

Use and develop land for a dwelling

89 Old Sale Road, Drouin West

Client
Mitchell Preen and Mikaela Pellizzari

Issued
10/11/2020



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Revision Table

REV	DESCRIPTION	DATE	AUTHORISED
01	For Submission	10-11-2020	<p style="color: red; font-size: small;">This document has been copied and made available for the planning process as set out in the Planning and Environment Act 1987.</p> <p style="color: red; font-size: small;">JW Information must not be used for any other purpose.</p> <p style="color: red; font-size: small;">By taking a copy of this document, you acknowledge and agree that you will only use the document for the purpose specified above and that any dissemination, distribution or copying of this document is strictly prohibited.</p>
02	Revision to address RFI	08-02-21	

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1 INTRODUCTION

This Town Planning Report has been prepared in support of an application for a planning permit to use and develop land for a dwelling at 89 Old Sale Road, Drouin West.

The report provides details of the site and environs, the proposal, planning controls and an assessment against the provisions of the Baw Baw Planning Scheme.

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2 SITE AND SURROUNDS

2.1 Subject site

The site is located at 89 Old Sale Road, Drouin West.

The land consists of Lot 1 on Title Plan 244251Y and is contained in Certificate of Title Vol. 8119 Fol. 243.

The title is not affected by any covenants or Section 173 Agreements and does not contain any easements.

A copy of the title search statement and Title Plan is contained in **Appendix A**.

The site is generally rectangular in shape and has a combined area of roughly 1011.33m² with the following dimensions:

- A northern boundary with a length of 20.11 metres;
- An eastern side boundary with a length of 50.25 metres;
- A southern boundary abutting Old Sale Road with a length of 20.11 metres; and,
- A western side boundary with a length of 50.25 metres.

The land is currently a vacant allotment containing only mown grass and some exotic vegetation. There is one *eucalyptus spp* tree located in the north-eastern corner of the land.

The land has existing access via a gravel crossover positioned in the south-western corner.

Reticulated electricity is available to the site.

The topography of the land is generally flat.

There are no declared watercourses or other native features within the land.

The boundaries of the site are delineated by post and wire fencing.

The following photographs provide a visual description of the land.

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Photo 1 Subject land - existing access



Photo 2 Subject land

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Photo 3 Subject land

2.2 Surrounding Environment

The site is located within the rural residential settlement of Drouin West.

Drouin West contains a school, local fire station, cemetery and a cluster of houses on small lots within the Rural Living and Farming Zones.

The area has a range of land uses, including farming, industry and residential uses. Land use within immediate proximity of the subject land is dominated by residential lifestyle purposes, however also includes industry (timber processing) opposite the subject land and a restaurant, accommodation and hotel to the west.

Immediately abutting the subject land is:

- '89 Old Sale Road' to the west. The land is more specifically identified as Lot 1 TP555345 and is a smaller parcel with an area of roughly 2,322 m². The land is developed with a dwelling and a shed and is used for residential purposes.
- '93 Old Sale Road' to the east. The land comprises of two parcels known more specifically as Lot 1 TP240462 and Lot 1 TP218444. The land is developed with a dwelling and various sheds.

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- '87 Old Sale Road' to the north. This is a battle axe shaped allotment with an area of approximately 3,847m² that has the rear part of the allotment abutting the subject land and the frontage of the land abutting Old Sale Road. The land is developed with a dwelling and a large shed and appears to be used for domestic purposes with small non-commercial agricultural use.
- The land to the south, directly opposite the subject land, is developed with industry, namely Browns Timber, that is used to store timber associated with the production of sawn timber products.

Old Sale Road is a long rural road connecting townships from Sale through to Warragul. The road is now separated into sections by other roads. The section of Old Sale Road on which the subject land is located commences at the intersection with Main Neerim Road to the east and terminates to the intersection with Princes Way to the west. The road is a two-way bitumen sealed road with gravel verges and rural drains either side of the road.



FIGURE 1 Locality Plan Source: Nearmap

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3 THE PROPOSAL

This application seeks a permit to use and develop the land for a dwelling.

Plans of the proposed dwelling including a site plan, floor plans and elevations are contained in **Appendix B**.

The proposed dwelling is proposed to be sited 5.00 metres from Old Sale Road, 1.00 metre from the eastern boundary and 4.72m from the western boundary.

The dwelling is proposed to be a single storey dwelling and constructed with Linea board cladding walls and a Colorbond Roof. The design incorporates a 22.5° roof pitch with gable end details with James Hardie Easy Tex cladding, which offers a rendered appearance.

The dwelling has a proposed maximum wall height of 2.85 metres.

The land is not connected to reticulated sewer and therefore the dwelling will be required to be connected to a suitably designed waste disposal system. A land capability assessment will be provided shortly demonstrating the ability of the land to dispose of effluent for this dwelling.

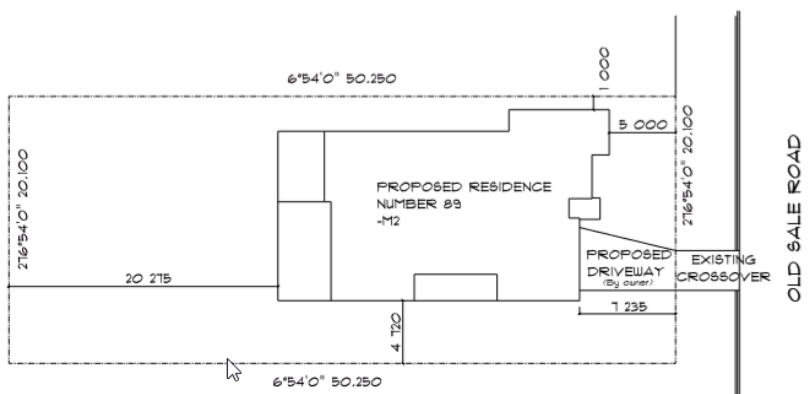


Figure 2 Site plan

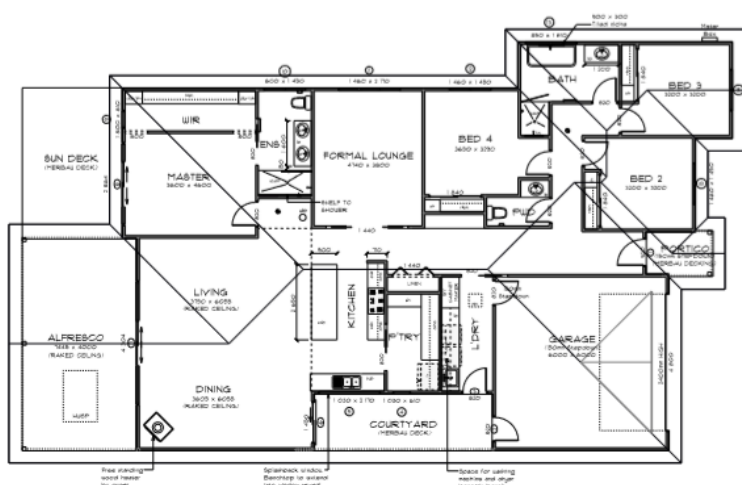


Figure 3 Floor Plan

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Control Joints (CJ - as per plan) for Habel PowerPanel Systems are to have:

- Vertical Control Joints at no greater than 6 meter centres (confirm on site)
- Vertical Control Joints at ALL Internal and External corners
- Vertical Control Joints above AND below all doors (inc. Sliding and Garage)

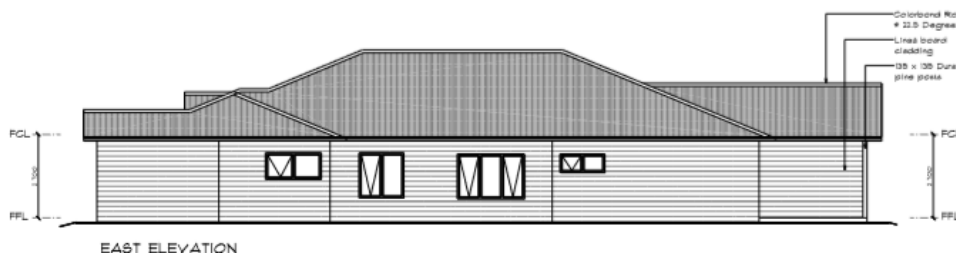
See Habel 'House and Low Rise Multi-Residential External Wall PowerPanel - Design and Installation Guide' and attach space for further details

Temporarily Dimpled Bricks to be installed in Dimpled Locations during construction as per AS2870 regulations.

Dimpled positions in accordance with NCC clause 3.5.2.5.1 particular (a) and (c).

Dimpleds must be located within 150 of a valley and must serve less than 1m of guttering.

Weatherhole locations as per NCC and relevant Australian Standards



EAST ELEVATION



WEST ELEVATION

Elevation Notes

Control Joints (CJ - as per plan) for Habel PowerPanel Systems are to have:

- Vertical Control Joints at no greater than 6 meter centres (confirm on site)
- Vertical Control Joints at ALL Internal and External corners
- Vertical Control Joints above AND below all doors (inc. Sliding and Garage)

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Weatherhole locations as per NCC and relevant Australian Standards

Figure 4 Elevation plans

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4 PLANNING MATTERS

4.1 Planning Policy Framework

The Baw Baw Planning Scheme contains a series of State policies relevant to this proposal:

- Settlement Gippsland (**Clause 11.01-1R**)
- Regional and local places (**Clause 11.003-6S**)
- Protection of agricultural land (**Clause 14.01-1S**)
- Protection of agricultural land - Gippsland (**Clause 14.01-1R**)
- Water supply, sewerage and drainage (**Clause 19.03-3S**)

Clause 11.01-1R Settlement - Gippsland contains the following relevant strategies;

- *Support the continuing role of towns and small settlements in providing services to their districts, recognising their relationships and dependencies with larger towns.*
- *Provide regional social infrastructure in the regional city and regional centres.*

Clause 11.03-6S Regional and local places has the objective:

- 'To facilitate integrated place-based planning.'

The strategies to achieve this objective are

- *'Integrate relevant planning considerations to provide specific direction for the planning of sites, places, neighbourhoods and towns*
- *Consider the distinctive characteristics and needs of regional and local places in planning for future land use and development.'*

Clause 14.01-1S Protection of agricultural land has the objective:

- 'To protect the state's agricultural base by preserving productive farmland.'

The strategies listed to achieve this are;

- *'Identify areas of productive agricultural land, including land for primary production and intensive agriculture.*
- *Consider state, regional and local, issues and characteristics when assessing agricultural quality and productivity.*
- *Avoid permanent removal of productive agricultural land from the state's agricultural base without consideration of the economic importance of the land for the agricultural production and processing sectors.*
- *Protect productive farmland that is of strategic significance in the local or regional context.*
- *Protect productive agricultural land from unplanned loss due to permanent changes in land use.*
- *Prevent inappropriately dispersed urban activities in rural areas. Protect strategically important agricultural and primary production land from incompatible uses. Limit new housing development in rural areas by:*
 - *Directing housing growth into existing settlements.*
 - *Discouraging development of isolated small lots in the rural zones from use for dwellings or other incompatible uses.*
 - *Encouraging consolidation of existing isolated small lots in rural zones.*

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- Identify areas of productive agricultural land by consulting with the Department of Economic Development, Jobs, Transport and Resources and using available information.'

In considering a proposal to use, subdivide or develop agricultural land, consider the:

- 'Desirability and impacts of removing the land from primary production, given its agricultural productivity.
- Impacts on the continuation of primary production on adjacent land, with particular regard to land values and the viability of infrastructure for such production.
- Compatibility between the proposed or likely development and the existing use of the surrounding land.
- The potential impacts of land use and development on the spread of plant and animal pests from areas of known infestation into agricultural areas.
- Land capability.
- Balance the potential off-site effects of a use or development proposal (such as degradation of soil or water quality and land salinisation) against the benefits of the proposal.'

Clause 14.01-1R Protection of agricultural land – Gippsland has the following strategy:

- 'Protect productive land and irrigation assets, including the Macalister Irrigation District, that help grow the state as an important food bowl for Australia and Asia.'

Clause 19.03-3S Water supply, sewerage and drainage has the objective:

- 'To plan for the provision of water supply, sewerage and drainage services that efficiently and effectively meet state and community needs and protect the environment.'

Strategies are to:

- 'Improve alignment between urban water management and planning by adopting an integrated water management approach.
- Ensure water quality in water supply catchments is protected from possible contamination by urban, industrial and agricultural land uses.
- Provide for sewerage at the time of subdivision, or ensure lots created by the subdivision are capable of adequately treating and retaining all domestic wastewater within the boundaries of each lot.
- Plan urban stormwater drainage systems to:
 - Coordinate with adjacent municipalities and take into account the catchment context.
 - Include measures to reduce peak flows and assist screening, filtering and treatment of stormwater, to enhance flood protection and minimise impacts on water quality in receiving waters.
 - Prevent, where practicable, the intrusion of litter. Encourage the reuse of wastewater including urban run-off, treated sewage effluent and run-off from irrigated farmland where appropriate.
 - Protect significant water, sewerage and drainage assets from non-rural, high sensitive and incompatible uses. Minimise the potential impacts of water, sewerage and drainage assets on the environment'

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4.2 Local planning policy framework

The Baw Baw Shire Municipal Strategic Statement (MSS) sets out the future strategic direction for the municipality in **Clause 21** of the Planning Scheme. The following is an outline of the relevant planning policies contained within the MSS.

