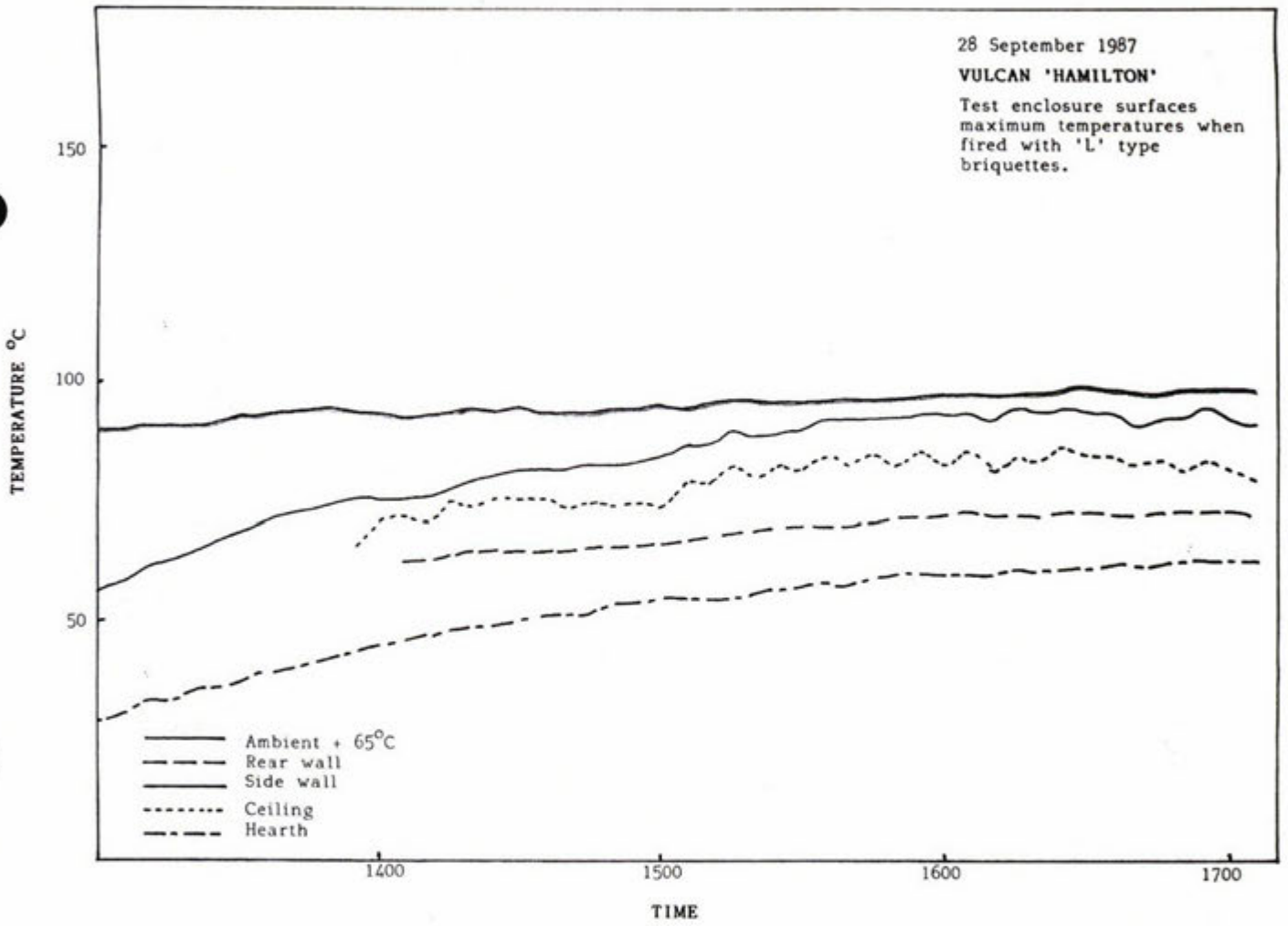
External wall. The maximum temperature rise was 48°C, which occurred at a point 75 mm directly above the 340 mm diameter flue penetration.

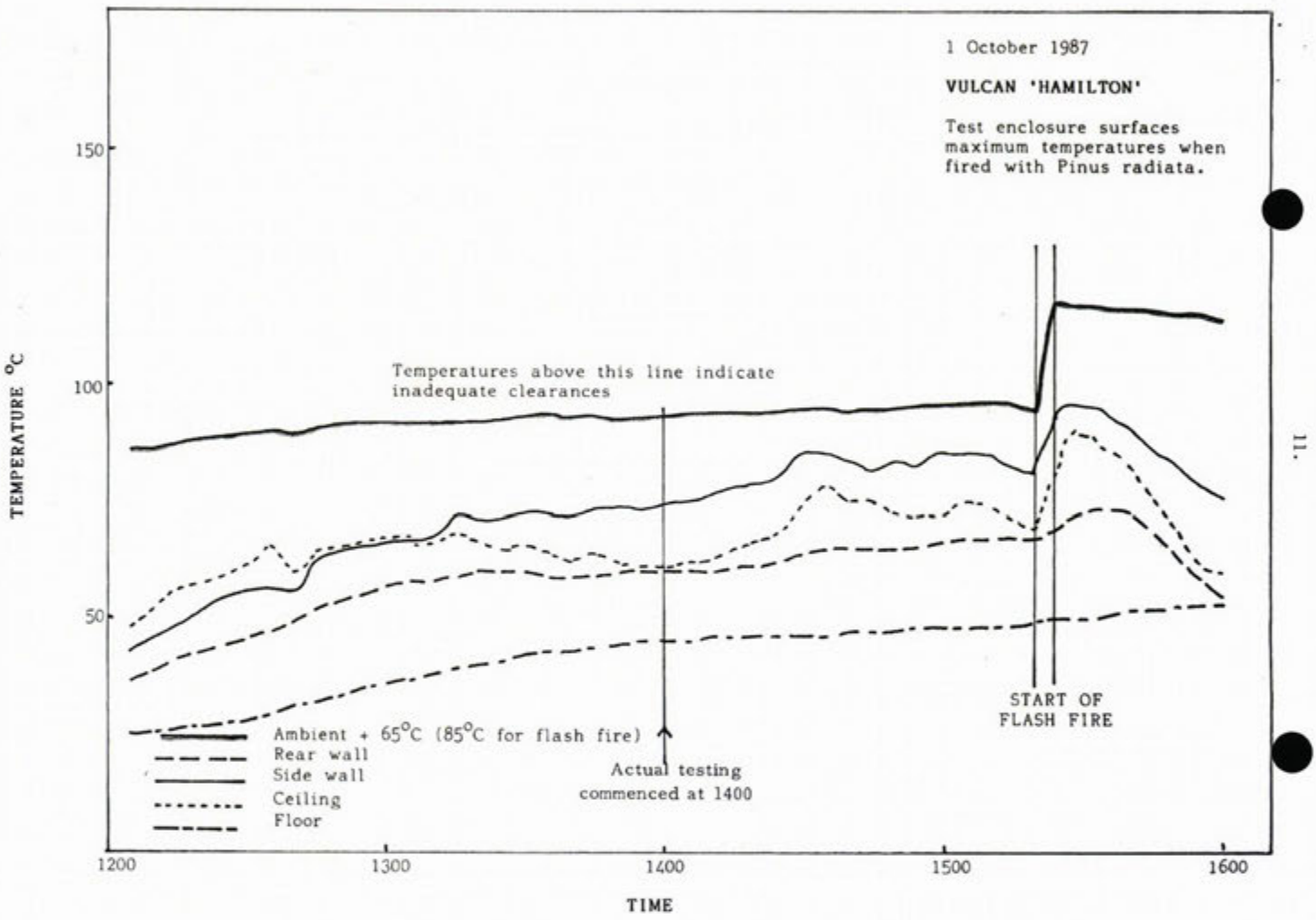
Previous floor and ceiling test figures i.e. test 'B' apply for this test.

