

Form 2

NOTICE OF AN APPLICATION FOR PLANNING PERMIT

The land affected by the application is located at:	215 Broadlands Road EAST BAIRNSDALE 3875 Lot: 1 TP: 545554
The application is for a permit to:	Development of a Dwelling
The applicant for the permit is:	Development Solutions Victoria Pty Ltd
The application reference number is:	5.2024.137.1

You may look at the application and any documents that support the application free of charge at: <https://www.eastgippsland.vic.gov.au/building-and-development/advertised-planning-permit-applications>

You may also call 5153 9500 to arrange a time to look at the application and any documents that support the application at the office of the responsible authority, East Gippsland Shire. This can be done during office hours and is free of charge.

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

An objection must

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

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

The Responsible Authority will not decide on the application before:	Subject to the applicant giving notice
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If you object, the Responsible Authority will tell you its decision.

REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958 Page 1 of 1

VOLUME 08850 FOLIO 355

Security no : 124114321851W
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LAND DESCRIPTION

Lot 1 on Title Plan 545554B.
PARENT TITLE Volume 01147 Folio 298
Created by instrument D658962 12/03/1970

REGISTERED PROPRIETOR

Estate Fee Simple
Joint Proprietors
MARIO VANZIN
MARIA VANZIN
AH784838F 12/02/2011

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 TP545554B FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

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

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

Street Address: 215 BROADLANDS ROAD EAST BAIRNSDALE VIC 3875

DOCUMENT END



Imaged Document Cover Sheet

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TITLE PLAN		EDITION 1	TP 545554B
Location of Land		Notations	
Parish:	BROADLANDS		
Township:			
Section:			
Crown Allotment:	27B(PT)		
Crown Portion:			
Last Plan Reference:			
Derived From:	VOL 8850 FOL 355		
Depth Limitation:	NIL	ANY REFERENCE TO MAP IN THE TEXT MEANS THE DIAGRAM SHOWN ON THIS TITLE PLAN	

Description of Land / Easement Information	THIS PLAN HAS BEEN PREPARED FOR THE LAND REGISTRY, LAND VICTORIA, FOR TITLE DIAGRAM PURPOSES AS PART OF THE LAND TITLES AUTOMATION PROJECT COMPILED: 28/06/2000 VERIFIED: SO'C
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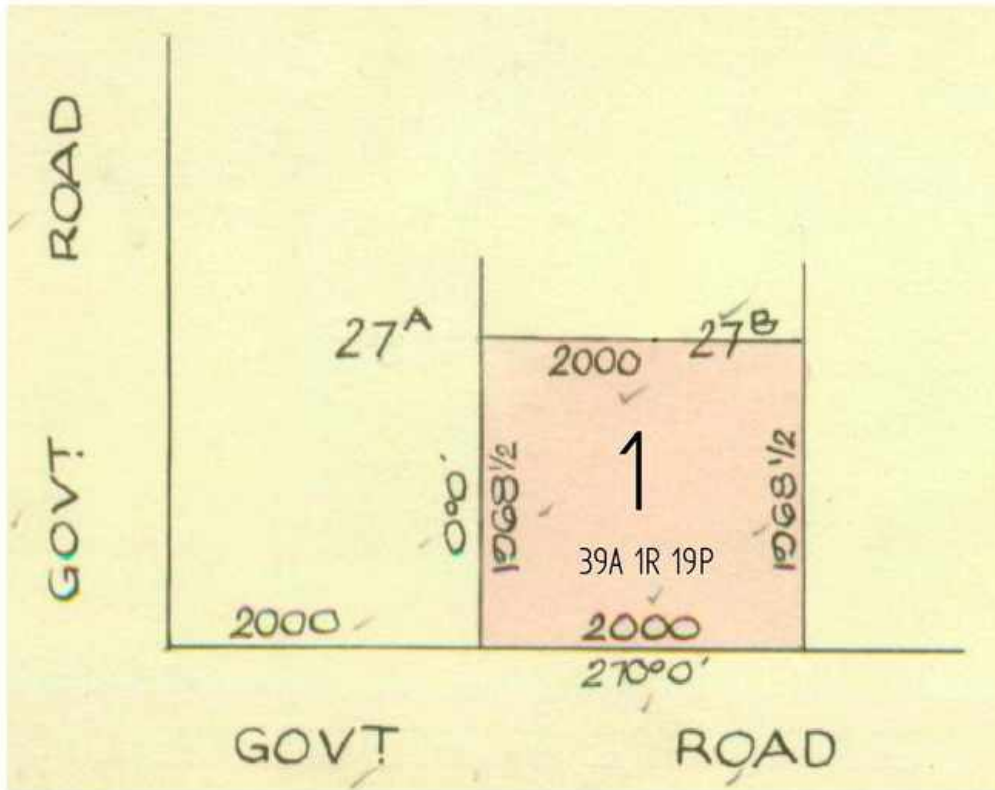


TABLE OF PARCEL IDENTIFIERS
WARNING: Where multiple parcels are referred to or shown on this Title Plan this does not imply separately disposable parcels under Section 8A of the Sale of Land Act 1962
PARCEL 1 = CA 27B (PT)

APR
20
24

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APPLICATION FOR PLANNING PERMIT

USE AND DEVELOPMENT OF A DWELLING

215 BROADLANDS ROAD, EAST BAIRNSDALE

JESSE VANZIN

REF: 24044

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APPENDIX

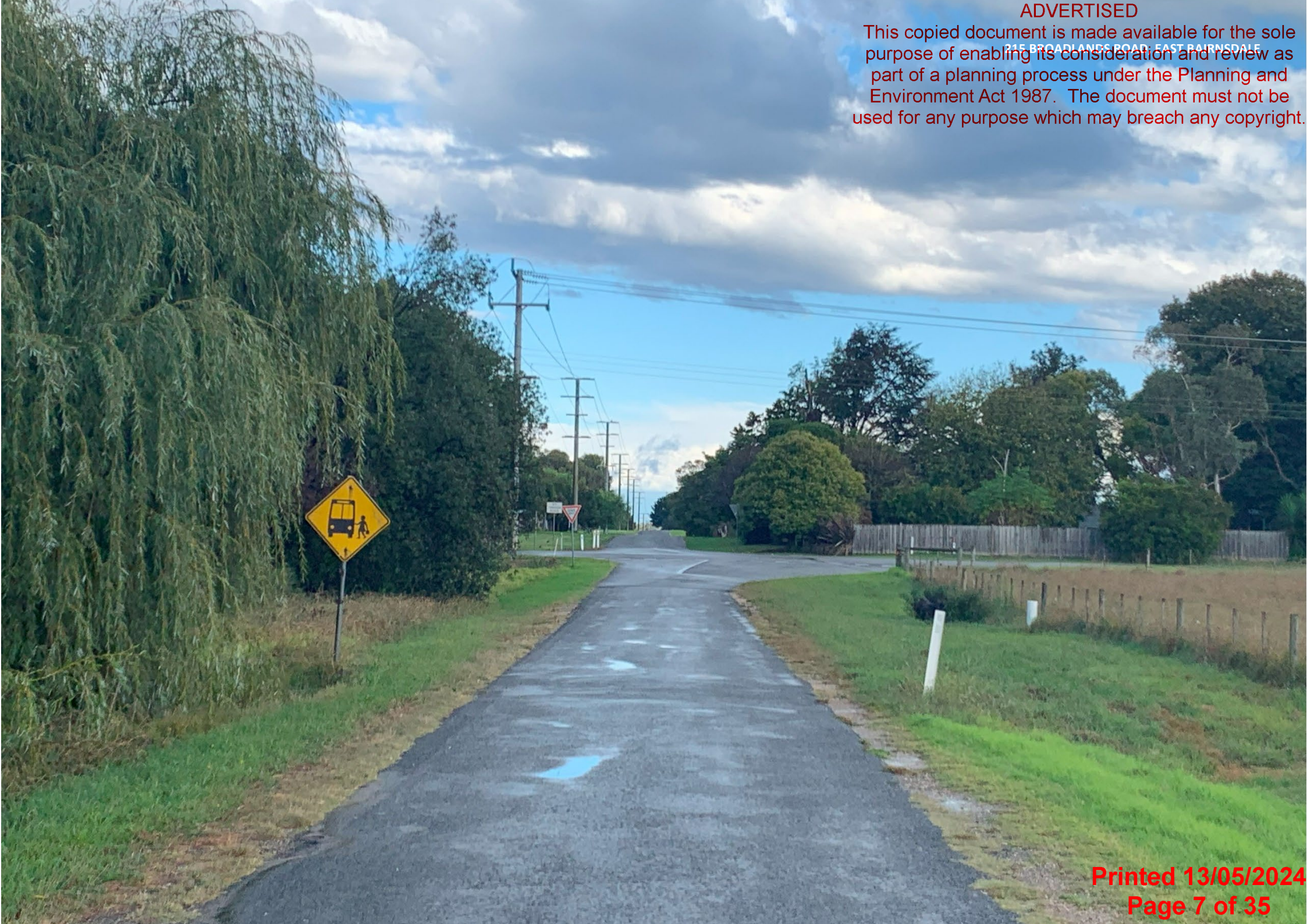
- A Copy of Title and Plan of Subdivision
- B Proposed Development Plans
- C Land Capability Assessment

DOCUMENT REVISION

1	Draft Report	DAC	21/04/2024
2	Final Report	CMC	26/04/2024

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215 BROADLANDS ROAD, EAST BAINSDALE



1. INTRODUCTION

Development Solutions Victoria Pty Ltd act on behalf of Jesse Vanzin, the applicant for the planning permit application for the use and development of a dwelling at 215 Broadlands Road, East Bairnsdale.

This submission and supporting documentation provide details of the subject site, relevant planning controls and policies and delivers an assessment against the provisions of the East Gippsland Planning Scheme.

The proposal is consistent with the objectives of the East Gippsland Planning Scheme, is an appropriate development in this location and will result in a positive planning outcome.