In its Municipal Profile at **Clause 21.01**, the MSS states that the municipality is located in West Gippsland between Melbourne's south-eastern growth corridor and the Latrobe Valley. It highlights that the municipality contains some of Australia's finest agricultural land, along with extensive agricultural infrastructure and investment.

Clause 21.02 outlines the Municipal Vision, which is based on Council's adopted *Baw Baw 2050 – Community Vision*:

- *'Happy, healthy people;*
- *sharing prosperity and knowledge from living sustainably and in harmony with our rural identity;*
- *thriving villages;*
- *and productive and inspiring landscapes.'*

The following three strategic directions of *Baw Baw 2050* are relevant to the proposal:

'Managing Growth:

- *Maintaining the integrity of the land resource and its protection from unplanned urban and residential encroachment is vital for the long term economic prosperity of the Shire and its people.'*

'Valuing our Environment:

- *The Shire comprises some of Australia's most fertile and productive rural land.'*

'Building Prosperity:

- *Protecting and further developing of the Shire's resources particularly those relating to dairying, horticulture, grazing, timber production, tourism and the capacity to supply high quality water is key to ensuring future prosperity.'*

Clause 21.06 identifies the Council Vision, objectives and strategies for **Natural Environment and Resource Management**. The stated Vision is:

- Council will consider planning applications and make decisions in accordance with the following vision:
 - *To ensure the protection, conservation and sustainable management of the Shire's natural environment.*
 - *To recognise the State and National importance of the Shire's resources while ensuring they are utilised in a way that maintains a high quality of life for residents.*
 - *To recognise the Shire's natural environment as the habitat for a wide range of indigenous flora and fauna and the importance of maintaining the long term survival of these species.*

In the **Natural Environment and Resource Management** overview at **Clause 21.06-2**, it is stated that the natural environment of the municipality provides pastoral, rural and bushland landscapes which are greatly valued by residents and visitors.

Clause 21.06-4 contains the following objective and strategies relating to the **Natural Resource Base**:

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Objective

- To ensure development proposals demonstrate a positive contribution to the environment in terms of soil stability, erosion, flood and drainage management and the retention of native vegetation.

A relevant strategy identified to achieve this objective is:

- Recognise the high quality attributes of the natural environment and its significant link with every urban and rural area in the Shire.

Clause 21.06-6 contains the following objective and strategies relating to the **Farmland and Soil Quality**:

Objectives

- To protect and maintain high quality agricultural land.
- To ensure that the future of agricultural industries are not prejudiced by the removal or degradation of soils.

A relevant strategy identified to achieve these objectives is:

- Discourage practices that damage soil integrity, for example through inappropriate waste management or poor farm practices.

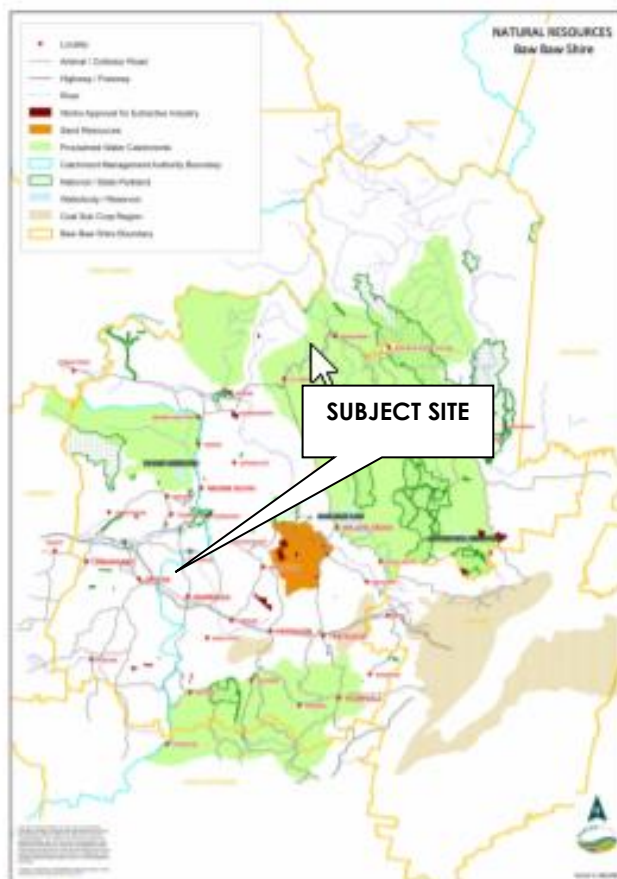


Figure 5 Natural Resources Map at Clause 21.06

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In the **Primary Production** overview at **Clause 21.07-3**, it is stated that the Baw Baw Shire is a major agricultural producer in the West Gippsland region and that agricultural output is highly valued. It also stated that there are many opportunities for further economic development within the municipality, particularly in alternative agricultural enterprises.

Clause 21.07-3 contains the following objective and strategies relating to the **Primary Production**:

Objective

- *To enhance rural based economic activity in agriculture, horticulture and silviculture.*

Relevant strategies identified to achieve this objective include:

- *Facilitate opportunities to expand and value add to raw products.*
- *Develop the concept of the Shire as a centre for high quality agricultural production.*
- *Discourage uses and developments likely to impact detrimentally on agriculture and the environment.*

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4.3 Zoning and overlay controls

4.3.1 Zoning

The land is zoned Rural Living – Schedule 1 under the Baw Baw Planning Scheme. An extract of the zoning map is contained in **Figure 6**.



Figure 6 Extract of Zoning Map Source; Land Victoria website

The purpose of the Rural Living Zone, as stated in **Clause 35.03** of the Scheme, is:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To provide for residential use in a rural environment.
- To provide for agricultural land uses which do not adversely affect the amenity of surrounding land uses.
- To protect and enhance the natural resources, biodiversity and landscape and heritage values of the area.
- To encourage use and development of land based on comprehensive and sustainable land management practices and infrastructure provision.

In accordance with **Clause 35.03-1** of the Rural Living Zone, a permit is required to use the land for a dwelling, as the lot is less than 4 hectares in area.

The use of land for a dwelling must meet the following requirements stipulated in **Clause 35.03-2**:

- Access to the dwelling must be provided via an all-weather road with dimensions adequate to accommodate emergency vehicles.

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- The dwelling must be connected to a reticulated sewerage system or if not available, the waste water must be treated and retained on-site in accordance with the State Environment Protection Policy (Waters of Victoria) under the Environment Protection Act 1970.
- The dwelling must be connected to a reticulated potable water supply or have an alternative potable water supply with adequate storage for domestic use as well as for fire fighting purposes.
- The dwelling must be connected to a reticulated electricity supply or have an alternative energy source

Pursuant to **Clause 35.03-4** a permit is required to construct a building and construct or carry out works associated with a dwelling.

4.3.2 Overlays

Development Contributions Plan Overlay (DCPO)

The entire site is affected by the Development Contributions Plan Overlay, Schedule 1 (Baw Baw Shire Development Contributions Plan) under the Baw Baw Planning Scheme.

An extract of the overlay map is contained in **Figure 7**.

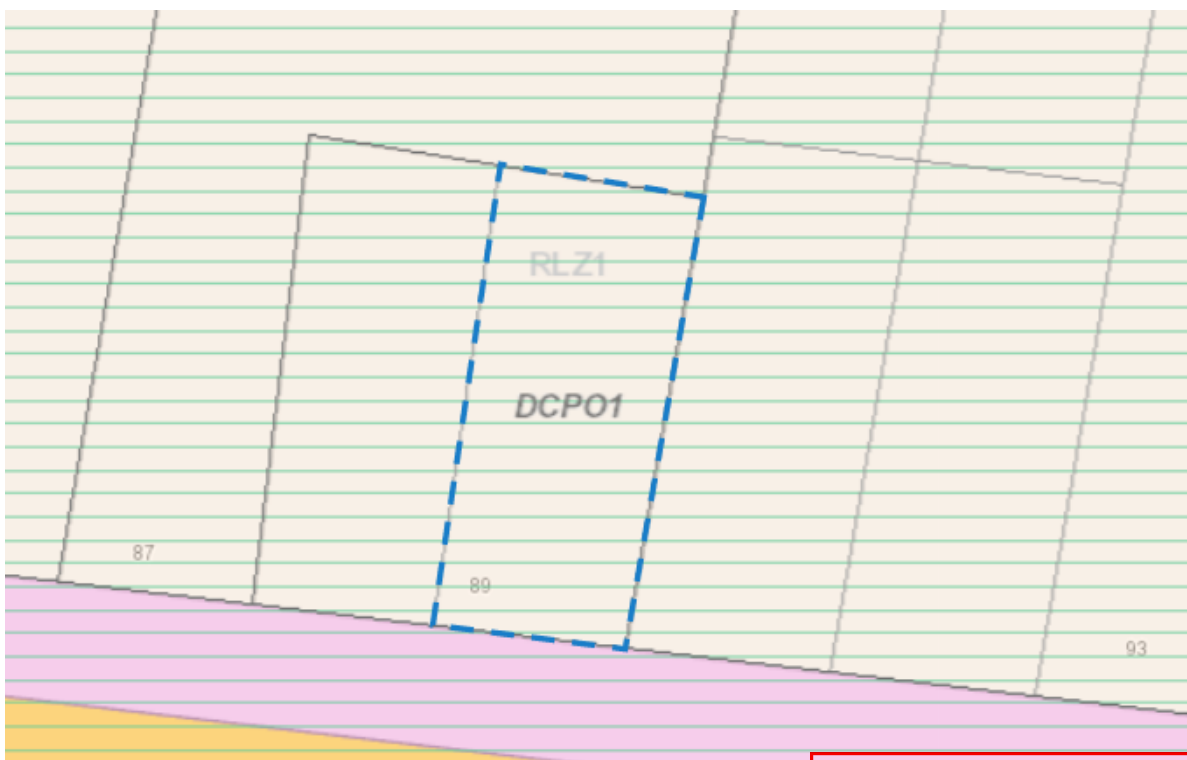


Figure 7 Extract of Overlay Map Source; Land Victoria website

The purpose of the Development Contributions Plan Overlay, as stated in **Clause 45.06** of the Scheme, is:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To identify areas which require the preparation of a development contributions plan for the purpose of levying contributions for the provision of works and services and facilities for development can commence.

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The Baw Baw Shire Development Contributions Plan has been prepared and is contained in Schedule 1 to the overlay. The Contributions Plan identifies the site within 'Area 48' of the municipality.

4.4 Particular provisions

None applicable.

4.5 General provisions

The requirements of **Clause 65 – Decision Guidelines** and **Clause 66 – Referrals and Notice Provisions** are relevant to the proposal.

4.6 Incorporated and reference documents

The following relevant documents are incorporated in the Baw Baw Planning Scheme:

- *'Guidelines for Environmental Management – Code of Practice – Onsite Management of Wastewater (Publication 8913, EPA 2013)*

The following relevant documents are referenced in the Baw Baw Planning Scheme:

- *'Gippsland Regional Growth Plan' (Victorian Government, 2014)*
- *'Baw Baw 2050 Community Vision 2010' (Baw Baw Shire Council)*
- *Assessment of agricultural quality of land in Gippsland (Swan and Volum, 1984)*

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5 PLANNING ASSESSMENT

5.1 The decision guidelines of the Rural Living Zone

The following decision guidelines of the Rural Living Zone set out matters that the responsible authority must consider (as appropriate):

- *The Municipal Planning Strategy and the Planning Policy Framework.*

The PPF and MSS of the Baw Baw Planning Scheme both recognise the need to manage the interface of rural and rural lifestyle properties and provide for development of land for residential purposes in appropriate locations. The subject land is zoned for rural living and is located in close proximity to both the Drouin town centre and the M1 Freeway 'on-ramp' to Melbourne and Traralgon. It is serviced land that provides for an appropriate location for a dwelling. The proposal is therefore considered to closely adhere to the policies at **Clause 16.01-3S** Rural Residential Development. The policies encourage settlement where there has been investment in physical and community infrastructure. The land is well serviced with only reticulated sewer being unavailable. The settlement is serviced with a school and community fire station, hotel and accommodation and is the type of locality envisaged by this policy for residential development. There are no agricultural industries abutting the subject site and the land has no abuttal to land zoned for farming purposes. Therefore, there is appropriate protection from agricultural land uses. The subject land is located opposite land that has been used historically for the purpose of timber storage and milling and has successfully integrated itself with the local rural residential village that exists in Drouin West without concern.

Clause 21.03-2 Settlement refers to the value that the community places in the rural character and heritage of the towns of the Shire and their hinterland. The proposal responds to the directions within the MSS to these character values, by ensuring that the design and siting of the dwelling is consistent with the patterns of development in the area and the rural residential themes of Drouin West.