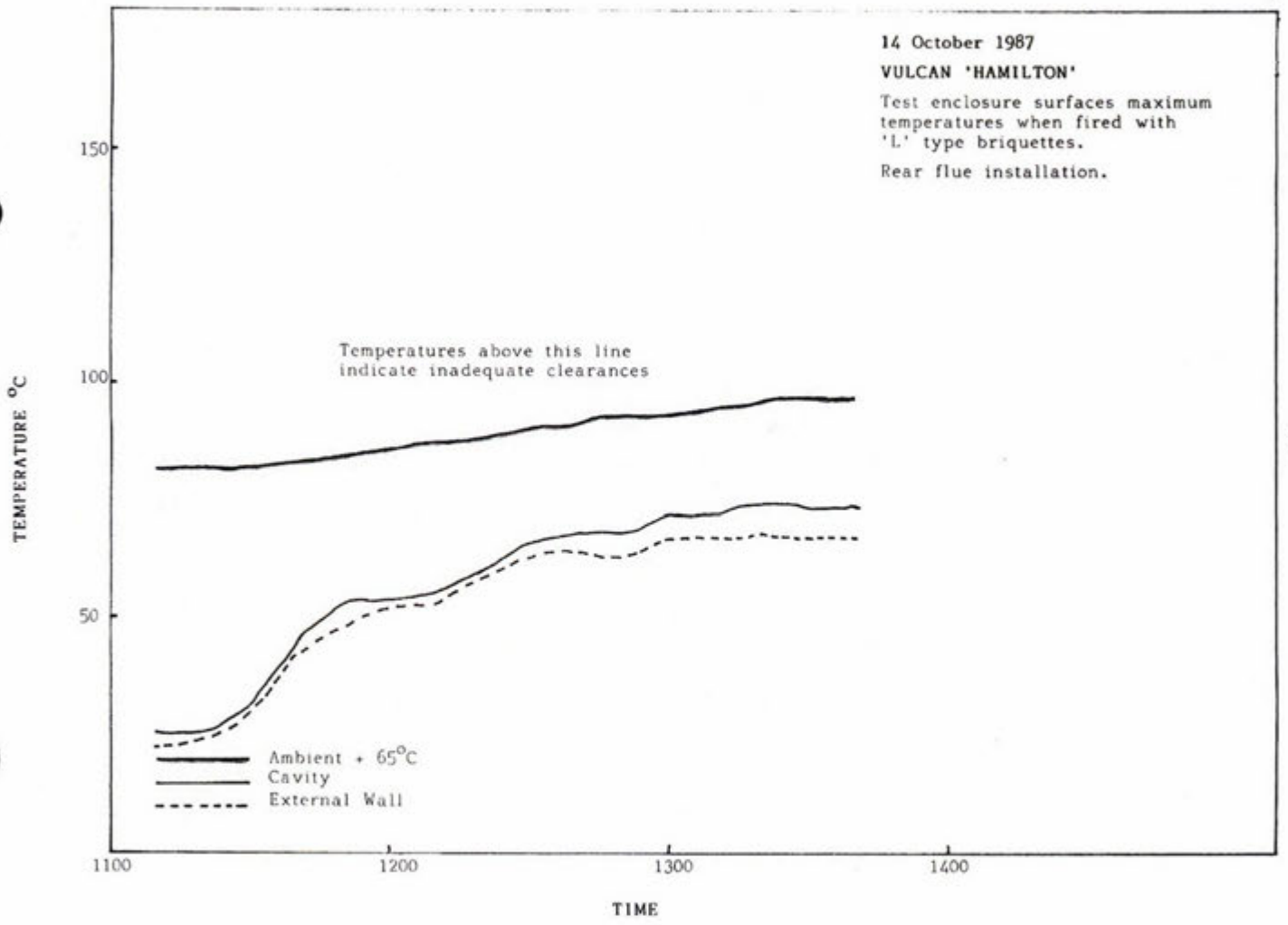
The maximum allowable temperature rise of 85°C above ambient air temperature, as specified in the SAA AS2918-12987 was not exceeded on any surface of the test enclosure.