Address	215 Broadlands Road, East Bairnsdale
Site Description	Lot 1 on Title Plan 545554B
Title Particulars	Vol 08850 Fol 355
Site Area	Approximately 16.11 hectares
Proposal	Use and Development of a Dwelling
Planning Scheme	East Gippsland Planning Scheme
Zone	Farming Zone – Schedule 1
Overlays	Not affected by any overlays
Aboriginal Cultural Heritage	Not identified as an area of Cultural Heritage Sensitivity
Permit Triggers	Clause 35.07-1 Farming Zone - Use Clause 35.07-4 Farming Zone - Buildings and Works
Notice	No exemption available
Referrals	No referrals required
Work Authority Licence	Not Applicable
Planning Scheme requirements	Municipal Planning Strategy – Clause 02 Settlement – Coastal settlements – Clause 02.03-1 Environmental and landscape values – Clause 02.03-2 Environmental risks and amenity – Clause 02.03-3 Built environment and heritage – Clause 02.03-5 Planning Policy Framework – Clause 10 Settlement – Clause 11 Environmental and landscape values – Clause 12 Environmental risks and amenity – Clause 13 Natural Resource Management – Clause 14 Built environment and heritage – Clause 15 Housing – Clause 16 Farming Zone – Clause 35.07 Decision guidelines – Clause 65

2. SITE CONTEXT

Site

The subject site is located at 215 Broadlands Road, East Bairnsdale. A copy of the Title and Title Plan is contained in **Appendix A**. The title is not affected by any restrictive covenants or agreements.

The subject site is square in shape with a total area of approximately 16.11 hectares and is currently vacant land.

The site is undulating in nature and contains minimal scattered vegetation throughout. Details of the site are depicted in the photographs provided below.

There is currently no formal vehicular access to the site, however there is an existing gate along the southern boundary providing informal access directly from Broadlands Road. Broadlands Road is a bitumen sealed road with gravel shoulders, traversing in an east to west direction.

The subject site in relation Bairnsdale as well as the surrounding land, is shown in the locality plans in **Figure 1** and **Figure 2**.

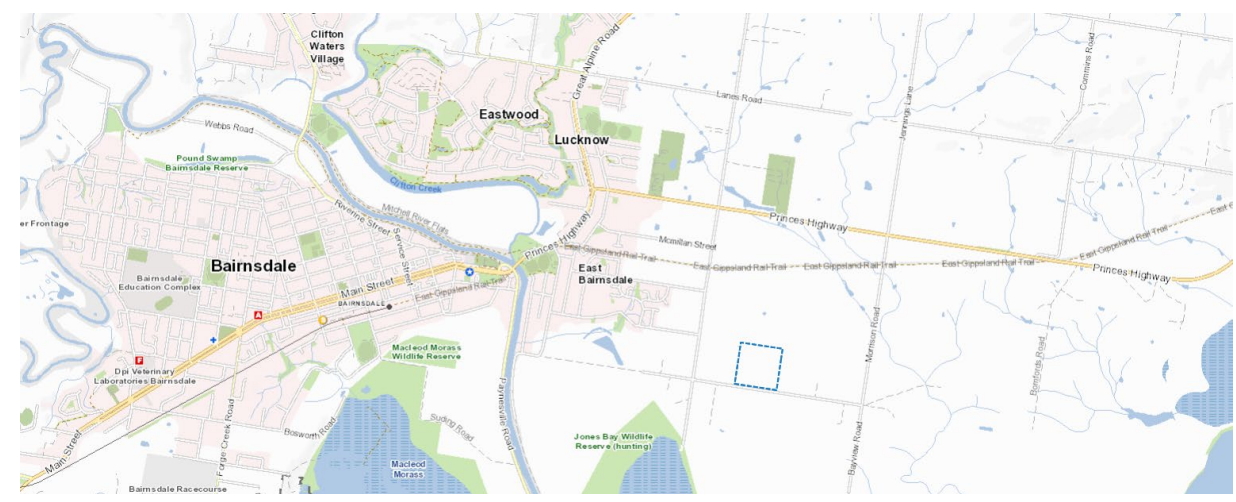


Figure 1 – Locality Plan – 215 Broadlands Road, East Bairnsdale (source: mapshare.vic.gov.au)

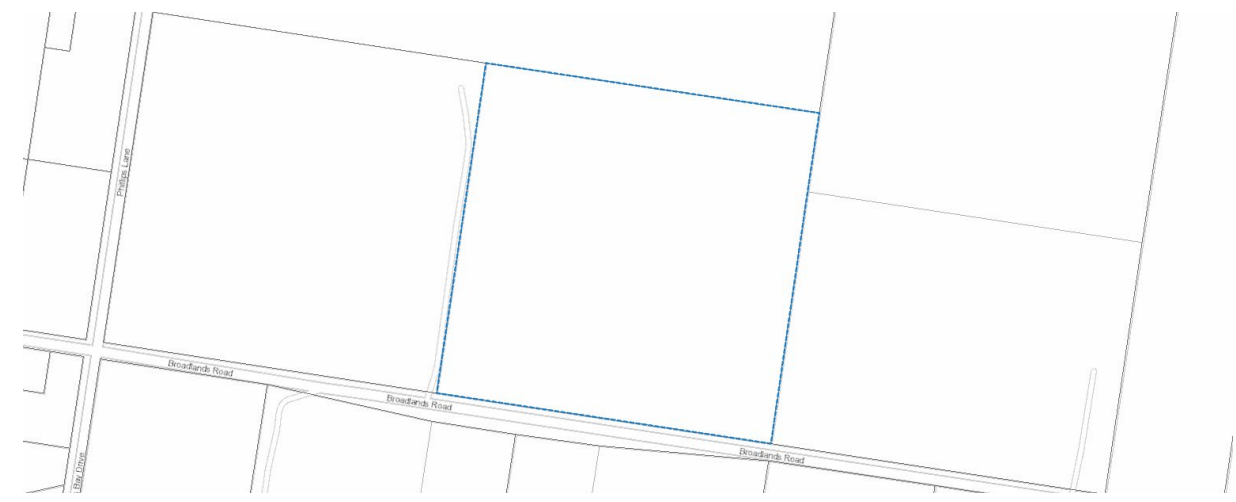


Figure 2 – Locality Plan – 215 Broadlands Road, East Bairnsdale (source: mapshare.vic.gov.au)

Surrounds

The land in this locality is predominantly farming land developed with residential dwellings.

The boundaries of the site are defined with post and wire fencing.

Land adjoining the northern and eastern boundary comprises of vacant farming land. Adjoining the southern boundary is Broadlands Road and further farming land containing existing residential development. Adjoining the western boundary comprises farming land containing an existing dwelling and associated facilities.

The site is located in East Bairnsdale. Bairnsdale is the main commercial city of East Gippsland, is located on the Mitchell River and is built around the Princes Highway. The Princes Highway through the main centre of Bairnsdale is a large boulevard featuring trees, garden areas, a rotunda and many other public amenities. The Princes Highway extends through to Lakes Entrance and beyond.

The subject site in relation to Bairnsdale is shown in the aerial photograph below.



Photograph 1 – Aerial Photograph of the subject site and surrounding land
– 215 Broadlands Road, East Bairnsdale (source: dpi.vic.gov.au)
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Photograph 2 – Subject site at 215 Broadlands Road, East Bairnsdale.



Photograph 4 – Subject site facing north showing proposed dwelling location.



Photograph 6 – Subject site facing west.



Photograph 3 – Existing informal access to subject site.



Photograph 5 – Subject site facing east showing proposed dwelling location.



Photograph 7 – Subject site facing south showing proposed dwelling location.



Photograph 8 – Subject site facing northwest showing proposed dwelling location.



Photograph 10 – Proposed driveway location facing north along the southern boundary.



Photograph 12 – Neighbouring property adjoining the eastern boundary at 285 Broadlands Road, East Bairnsdale.



Photograph 9 – Proposed driveway location facing south along the southern boundary.



Photograph 11 – Neighbouring property adjoining the western boundary at 195 Broadlands Road, East Bairnsdale.



Photograph 13 – Neighbouring property adjoining the southern boundary at 250 Broadlands Road, East Bairnsdale.



Photograph 14 – Property directly opposite the subject site at 240 Broadlands Lane, East Bairnsdale.



Photograph 16 – Broadlands Road facing west.



Photograph 15 – Broadlands Road facing east.

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3. THE PROPOSAL

This application seeks approval for use and development of a dwelling. The proposed development plans are contained in **Appendix B**.

The proposed dwelling will be located in the southeastern corner of the subject site with a setback of approximately 105 metres to the southern boundary being Broadlands Road and 25 metres to the eastern boundary.

The proposed dwelling will have a total building footprint of approximately 410.93m² and will be single storey. The overall proposed height of the dwelling is 5.2 metres.

An extract of the proposed floor plan and south elevation is provided to the right and in **Appendix B**.

Vehicle access is proposed via a gravel crossover and driveway entering from the southern boundary directly from Broadlands Road and will extend to the location of the proposed dwelling as indicated on the proposed development plans.

The proposed dwelling will connect to all available services including electricity, telecommunications and the existing road network. Water will be provided via a proposed

water tank. Wastewater will be treated and retained on site via a secondary treatment system as recommended within the Land Capability Assessment contained in **Appendix C**.

The proposal does not require any earthworks exceeding 1 metre in depth and no vegetation is required to be removed.

Drainage from the proposed development will be directed to the water tank in the first instance with overflow directed to the legal point of discharge to the satisfaction of the responsible authority.



Figure 3 – South elevation – G.J Gardner Homes

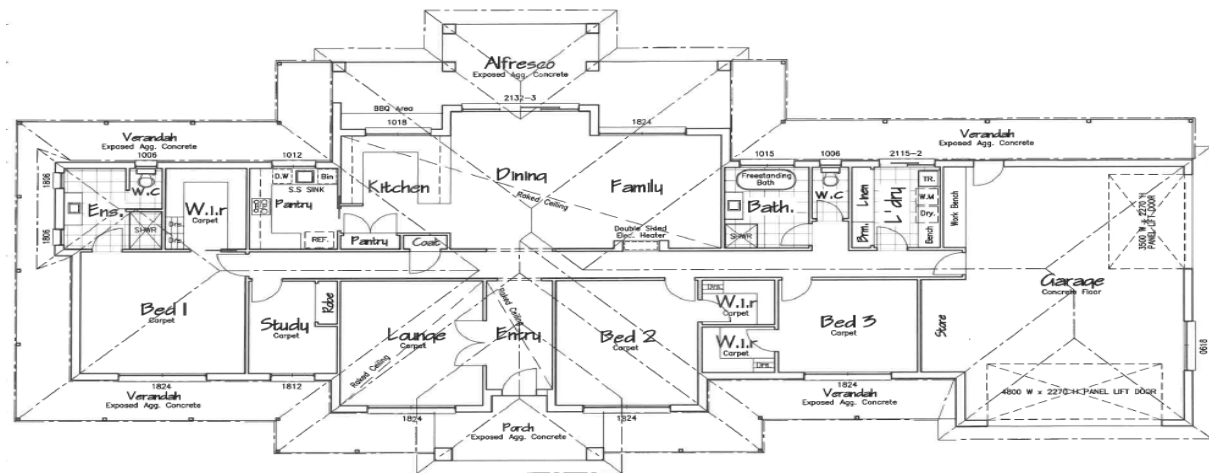


Figure 4 – Floor Plan – G.J Gardner Homes

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4. ZONES AND OVERLAYS

Farming Zone - Schedule 1

The purpose of the Farming Zone is:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To provide for the use of land for agriculture.
- To encourage the retention of productive agricultural land.
- To ensure that non-agricultural uses, including dwellings, do not adversely affect the use of land for agriculture.
- To encourage the retention of employment and population to support rural communities.
- To encourage use and development of land based on comprehensive and sustainable land management practices and infrastructure provision.
- To provide for the use and development of land for the specific purposes identified in a schedule to this zone.