Clause 21.03 includes strategies that direct development and population to settlements where land has already been zoned or committed for residential purposes and has ready access to existing infrastructure and services. The Drouin West settlement is appropriately zoned and serviced to meet this strategy and other strategies that encourage development within existing or preferred settlements.

- *The capability of the land to accommodate the proposed use or development.*

A Land Capability Assessment is being prepared that demonstrates that the site is capable of disposing of effluent safely on site.

- *Whether the site is suitable for the use or development and whether the proposal is compatible with adjoining and nearby land uses.*

The Drouin West settlement is a clear rural residential development that includes a high proportion of residential land uses among other non-residential and non-rural land uses. The proposed dwelling is considered to be consistent with land use themes and compatible with land uses in the area.

- *The capacity of the site to sustain the agricultural use.*

No agricultural land use is proposed.

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- *Any integrated land management plan prepared for the site.*

No integrated site/land management plan has been prepared for the land, nor is one warranted given the clear and logical use of the land for residential purposes and the non-substantive residual land not included in the development.

- *The potential for the future expansion of the use or development and the impact of this on adjoining and nearby agricultural and other land uses.*

The use is limited by the site area and planning controls that exist for residential land use on the site. The land does not have abutments to agricultural land and will not impact on the expansion of any nearby farm.

The land is opposite a timber processing facility however it is not expected that the addition of one dwelling amongst the many dwellings that form the Drouin West township will have an impact on the ongoing use or expansion of this facility.

- *The impact on the natural physical features and resources of the area and in particular any impact caused by the proposal on soil and water quality and by the emission of noise, dust and odours.*

The subject land will not require excessive earthworks to provide for the dwelling. The land does not contain waterways or other natural features that will be impacted by the proposal. The use of the land for a dwelling is unlikely to result in excessive noise, dust or odour, and dust is limited also by the short driveway to the dwelling.

- *The impact of the use or development on the flora, fauna and landscape features of the locality.*

The proposal does not remove native vegetation or impact on any natural features of the locality. The land is not in a sensitive landscape area and the design and siting of the dwelling will not impact on significant sightlines.

- *The need to protect and enhance the biodiversity of the area, including the need to retain vegetation and faunal habitat and the need to revegetate land including riparian buffers along waterways, gullies, ridgelines, property boundaries and saline discharge and recharge area.*

The proposal does not impact on any area identified to have particular biodiversity. The proposal impacts only non-native vegetation that is not recognised as being habitat for fauna. The land contains no waterway, ridgelines or areas known to be saline discharge or recharge areas.

- *The location of on-site effluent disposal areas to minimise the impact of nutrient loads on waterways and native vegetation.*

The proposal will be required to dispose of effluent via an on-site system that is designed to the allotment. The system is not likely to impact on any waterways or native vegetation.

- *The impact of the siting, design, height, bulk, colours and materials on the environment, major roads, vistas and water features and the measures to be undertaken to minimise any adverse impacts.*

The design is a modest, single storey home with a low 22.5° roof pitch. The design will not be significant in the landscape.

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- *The impact on the character and appearance of the area or features of architectural, historic or scientific significance or of natural scenic beauty or importance.*

There are no historical or natural features in the area that will be impacted by the design. The proposed building sits appropriately into the settlement so as not to impact the character of the area negatively.

- *The location and design of existing and proposed infrastructure including roads, gas, water, drainage, telecommunications and sewerage facilities.*

The subject land is serviced with electricity, located on a line along Old Sale Road.

Sewerage is not available to the area and therefore waste treatment will be provided for by on-site effluent disposal.

Town water runs along Old Sale Road and the site is able to connect into this.

Telecommunications is also provided along Old Sale Road and the site is able to connect to this.

There is no gas available to the site.

The site will drain to the existing swale drain in Old Sale Road.

Old Sale Road is a bitumen sealed road that is appropriate for access. An existing crossover to the land is provided in the south western corner of the land and will be utilised by the proposed dwelling for access.

- *Whether the use or development will require traffic management measures*

The proposal will not require specific traffic management measures.

5.2 The decision guidelines of Clause 65

The decision guidelines contained in Clause 65 set out matters that the responsible authority must consider, as appropriate.

Clause 65.01 – Approval of an application or plan

- *The matters set out in Section 60 of the Act;*

These are matters that the responsible authority must take into account before making a decision on an application. These matters cannot be addressed in this report.

- *The Planning Policy Framework and Municipal Strategic Statement;*

This has been addressed in section 5.1 of this report.

- *The purpose of the zone, overlay or other provision;*

The proposal achieves the purpose of the zone, as it:

- Provides a solid response to the relevant statements and policies within the PPF and MSS;
 - Provides for a residual use of the land supported by the intent of the zone and infrastructure available to the site;
 - Provides for an appropriate design response to the character of the Drouin West Township
- Will have minimal impacts to the environmental qualities of the land.

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- *Any matter required to be considered in the zone, overlay or other provision;*
This has been addressed in section 5.1 of this report.
- *The orderly planning of the area;*
The proposal is consistent with land use patterns and expectations for development with Drouin West and is consistent with planning decisions regularly made in Baw Baw Shire for similar applications.
- *The effect on the amenity of the area;*
Land in close proximity to the site is largely made up of residential land uses. The proposal will not negatively impact on any nearby residential land use through noise, dust or nuisance associated with traffic movements.
- *The proximity of the land to any public land;*
Apart from Old Sale Road, the site does not directly abut any public land. The proposal utilises the existing access onto Old Sale Road.
- *Factors likely to cause or contribute to land degradation, salinity or reduce water quality;*
There are no known factors likely to cause or contribute to land degradation, salinity or reduction in water quality.
- *Whether the proposed development is designed to maintain or improve the quality of stormwater within and exiting the site;*
Stormwater runoff from the dwelling will be directed to the swale drain within Old Sale Road.
- *The extent and character of native vegetation and the likelihood of its destruction.*
No native vegetation is impacted by the proposal.
- *Whether native vegetation is to be or can be protected, planted or allowed to regenerate.*
There are currently no native trees on site that require protection or regeneration.
- *The degree of flood, erosion or fire hazard associated with the location of the land and the use, development or management of the land so as to minimise any such hazard.*
The site is not susceptible to flooding or erosion. It is, however, within a designated bushfire prone area and the Building Regulations 2006 will therefore apply bushfire protection standards for the construction of the proposed dwelling at the building permit stage.

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6 CONCLUSION

This report demonstrates that the proposal is consistent with the provisions of the Baw Baw Planning Scheme, including the Planning Policy Framework and relevant sections of the MSS.

The land has appropriate infrastructure available to the site to avoid unnecessary upgrading of infrastructure to enable the construction of the dwelling.

The proposal will provide for a built form that is consistent with the character of the Drouin West township and is within the expectations of development within this area.

The proposal supports the purpose and intent of the Rural Living Zone in providing for residential development within a rural context without impacting on nearby farming activities.

It is considered that the proposal has planning merit and it is therefore requested that Baw Baw Shire Council issue a planning permit for the use and development of land for a dwelling at 89 Old Sale Road, Drouin West.

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Site Notes

Soil classification is supplied by builder as determined by soil engineer.

All stormwater to be connected to a legal point of Discharge to local council requirements.

Ground lines, site cut and fill as shown are approximate only and should be verified by builders prior to commencement of building works.

All level and plan dimensions to be verified by builder on site.

All service locations to be verified by builder on site.

Evident discrepancies to be remedied by builder with the approval of the designer.

Do not scale - use written dimension only.

All works to be in accordance with local council by-laws and current building code of Australia (NCC 2016) and latest Australian Standards and Codes where applicable.

Stormwater drains to be taken to lawful point of discharge.

Top soil and vegetation under slabs to be removed.

Ground in immediate area of works is to be sprayed with anti-termite treatment.

LEGEND:

FFL Finished floor level
 FGL Finished ground level
 LPD legal point of discharge (to be confirmed)

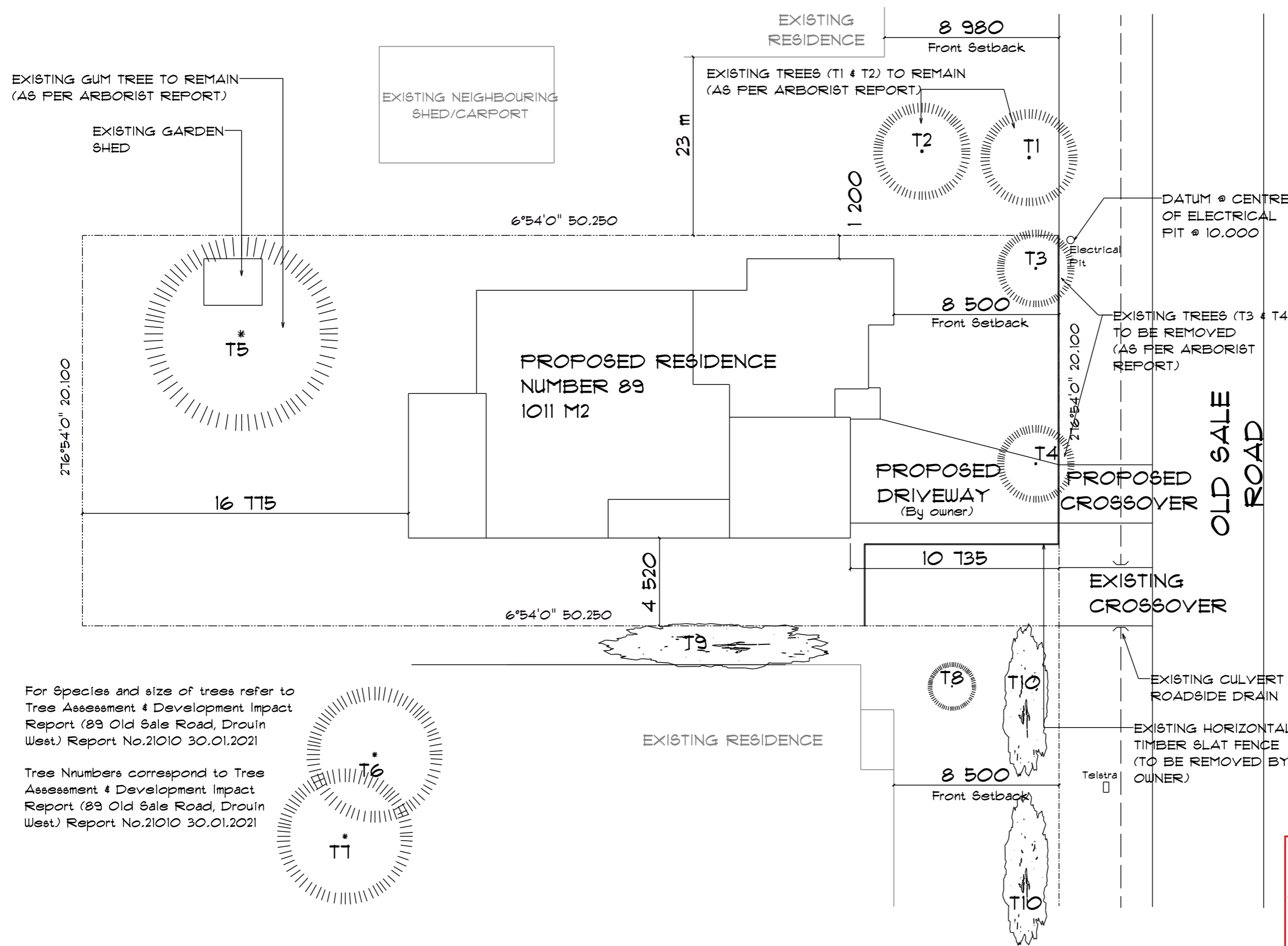
This site is in a DESIGNATED BUSHFIRE PRONE AREA as at

Bushfire Attack Level	TBC
-----------------------	-----

Refer to Bushfire Attack Level Report for any details and/or queries on assessment.