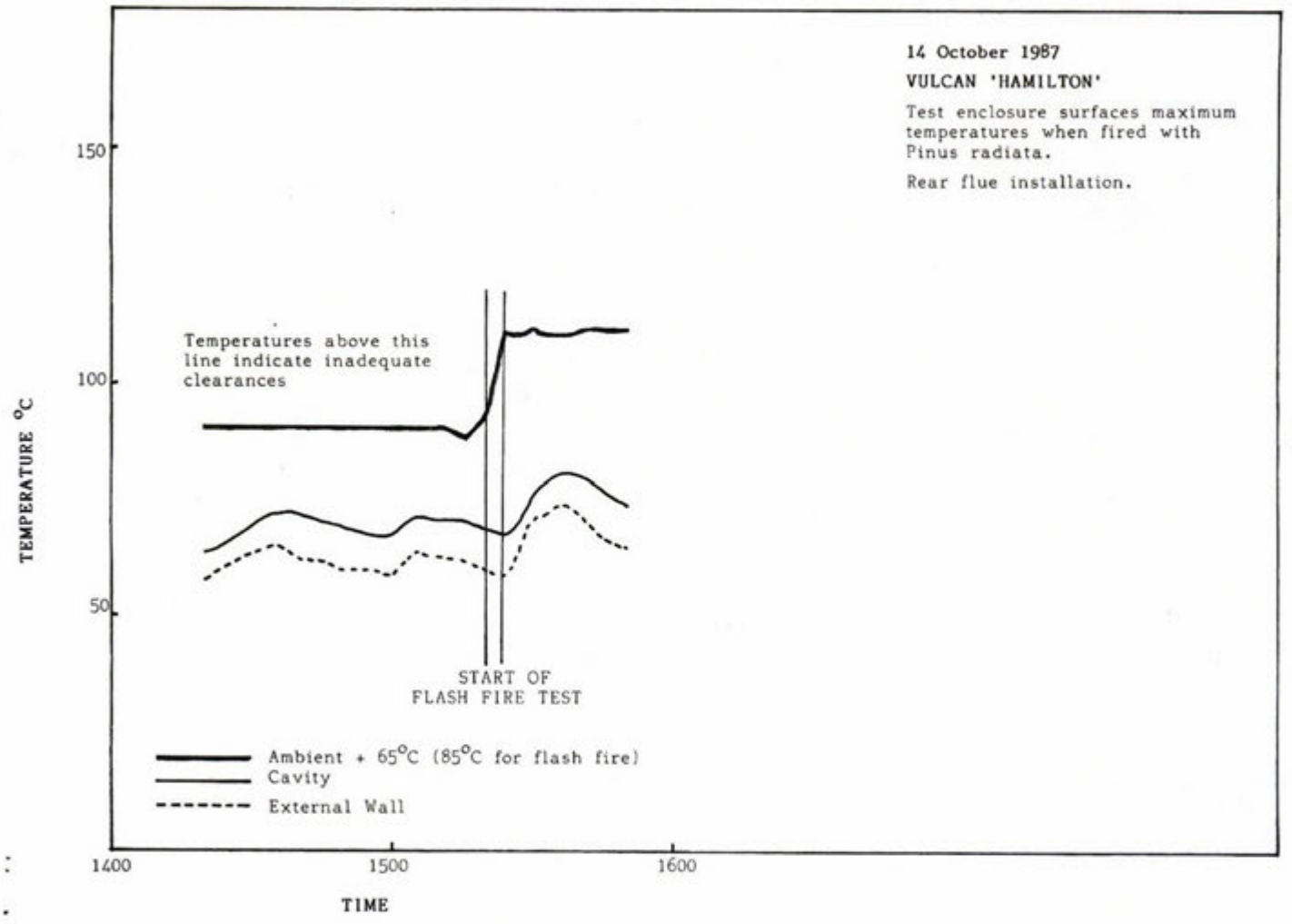
Signed: .....

Date: 24/11/87.....


28 September 1987
VULCAN 'HAMILTON'
Test enclosure surfaces maximum temperatures when fired with 'L' type briquettes.
TEMPERATURE °C
150
100
50
1400
1500
1600
1700
TIME
Ambient + 65°C
Rear wall
Side wall
Ceiling
Hearth

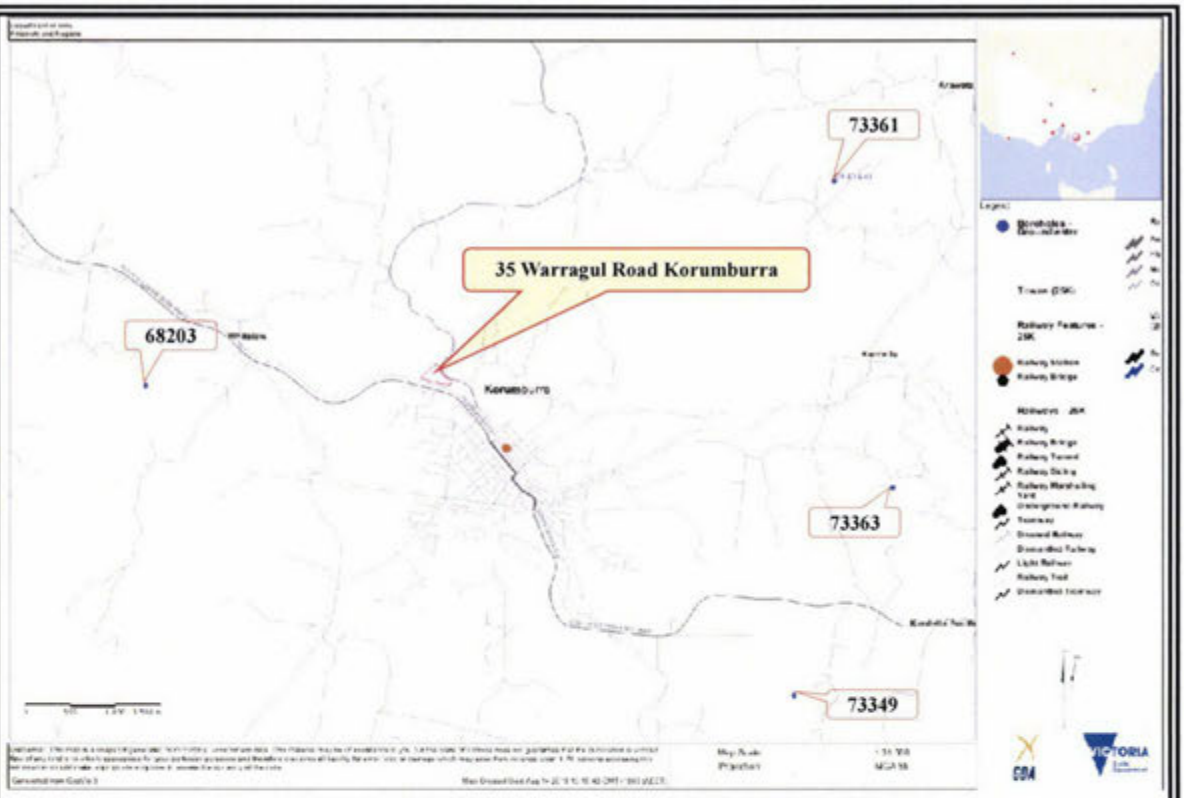

1 October 1987
VULCAN 'HAMILTON'
Test enclosure surfaces maximum temperatures when fired with Pinus radiata.
Temperatures above this line indicate inadequate clearances
START OF FLASH FIRE
Actual testing commenced at 1400
Ambient + 65°C (85°C for flash fire)
Rear wall
Side wall
Ceiling
Floor
TEMPERATURE °C
150
100
50
1200
1300
1400
1500
1600
TIME


14 October 1987
VULCAN 'HAMILTON'
Test enclosure surfaces maximum temperatures when fired with 'L' type briquettes.
Rear flue installation.
Temperatures above this line indicate inadequate clearances
Ambient + 65°C
Cavity
External Wall
TEMPERATURE °C
150
100
50
1100
1200
1300
1400
TIME


14 October 1987
VULCAN 'HAMILTON'
Test enclosure surfaces maximum temperatures when fired with Pinus radiata.
Rear flue installation.
150
100
50
TEMPERATURE °C
Temperatures above this line indicate inadequate clearances
START OF FLASH FIRE TEST
Ambient + 65°C (85°C for flash fire)
Cavity
External Wall
1400
1500
1600
TIME