An extract of the Farming Zone Map is provided to the right in **Figure 5**.

Clause 35.07-1 provides a dwelling on an allotment that is less than 40 hectares is a Section 2 use - permit required.

Clause 35.07-4 provides a permit is required to construct a building or construct or carry out works associated with a Section 2 use.

As such a permit is required under the provisions of the Farming Zone for the use and development of a dwelling. The relevant decision guidelines are addressed below in Section 5.

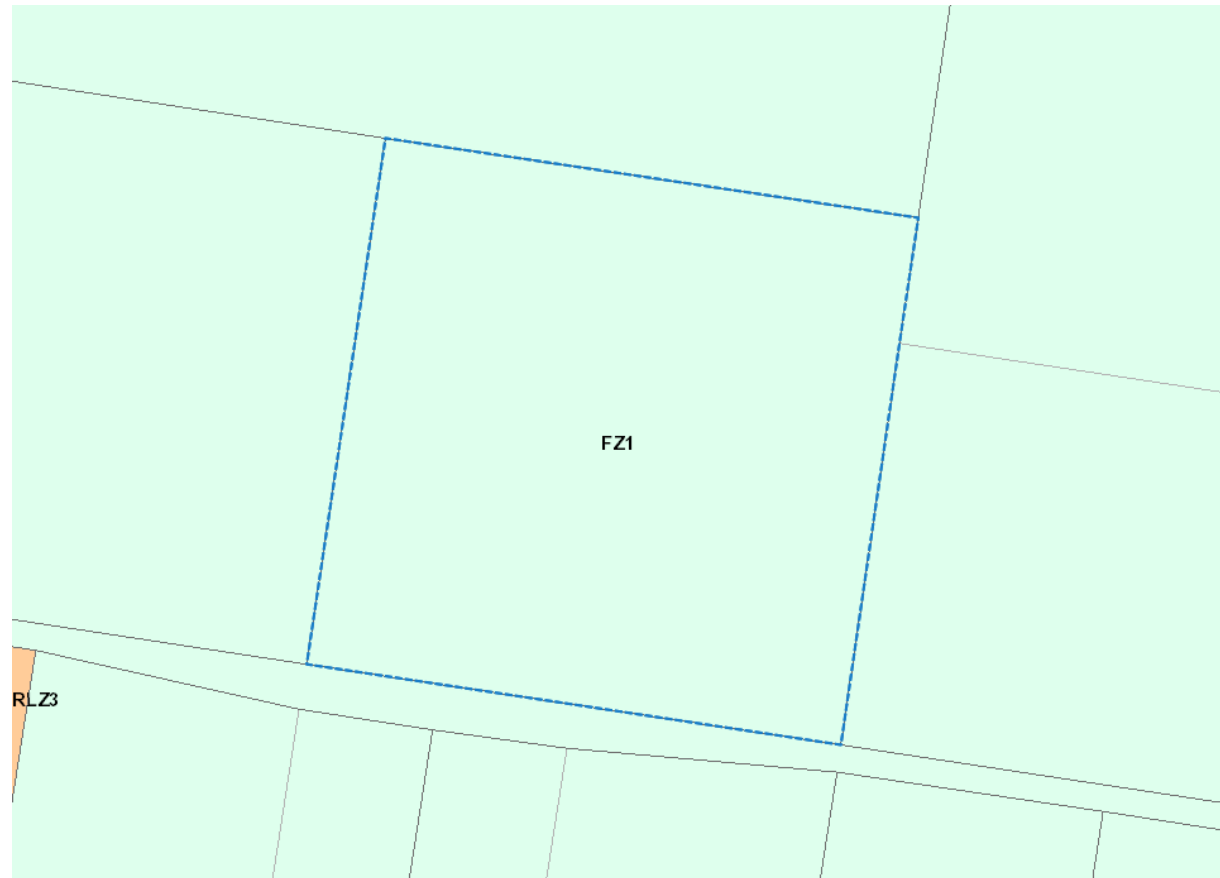


Figure 5 – Farming Zone – (source - mapshare.vic.gov.au)

Aboriginal Cultural Heritage

Under the provisions of the *Aboriginal Heritage Act 2006* the subject site is not recognised as being within an area of Aboriginal Cultural Heritage Sensitivity.

As such a Cultural Heritage Management Plan is not required.

5. PLANNING ASSESSMENT

This proposal has been assessed against the objectives and standards of applicable clauses of the East Gippsland Planning Scheme and it is considered that the proposed use and development is appropriate for the following reasons:

- The proposal meets the objectives of the Municipal Planning Strategy at **Clause 02** and the Planning Policy Framework at **Clause 10** providing for an appropriate dwelling that can be respectful of the existing surrounding development and the environment.
- The proposal will contribute to a high standard of environmental sustainability, design and amenity by designing a dwelling to meet the constraints of the land reducing any potential negative environmental implications as sought to achieve by the relevant clauses including **Clause 02.03** and **Clause 11**.
- **Clause 02.03-1** identifies Bairnsdale as a growth area town. The proposed dwelling will connect to all available services and infrastructure including electricity, telecommunications and a good quality road network. Water will be provided via a water tank and wastewater will be treated and retained within the allotment

boundaries via a secondary treatment septic system as recommended in the Land Capability Assessment contained in **Appendix C**.

- The economic importance of agricultural production is recognised in **Clause 14**, which also seeks to ensure agricultural land is managed sustainably. The subject site is not of a size that is considered suitable for agricultural production.
- The proposal meets the objectives of **Clause 16** by providing an additional dwelling that will in turn support housing for the community.
- The decision guidelines of the Farming Zone at **Clause 35.07-6** seek to protect and enhance viable agricultural land.
- The subject site is currently vacant land. The proposed dwelling will be located in the southeast corner of the site and will have appropriate setbacks from all boundaries.
- The subject site has access to a suitable level of services and infrastructure including electricity, telecommunications and a good quality road network.
- Access to the subject site is proposed along the southern boundary directly from Broadlands Road and will be extended to the proposed dwelling as indicated on the proposed development plans.

- The proposed dwelling will be used for residential purposes and will be supported by grazing cattle on the balance of the land. The scale of the agricultural activity will be relatively small, however appropriate in the location and relevant to the size of the land.
- The location of the subject site in context to the rural living and residential zones of East Bairnsdale as well as the number of dwellings and similar development immediate surrounding the site, ensure that the proposed dwelling in this location will not be detrimental to the ability for the surrounding parcels of land to be used for productive agriculture.
- The proposed dwelling will be suitably setback from all boundaries and will not permanently remove any productive agricultural land.
- This submission has addressed the decision guidelines of **Clause 65**, and the proposed use and development supports orderly planning of the area whilst taking into consideration the potential effect on the environment, human health and the amenity of the area.
- There will be no negative impact on the existing road network. The increased traffic as a result of the proposal is unlikely to generate any negative impact on the existing road network.

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- There are no factors of this proposal that are likely to cause or contribute to land degradation, salinity or reduce water quality.
- Approval for a dwelling has been granted on this property in the past (reference: 5.2007.549.2 issued 03/02/2014).
- Preliminary advice was provided to GJ Gardner and the applicant from Andrew Bates on 21st February, 2024. The advice was that whilst generally a dwelling on a smaller farming zoned allotment is not supported, in this instance, due to the proximity to the urban area Council will likely not oppose the application.

6. CONCLUSION

This submission is in support of a planning permit application for the use and development of a dwelling at 215 Broadlands Road, East Bairnsdale

The relevant provisions of the East Gippsland Planning Scheme have been addressed and it has been ascertained that the proposed development is appropriate in this location. It is requested that the proposal be supported for the following reasons:

- The proposal is consistent with the objectives and strategies outlined in the Municipal Planning Strategy and the Planning Policy Framework.
- The proposal is generally consistent with the objectives of the Farming Zone.
- The design of the building is complementary to the existing surrounding development and is consistent with the character of the area.


It is requested that a planning permit be granted for this development.

Development Solutions Victoria

Disclaimer:

This document has been prepared for planning permit application purposes only. The report has been made with careful consideration and with the best information available to Development Solutions Victoria Pty Ltd at the time.

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 <p>Simon Anderson Consultants CIVIL STRUCTURAL PROJECT ENGINEERS</p> <p>P.O. Box 1700 111 Main St Bairnsdale, Vic, 3875 ACN 073 392 266</p> <p>P.O. Box 566 191-193 Raymond St Sale, Vic, 3850 ACN 145 437 065</p>	<p>Job: Proposed Residence 215 Broadlands Road East Bairnsdale</p>	<p>Date: 15 Aug 2023</p>	
	<p>Client: GJ Gardner Homes</p>	<p>Designed: SJA</p>	<p>Job No.: 438182</p>
	<p>Checked:</p>	<p>Page No.: 1 of 11</p>	

LAND CAPABILITY ASSESSMENT ON-SITE DOMESTIC WASTEWATER



215 Broadlands Road, East Bairnsdale

1.0 INTRODUCTION

SAC were engaged to undertake an LCA for the purpose of on-site domestic wastewater management of the Proposed Residence at 215 Broadlands Road, East Bairnsdale. The field investigation and report have been undertaken by suitable experienced staff.

The assessment was completed in accordance with the EPA’s *Code of Practice – Onsite Wastewater Management* (EPA Publ. No. 891.4, July 2016), guidelines for *Land Capability Assessment For On-Site Wastewater Management* (EPA Publ. No. 746.1, March 2003), *On-Site Domestic Wastewater Management* (AS/NZS 1547:2012) and East Gippsland Shires *DWMP*.