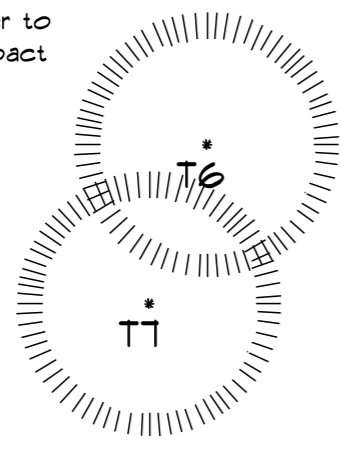
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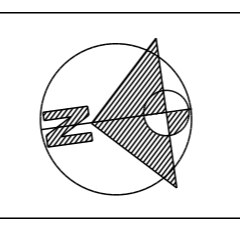
For Species and size of trees refer to Tree Assessment & Development Impact Report (89 Old Sale Road, Drouin West.) Report No.21010 30.01.2021

Tree Numbers correspond to Tree Assessment & Development Impact Report (89 Old Sale Road, Drouin West.) Report No.21010 30.01.2021



GREEN DESIGN HOMES
 6 June Court, Warragul 3820 (CDB-U 54423)

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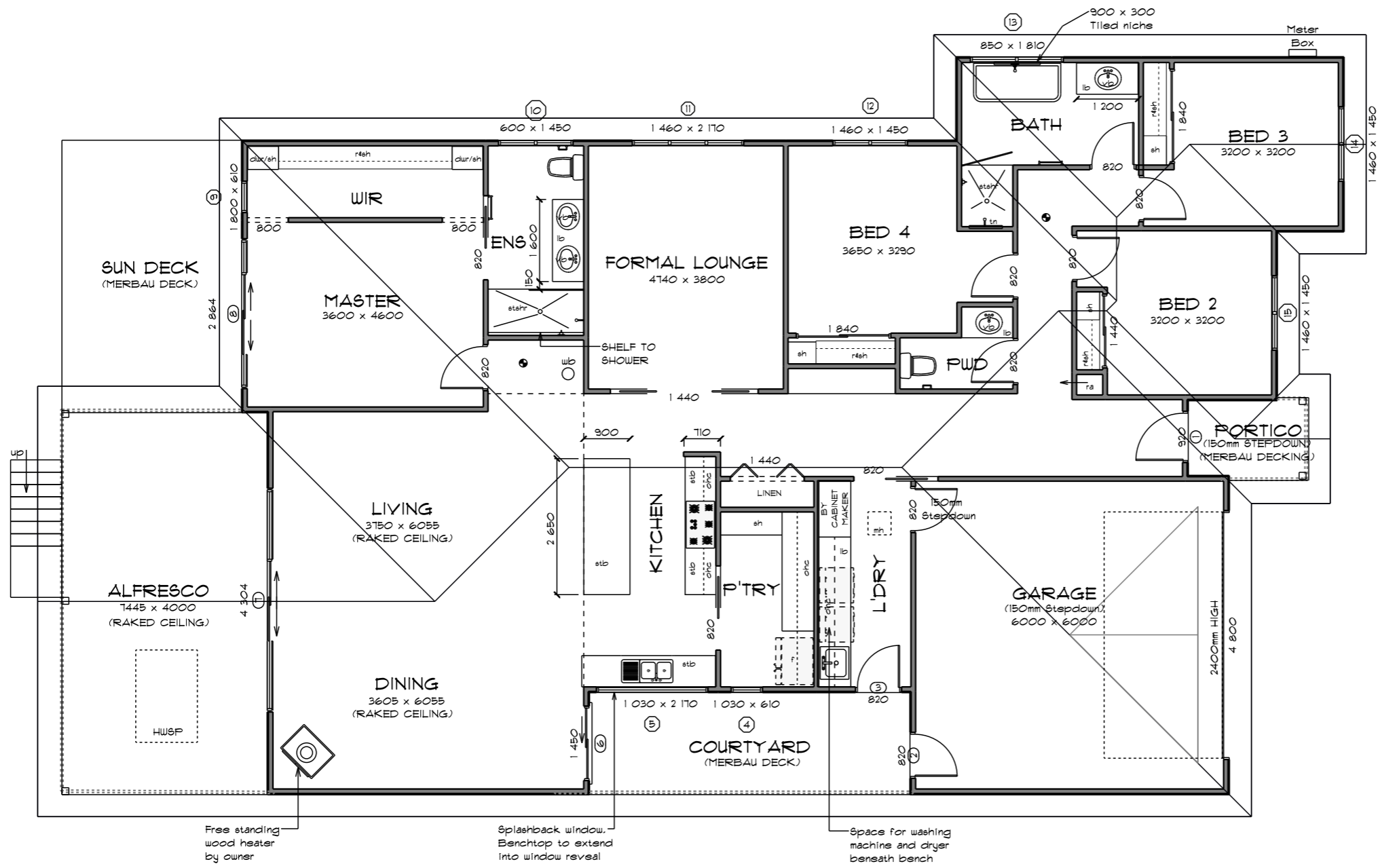


Client: Mitchell Preen & Michaela Pellizzari
 Project: Proposed Residence
 Address: 89 Old Sale Road, Drouin West Vic

Drawing Title: Site Plan
 Sheet Number: 1 of 4
 Scale: 1:200 @ A3
 Drawn: AR
 Date: February 09, 2022
 Last Modified: 2022

FLOOR PLAN NOTES

1. All level and plan dimensions to be verified by Builder on site. All service locations to be verified by Builder on site. Evident discrepancies to be remedied by Builder with the approval of the designer.
2. Do not scale - use written dimension only.
3. All works to be in accordance with Local Council by-laws and current Building Code of Australia (NCC 2016) and latest Australian Standards and codes where applicable.
4. All frame timber to conform to AS 1684 and the Timber Framing Manual.
5. Structural steel and concrete to comply with design.
6. Metal lintels in external walls to be hot dipped galvanised.
7. All glazing to comply with AS 1288 - 2006.
8. Stormwater drains to be taken to lawful point of discharge.
9. Top soil and vegetation under slabs to be removed.
10. Wet areas to be impervious to water as per AS 3740 - 2010.
11. All external steps to have a max. 190mm and min 115mm riser and max 335mm and min 240mm tread.
12. Roofs,walls and floors to be insulated in accordance with NCC.
13. Smoke detectors to be in accordance with AS 3786 - 1993.
14. Ground in immediate area of works is to be sprayed with anti - termite treatment.
15. All concrete and reinforcement detail based on "M" classification. Builder to verify. All concrete to be 20MPa minimum.
16. Where exposed, timber is to have a minimum durability rating of H3.



LEGEND:

stb	stone benchtop
lb	laminata benchtop
ohc	overhead cupboard
ohs	overhead shelves
ek	sink
hptc	hotplate & oven
t	toilet
vb	vanity basin
stshr	stepsless tiled shower
b	bath
sh	shelves
rsh	rod & shelf
clur	drawers
br	broom
mh	manhole (location subject to roof design)
tn	approx. 300x600mm tiled niche
HU&SP	Hot water solar panel
wb	whirley bird

AREA SCHEDULE:

NAME	AREA (m ²)	AREA (sq. ft.)
Living	203.62	22.56
Garage	36.00	3.91
Courtyard	6.36	0.69
Portico	3.80	0.40
Sun Deck	18.48	1.98
TOTAL	312.38	33.62

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QUOTING DRAWINGS
 Date Modified: November 12, 2020
 2069

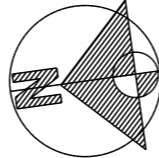


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Client: Mitchell Preen & Michaela Pellizzari
 Project: Proposed Residence
 Address: 89 Old Sale Road, Drouin West Vic

Drawing Title: Floor Plan
 Sheet Number: 2 of 4
 Scale: 1:100 @A3
 Drawn: AR

Elevation Notes

Control Joints (CJ - as per plan) for Hebel PowerPanel Systems are to have:

- Vertical Control Joints at no greater than 6 meter centres (confirm on-site)

- Vertical Control Joints at ALL Internal and External corners

- Vertical Control Joints above AND below all doors (inc. Sliding and Garage)

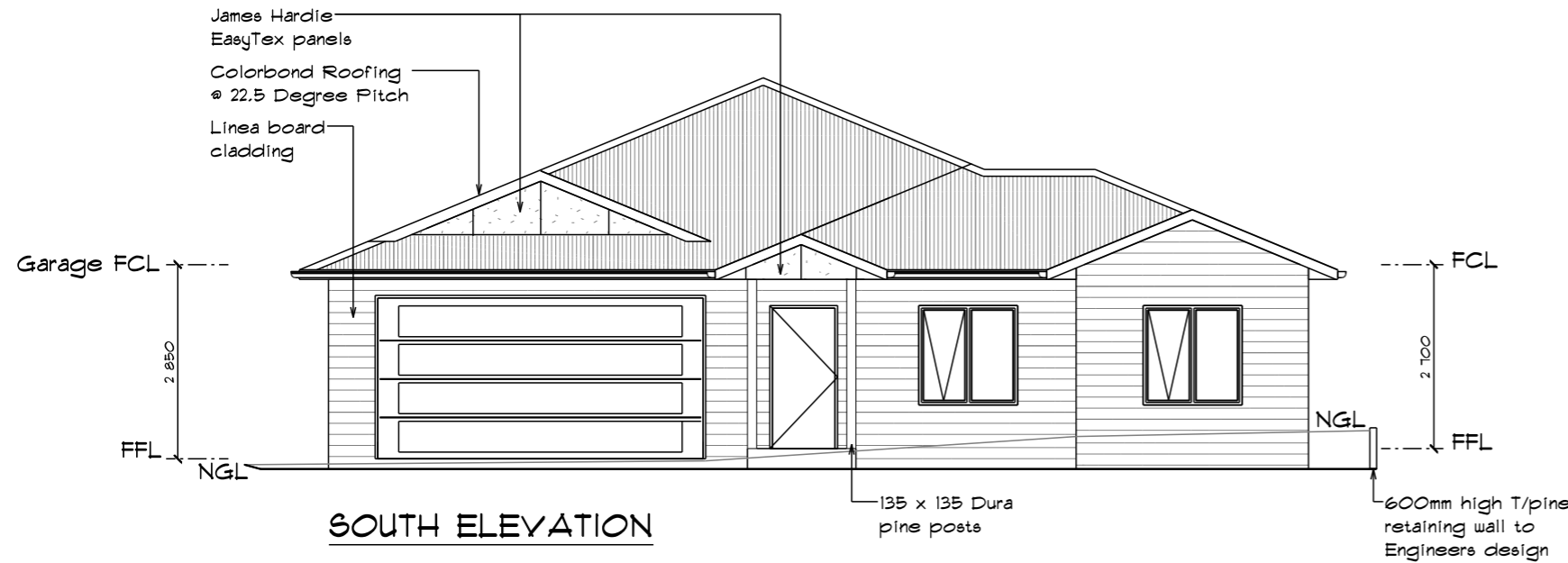
See Hebel 'House and Low Rise Multi-Residential External Walls PowerPanel - Design and Installation Guide,' and attached specs for further details

Temporary Downpipe Socks to be installed at Downpipe Locations during construction as per AS2870 regulations.

Downpipe positions in accordance with NCC clause 3.5.2.5, in particular (a) and (c).

Downpipes must be located within 1.5m of a valley and must serve less than 12m of guttering.

Weephole locations as per NCC and relevant Australian Standards



SOUTH ELEVATION



EAST ELEVATION

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Client: Mitchell Preen & Michaela Pellizzari
 Project: Proposed Residence
 Address: 89 Old Sale Road, Drouin West Vic

Drawing Title: Elevations 1
 Sheet Number: 3 of 4
 Scale: 1:100 @ A3
 Drawn: AR

QUOTING DRAWINGS
 2
 Last Modified: November 2, 2020
 2069

Elevation Notes

Control Joints (CJ - as per plan) for Hebel PowerPanel Systems are to have:

- Vertical Control Joints at no greater than 6 meter centres (confirm on-site)

- Vertical Control Joints at ALL Internal and External corners

- Vertical Control Joints above AND below all doors (inc. Sliding and Garage)

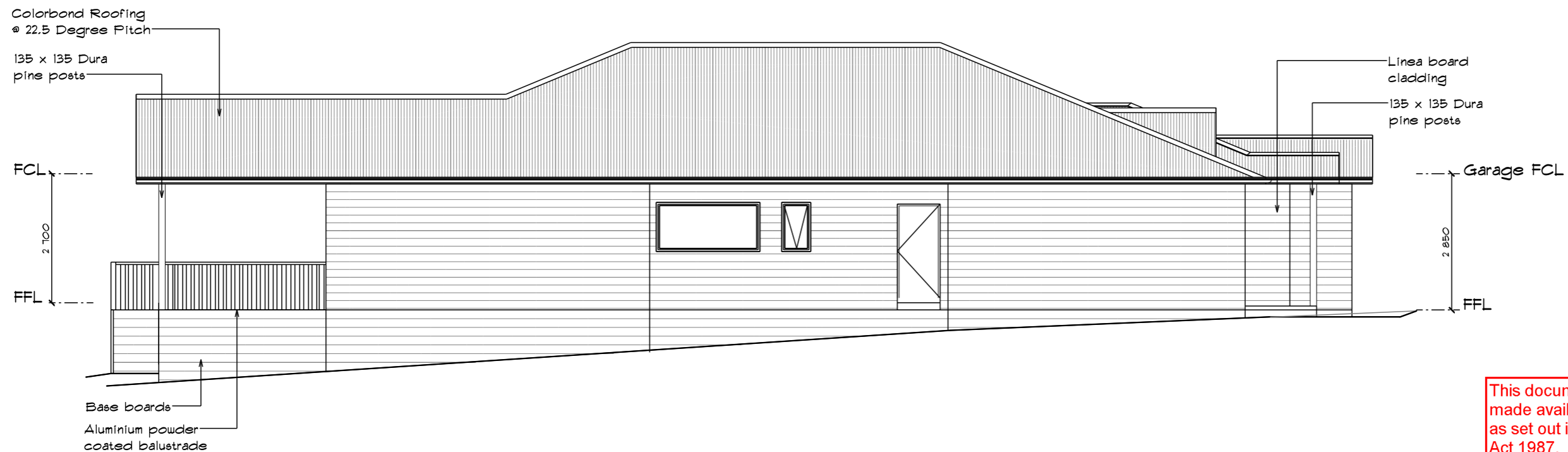
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Weephole locations as per NCC and relevant Australian Standards



WEST ELEVATION

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Client: Mitchell Preen & Michaela Pellizzari
 Project: Proposed Residence
 Address: 89 Old Sale Road, Drouin West Vic

Drawing Title: Elevations 2
 Sheet Number: 4 of 4
 Scale: 1:100 @A3
 Drawn: AR

QUOTING DRAWINGS
 2
 Last Modified: November 2, 2020
 2069



A.B.N. 63 101 322 089 A.C.N. 101 322 089

Land Capability Assessment

Report No. PER-2032



89 Old Sale Road DROUIN WEST

26th November 2020

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1. Site Location:

89 Old Sale Road
DROUIN WEST

2. Client:

Mitchell Preen & Michaela Pellizzari

3. Construction Proposal:

Upgraded septic system for proposed extended residence.