APPENDIX G
GROUNDWATER DATABASE SEARCH

FIGURE 16 - GEOVIC GROUNDWATER BORE SEARCH MAP



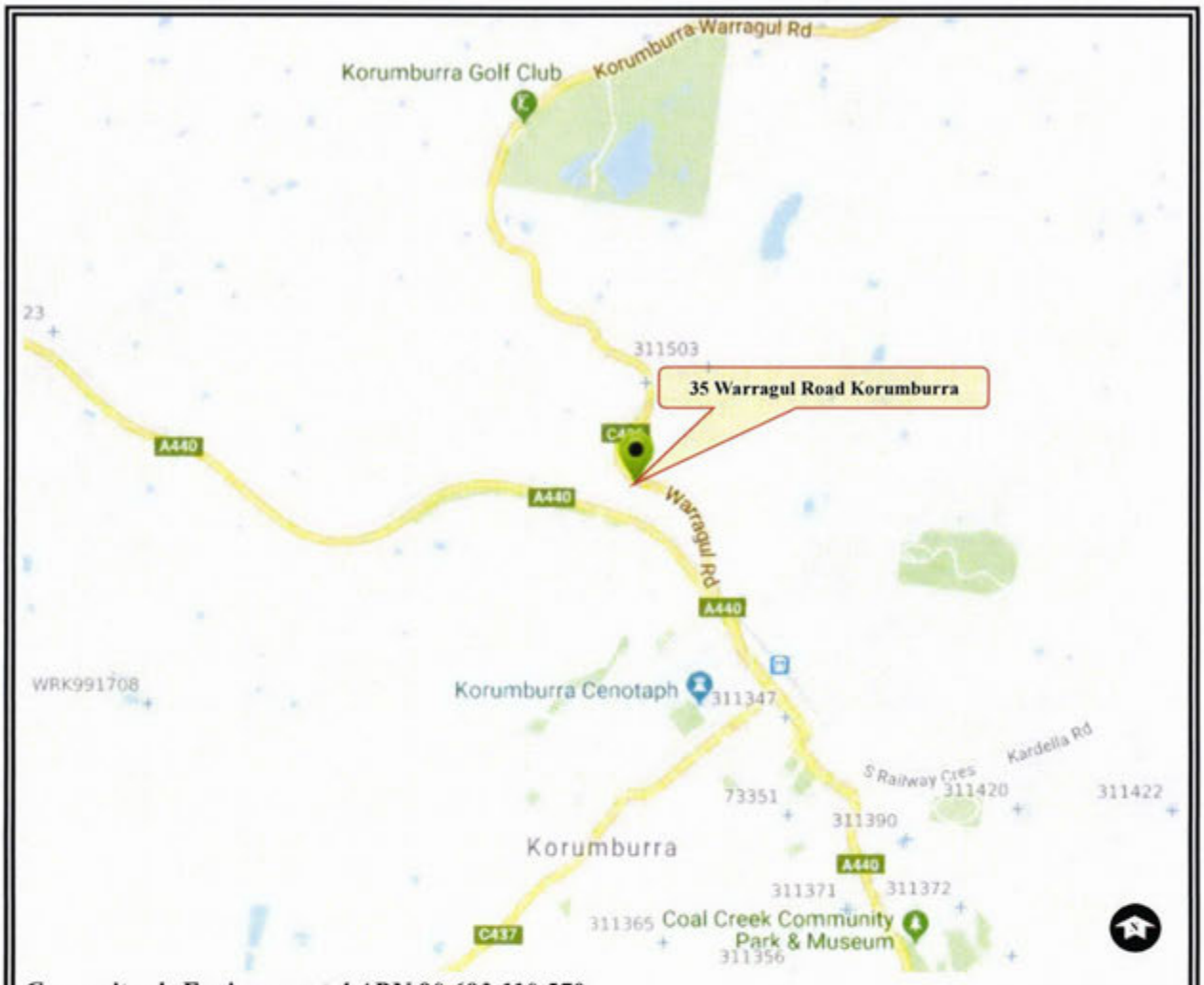
Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM594-M	Map Description	Groundwater Bore Search Map
Location	35 Warragul Road Korumburra	Source	The Earth Resources web mapping application - Geovic
Date	14 August 2019	Project	Stage 1 Preliminary Site Investigation

TABLE 18 - THE EARTH RESOURCES WEB MAPPING APPLICATION - GEOVIC GROUNDWATER DATABASE SEARCHES DETAILS

Bore id	Drill Date	Measured Depth (metres)	Company Name	Data Source	Usage	Method	Purpose	Datum of Coordinate Attributes	Zone	Latitude	Longitude	Parish Name	Parish Hole Number
68203	31/12/1927	177.08	Department of Manufacturing and Industry Development	Dept. Manufacturing & Industry	Domestic & Stock water supply	-	Groundwater	GDA94	55	-38.4241	145.7783	Jeetho	4
73361	21/04/1972	85.344	Private Individual/Corporation	Rural Water Commission	Domestic & Stock water supply	-	Groundwater	GDA94	55	-38.4044	145.8662	Korumburra	10002
73349	31/12/1919	117.653	Department of Manufacturing and Industry development	Dept. Manufacturing & Industry	Domestic & Stock water supply	-	Groundwater	GDA94	55	-38.4561	145.8603	Korumburra	86
73363	18/03/1983	15.4	Private Individual/Corporation	Rural Water Commission	-	Percussion (cable)	Groundwater	GDA94	55	-38.4353	145.8733	Korumburra	10004

FIGURE 17 - VISUALISING VICTORIA'S GROUNDWATER (VVG) MAP



Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM594-M	VVG Map Legend	Bores - DEPI WMIS (groundwater) + Unmonitored + Previously Monitored + Monitored
Location	35 Warragul Road Korumburra	Source	Visualising Victoria's Groundwater (VVG) - Map portal
Date	14 August 2019	Project	Stage 1 Preliminary Site Investigation