Information and results are presented in table form for clear data presentation and ease of identification of key points. **Detailed recommendations presented on page 7 of the report. LCA is to be read in conjunction with Site Features Plan 438182-LC1.**

Subject Land	215 Broadlands Road, East Bairnsdale
Client	GJ Gardner Homes
Postal Address	103 Main St, Baitnsdale VIC 3875
Contact	Matt Jenman, Mob: 0437 072 082 E: matt.jenman@gjgardner.com.au
Map Reference	Vicroads 689 Q9
Municipality	East Gippsland Shire Council
Proposed Development	4 Bedroom Residence (Potential Occupancy = No. of Bedrooms + 1) ¹
Design Flow	150 L/person/day ²
Anticipated Wastewater Load	750 L/day
Treatment System Required	Secondary treated effluent to minimum 20/30 standard (ie. AWTS ³ or sand filter)
Disposal System Required	Sub-surface irrigation – Area of 390m ²

¹ As identified in Victorian EPA Code of Practice – Onsite Wastewater Management (publication 891.4, July 2016) Section 3.4.1

² As identified in AS/NZS 1547:2012 – Onsite Domestic Wastewater Management (Appendix H, Table H1)

³ AWTS – Aerated Wastewater Treatment System (EPA approved)

Simon Anderson Consultants
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 111 Main St
 Bairnsdale, Vic, 3875
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 ACN 145 437 065

Job: Proposed Residence
215 Broadlands Road
East Bairnsdale
Client: GJ Gardner Homes
Checked:

Date: 13 Aug 2023
Designed: SJA
Job No.: 438182
Page No.: 2 of 11

2.0 PURPOSE/SCOPE OF ASSESSMENT

Purpose and Scope of Assessment	Broad-scale assessment for subdivisional purposes (often requires further lot-specific assessment at later date)	<input type="checkbox"/>
	Detailed investigation for lot-specific management requirements	<input checked="" type="checkbox"/>

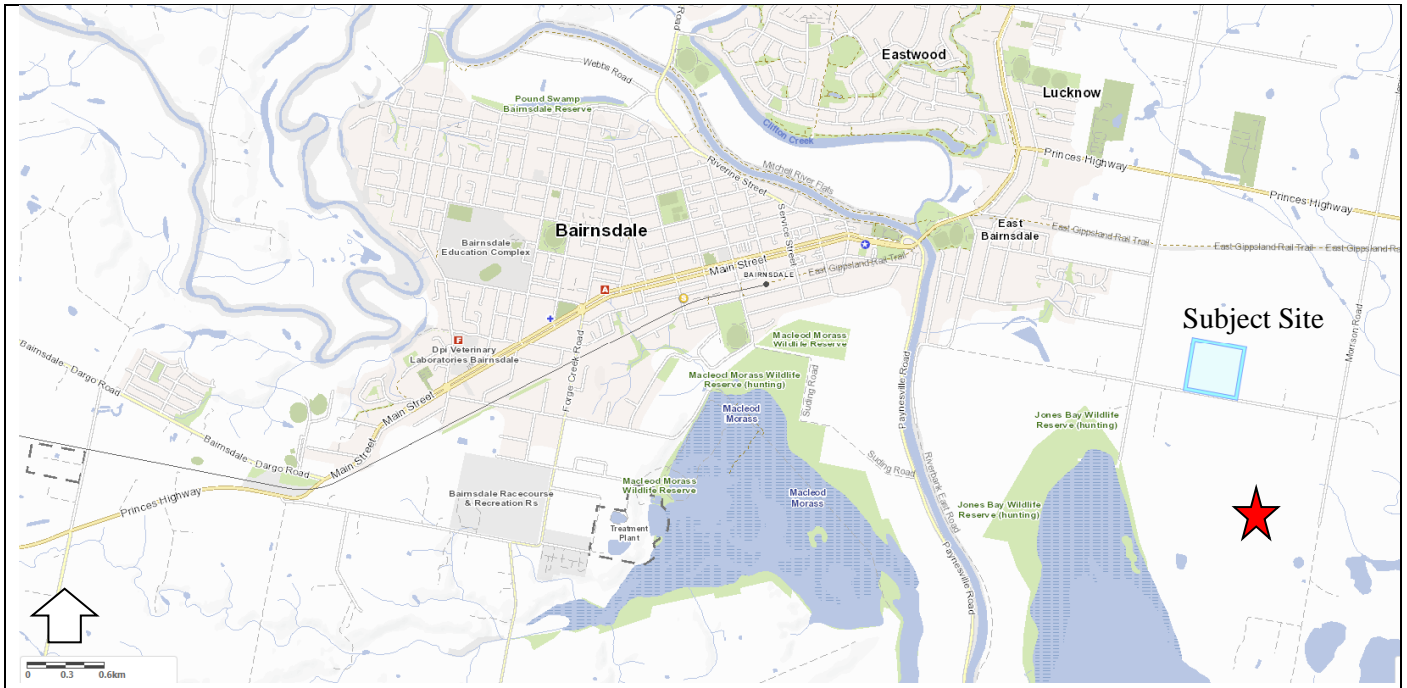



Figure 1: Locality Plan




Figure 2: Aerial view of subject site (approximate title boundaries shown)

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	<p>Client: GJ Gardner Homes</p>	<p>Job No.: 438182</p>
	<p>Checked:</p>	<p>Page No.: 3 of 11</p>

3.0 SITE KEY FEATURES

Criteria / Feature	Description	Implications for Wastewater Management
Allotment/s		
Title details	Lot 1, TP 545554, Council Property No: 94792	
No. of Lots Proposed	1	
Lot size (EPA recommended minimum lot size = 1.0 ha)	16.11 ha	Large allotment, with ample capacity to locate dwelling and effluent field in a number of sites within allotment boundaries and hence for effluent to be contained on-site.
Dwelling Usage	Likely to be permanent	
Adjoining Lot sizes	Farm lots 15 – 30+ ha in size.	Overall volume of wastewater being disposed to land in the local district is low.
Current Land Use	Vacant	Current Wastewater generation is negligible
Infrastructure		
Zoning & Overlays	Farming Zone (FZ)	
Nearest Reticulated Sewer	Township of Bairnsdale	Not feasible to connect to reticulated sewer. The area is unlikely to be sewered in the short to medium term future.
Reticulated Water	None available on existing allotment	On-site roof water collection – Occupants will rely solely on tank water for potable and non-potable supply
Power	Available on existing allotment	Allows ready use of wastewater treatment plant
Land Features		
Geology	Qa7 (Qp5) - Quaternary Non-Marine (Alluvial) deposits consisting of Fluvial: gravel, sand, silt (from 1:250,000 Geological Map Series BAIRNSDALE)	Observed Soils dominated by loams, and silty loams, overlying stiff heavy clays
Elevation	Approx 7-10m AHD	
Landscape Elements	Alluvial plain landform	Run-off upslope negligible
Fill	Natural soil profiles were observed throughout the site. No fill was observed.	No filling is proposed in the effluent management area.
Aspect	Area of investigation slopes slightly to the south	
River/Stream Catchment	No creeks or waterways in allotments.	Risk is reduced
Dams/Surface Water	None	Risk is reduced
Rock Outcrop	None	Reduces limitations and maximises efficiency of effluent disposal fields
Erosion	No evidence of sheet or rill erosion.	The erosion hazard is low.
Vegetation	Pasture/Grass	No vegetation clearing required for establishment of effluent disposal field or dwelling development
Climate	Temperate	Reduces variation in efficiency of effluent field
Solar Exposure	High.	Maximises efficiency of effluent disposal field
Recommended Buffer Distances	All buffer distances recommended in Table 5 of EPA Publication 891.4 (July 2016) are achievable and do not significantly limit siting of the LAA in this case	
Available Land Application Area (LAA)	Considering all site constraints and the buffers mentioned above, the site has ample land that is suitable and available for land application of treated effluent.	By using a system that provides secondary treatment and pressurized sub-surface irrigation, there will be ample protection for surface and groundwater



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	<p>Client: GJ Gardner Homes</p>	<p>Designed: SJA</p>
	<p>Checked:</p>	<p>Job No.: 438182</p>
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4.0 SOIL ASSESSMENT & CONSTRAINTS

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


4.1 Published Soils Information


Soils of the site have been mapped and described in Sustainable Soil Management “A reference manual to the major agricultural soils of the Bairnsdale and Dargo regions”, and are described as belonging to the Stratford (Sf) map unit. The Qp5 terraces occur on alluvial plains associated with the Mitchell, Nicholson and Tambo Rivers. The surface soils are generally fine sandy loams, occasionally silty loams. The B horizon soils are brown to yellowish brown medium to heavy clays.

4.2 Soil Survey and Analysis

A Soil survey was carried out at the site to determine suitability for application of treated effluent. Subsoil investigations were conducted at three locations in the vicinity of the proposed building, as shown on the Site Features Plan, using a hand auger (B1-3). This was sufficient to adequately characterise the soils, as no variation was found throughout the area of interest.

Samples of all discrete soil layers for test bore 3 were collected for subsequent laboratory analysis of pH⁴, electrical conductivity⁵ and Emerson Aggregate Class. The soil profiles of bores 1 & 2 are detailed below.