4. Site Description:

The site is located in a rural area, has a moderate slope to the rear and is currently covered by natural grass.

5. Geology:

The site is situated within a geological area of Undifferentiated Silurian Devonian Rocks, Sedimentary, Marine. The site investigation confirmed this.

6. Site Investigation:

Three boreholes were drilled by hand auger within the recommended effluent disposal area to check for ground water, rock and estimate soil percolation rates using AS/NZS 1547:2012 'On-site domestic waste water management'. The attached borehole log shows layer descriptions and depths.

7. Soil Profile:

The boreholes revealed a soil profile consisting of the following:

- 750mm to 800mm of Grey Sandy Clayey SILT(Soil Category 4 – Clay Loam) *overlying*
- Orange/Grey Silty CLAY(Soil Category 5 – Light Clay)

Soils were classified using the textural method. (AS/NZS 1547:2012 – E4)

No groundwater was encountered in either hole.

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8. Land Assessment for Effluent Disposal:

	Land features		Site Rating	
A	Site drainage	Very Slow	1	Very Good
B	Inundation Potential / Flooding	Never	1	Very Good
C	Slope of land (%)	2-8	2	Good
D	Landslip	Nil	1	Very Good
E	Depth to seasonal or perched water table (m)	>5	1	Very Good
E	Rainfall (mm) Neerim Sth (85202)	750-1000	4	Poor
F	Pan Evaporation (mm/yr) Noojee (085277)	1000-1250	3	Fair
G	Soil Structure	High	1	Very Good
H	Soil Profile Depth (m)	>2	1	Very Good
I	Soil Sodcity ESP%	< 3	1	Very Good
J	Estimated soil permeability (m/day) Soil Category 5	0.2	1	Very Good
K	Soil Stoniness (%)	< 10	1	Very Good
L	Soil Emerson Test (dispersion/slaking)	7	3	Fair
M	Soil Salinity (dS/m)	< 0.3	1	Very Good
	Site Rating		4	Poor

Notes:

- Site NOT within a designated 'flood prone area' with proposed residence stormwater to be disposed away from effluent disposal area.
- Given the site is within a potable water catchment area with Tarago Reservoir 220metres downslope a secondary treatment system via a 8m x 3m sand filter is recommended.
- This 220metres is greater than the required 150metres for secondary treated effluent.
- The area is covered in grass, cleared of trees with high sun and wind exposure.
- Site rated poor due to relatively high rainfall.

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9. Required Sub-Surface Irrigation Area for 20/30 Standard Effluent:

EPA Publication 891.3 & AS/NZS 1547:2012

Water Balance

Indicative Soil Permeability K_{sat}	Design Irrigation Rate (Spray/Drip)	Design Wastewater Discharge	Spray / Drip Irrigation Area
0.2 m/day	3mm/day	750litres/day	390m ²

This irrigation area was determined via a full water balance using the following:

- 4 Bedrooms
- Neerim South - 85202 – Mean Rainfall
- Noojee - 085277 – Evaporation

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10. Suitable Disposable Area:

The septic system should be limited to a wastewater treatment system capable of consistently producing a high quality secondary effluent (such as Taylex wastewater treatment plant).

A suitable area for secondary treated (eg Sand Filter System) effluent disposal through sub-surface irrigation lines installed at 100mm to 150mm below ground level at 1metre spacings exists to the front and side of the proposed residence.



11. Recommendations:

Geocore recommends and can validate the use of a sand filtered secondary treatment septic system that uses shallow sub-surface irrigation treating and maintaining wastewater within the site.

Vegetation should be maintained around the disposal field at all times.

**Mr Vinod Darade BE (Civil), MIEAust
Geotechnical Engineer
GEOCORE PTY LTD**

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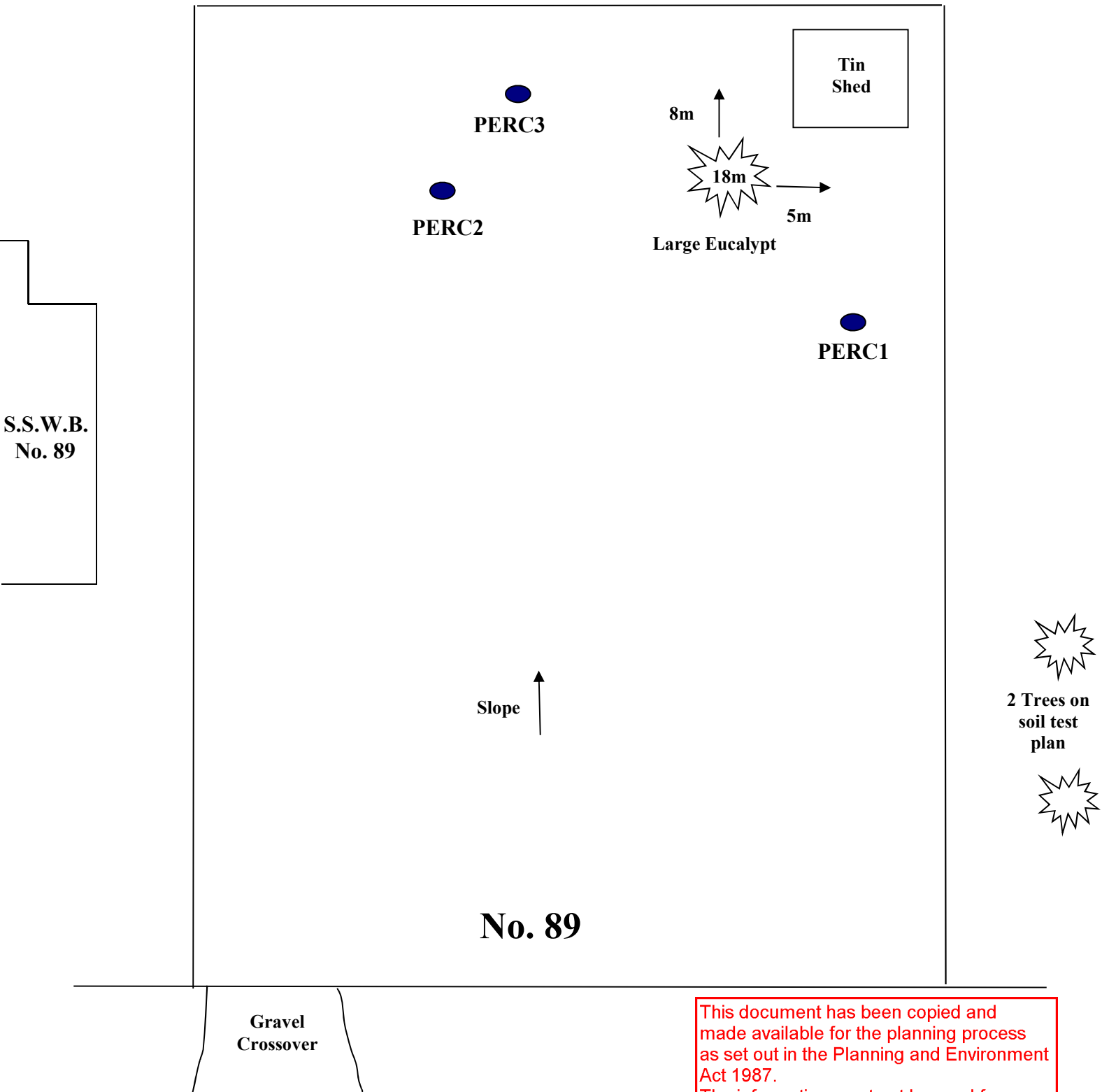
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13. Site Plan:


Note: Plan not to scale



Old Sale Road

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TOORADIN VIC 3980

03 5998 3888
03 5998 3999
mail@geocore.com.au

GEOTECHNICAL SITE CLASSIFICATION LOGS

Project: 89 Old Sale Road
DROUIN WEST

Proposal: Residential Septic System

Report No.: PER-2032

Client: Mitchell Preen & Michaela Pellizzari

Date: 26/11/2020

<p>Topography:</p> <p>Essentially Level <input type="checkbox"/></p> <p>Undulating <input type="checkbox"/></p> <p>Hilly <input type="checkbox"/></p> <p>Steep Slope <input type="checkbox"/></p> <p>Moderate Slope <input checked="" type="checkbox"/></p> <p>Slight Slope <input type="checkbox"/></p> <p>Extreme Condition <input type="checkbox"/></p>	<p>Virgin Site <input type="checkbox"/></p> <p>Filled Site <input type="checkbox"/></p> <p>Slope Direction: <input type="text" value="Rear"/></p> <p>Water <input type="checkbox"/> type: <input type="text"/></p> <p>Depressions <input type="checkbox"/> type: <input type="text"/></p> <p>Contaminants <input type="checkbox"/> type: <input type="text"/></p> <p>Trees <input checked="" type="checkbox"/> type: <input type="text" value="Eucalypt"/></p>	<p>Comments:</p> <p>Depth: <input type="text"/></p> <p>Source: <input type="text"/></p> <p>Size: <input type="text" value="Large"/></p>
<p>Soil Drainage:</p> <p>Good: <input type="checkbox"/> Sandy</p> <p>Fair: <input checked="" type="checkbox"/> to</p> <p>Poor: <input type="checkbox"/> Clay</p>	<p>Existing Structures <input type="checkbox"/></p> <p>Condition: Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor <input type="checkbox"/></p> <p>Comments:</p>	

Layer Description BH1	Depth	Layer Description BH2	Depth	Layer Description BH3	Depth
Sandy Clayey SILT Grey Firm Moist Soil Category 4 - Clay Loam	750mm	Sandy Clayey SILT Grey Firm Moist Soil Category 4 - Clay Loam	800mm	Sandy Clayey SILT Grey Firm Moist Soil Category 4 - Clay Loam	800mm
Silty CLAY Medium to High Plasticity Orange/Grey Stiff Moist Soil Category 5 - Light Clay	1500mm	Silty CLAY Medium to High Plasticity Orange/Grey Stiff Moist Soil Category 5 - Light Clay	1500mm	Silty CLAY Medium to High Plasticity Orange/Grey Stiff Moist Soil Category 5 - Light Clay	1500mm
End of BH1 26/11/2020		End of BH2 26/11/2020		End of BH3 26/11/2020	

Operator: D.McMillan

Auger Type: Hand

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Nominated Area Water Balance & Storage Calculations

Site Address: 89 old Sale Road, DROUIN WEST

INPUT DATA

Design Wastewater Flow	Q	750	L/day	5250	350	250
Design DIR	DI R	21	mm/week	400mm LOAM Topsoil	0.6	
Daily DIR		3.0	mm/day			
Nominated Land Application Area	L	285	m sq			
Crop Factor	C	0.7-0.8	unitless			
Retained Rainfall		0.75	unitless			
Rainfall Data		Neerim Sth - 85202				
Evaporation Data		Nooliee - 085277				

Parameter	Symbol	Formula	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
Days in month	D	1	days	31	28	31	30	31	30	31	31	30	31	30	31	365	
Rainfall	R	1	mm/month	82.8	83.9	85.1	73.4	71.7	78.8	79	87.5	109.1	102	88.5	81.5	944.9	
Evaporation	E	1	mm/month	151.9	126	102.3	83	43.4	36	40.3	56.8	75	90.2	114	133.3	1040.2	
Crop Factor	C			0.80	0.80	0.80	0.70	0.70	0.70	0.70	0.70	0.70	0.80	0.80	0.80		
OUTPUTS																	
Evapotranspiration	ET	ExC	mm/month	122	101	82	44	30	25	28	39	53	79	91	107	800.81	
Percolation	B	(DIR/7)xD	mm/month	93.0	84	93.0	90.0	93.0	90.0	93.0	93.0	90.0	93.0	90.0	93.0	1005.0	
Outputs		ET+B	mm/month	214.5	184.8	174.8	134.1	123.4	115.2	121.2	132.1	142.5	172.4	181.2	199.8	1805.8	
INPUTS																	
Retained Rainfall	RR	R*0.75	mm/month	48.95	40.425	48.825	55.05	53.775	57.45	59.25	85.625	77.325	78.5	88.375	81.125	708.875	
Effluent Irrigation	W	(QxD)/L	mm/month	81.8	73.7	81.8	78.9	81.8	78.9	81.8	81.8	78.9	81.8	78.9	81.8	960.5	
Inputs		RR+W	mm/month	128.5	114.1	130.4	134.0	135.4	136.4	140.6	147.2	158.3	159.1	145.3	142.7	1669.2	
STORAGE CALCULATION																	
Storage remaining from previous month			mm/month	0.0	0.0	0.0	0.0	0.0	12.0	33.2	52.8	87.9	81.7	67.4	31.5		
Storage for the month	S	(RR+W)-ET+B	mm/month	-86.0	-70.7	-44.4	-0.1	12.0	21.2	19.8	15.1	13.8	-14.3	-35.9	-58.9	-47.3	
Cumulative Storage	M		mm	0.0	0.0	0.0	0.0	12.0	33.2	52.8	87.9	81.7	67.4	31.5	0.0	348.5	
Maximum Storage for Nominated Area	N		mm													81.71	
	V	NdL	L													0	
LAND AREA REQUIRED FOR ZERO STORAGE				m ²	150	145	185	285	334	390	375	350	345	243	196	168	
MINIMUM AREA REQUIRED FOR ZERO STORAGE:				m ²													389.6

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TREE ASSESSMENT & DEVELOPMENT IMPACT REPORT

89 OLD SALE ROAD, DROUIN WEST

PREPARED FOR: MICHAELA PELLIZZARI

CONSULTING ARBORIST: MATHEW SORENSON *Dip Arb*

DATE: 30/01/2021

REPORT No. 21010

VERSION 1.1

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DOCUMENT CONTROL

Report Version	Date	Details
V.1	27/01/2021	Development Impact Assessment – Preliminary Design

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1. INTRODUCTION

1.1 BACKGROUND

- 1.1.1 The construction of a new dwelling is proposed at 89 Old Sale Road, Drouin West.
- 1.1.2 This report has been commissioned to assess all nominated trees within the subject property, adjoining properties and road reserve(s) that may be impacted by the proposed development.