TABLE 19 - VISUALISING VICTORIA'S GROUNDWATER DATABASE SEARCH DETAILS

Bore ID	Monitoring Status	Map zone	Longitude gda94	Latitude gda94	Constructed date	Constructed depth	Bore type	Use	Driller	Digitised elevation	Old Bore ID
311347	N	55	145.8242	-38.432868	31/12/1908	394.1	Groundwater	-	Not Known	227.36	1
311352	N	55	145.8204	-38.419356	31/12/1908	337.71	Groundwater	-	Not Known	231.2	6
311358	N	55	145.8204	-38.419356	31/12/1908	345.79	Groundwater	-	Not Known	231.2	12
311365	N	55	145.8182	-38.441548	31/12/1908	406.81	Groundwater	-	Not Known	224.48	19
311367	N	55	145.8204	-38.419356	31/12/1908	332.23	Groundwater	-	Not Known	231.2	21
311369	N	55	145.8204	-38.419356	31/12/1908	125.57	Groundwater	-	Not Known	231.2	23
311370	N	55	145.8273	-38.440261	31/12/1908	115.06	Groundwater	-	Not Known	208.32	24
311371	N	55	145.8272	-38.44026	31/12/1908	132.74	Groundwater	-	Not Known	208.5	25
311372	N	55	145.8328	-38.440172	31/12/1908	198.42	Groundwater	-	Not Known	232.27	26
311375	N	55	145.8173	-38.419929	31/12/1908	370.02	Groundwater	-	Not Known	250.7	29
311376	N	55	145.8204	-38.419356	31/12/1908	58.82	Groundwater	-	Not Known	231.2	30
311377	N	55	145.8204	-38.419356	31/12/1908	51.35	Groundwater	-	Not Known	231.2	31
311378	N	55	145.8204	-38.419356	31/12/1908	45.11	Groundwater	-	Not Known	231.2	32
311379	N	55	145.8204	-38.419356	31/12/1908	65.83	Groundwater	-	Not Known	231.2	33
311380	N	55	145.8204	-38.419356	31/12/1908	89.3	Groundwater	-	Not Known	231.2	34
311384	N	55	145.8204	-38.419356	31/12/1908	91.44	Groundwater	-	Not Known	231.2	38
311386	N	55	145.8204	-38.419356	31/12/1908	68.88	Groundwater	-	Not Known	231.2	40
311387	N	55	145.8204	-38.419356	31/12/1908	76.2	Groundwater	-	Not Known	231.2	41
311388	N	55	145.8301	-38.437577	31/12/1908	126.33	Groundwater	-	Not Known	227.4	42

Bore ID	Monitoring Status	Map zone	Longitude gda94	Latitude gda94	Constructed date	Constructed depth	Bore type	Use	Driller	Digitised elevation	Old Bore ID
311389	N	55	145.83	-38.437693	31/12/1908	113.69	Groundwater	-	Not Known	226.82	43
311390	N	55	145.8301	-38.437577	31/12/1908	119.63	Groundwater	-	Not Known	227.4	44
311394	N	55	145.8204	-38.419356	31/12/1914	181.05	Groundwater	-	Not Known	231.2	48
311399	N	55	145.8204	-38.419356	31/12/1915	119.32	Groundwater	-	Not Known	231.2	53
311400	N	55	145.8204	-38.419356	31/12/1915	135.94	Groundwater	-	Not Known	231.2	54
311401	N	55	145.8204	-38.419356	31/12/1918	96.31	Groundwater	-	Not Known	231.2	55
311402	N	55	145.8204	-38.419356	31/12/1918	126.79	Groundwater	-	Not Known	231.2	56
311403	N	55	145.8204	-38.419356	31/12/1918	135.33	Groundwater	-	Not Known	231.2	57
311404	N	55	145.8204	-38.419356	31/12/1918	122.22	Groundwater	-	Not Known	231.2	58
311405	N	55	145.8204	-38.419356	31/12/1918	97.53	Groundwater	-	Not Known	231.2	59
311406	N	55	145.8204	-38.419356	31/12/1918	79.85	Groundwater	-	Not Known	231.2	60
311407	N	55	145.8204	-38.419356	31/12/1918	136.55	Groundwater	-	Not Known	231.2	61
311408	N	55	145.8204	-38.419356	31/12/1918	64.92	Groundwater	-	Not Known	231.2	62
311409	N	55	145.8204	-38.419356	31/12/1918	134.11	Groundwater	-	Not Known	231.2	63
311410	N	55	145.8204	-38.419356	31/12/1918	51.81	Groundwater	-	Not Known	231.2	64
311411	N	55	145.8204	-38.419356	31/12/1918	115.21	Groundwater	-	Not Known	231.2	65
311412	N	55	145.8204	-38.419356	31/12/1918	103.63	Groundwater	-	Not Known	231.2	66
311413	N	55	145.8204	-38.419356	31/12/1918	112.77	Groundwater	-	Not Known	231.2	67
311414	N	55	145.8204	-38.419356	31/12/1918	225.85	Groundwater	-	Not Known	231.2	68
311415	N	55	145.8204	-38.419356	31/12/1918	93.26	Groundwater	-	Not Known	231.2	69

Bore ID	Monitoring Status	Map zone	Longitude gda94	Latitude gda94	Constructed date	Constructed depth	Bore type	Use	Driller	Digitised elevation	Old Bore ID
311417	N	55	145.8204	-38.419356	31/12/1919	170.99	Groundwater	-	Not Known	231.2	71
311418	N	55	145.8204	-38.419356	31/12/1919	251.46	Groundwater	-	Not Known	231.2	72
311420	N	55	145.8356	-38.436397	31/12/1919	122.22	Groundwater	-	Not Known	200.45	74
311421	N	55	145.8204	-38.419356	31/12/1919	170.99	Groundwater	-	Not Known	231.2	75
311428	N	55	145.8204	-38.419356	31/12/1919	243.84	Groundwater	-	Not Known	231.2	82
311429	N	55	145.8204	-38.419356	31/12/1919	257.86	Groundwater	-	Not Known	231.2	83
311430	N	55	145.8204	-38.419356	31/12/1919	182.27	Groundwater	-	Not Known	231.2	84
311432	N	55	145.8204	-38.419356	31/12/1923	22.7	Groundwater	-	Not Known	231.2	89
311433	N	55	145.8204	-38.419356	31/12/1923	12.8	Groundwater	-	Not Known	231.2	90
311434	N	55	145.8204	-38.419356	31/12/1923	24.53	Groundwater	-	Not Known	231.2	91
311435	N	55	145.8204	-38.419356	31/12/1925	54.25	Groundwater	-	Not Known	231.2	92