Depth (m)	Description	Horizon	
0.0	TOPSOIL: Dk Greyish Brown Moist Loam	A1	 <p style="text-align: right; color: yellow; font-weight: bold;">BORE 1</p>
0.1			
0.2	SILT: Lt Grey/Brown Moist Dense	A2	
0.3	CLAY: Yellowish Brown Moist Stiff	B1	
0.4			
0.5			
0.6			
0.7			
0.8			
0.9			
1.0+			

Depth (m)	Description	Horizon	
0.0	TOPSOIL: Dk Greyish Brown Moist Loam	A1	 <p style="text-align: right; color: yellow; font-weight: bold;">BORE 2</p>
0.1			
0.2	SILT: Lt Grey/Brown Moist Dense	A2	
0.3	CLAY: Yellowish Brown Moist Stiff	B1	
0.4			
0.5			
0.6			
0.7			
0.8			
0.9			
1.0+			

⁴ The pH of 1:5 soil/water suspensions was measured using a Merck pH strip


⁵ EC (dS m⁻¹) was calculated by measuring the electrical conductivity of 1:5 soil water suspension.
438182 LCA

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 <p>Simon Anderson Consultants CIVIL STRUCTURAL PROJECT ENGINEERS</p> <p>P.O. Box 1700 111 Main St Bairnsdale, Vic, 3875 ACN 073 392 266</p> <p>P.O. Box 566 191-193 Raymond St Sale, Vic, 3850 ACN 145 437 065</p>	<p>Job: Proposed Residence 215 Broadlands Road East Bairnsdale</p>	<p>Date: 15 Aug 2023</p> <p>Designed: SJA</p>	
	<p>Client: GJ Gardner Homes</p>		<p>Job No.: 438182</p>
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Soil Features: TEST BORE B3			
Soil Horizon	A1	A2	B1
Depth (mm)	0 - 200	200 - 300	300 +
Boundary Type	NA	Clear	Sharp
Field Texture Grade ⁶	L	ZL	HC
Structure	Moderate	Weak	Massive
pH	7	7	7
EC (dS m ⁻¹)	0.06	0.00	0.08
Dominant Colour	10YR3/2 Very Dk Greyish Brown	10YR6/2 Light Brownish Grey	10YR4/6 Dk Yellowish Brown
Mottles	-	-	-
Dispersion	5	5	2
Coarse Fragments (% Volume)	-	-	-
Soil Category⁷ (AS/NZ1547:2012)	3a	3b	6c
Design Irrigation Rate ⁸ (DIR mm/day)	4	4	2
Design Loading Rate ⁹ (DLR mm/day)	15	10	NR

NA: Not Applicable NR: Not Recommended

Depth (m)	Description	Horizon	
0.0	TOPSOIL: Moist Loamy	A1	
0.1			
0.2	SILT: Moist Medium Dense	A2	
0.3	CLAY: Moist Stiff	B1	
0.4			
0.5			
0.6			
0.7			
0.8			
0.9			
1.0			
1.2			
1.5+			


Soil Bore Log Profile

⁶ Refer Appendix D for description details(all soil samples have been sieved to minus 2mm and air-dried before being analyzed)

⁷ As identified in Victorian EPA Code of Practice – Onsite Wastewater Management (publication 891.4, July 2016) Appendix A, Table 9

⁸ For sub-surface irrigation (Refer Table M1 of AS/NZS 1547:2012)

⁹ For absorption trenches and bed

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5.0 LAND CAPABILITY ASSESSMENT MATRIX

Land features	Land capability class rating				
	Very good (1)	Good (2)	Fair (3)	Poor (4)	Very Poor (5)
General characteristics					
Site drainage	No visible signs of dampness	Moist soil, but no water in pit		Visible signs of dampness	Water ponding on surface
Runoff	None	Low	Moderate	High - diversionary structures req'd	Very High - diversion not practical
Flood/inundation potential (yearly return exceedence)	Never		< 1 in 100	< 1 in 30	> 1 in 20
Proximity to watercourses	> 60m				< 60m
Slope (%)	0 - 2	2 - 8	8 - 12	12 - 20	> 20
Landslip	None Evident		Low potential for failure	High potential for failure	Present or past failure
Seasonal water table depth (m) (incl. perched water tables)	>5	5 - 2.5	2.5 - 2.0	2.0 - 1.5	< 1.5
Rock Outcrop (% of land surface containing rocks > 200mm)	0	< 10%	10-20%	20-50%	>50%
Vegetation Type	Turf or pasture				Dense forest with little understorey
Average Rainfall (mm/yr)	< 450	450 - 650	650 - 750	750 - 1000	> 1000
Pan Evaporation (mm/yr)	> 1500	1250 - 1500	1000 - 1250	-	< 1000
Fill	No Fill		Fill present		
Soil profile characteristics*					
Structure	High	Moderate	Weak	Massive	Single Grained
Profile depth (of limiting Horizon B1)	> 2.0m	1.5m - 2.0m	1.5m - 1.0m	1.0m - 0.5m	< 0.5m
Soil permeability category ¹⁰	2 and 3	4		5	1 and 6
Presence of mottling	None				Extensive
Coarse Fragments (% volume)	<10	10-20	20-40		>40
pH	6 - 8		4.5 - 6		<4.5, >8
Emerson Aggregate Test (dispersion/slaking)	4, 6, 8	5	7	2, 3	1
Salinity (dS/m) (Electrical Conductivity)	<0.3	0.3 - 0.8	0.8 - 2	2 - 4	>4
Overall Site Rating¹¹				Poor	4

* relevant to the sites most restrictive soil layer(s)

¹⁰ Refer Table 5.1 (Determination of Soil Category) of AS/NZS 1547:2012

¹¹ A description of each Land Capability Class Rating is provided in Appendix A. 438182 LCA

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6.0 CONCLUSION

This LCA has been prepared to accompany a development application to East Gippsland Shire Council for a Proposed Residence and associated necessary wastewater management system. As such, this report provides recommendations for treatment and land application systems that are appropriate to the land capability.

The site has a number of limitations that result in the development being unsuitable for Primary treatment only (i.e. traditional septic tank and subsoil absorption trenches):

- Limiting Horizon B1 (Heavy Clays) have a very low permeability rate,
- Heavy Clays at very shallow depths (300mm),
- Massively structured (Category 6c) clay soils not suitable for disposal via absorption trenches.
- Minimum 600mm vertical separation required between bottom of trench & limiting horizon for final polishing (i.e. imported fill would be required to artificially achieve the 600mm vertical buffer.)


The following section provides an overview of a suitable system, with sizing and design considerations. **Detailed design for the system is beyond the scope of this study, but should be undertaken at the time of building application and submitted to Council.**

7.0 RECOMMENDATIONS

It is recommended based on this LCA, that if the development of a Proposed Residence on 215 Broadlands Road, at the location indicated on the Site Features Plan 438182 - LC1:

- Install a system that provides secondary treatment with disinfection to meet EPA requirements for irrigation. Indicative target effluent quality is a minimum EPA standard 20mg/L BOD and 30mg/L SS. Several suitable options are available, including aerated wastewater treatment systems (AWTS) and single pass sand filters. Either of these options is capable of achieving the desired level of performance and final selection is the responsibility of the property owner, who will forward details to Council for approval.
- On-site disposal of domestic wastewater should occur within the proposed Land Application Area (refer Site Features Plan 438182 - LC1). The client is allowed flexibility in selecting the final location and configuration of the irrigation system, provided it remains within this envelope and in accordance with the relevant codes/standards.
- Calculation of Irrigation Area based on AS/NZ 1547 equation $A=Q/DIR$
 - Q – 750 L/day;
 - DIR – 2 mm/day;
 - Irrigation Area – 375 m²
- To determine if the irrigation area recommended above is adequate, a water balance¹² modelling has been undertaken to achieve zero wet weather storage. The calculations are summarized below, with full details in Appendix B.
 - Average daily effluent load – 750 L
 - Design irrigation rate (DIR) – 2 mm/day;
 - Crop factor – 0.6 to 0.85; and
 - Retained Rainfall – 75%.
 - **Irrigation Area – 390m²**
 - Max Wet Weather Storage Depth – 0 mm (*therefore area shown in bold to be adopted*)
- Minimum setbacks and buffer distances must be obtained when establishing effluent disposal envelopes, as per *EPA Code of Practice – Onsite Wastewater Management, publication 891.4, (July 2016)*.
- The owner shall consult an irrigation expert familiar with wastewater irrigation equipment, to help design and install the irrigation system. The irrigation plan must ensure good, even application of effluent.

¹² Water Balance undertaken in accordance with EPA Publication 168 (1991), Guidelines for Wastewater Irrigation.
438182 LCA

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8.0 MANAGEMENT PROGRAM

8.1 Installation Issues

To ensure the satisfactory installation and operation of the AWTS & Sub-surface irrigation, the following measures are to be implemented:

- Construction of a shallow table or cut-off drain along the high sides of the effluent disposal area, extending to below the effluent disposal field;
- Overflow from all water storage tanks to be directed into a table drain, or equivalent, to discharge below the effluent disposal field in a manner to avoid scouring or washing away downstream of the discharge point;
- Stormwater flows from the roof must be discharged at a point well clear of the effluent disposal field and runoff from paved surfaces and driveways must be directed away from the disposal site.
- Installation of the sub-surface irrigation system to be undertaken when the soils are dry or moist, not when the ground is saturated;
- Sub-surface irrigation system to be designed to minimise root intrusion from trees;
- Sub-surface irrigation system to utilise pressure dosing to ensure effluent is applied uniformly throughout the effluent disposal area.

8.2 Ongoing Management & Maintenance Issues

To ensure the satisfactory ongoing performance of the proposed AWTS & Sub-surface irrigation, the owners/occupiers will need to ensure that:

- No buildings or impermeable surfaces are constructed on or over the effluent disposal areas;
- Heavy equipment is kept away from effluent disposal areas whilst the soil is saturated;
- The effluent disposal field is maintained as a grassed area, or planted out with shrubs that tolerate wet conditions, have high evapo-transpiration capacity and can tolerate phosphorus levels typically found in treated effluent;
- Trees and/or thick shrubs **are not** to be planted out along the northern or western edges of the effluent disposal areas to prevent exposure to both wind and sun .

The installer of the AWTS & Sub-surface irrigation is to ensure that the owners/occupants are aware of and fully understand their responsibilities in relation to operating the treatment system, maintenance requirements and what should be done in the event of any problems. The satisfactory ongoing performance and longevity of the AWTS & Sub-surface irrigation can be enhanced by:

- Ensuring that maintenance requirements are undertaken regularly in accordance with the systems' requirements and that both they and future owners/occupiers are aware of the systems capabilities, limitations and ongoing requirements;
- Using biodegradable soaps, low phosphorous detergents and detergents that have low salt, sodium and chlorine levels;
- Limiting the use of germicides (such as strong detergents, disinfectants, toilet cleaners, whiteners and bleaches);
- Not flushing disposable nappies, sanitary napkins or other hygiene products into the systems;
- Not flushing chemicals, paint or similar substances into the systems.

NOTE: This report and associated plan(s) does not constitute a Septic Tank Permit. Such a permit should be obtained separately from the Environmental Health Department of East Gippsland Shire Council after development approval is obtained and prior to plumbing works commencing.