1.2 OBJECTIVES

- 1.2.1 Assess all nominated trees providing information on species, origin, age, dimensions, condition, useful life expectancy (ULE), significance and retention value.
- 1.2.2 Identify trees that require removal to facilitate the proposed design.
- 1.2.3 Assess the impact on retained trees from the proposed development.
- 1.2.4 Recommend strategies to minimise the impact from the proposed development on retained trees.

1.3 METHODOLOGY

- 1.3.1 A site assessment was performed by Mathew Sorenson on 25/01/2021.
- 1.3.2 Assessment of the tree population was performed using a visual, ground-based inspection method.
- 1.3.3 Trees were assessed individually and/or within groups and assigned an identification number ranging from **1 – 10** ('G' following a tree identification number indicates a group of trees).
- 1.3.4 Only tree roots visible from above ground level (surface roots) were assessed. Detailed inspections of tree root systems using root zone exploratory methods were not performed.
- 1.3.5 Diameter at Breast Height (DBH) and Diameter at Base (DAB) were recorded, as per Australian Standards (AS 4970 – 2009), using a diameter tape. Where access to the stem(s) of trees was unachievable (due to dense understory vegetation, dense low branch structure, undesirable form or private property), DBH & DAB were generously estimated.
- 1.3.6 Height and canopy spread were estimated from the ground and recorded to the nearest meter. Canopy spread was observed on the widest axis.
- 1.3.7 The trees were further assessed on age, health, structure, useful life expectancy (ULE), significance and retention value. These assessments were limited to visual observations from the ground only and based on the consulting arborist's knowledge and experience, using the descriptors provided in Appendix A – Tree Descriptors, pages 22-25.
- 1.3.8 Tree protection zones (TPZ) and structural root zones (SRZ) were calculated as per Australian Standards – Protection of trees on development sites (AS 4970-2009).

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1.4 STATUTORY CONTROLS

1.4.1 The subject site is within the Local Government Area: **Baw Baw Shire** (Council)

1.4.2 The land is included in a Rural Living Zone - Schedule 1 (**RLZ1**)

1.4.3 The land is subject to the following overlay(s):

- **Development Contributions Plan Overlay (DCPO)**
Development Contributions Plan Overlay – Schedule 1 (DCPO1)

1.4.4 The subject property is included within a Designated Bushfire Prone Area.

1.5 SUBJECT PROPERTY LOCATION



Map 1.1. Aerial Map (Landchecker) with approximate title boundaries

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2. TREE SURVEY

2.1 TREE LOCATIONS



Map. 2.1. Aerial Map (Nearmap Nov 2020) with numbered tree locations

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2.2 TREE DATA

ID	Botanical Name	Common Name	Origin	Age	DBH (cm)	H x S (m)	Health	Structure	ULE (yrs)	Significance	R.V	Location
1	<i>Liquidambar styraciflua</i>	American Sweetgum	Exotic	Semi-Mature	40	8x7	Fair	Fair	30+	Landscape	Medium	No. 93 Old Sale Rd
2	<i>Liquidambar styraciflua</i>	American Sweetgum	Exotic	Semi-Mature	45	12x8	Fair	Fair	20-30	Landscape	Medium	No. 93 Old Sale Rd
3	<i>Acacia cognata</i>	Narrow-Leaf Bower Wattle	Native	Mature	19	6x4	Good	Good	10-20	Low	Low	Subject Property
4	<i>Syzygium australe</i>	Lilly Pilly	Native	Semi-Mature	45*	8x6	Fair	Fair	20-30	Low	Low	Subject Property
5	<i>Eucalyptus botryoides</i>	Southern Mahogany	Vic Native	Semi-Mature	68*	12x10	Fair	Fair	20-30	Landscape	Medium	Subject Property
6	<i>Liquidambar styraciflua</i>	American Sweetgum	Exotic	Mature	70	10x8	Fair	Fair	10-20	Amenity	Medium	Subject Property
7	<i>Acer negundo</i>	Box Elder	Exotic	Mature	55*	10x8	Fair	Fair	5-10	Amenity	Low	Subject Property
8	<i>Camellia sasanqua</i>	Camellia	Exotic	Semi-Mature	15*	2x2	Good	Good	30+	Low	Low	Subject Property
9	<i>Cyathea sp.</i>	Tree Fern	Native	Semi-Mature	25	2x2	Fair	Fair	10-20	Low	Low	Subject Property
10	<i>Camellia sasanqua</i>	Camellia	Exotic	Semi-Mature	15*	1x1	Good	Good	30+	Low	Low	Subject Property

Table 2.2 Recorded Tree Data

*Combined DBH shown for multi-stemmed trees
All dimensions for groups are averages

Refer to Appendix 2 for tree photos.

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2.3 PHOTOGRAPHS



Figure 2.3. Subject property viewed from the southeast corner



Figure 2.4. Tree 1



Figure 2.5. Tree 2



Figure 2.6. Trees 1 & 2



Figure 2.7. Tree 3



Figure 2.8. Tree 4



Figure 2.9. Tree 5



Figure 2.10. Base of tree 5



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2.4 PHOTOGRAPHS



Figure 2.12. Tree 6

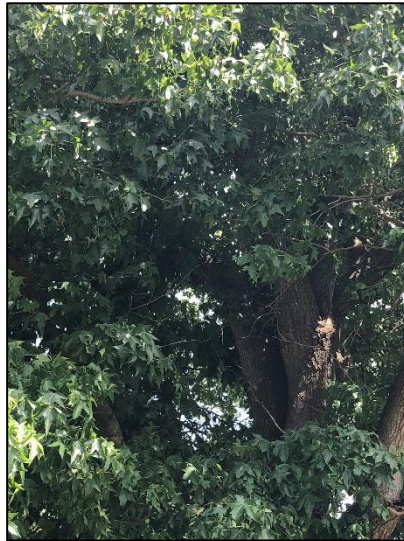


Figure 2.13. Canopy of tree 6



Figure 2.14. Tree 7



Figure 2.15. Trees 8



Figure 2.16. Trees 9G



Figure 2.17. Trees 10G



Figure 2.9. Trees 10G



Figure 2.10. Trees 6 & 7, viewed from the existing driveway



Figure 2.11. Address sign

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3. DISCUSSION

3.1 PROPERTY OVERVIEW

3.1.1 No significant topographical features are present within the site with the sloping toward the north with a low to moderate grade. No watercourses are present within 10m of the subject property boundaries. An existing dwelling, garage and shed are present within the property, with 2 vehicle access points and crossovers providing vehicle entry/exit onto Old Sale Road.

3.2 NATURE-STRIP TREES & TREES ON ADJOINING PROPERTIES

3.2.1 No nature-strip trees are located within 5m of the property boundaries.

3.2.2 2 trees (ID 1 & 2) on the neighbouring property (93 Old Sale Rd) were assessed and portions of their Tree Protection Zone/s (TPZ) extend into the subject property. Both trees are exotic planted trees (*Liquidambar styraciflua*) with only a very small portion of the canopy of tree 2 overhanging the boundary fence.

3.3 TREES WITHIN THE SUBJECT PROPERTY

3.3.1 6 individual trees (ID 3 – 8) and 2 groups of trees/shrubs (ID 9 & 10) were recorded within the subject property. All trees within the subject property have been planted and are not protected under the current planning controls.

3.3.2 Trees 5 – 7 are medium sized canopy trees, which provide landscape and amenity value to the property. Tree 5, *E. botryoides*, is situated within the northeast corner of the property, and evidence of previous branch failures were observed (see figure 3.1). Tree 6, *L. styraciflua*, is situated north of the existing dwelling and contains numerous large scaffold branches. Tree 7, *A. negundo*, is situated north of the existing dwelling and has a significant weight bias toward the north west as the result of phototropic behaviour and competition from tree 6 (see figure 3.2). Trees 5 – 7 are reaching their expected mature size for the site and tree pruning maintenance requirements are expected to increase over the coming 10 years and as the site use changes.



Figure 3.1. Branch failure, tree 5



Figure 3.2. Weight bias at tree 7

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eight/fifty six at tree 7 that any dissemination, distribution or copying of this document is strictly prohibited.

4. RETENTION VALUE

4.1 INTRODUCTION

- 4.1.1 All trees have been allocated a retention value (see table 4.1). The retention value of each tree is a recommendation of the level of suitability within the future development.
- 4.1.2 Many factors influence the retention value of a tree, with useful life expectancy (ULE) and significance being two major influencing factors.
- 4.1.3 A colour has been assigned to each retention value category and can be used as a quick reference aid on the associated tree location map. See 2.1 Page 6.

Retention Value	Colour Code	Description	Tree ID
High	Green	Highest retention score, Tree is of High Significance. Retain.	N/A
Medium	Blue	Tree is suitable for retention and has a reasonable ULE. Retain if possible.	1, 2, 5 & 6
Low	Yellow	<i>Consider tree for removal. If site cannot accommodate tree requirements removal is recommended. Consider for removal.</i>	3, 4, 7 – 10
Poor	Red	<i>Tree is unsuitable for retention, due to poor health and/or structure, weed classification, hazardous or other reasons. Remove.</i>	N/A
<p><i>Privately owned trees, i.e. trees on neighbouring properties or on nature strips, generally require protection. Unless the relevant tree owner/manager grants permission for its removal; Protect Tree. Note statutory/planning controls may also still apply.</i></p>			

Table 4.1. Retention Value

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5. TREE PROTECTION ZONES

5.1 INTRODUCTION

- 5.1.1 Retained trees will require protection during the development phase. This can be achieved by establishing tree protection zones.
- 5.1.2 Trees on adjoining properties and nature-strips will also require protection during the development phase. All portions of the TPZ of an off-site tree within the subject property will require establishment.

5.2 DEFINITIONS

Tree Protection Zone (TPZ)

- 5.2.1 The TPZ is the area around the tree (both above and below ground) where all forms of construction activities (including excavation, fill and machine use) are excluded. The purpose of the TPZ is to protect the tree during the development process, allowing the tree to access the required resources in which it needs to remain viable.
- 5.2.2 The basic TPZ without alterations is simply a circle around the tree where the radius is measured from the centre of the stem at ground level. The radius of the TPZ is calculated for each tree by multiplying its DBH by 12 (TPZ = DBH x 12). Note; the minimum size of a TPZ is 2m and the maximum is 15m.

Structural Root Zone (SRZ)

- 5.2.3 The SRZ is an area calculated to determine the requirements of maintaining a trees stability. The SRZ is an area smaller in size than the TPZ and alone will not fulfil the requirements to maintain the viability of a tree. The true area occupied by the structural roots of a tree are influenced by many factors and may differ from the indicative SRZ. A thorough root investigation will provide much more accurate and detailed information and location on the extent of structural roots.