FIGURE 18 - VISUALISING VICTORIA'S GROUNDWATER (VVG) MAP – GROUNDWATER SALINITY

Geoaquitards Environmental ABN 80 683 110 579

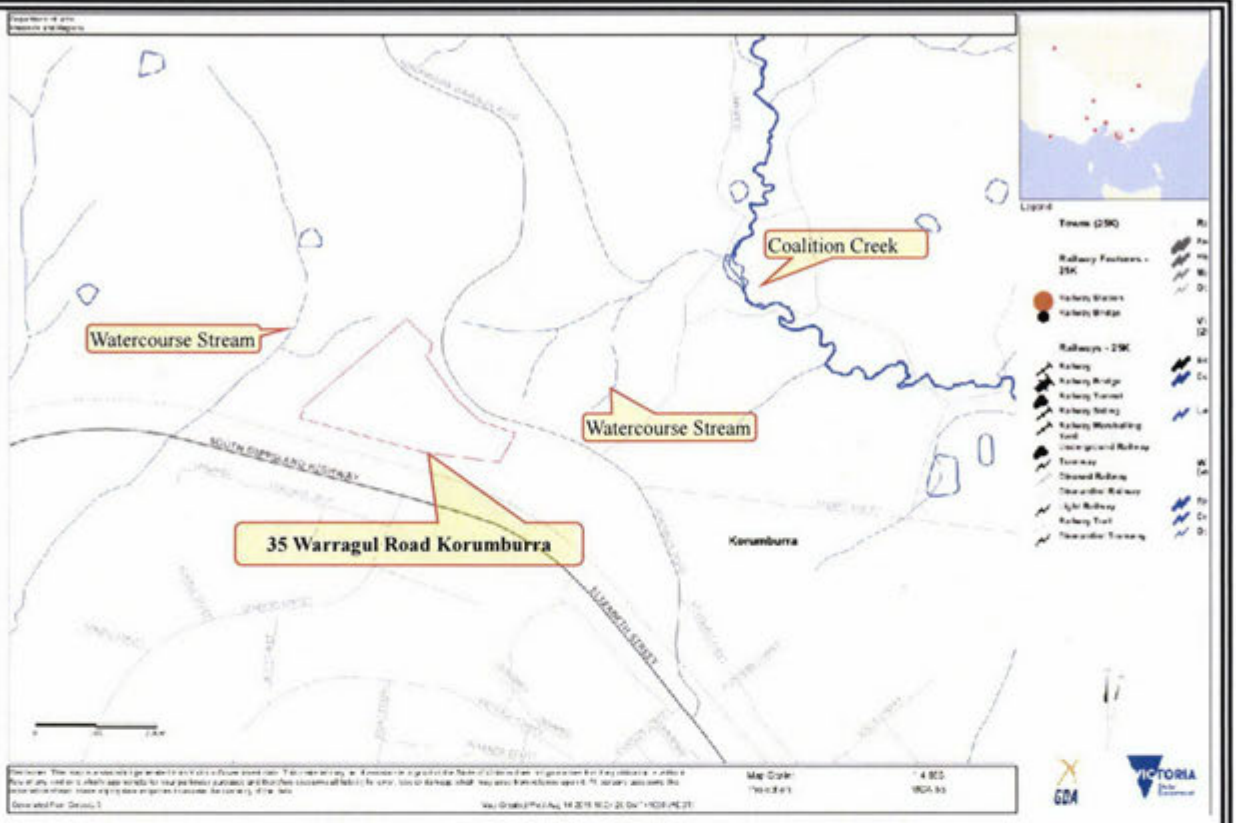
Job Number	RM594-M	VVG Groundwater Salinity Map Legend	Groundwater salinity (DEPI) Less than 500mg/l 500-1,000mg/l 1,000-3,500mg/l 3,500-7,000mg/l 7,000-13,000mg/l 13,000-35,000mg/l Greater than 35,000mg/l
Location	35 Warragul Road Korumburra	Source	Visualising Victoria's Groundwater (VVG) - Map portal
Date	14 August 2019	Project	Stage 1 Preliminary Site Investigation

FIGURE 19 - VISUALISING VICTORIA'S GROUNDWATER (VVG) MAP – DEPTH TO WATERTABLE

Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM594-M	VVG Groundwater Salinity Map Legend	Depth to watertable (DEPI) Less than 5 metres 5 to 10 metres 10 to 20 metres 20 to 50 metres Greater than 50 metres
Location	35 Warragul Road Korumburra	Source	Visualising Victoria's Groundwater (VVG) - Map portal
Date	14 August 2019	Project	Stage 1 Preliminary Site Investigation

FIGURE 20 - WATERCOURSES AND LAKES DATABASE SEARCH



Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM594-M	Map Description	Watercourse Map
Location	35 Warragul Road Korumburra	Source	The Earth Resources web mapping application - Geovic
Date	14 August 2019	Project	Stage 1 Preliminary Site Investigation

TABLE 20 - WATERCOURSES DATABASE SEARCH RESULTS

Watercourse	Feature Type Code	Location and Closest point from the Site
Watercourse Stream	watercourse_stream	Approximately 43m to the west of the site and ultimately flows in to the Foster Creek located south-west of the site.
Watercourse Stream	watercourse_stream	Approximately 81m to the west north-east of the site and flows in to the Coalition Creek.
Coalition Creek	Connector_stream	Approximately 508m to the north-east of the site.

APPENDIX H
SITE PHOTOGRAPHS

FIGURE 21- SITE PHOTOGRAPHS

Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM594-M	Description	Site Photographs
Location	35 Warragul Road Korumburra		
Data	14 August 2019	Project	Stage 1 Preliminary Site Investigation

APPENDIX I

CATHODIC PROTECTION SYSTEM DATABASE SEARCH INFORMATION

24 July, 2019

energysafe VICTORIA

Creating a safer state with electricity and gas

To: Emmanuel Ernest

Geoaquitards Environmental

T: 9554 3258

SEARCH FOR CATHODIC PROTECTION SYSTEMS

With reference to your email of 22/07/2019, a search of the CP database has failed to identify any cathodic protection systems that have been registered at the following locations:

- ***35 Warragul Road, Korumburra***

Yours sincerely

Peter Wade
MANAGER ELECTROLYSIS MITIGATION

Disclaimer

Energy Safe Victoria provides this information in good faith, but cannot guarantee the accuracy or validate the information provided. The Cathodic Protection (CP) database is a register of currently operating Cathodic Protection systems in Victoria and was established in 1970. The CP database is administered under the Electricity Safety Act 1998 and the Electricity Safety (Cathodic Protection) Regulations 2009.
Some underground fuel tanks may not be listed in the CP database including: if the tank is not metallic (therefore not requiring CP); the tank is metallic but CP was not installed; the CP system was not registered, or the CP system has been de-commissioned.
If you believe underground tanks may be present and not shown on ESV's database you should conduct your own tests and investigations.

Energy Safe Victoria
ABN 27 462 247 657

Level 5 Building 2
4 Riverside Quay
Southbank VIC 3006

PO Box 262
Collins St West VIC 8007
DX 212569 Melbourne VIC

T (03) 9203 9700
F (03) 9686 2197
www.esv.vic.gov.au

APPENDIX J

REVIEW OF DANGEROUS GOODS STORAGE LICENCE BY WORKSAFE VICTORIA

Emmanuel Ernest

From: licensing@worksafe.vic.gov.au
Sent: Thursday, 1 August 2019 8:44 AM
To: Emmanuel Ernest
Subject: Re: HISTORICAL SEARCH OF DANGEROUS GOODS STORAGE LICENCES ISSUED BY WORKSAFE VICTORIA FOR 35 WARRAGUL ROAD, KORUMBURRA VIC 3950
Attachments: RM594-M - WorkSafe letter.pdf; M1536-P - Signed Acceptance Form.pdf; 35-Warragul-Road-Korumburra-Basic-Property-Report.pdf

Good morning Emmanuel,

I have no record of any Dangerous Goods being stored on that sire.