APPENDIX A

Capability Class	Degree of Limitation	General Description
Rating 1	None to Very Slight	The proposed subdivision is suitable for on-site disposal of septic tank discharge. The limitations or environmental hazard from long-term use are considered very slight. Standard performance measures for design, installation and management should prove satisfactory.
Rating 2	Slight	The site has been identified as generally suitable for on-site effluent disposal but there is a slight associated environmental hazard expected. One or more land limitations are present, which may not be compatible with 'straight forward' conventional on-site disposal. The wastewater management program will require careful planning, adherence to specifications and adequate supervision.
Rating 3	Moderate	The site has only a fair capability for on-site effluent disposal with a moderate associated environmental risk always present. Very careful site selection, preparation and specialized design will be required to address the identified land constraints. A management program should be delivered to the responsible authority with the development application and prior to earthworks commencing. It is recommended that, in order to achieve BPEM, wastewater-processing systems which can attain a higher level of treatment with basic monitoring should be considered as an alternative to standard conventional trench disposal.
Rating 4	High	Areas have a poor capability rating with a high associated environmental risk. Considerable difficulties are expected during siting and installation of the wastewater treatment system and during routine operation. A very high Engineering input and close supervision would be needed to minimize the environmental impact. Alternative wastewater processing systems capable of consistently producing a high quality secondary effluent (such as aerated wastewater treatment plants) together with a close monitoring program should be seriously investigated and adopted.
Rating 5	Severe	Areas have a very poor capability and there is severe associated environmental risk. The areas are not generally considered suitable for disposal of septic tank effluent by trench systems. The high levels of Engineering input and management needed at all stages are unlikely to adequately address the identified land constraints and achieve a sustainable outcome. Reticulated sewerage is usually the only acceptable option.



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215 Broadlands Road
East Bairnsdale

Client: GJ Gardner Homes

Checked:

Date: 15 Aug 2023

Designed: SJA

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APPENDIX B

Bairnsdale 085279

Evap.data

Bairnsdale 084100

Mean

average Pan evaporation

Source: AS1547-1994 - Table G1

(Prepared by R.A. Patterson, Lanfax Labs. Armidale updated April 2006)

1	2	3	4	5	6	7	8	9		
Month	Days	daily pan	Pan Eo	Et	Rainfall	Retained	LTAR*N	Disposal	Effluent	Size of
	per	Eo		+C*Eo	P	Rainfall		rate/month	applied	area
	month	(B.Met)				Re=(1-r)P	2	(Et-Re)+	per month	(8)/(7)
		mm	mm	mm	mm	mm	mm	LTAR*N	750	m2
Jan	31	6.6	204.3	174	48.9	36.7	62	199.0	23250	117
Feb	28	6.1	170.0	144	50.8	38.1	56	162.4	21000	129
Mar	31	4.8	148.8	126	44.7	33.5	62	155.0	23250	150
Apr	30	3.7	109.8	66	55.8	41.9	60	84.0	22500	268
May	31	2.6	80.0	48	47.3	35.5	62	74.5	23250	312
Jun	30	2.4	70.8	42	59.7	44.8	60	57.7	22500	390
Jul	31	2.4	73.8	44	49.1	36.8	62	69.4	23250	335
Aug	31	3.0	93.0	56	36.3	27.2	62	90.6	23250	257
Sep	30	3.8	114.9	69	52.7	39.5	60	89.4	22500	252
Oct	31	4.7	144.8	123	60	45.0	62	140.1	23250	166
Nov	30	5.5	165.9	141	80.9	60.7	60	140.3	22500	160
Dec	31	6.3	195.9	167	59	44.3	62	184.3	23250	126
Totals		1571.9	1201	645.2	483.9					

TABLE G2 - Depth of stored effluent First trial - choose from col.9 table above

1	2	3	4	5	6	7	8	9	10	11
month	first trial	application	Disposal	(3)-(4)	Increase	Starting	increase	computed	reset if	equivalent
	area	rate	rate		cepth of	depth	depth	depth	Et deficit	storage
	(m2)	(8)/(2)	per month		stored	effluent	effluent	effluent	<0	10 x area
		(mm)	(mm)	(mm)	(5)/porosity	month	+(6)	(mm)	(mm)	(L)
Dec								0.0	0	
Jan	390	60	199	-139	-348	0	-348	-348	0	0
Feb		54	162	-109	-271	0	-271	-271	0	0
Mar		60	155	-95	-238	0	-238	-238	0	0
Apr		58	84	-26	-66	0	-66	-66	0	0
May		60	75	-15	-37	0	-37	-37	0	0
Jun		58	58	0	0	0	0	0	0	0
Jul		60	69	-10	-25	0	-25	-25	0	0
Aug		60	91	-31	-77	0	-77	-77	0	0
Sep		58	89	-32	-79	0	-79	-79	0	0
Oct		60	140	-80	-201	0	-201	-201	0	0
Nov		58	140	-83	-207	0	-207	-207	0	0
Dec		60	184	-125	-312	0	-312	-312	0	0
Jan		60	199	-139	-348	0	-348	-348	0	0
Feb		54	162	-109	-271	0	-271	-271	0	0
Mar		60	155	-95	-238	0	-238	-238	0	0
Apr		58	84	-26	-66	0	-66	-66	0	0
May		60	75	-15	-37	0	-37	-37	0	0

From calculations in tables above for optimised drainfield area, using Appendix G AS1547-1994


Porosity in disposal area = 40%

Variables Table

Runoff Coeff = 0.25 percentage runoff
Summer Crop Factor = 0.85 crop transpiration rate Oct-Mar
Winter Crop Factor = 0.6 crop transpiration rate -Apr-Sep
LTAR = 2 L/m2/day
FLOW = 750 L/day

Change as required

Estimated area of effluent drainfield = 390 square metres
Maximum depth of stored effluent = 0 mm depth

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APPENDIX C

RECORD OF FIELD TEXTURE DETERMINATION						
Soil	Grittiness	Stickiness	Plasticity	Stain	Ribbon (mm)	Grade
A1	None	Slight	Slight	Slight	25	L
A2	None	Slight	Slight	None	25	ZL
B1	None	Extremely	Extremely	Extremely	75+	HC


NONE SLIGHT MODERATE VERY EXTREMELY

APPENDIX D

Soil Category	Field Texture Grade		Behaviour of moist blobs	Ribbon length (mm)	Approx clay content %
1	S	Sand	coherence nil to very slight, cannot be moulded; sand grains of medium size; single sand grains stick to fingers	nil	< 5%
2	LS	Loamy sand	slight coherence; sand grains of medium size; can be sheared between thumb and forefinger to give minimal ribbon of about 5mm	about 5	about 5%
	CS	Clayey sand	slight coherence; sand grains of medium size; sticky when wet; many sand grains stick to fingers; discolours fingers with clay stain	5 - 15	5% to 10%
3	SL	Sandy loam	bolus coherent but very sandy to touch; will form ribbon; dominant sand grains of medium size and readily visible	15 - 25	10% to 20%
	FSL	Fine sandy loam	as for sandy loams, except that individual sand grains are not visible, although they can be heard and felt	15 - 25	10% to 20%
	L	Loam	bolus coherent and rather spongy; smooth feel when manipulated but with no obvious sandiness or "silkeness"; may be somewhat greasy to touch if much organic material present	25	about 25%
4	ZL	Silty loam	coherent bolus, very smooth to silky when manipulated, will form a very thin ribbon and dries out rapidly	25	10% to 25%
	SCL	Sandy clay loam	strongly coherent bolus, sandy to touch; medium size sand grains visible in finer matrix	25 - 40	20% to 30%
	FSCL	Fine sandy clay loam	as for sandy clay loam, except that individual sand grains are not visible although they can be heard and felt.	40 - 50	20% to 30%
	CL	Clay loam	coherent plastic bolus, smooth to manipulate	40 - 50	30% to 35%
	ZCL	Silty clay loam	as for clay loams but not spongy; very smooth and silky; dries out rapidly	40 - 50	30% to 35%
5	SC	Sandy clay	plastic bolus; fine to medium sand can be seen, felt or heard in clayey matrix	50 - 75	35% to 40%
	SiC	Silty clay	plastic bolus; smooth and silky to manipulate; long but very fragmentary ribbon; dries out rapidly	50 - 75	30% to 40%
	LC	Light clay	plastic bolus; smooth to touch; slight resistance to shearing between thumb and forefinger	50 - 75	35% to 40%
6	LMC	Light medium clay	plastic bolus; smooth to touch; slight to moderate resistance to ribboning shear	75	40% to 45%
	MC	Medium clay	smooth plastic bolus; handles like plasticine and can be moulded into rods without fracture; has moderate resistance to ribboning shear	> 75	45% to 55%
	HC	Heavy clay	smooth plastic bolus; handles like stiff plasticine; can be moulded into rods without fracture; has firm resistance to ribboning shear	> 75	50% +

Soil Texture Grade Table (International System, soil sieved < 2mm) & Table E1 (Assessment of Soil Textures) pg 106 of AS/NZS 1547:2012

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	<p>Checked:</p>	<p>Page No.: 11 of 11</p>	

9.0 REFERENCES

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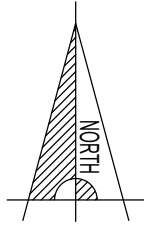
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Victorian Resources Online; <http://vro.depi.vic.gov.au/dpi/vro/vrosite.nsf/pages/vrohome>