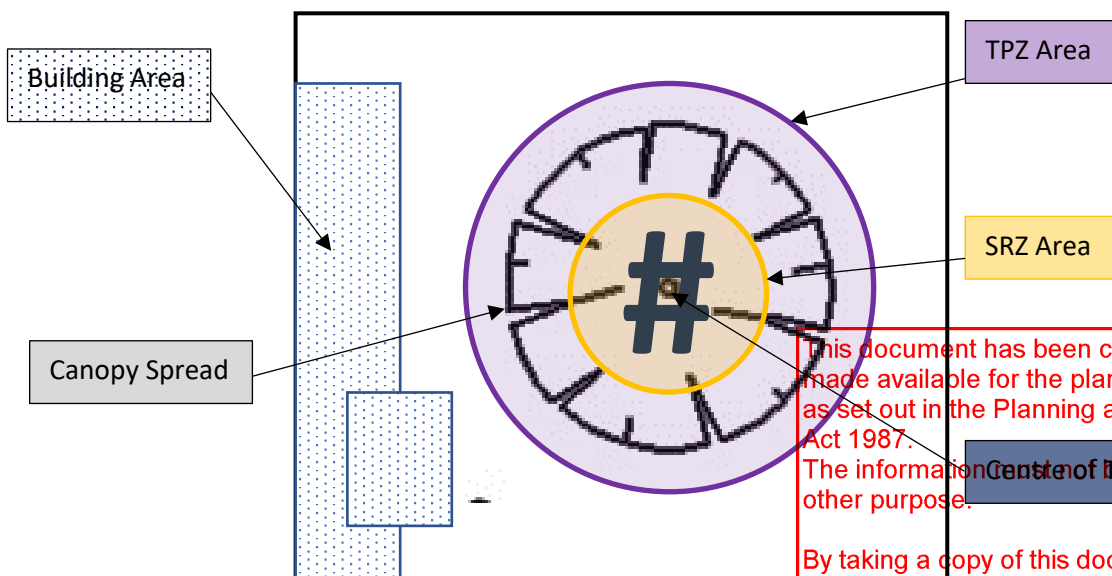


Figure 5.1. TPZ/SRZ area with no encroachment

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5.3 MINOR ENCROACHMENT

5.3.1 An encroachment of the TPZ is where the calculated TPZ is modified to allow permitted construction activities to occur. If the area proposed to be encroached is less than 10% of the total TPZ area, and is outside of the SRZ, it is considered a minor encroachment. A minor encroachment of the TPZ is generally acceptable, however individual tree requirements and site conditions will need to be considered to determine the overall impact on the tree.

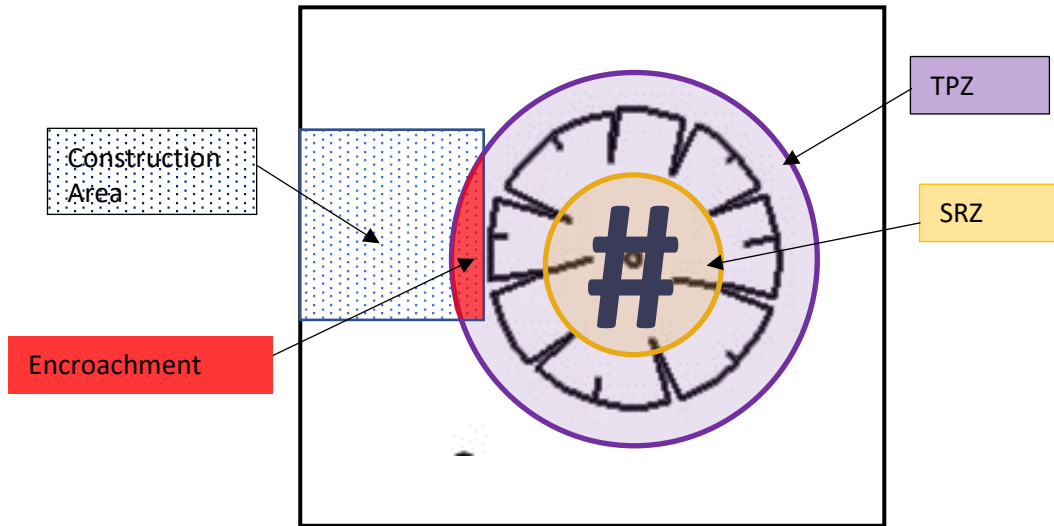


Figure 5.2. Minor encroachment (<10% of TPZ area with no encroachment of the SRZ)

5.4 MAJOR ENCROACHMENT

5.4.1 When a proposed encroachment is greater than 10% of the TPZ or inside the SRZ, it is considered a major encroachment. When a major encroachment is proposed the consulting arborist must determine if the tree/s will remain viable. Considerations including; species, soil characteristics, age & vitality of the tree along with construction methods, will help determine if a tree/s will be tolerant.

5.5 TPZ/SRZ DIMENSIONS

5.5.1 The TPZ and SRZ dimensions have been calculated for all assessed trees. All dimensions are provided in metres and are to be applied as a radius from the centre of the trunk at ground level. The TPZ/SRZ radius only applies to trees that are to be retained.

Tree ID	TPZ (m)	SRZ (m)	TPZ area (m ²)
1	4.80	2.36	72.38
2	5.40	2.48	91.61
3	2.28	1.73	16.33
4	5.40	2.48	91.61
5	8.16	2.95	209.18

Tree ID	TPZ (m)	SRZ (m)	TPZ area (m ²)
6	8.40	2.99	221.67
7	6.60	2.70	136.85
8	2.00	1.56	12.57
9	2.00	1.56	12.57
10	2.00	1.56	12.57

Figure 5.3. TPZ/SRZ dimensions

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5.6 TREE PROTECTION PLAN



Figure 5.4. Tree Protection Plan

5.7 TREE PROTECTION ZONE FENCING

- 5.7.1 The perimeter of the calculated TPZ(s) should be clearly marked and identified to all personnel involved throughout the development. Generally, it is not possible to erect tree protection fencing on adjoining properties, however fencing will need to be erected for any portions of TPZ/s that occur within the subject site.
- 5.7.2 The tree protection fencing shall be a minimum of 1.5 meters high above ground level and be constructed of prefabricated wire mesh (or similar) with a high visibility plastic tape at the top or high visibility barricade mesh supported by a straining wire, or similar.
- 5.7.3 The tree protection fencing shall be supported by steel fence posts or similar driven into the ground to create a fixed position for the protection fencing. Fence posts and supports shall have a diameter greater than 20mm and be located clear of roots.

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5.8 TPZ SIGNAGE

5.8.1 All TPZ areas need to be clearly identified by suitable signs. Signs should be attached to the TPZ fencing at intervals no less than 15m apart. See figure 5.4.



Figure 5.4. Standard TPZ Sign

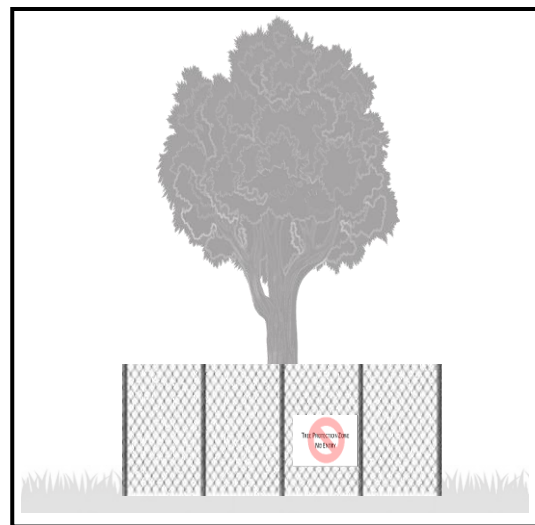


Figure 5.5 Tree Protection Zone

5.9 APPROVED WORK WITHIN TPZ(s)

5.9.1 A minor encroachment (work within <10% of the TPZ area and outside of the SRZ) is generally considered acceptable if expressed so by the project arborist. If any construction personnel are unsure of the permitted work within a TPZ area, they should contact the project arborist prior to the commencement of work. In areas where TPZ encroachment has been approved the TPZ fencing is permitted to be reduced by the minimum extent necessary to facilitate the approved work.

5.9.2 All earthwork (cut, fill, boring and trenching) within the TPZ area must be supervised by the project arborist. Sensitive techniques may be required when excavating in the unfenced TPZ areas. This may include the use of hand tools along the extent of work (closest to the base of the tree) to identify possible roots, NDD (non-destructive digging) and the use of the smallest size machine capable of carrying out the approved work.

5.9.3 Any tree roots encountered <30mm dia. that require pruning, need to be done so by a suitably qualified person using sterilized and sharp cutting instruments. Pruning of tree roots >30mm dia. is not permitted unless directly authorized by the project arborist.

5.9.4 All exposed tree roots need to be covered with suitable topsoil within 48 hours of the excavation process. If this is unachievable temporary covering of exposed tree roots with moist material (i.e. hessian or similar) needs to be carried out until the excavation can be permanently backfilled.

5.10 CARE OF PROTECTED TREES

5.10.1 The pruning of trees under protection shall be avoided where possible. The pruning of any tree under protection shall be undertaken by a suitably qualified arborist in accordance with Australian Standards – Pruning of Amenity Trees (AS 4373 – 2007). It is highly important to maintain and promote tree health whilst under protection.

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CARE OF PROTECTED TREES (CONTINUED)

5.10.2 The importance of the Tree Protection Program shall be clearly conveyed to all personnel involved throughout the development. Watering, mulching, weeding, fertilizing and pest treatment of protected trees shall continue for the duration of the project.

5.10.3 Roots discovered outside the TPZ(s) shall be severed cleanly with a disinfected hand saw and shall not be ripped, torn, pulled, or smashed.

5.10.4 Any damage to the tree(s) under protection shall be immediately reported to the project arborist. This includes damage to; branches, trunks, roots or a noticeable change in appearance. Any confusion or uncertainty about the tree(s) or the protection program should be referred to the consulting arborist without hesitation.

5.11 TEMPORARY ACCESS FOR MACHINERY.

5.11.1 In some situations, a TPZ may restrict the access of machinery needed to perform construction outside of the TPZ. If temporary access is required additional control measures need to be implemented such as installing ground protection and branch/truck protection.

5.11.2 Ground protection is often achieved by covering the ground surface with a 100mm layer of mulch with timber hoarding or rumble boards placed on top. For branch/trunk protection boards and padding should be attached by means of strapping and avoid damaging the bark.

5.12 FOOTING HOLES FOR FENCES

5.12.1 Post hole required to facilitate the construction of fences must be dug by hand avoiding damage to any roots >30mm. dia. relocation of footing holes may be necessary if such damage cannot be avoided.

5.12.2 Any roots <30mm dia. requiring pruning shall be done in a manner that encourages tree health. All roots cut shall be done using sterilized hand tools by a suitably experienced person.

5.13 INSTALLATION OF UNDERGROUND SERVICES

5.13.1 Excavation inside a TPZ poses a significant level of risk to the tree's health and viability. If underground services must be installed inside a TPZ directional drilling at a minimum depth of 600mm (top of bore) is recommended.

5.13.2 If boring is unachievable manually excavated open trenches may also be approved and undertaken under supervision of the project arborist. If manual excavation under the supervision of the project arborist is advised. Roots critical to tree stability need to be identified and protected.

5.14 OTHER RESTRICTIONS

5.14.1 The base area of the TPZ(s) shall be unaltered by cut, fill, trenching, fertilizers, or liquid chemical overland flow except under the conditions set out in Construction within TPZs.

5.14.2 Building materials or waste shall not be stored within the TPZ(s). An area as far away from the tree(s) as practical shall be selected for all long-term storage and nothing shall be attached to any retained tree, including service wires, nails, screws, etc.