Any amount of dangerous goods below "Manifest Quantity" in Schedule 2 part 2 of Dangerous Goods (Storage and Handling) Regulations 2012 are not required to be notified to WorkSafe, therefore a detailed site inspection is recommended.

Your Sincerely

Michael Smith
Senior Licensing Officer

licensing@worksafe.vic.gov.au
Tel/ 1800 136 089 or 9641 1444

Head Office, 1 Malop Street
Geelong VIC 3220
www.worksafe.vic.gov.au

"Emmanuel Ernest " ---22/07/2019 02:53:00 PM---"Emmanuel Ernest " <emmanuelernest@iprimus.com.au>

"Emmanuel Ernest " <emmanuelernest@iprimus.com.au>

22/07/2019 02:52 PM

To: Licence/Field_Services/VWA@WorkCover

cc:

Subject: HISTORICAL SEARCH OF DANGEROUS GOODS STORAGE LICENCES ISSUED BY WORKSAFE VICTORIA FOR 35 WARRAGUL ROAD, KORUMBURRA VIC 3950

Dear Sir/Madam

Please find attached request regarding the above subject, Thanks for your help. .

Regards

EMMANUEL ERNEST
Senior Environmental Scientist

MSc (Geol) BSc (Chem) Grad Dip (Env Mngt)

To Contact **Geoaquitards Environmental**:

ABN 80 683 110 579

Postal Address: PO Box 4040 Dandenong South VIC 3164

Street Address Suite 23, 160 South Gippsland Highway, Dandenong South, VIC 3175

T (+61) (3) 9554 3258 F (+61) (3) 9705 7948 M 0434 890 678

e-mail: geoaquitards@iprimus.com.au

(See attached file: RM594-M - WorkSafe letter.pdf)(See attached file: M1536-P - Signed Acceptance Form.pdf)(See attached file: 35-Warragul-Road-Korumburra-Basic-Property-Report.pdf)

information about the use, access and disclosure of this information, refer to our privacy policy at our website.
(5) Please consider the environment before printing.

APPENDIX K

TRADE WASTE (WATER AUTHORITY) SEARCH

Emmanuel Ernest

From: sgwater <sgwater@sgwater.com.au>
Sent: Tuesday, 23 July 2019 1:45 PM
To: Emmanuel Ernest
Subject: RE: HISTORICAL SEARCH OF TRADE WASTE (WATER AUTHORITY) LICENCES ISSUED FOR 35 WARRAGUL ROAD, KORUMBURRA VIC 3950

Hi Emmanuel,

I have checked with Hugh Sullivan who looks after our Trade Waste Agreements at South Gippsland Water and he has informed me that there is no Trade Waste Agreement for the above listed property.

Regards,

Helen Hender
Customer Service Officer Reception
South Gippsland Water
14 - 18 Pioneer Street, Foster VIC 3960 | P.O. Box 102 Foster VIC 3960
P 03 56820 480 | F 03 5682 1199 | E hhender@sgwater.com.au

www.sgwater.com.au

From: Emmanuel Ernest [mailto:emmanuelernest@iprimus.com.au]
Sent: Monday, 22 July 2019 2:49 PM
To: sgwater <sgwater@sgwater.com.au>
Subject: HISTORICAL SEARCH OF TRADE WASTE (WATER AUTHORITY) LICENCES ISSUED FOR 35 WARRAGUL ROAD, KORUMBURRA VIC 3950

Attention: Trade Waste (Water Authority)

Dear Sir/Madam

Please find attached request regarding the above subject, Thanks for your help. .

Regards
EMMANUEL ERNEST
Senior Environmental Scientist
MSc (Geol) BSc (Chem) Grad Dip (Env Mngt)

To Contact **Geoaquitards Environmental:**
ABN 80 683 110 579
Postal Address: PO Box 4040 Dandenong South VIC 3164
Street Address Suite 23, 160 South Gippsland Highway, Dandenong South, VIC 3175
T (+61) (3) 9554 3258 F (+61) (3) 9705 7948 M 0434 890 678
e-mail: geoaquitards@iprimus.com.au

APPENDIX L
SITE CONTOUR MAP

FIGURE 22 - SITE CONTOUR MAP

Geoaquitards Environmental ABN 80 683 110 579

Job Number	RM594-M	Map Description	Site Contour Map
Location	35 Warragul Road Korumburra	Source	The State of Victoria Department of Environment, Land, Water and Planning 2019
Date	12 August 2019	Project	Stage 1 Preliminary Site Investigation

APPENDIX M

WEST GIPPSLAND CATCHMENT MANAGEMENT AUTHORITY FLOODING INFORMATION

West Gippsland
Catchment Management Authority

WGCMA Ref: WGCMA-F-2019-00555
Document No: 1
Your Ref: 58262315:90258274
Date: 15 August 2019

property.certificates@saiglobal.com

Geoaquitards Environmental via SAI Global Property

Dear Sir/Madam,

Application Number (CMA Ref): WGCMA-F-2019-00555

Property: **Street:** 35 Warragul Road Korumburra Vic 3950
Cadastral: Lot 1, PS725791, Parish of Korumburra

Thank you for your enquiry, received at the West Gippsland Catchment Management Authority ('the Authority') on 12 August 2019. The Authority understands you require flood advice for the purpose of a land transaction.

The Authority does not have any official record of flooding for the property on which to base its assessment. Information available to the Authority indicates that the property is not likely to be subject to riverine inundation during a 1% Annual Exceedance Probability (AEP[3]) flood event (commonly known as the 1 in 100 year flood). The property is located on a ridge and is more than 30 metres from the nearest designated waterway as shown in Figure 1.

Please refer to the attached **explanatory report** for further detail.