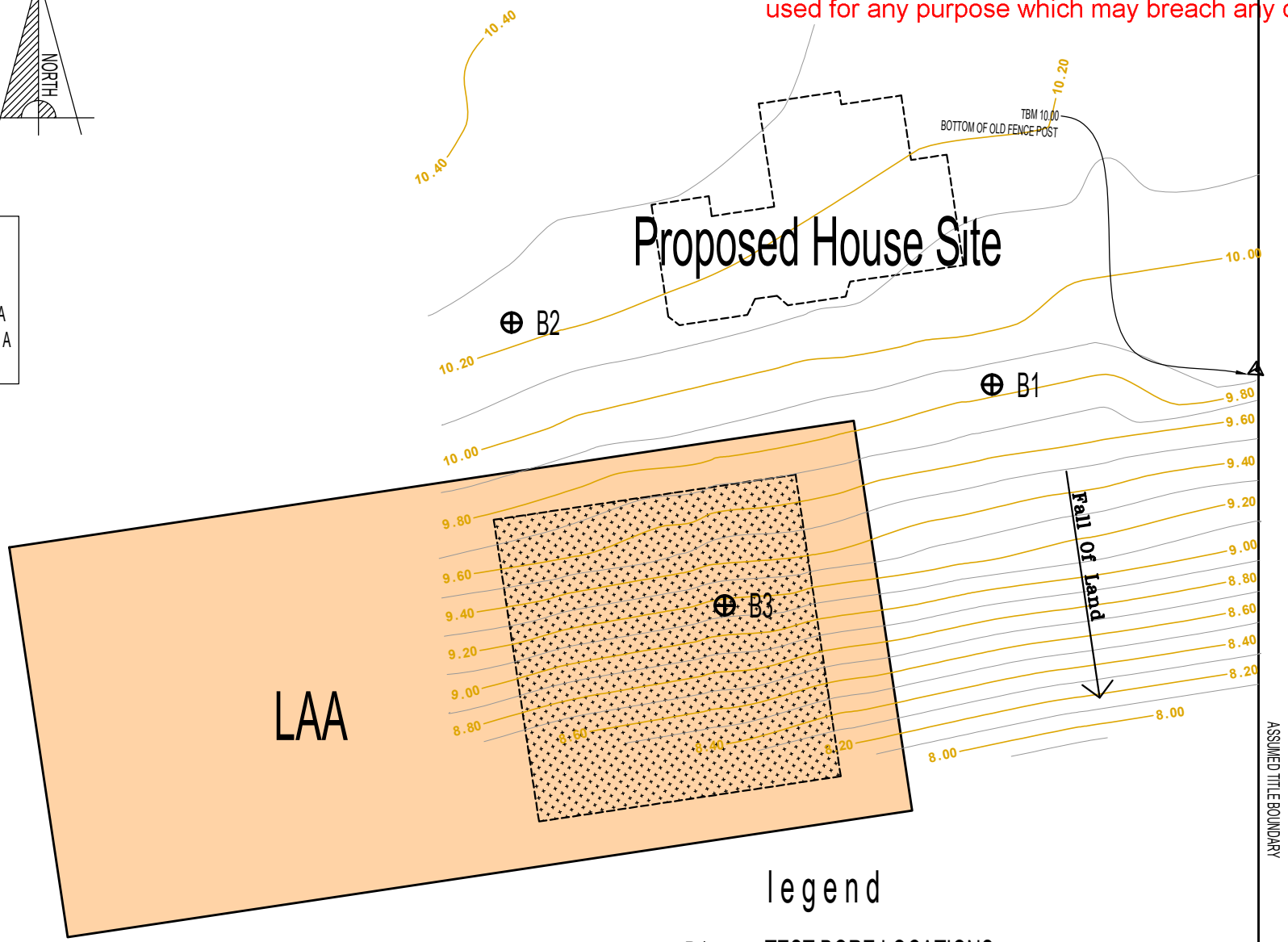
Munsell Soil-Color Charts (2009 Year Revised / 2012 Production)

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NOTES:
 DENOTES NATURAL SURFACE LEVEL 10.23
 DENOTES FLOOR LEVEL FL 12.00 APP.
 ALL LENGTHS ARE IN METRES
 CONTOUR INTERVAL IS 0.10m
 LEVELS ARE TO ARBITRARY DATUM



PLEASE NOTE:
 TITLES BOUNDARIES SHOWN MAY NOT REPRESENT EXACT TITLE POSITION.
 FOR EXACT TITLE POSITION IT IS RECOMMENDED THAT A TITLE RE ESTABLISHMENT SURVEY BE CARRIED OUT BY A LICENCED SURVEYOR



PLEASE NOTE:
 THE CLIENT IS ALLOWED FLEXIBILITY IN SELECTING THE FINAL LOCATION AND CONFIGURATION OF THE IRRIGATION SYSTEM, PROVIDED IT REMAINS WITHIN THE LAND APPLICATION AREA (LAA)

SITE FEATURES PLAN

SCALE 1:400

- legend
- B1 TEST BORE LOCATIONS
 - SUITABLE LAND APPLICATION AREA (LAA - 1500m² available)
 - IRRIGATION AREA - 390 m² required (for a 4 bedroom dwelling)



SITE PLAN

SCALE 1:3000

REV	DESCRIPTION	CHKD	DATE	Design: JDP	Project: SITE ANALYSIS	Job No: 438182
				Drawn: JDP	215 BROADLANDS RD, EAST BAIRNSDALE	Drawing No: LC1
				Checked: SJA	Client: GK GARDNER HOMES	Revision No: -
				Date: 15 AUG 2023		

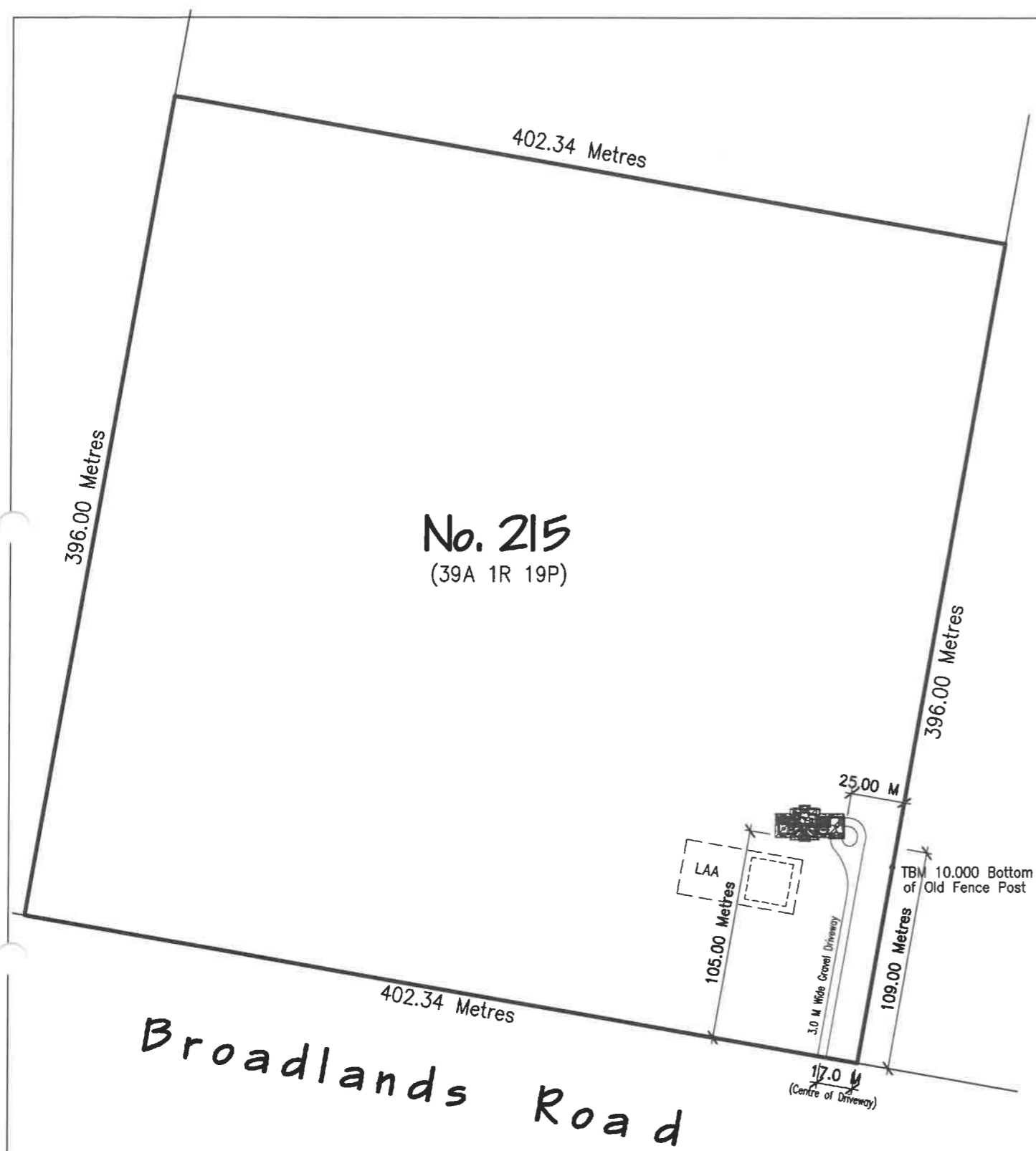
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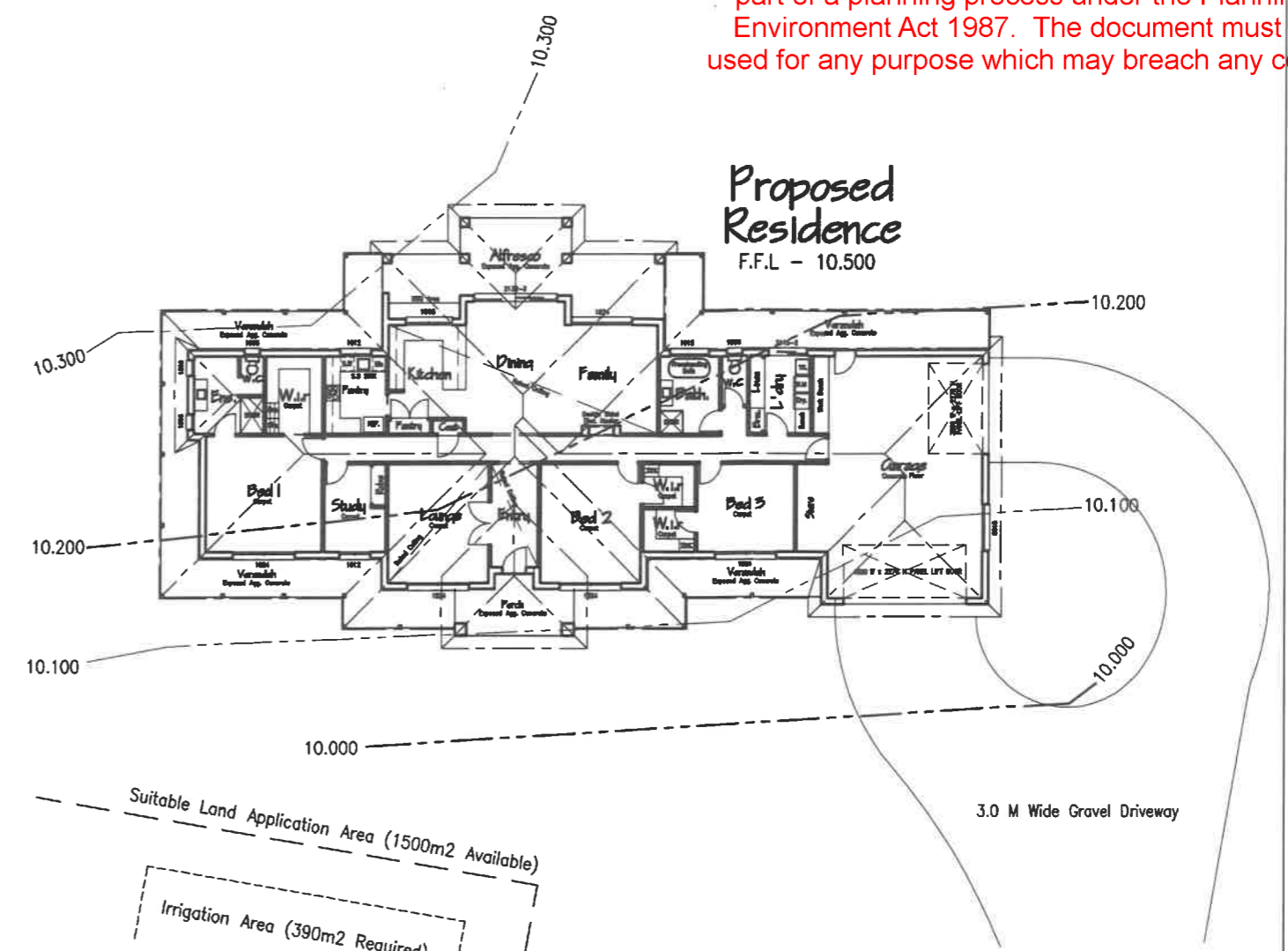
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Proposed Site Layout Plan 1:2500



Detailed Layout Plan 1:250



WE HAVE CHECKED THE PLANS AND AGREE THAT THEY ACCURATELY DEPICT THE HOUSE FOR CONSTRUCTION. ANY VARIATIONS REQUESTED AFTER SIGNING WILL INCUR A PROCESSING FEE IN ADDITION TO THE COST OF THE VARIATION ITEM/S AND ANY FURTHER PLANS TO BE PREPARED.