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6. DEVELOPMENT IMPACT ASSESSMENT

6.1 PROPOSED DESIGN

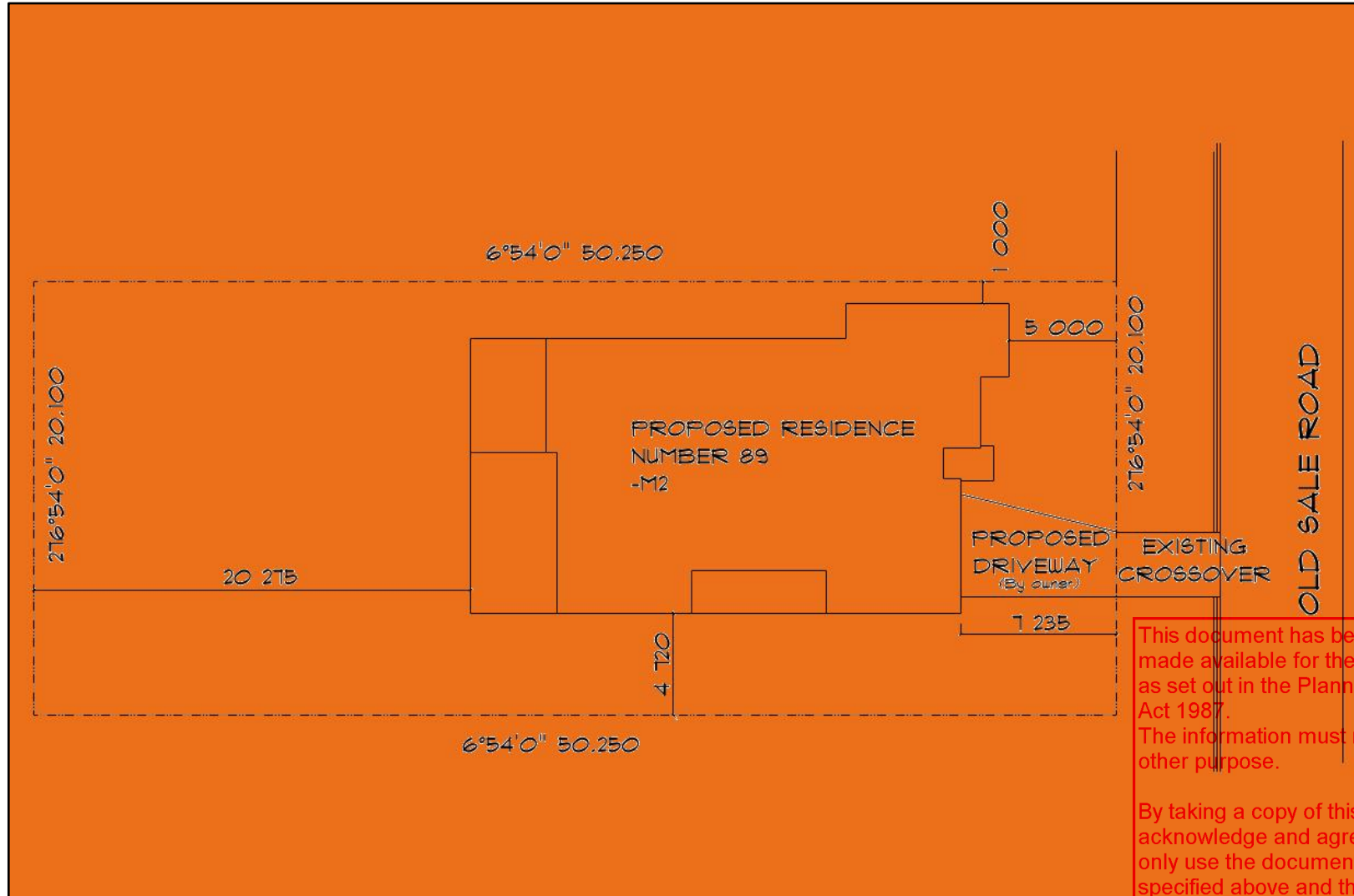


Figure 6.1. Proposed Residence (Green Design Homes)

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6.2 DEVELOPMENT IMPACT PLAN



Figure 6.2. Development Impact Plan (Indicative only, refer to site plans for detailed design)

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6.3 IMPACT SUMMARY

Description	Tree ID	# of Trees
Trees assessed	1 – 10	10
Trees that require removal	4	1
Trees with no encroachment of the TPZ	1 – 3, 6 – 10	8
Trees with a minor encroachment of the TPZ	5	1
Trees with a major encroachment of the TPZ	N/A	0

Table 6.2. Impact Summary

6.4 TREES PROPOSED FOR REMOVAL

6.4.1 One (1) individual tree (ID **4**) will require removal to facilitate the construction proposed driveway. Tree **4** has a low significance and low retention value, currently no planning controls restrict the pruning or removal of tree **4**.

6.5 TREES WITH NO TPZ ENCROACHMENT

6.5.1 The proposed design is not expected to require encroachment of the TPZ of trees **1 – 3, 6 – 10**. If the tree protection measures outlined within this report (see 5. Tree Protection Zones, pages 12 – 16) are implemented during the construction phase trees **1 – 3, 6 – 10** are expected to remain viable during and post development.

6.6 TREES WITH A MINOR TPZ ENCROACHMENT

6.6.1 The TPZ of tree **5** is likely to be encroached by the proposed dwelling and the proposed wastewater irrigation field.

6.6.2 It is expected the amount of TPZ encroachment required to facilitate the construction of the proposed dwelling will remain under 10% of the total TPZ area and out site of the SRZ. The foundations of the dwelling are proposed to be constructed on a post and beam subfloor. This will reduce the extent of excavation required considerably in comparison to a concrete slab foundation. If the proposed dwelling does not encroach the TPZ of tree **5** by more than 10% it is expected that the tree will be able to be successfully protected and retained. If a TPZ encroachment of more than 10% or within the SRZ is required detailed design and assessment will be required to determine if the tree will remain viable.

6.6.3 It is proposed that the wastewater field will consist of a sand filtered secondary treatment septic system that uses shallow (150mm) sub-surface irrigation (V. Darade - GeoCore). The wastewater field will be located to the southwest of tree **5** and is likely to encroach the tree's TPZ. The depth of the excavation and total area affected by the excavation will limit the impact to the tree. If excavation is required within 5m from the base of tree **5** for the purpose of the wastewater irrigation field a suitably qualified and experienced arborist (minimum AQF level 5) will be required to supervise the work.

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7. REPORT SUMMARY

7.1 REPORT SUMMARY

- 7.1.1 A new dwelling is proposed to be constructed at 89 Old Sale Road, Drouin West.
- 7.1.2 8 individual trees (ID **1 – 8**) and 2 groups of trees/shrubs (ID **9 & 10**) were assessed within 10 meters of the proposed construction areas. This included 2 trees (ID **1 & 2**) on the neighbouring property (No. 93 Old Sale Rd).
- 7.1.3 1 tree (ID **4**) will require removal to facilitate the proposed design.
- 7.1.4 The remaining 9 trees (ID **1 – 3, 5 – 10**) will be retained, and if the tree protection measures recommended within this report are implemented, are expected to remain viable during and post construction.

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8. REFERENCES

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Appendix A TREE DESCRIPTORS

A.A TREE ID

A.A.A **For trees assessed individually** a tree number is allocated for quick referencing and corresponds to the site map.

A.A.B **For populations of trees assessed collectively** a group ID is allocated for quick referencing and corresponds to the site map.

A.B TREE NAME

A.B.A **Botanical name** is the name given to the tree which is universally recognised and expressed in Latin, consisting of both the Genus and Species name.

A.B.B **Common name** is the most common informal name the tree is referred to in a regional context.

A.C TREE DIMENSIONS

A.C.A Tree Dimensions calculated by the Arborist during site assessment.

D.B.H	Diameter at Breast Height. Measured 1.4 Meters above the ground.
Height	The estimated height of the tree in meters.
Spread	A measurement of the tree canopy in meters. Measured on the ground by walking out the distance along the widest axis under the canopy.

A.D ORIGIN

A.D.A The recorded/accepted natural origin of the tree.

I - Indigenous	The tree is indigenous to the area and growing as the result of natural regeneration (i.e. not planted).
V/N - Vic Native	The tree is native to Victoria. However, it is outside of its naturally occurring range or has been planted.
N - Native	The tree is of Australian origin, but not naturally occurring within Victoria
E - Exotic	The tree is not of Australian origin.

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A.E AGE

A.E.A The estimated age of the tree as determined by the Arborist

J - Juvenile	An recently formed, emerging tree or sapling.
Y - Young	A young tree that is dynamic and actively growing.
S/M - Semi-mature	A tree which is established within its environment and continuing to actively grow towards its maximum size.
M - Mature	A tree which has reached its expected growing potential for the species and location and has slowed in growth.
S - Senescent	A tree which has reached full maturity, is not continuing to actively grow and may be in decline.
D - Dead	The tree is dead.

A.F HEALTH

A.F.A The overall health of the tree as observed by the Arborist.

Good	The tree displays a full canopy containing little or no dead wood, with good colour and shows indicators of good compartmentalisation of wounds (if present). The tree shows little or no signs of the presence of pathogens. The tree shows no visible sign of decay and no visible signs of root damage.
Fair	The tree is showing a combination of the following symptoms of fair health; signs of deadwood of up to 20%, minor presence of pathogens, small amounts of epicormic growth. Less than a full canopy with some discolouration in the leaves.
Fair - Poor	The Tree displays intermediate characteristics of both <i>Fair & Poor</i>
Poor	The tree is showing a combination of the following symptoms; up to 50% die back in the canopy with high quantities of deadwood. Discolouration of leaves. Large amounts of epicormic growth. Visible signs of pathogens causing decay and/or other damage.
Significant Decline	The tree is likely to be showing most if not all of the following symptoms; Canopy die back >75%. Extensive deadwood throughout the entire tree. Severe attack from pathogens. Large/extensive decay within root zone, trunk and branches.
Dead	The Tree is dead.

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A.G STRUCTURE

A.G.A The structural assessment of the tree as determined by the Arborist by visual, ground based observations. (Unless otherwise specified)

Good	Branch unions sound, little or no signs of decay within tree. Form is promoting good structural growth. Scaffold limbs and leaders display good taper.
Good-Fair	The Tree displays intermediate characteristics of both <i>Good & Fair</i>
Fair	Shows some evidence of structural defects including; rubbing branches, branches growing in an overextended lateral direction, minor cavities in trunk and branches, some evidence of decay, small amounts of damage to roots and missing bark.
Fair-Poor	The Tree displays intermediate characteristics of both <i>Fair & Poor</i>
Poor	Movement of root plate may be visible. Vertical cracks present. Large amounts of decay are observed. Large hollows or cavities are obvious. Included bark and poor branch unions present with co-dominant stems. Large epicormic branches.
Immediate Hazardous	The tree poses an immediate risk to people and property and requires immediate attention (e.g. isolation, remedial pruning or removal)
Dead	Tree is dead.

A.H USEFUL LIFE EXPECTANCY

A.H.A ***U.L.E (Useful Life Expectancy)***. The estimated time in which the tree will remain within the landscape with limited additional care and with a satisfactory level of risk.

30+ Years	Very Long
20-30 Years	Long
10-20 Years	Medium
5-10 Years	Short-Medium
<5 Years	Short
0 Years	Tree is dead, in severe decline, hazardous, impacting a fixed asset, presenting an obstruction, posing weed potential or a combination of these characteristics, removal may be necessary

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A.I SIGNIFICANCE –

A.I.A Is determined by the tree’s contribution to the local landscape and/or environment.

Criteria Category	Description	Level (points)	Overall Significance
Ecological E1	Tree is of significance due to its contribution to the flora and fauna (in a local or regional context). <i>Examples include (but not limited to) Tree forms part of remnant vegetation which is now restricted and/or threatened within the area. Tree provides significant amounts of habitat for local Fauna. Tree is protected under state, national or international agreements/Acts.</i>	High (3) Medium (2) Low (1) N/A (0)	(5 – 6) High (3 – 4) Medium
Landscape L1	Tree is significant due to its contribution to the local landscape. <i>Examples include (but not limited to) Tree is of exceptional size and/or age. Tree forms a focal point within the local landscape. Tree is part of a uniform and collective planting iconic to the local area. Tree is protected by local heritage classification.</i>	High (3) Medium (2) Low (1) N/A (0)	 (0 – 3) Low

A.J RETENTION VALUE

A.J.A A value (see below) given to the tree that considers all the above information. It provides the necessary guide for which trees are suitable for retention and which trees are recommended for removal.

High	<i>Highest retention score, Tree is of High Significance. Retain.</i>
Medium	<i>Tree is suitable for retention and has a reasonable ULE. Retain if possible.</i>
Low	<i>Consider tree for removal. If site cannot accommodate tree requirements removal is recommended. Consider for removal.</i>
Poor	<i>Tree is unsuitable for retention, due to poor health and/or structure, weed classification, hazardous or other reasons. Remove.</i>
*	<i>Privately owned trees, i.e. trees on neighbouring properties or on nature strips, generally require protection “*” following the retention value and indicates that the tree is privately owned. Unless the relevant tree owner/manager grants permission for its removal; Protect Tree. Note statutory/planning controls still apply.</i>

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Appendix B ASSUMPTIONS & LIMITATIONS

- B.A.A Reports are prepared assuming the person making the request has good title and ownership, legitimacy of purpose, the authority to grant access and/or engage service.
- B.A.B This report is prepared with reasonable care. To the extent permitted by law, the author accepts no responsibility for any loss or damage sustained by a recipient as a result of acting on its recommendations.
- B.A.C The author can neither guarantee nor be responsible for the accuracy of information in this report provided by others.
- B.A.D Information provided in a verbal or written report covers only those items examined. It reflects their condition at the time of inspection only.
- B.A.E Unless otherwise specified, inspection is limited to visual inspection from ground level without dissection, excavation, drilling, physical or nutritional analysis or quantification of structural integrity. No responsibility is accepted for the consequences of internal or sub-surface defects which present no discernible external symptoms.
- B.A.F The report shall not be used for any other purpose or conveyed externally in whole, part or meaning without the prior written consent of the author.
- B.A.G Sketches, diagrams, graphs and photographs used as visual aids are not necessarily to scale.
- B.A.H Unauthorised alteration or separate use of any part of the report is prohibited and invalidates the whole report.
- B.A.I The author accepts no responsibility for the consequences of work performed outside specification, by inappropriately qualified staff or without consultant supervision where it has been recommended.
- B.A.J The conclusions reached, and recommendations made do not imply that plants, built landscape or structures will withstand future adverse natural or man-made conditions.
- B.A.K There is no warranty or guarantee that problems, deficiencies, faults or failures of plants or property inspected may not arise in the future. Regular re-inspection will be required to identify emerging disorders

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