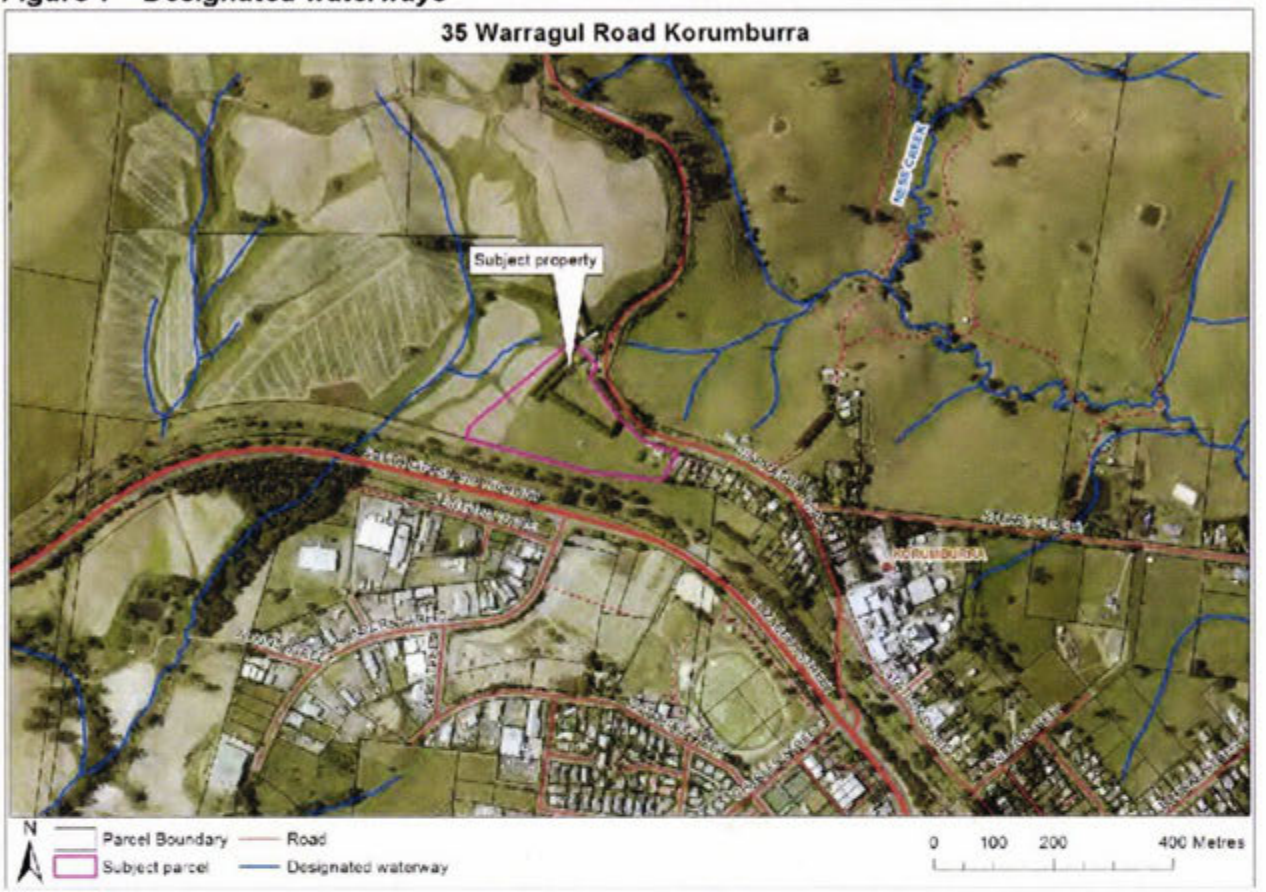
Should you have any queries, please do not hesitate to contact Catherine Couling on 1300 094 262. To assist the Authority in handling any enquiries please quote **WGCMA-F-2019-00555** in your correspondence with us.

Yours sincerely,

Linda Tubnor
Statutory Planning Team Leader

The information contained in this correspondence is subject to the disclaimers and definitions attached.

Figure 1 – Designated waterways



1% AEP[3] Flood Level Determination

Floods are classified by the frequency at which they are likely to occur. In Victoria, all proposals for development on floodplains are assessed against a flood that, on average, will occur once every 100 years. A flood of this size has a 1% chance of occurring in any given year, and is known as either the 100 year Average Recurrence Interval (ARI[5]) flood or the 1% Annual Exceedance Probability (AEP) flood.

Please note that the 1% AEP flood is the minimum standard for planning in Victoria, and is not the largest flood that could occur. There is always a possibility that a flood larger in height and extent than the 1% AEP flood may occur in the future.

The Authority does not have any official record of flooding for the property on which to base its assessment. Information available to the Authority indicates that the property is not likely to be subject to riverine inundation during a 1% AEP flood event. The property is located on a ridge and is more than 30 metres from the nearest designated waterway as shown in Figure 1.

The Authority holds no information in relation to the arrangement and capacity of stormwater drainage infrastructure in the area and recommends that you contact Council for more information.

Definitions and Disclaimers

1. The area referred to in this letter as the 'proposed development location' is the land parcel(s) that, according to the Authority's assessment, most closely represent(s) the location identified by the applicant. The identification of the 'proposed development location' on the Authority's GIS has been done in good faith and in accordance with the information given to the Authority by the applicant(s) and/or the local government authority.

2. While every endeavour has been made by the Authority to identify the proposed development location on its GIS using VicMap Parcel and Address data, the Authority accepts no responsibility for or makes no warranty with regard to the accuracy or naming of this proposed development location according to its official land title description.

3. **AEP** as Annual Exceedance Probability – is the likelihood of occurrence of a flood of given size or larger occurring in any one year. AEP is expressed as a percentage (%) risk and may be expressed as the reciprocal of ARI (Average Recurrence Interval).

   Please note that the 1% probability flood is not the probable maximum flood (PMF). There is always a possibility that a flood larger in height and extent than the 1% probability flood may occur in the future.

4. **AHD** as Australian Height Datum - is the adopted national height datum that generally relates to height above mean sea level. Elevation is in metres.

5. **ARI** as Average Recurrence Interval - is the likelihood of occurrence, expressed in terms of the long-term average number of years, between flood events as large as or larger than the design flood event. For example, floods with a discharge as large as or larger than the 100 year ARI flood will occur on average once every 100 years.

6. Nominal Flood Protection Level – is the minimum height required to protect a building or its contents, which includes a freeboard above the 1% AEP flood level.

7. No warranty is made as to the accuracy or liability of any studies, estimates, calculations, opinions, conclusions, recommendations (which may change without notice) or other information contained in this letter and, to the maximum extent permitted by law, the Authority disclaims all liability and responsibility for any direct or indirect loss or damage which may be suffered by any recipient or other person through relying on anything contained in or omitted from this letter.

8. This letter has been prepared for the sole use by the party to whom it is addressed and no responsibility is accepted by the Authority with regard to any third party use of the whole or of any part of its contents. Neither the whole nor any part of this letter or any reference thereto may be included in any document, circular or statement without the Authority's written approval of the form and context in which it would appear.

9. The flood information provided represents the best estimates based on currently available information. This information is subject to change as new information becomes available and as further studies are carried out.

10. Please note that land levels provided by the Authority are an estimate only and should not be relied on by the applicant. Prior to any detailed planning or building approvals, a licensed surveyor should be engaged to confirm the above levels.