OWNER SIGNED: DATE:
 OWNER SIGNED: DATE:
 BUILDER SIGNED: DATE:

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G.J Gardner. HOMES 89 Main Street, Bairnsdale VIC 3875 Office: (03) 5153 1330 CDB-U 53249 www.gjgardner.com.au	Custom Plan Classic Facade © Copyright Exclusive To G.J Gardner Homes	Craig Wight Design & Drafting Registered Building Practitioner DP AD 36750	CLIENT: J & L Van Zin	PROJECT: PROPOSED NEW RESIDENCE No. 215 Broadlands Road, East Bairnsdale	PAGES: 3 OF 3 SHEET SIZE: A3	FLOOR AREAS: INTERNAL: 220.23m ² GARAGE: 66.11m ² PORCH: 9.18m ² ALFRESCO: 29.34m ² VERANDAH: 84.07m ² TOTAL: 410.93m ²	REV. A PRELIMINARY DRAWINGS	DATE: 27/2/24
			DRAWING TITLE: SITE PLAN - SCALE 1:1000	JOB NO: 230804 DRAWN: CRAIG WIGHT DATE: 27/2/24	REV. B WORKING DRAWINGS		DATE: *	

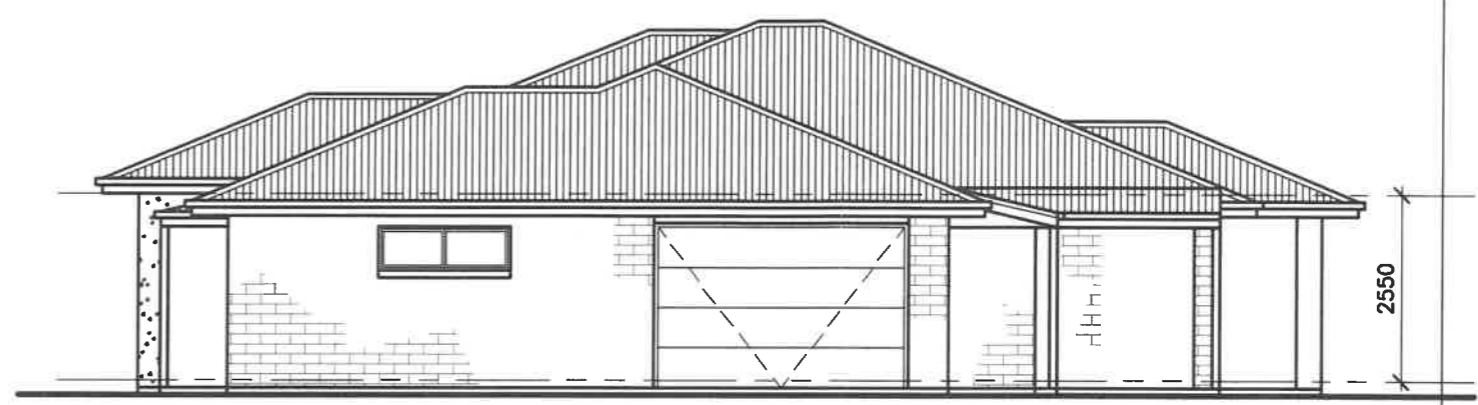
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South Elevation 1:100



West Elevation 1:100



East Elevation 1:100



North Elevation 1:100

WE HAVE CHECKED THE PLANS AND AGREE THAT THEY ACCURATELY DEPICT THE HOUSE FOR CONSTRUCTION. ANY VARIATIONS REQUESTED AFTER SIGNING WILL INCUR A PROCESSING FEE IN ADDITION TO THE COST OF THE VARIATION ITEM/S AND ANY FURTHER PLANS TO BE PREPARED.

OWNER SIGNED: DATE:
 OWNER SIGNED: DATE:
 BUILDER SIGNED: DATE:

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 To G.J Gardner Homes

Craig Wight
 Design & Drafting
 Registered Building Practitioner
 DP AD 36750

CLIENT:
J & L Vanzin
 DRAWING TITLE:
ELEVATIONS - SCALE 1:100

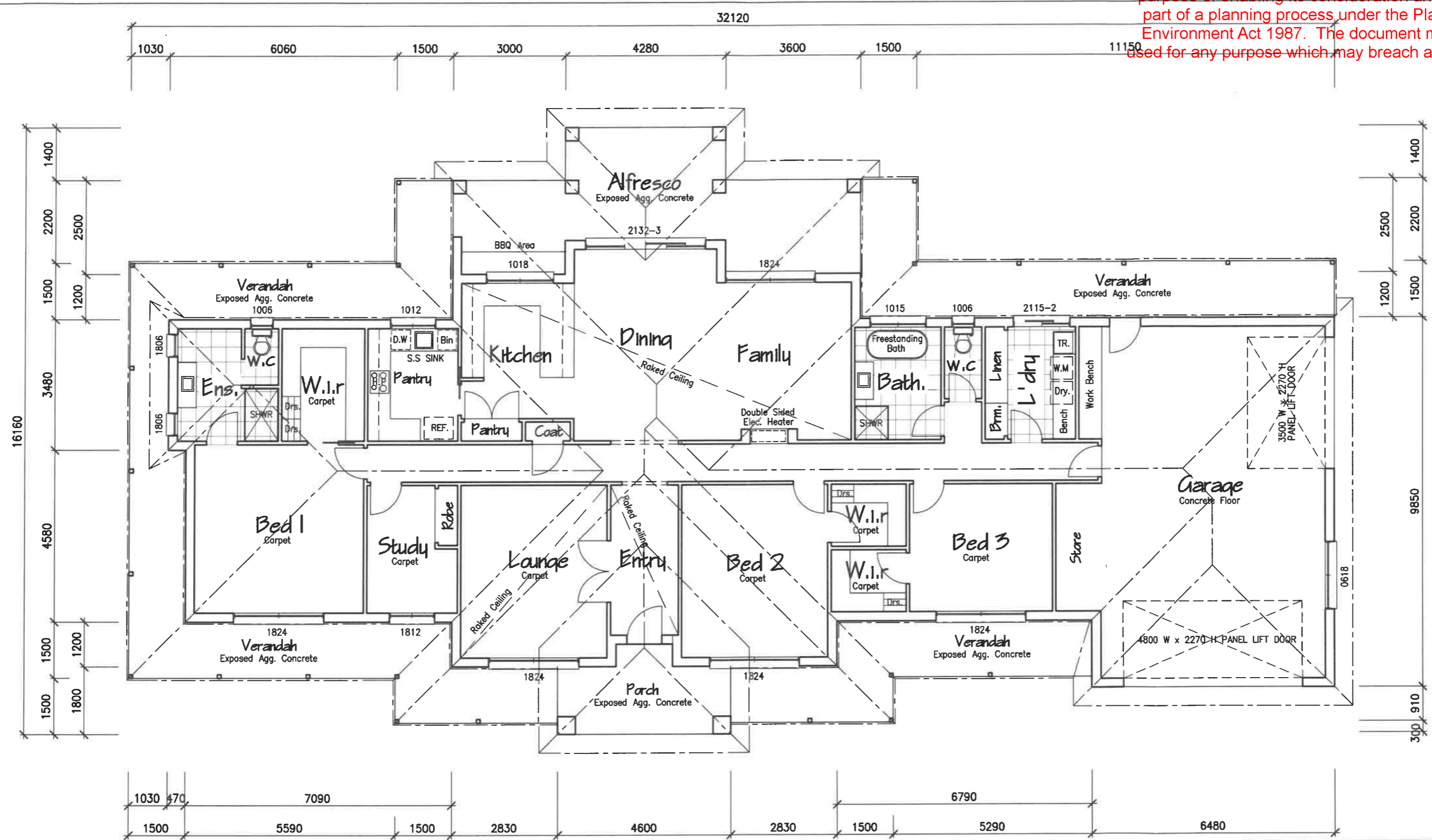
PROJECT: PROPOSED NEW RESIDENCE
 No. 215
 Broadlands Road,
 East Bairnsdale

PAGES: 2 OF 3
 SHEET SIZE: **A3**
 JOB NO: 230804
 DRAWN: CRAIG WIGHT
 DATE: 27/2/24

FLOOR AREAS:
 INTERNAL: 220.23m²
 GARAGE: 66.11m²
 PORCH: 9.18m²
 ALFRESCO: 29.34m²
 VERANDAH: 84.07m²
 TOTAL: 410.93m²

REV.	DETAILS:	DATE:
A	PRELIMINARY DRAWINGS	27/2/24
B	WORKING DRAWINGS	*

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Proposed Floor Plan 1:100



WE HAVE CHECKED THE PLANS AND AGREE THAT THEY ACCURATELY DEPICT THE HOUSE FOR CONSTRUCTION. ANY VARIATIONS REQUESTED AFTER SIGNING WILL INCUR A PROCESSING FEE IN ADDITION TO THE COST OF THE VARIATION ITEM/S AND ANY FURTHER PLANS TO BE PREPARED.

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			CLIENT: J & L Vanzin	No. 215	JOB NO: 230804	A		PRELIMINARY DRAWINGS	27/2/24	
			DRAWING TITLE: FLOOR PLAN - SCALE 1:100	Broadlands Road,	DRAWN: CRAIG WIGHT	B		WORKING DRAWINGS	*	
				East Bairnsdale	DATE: 27/2/24					