

Final Report

Existing Conditions Report 128 – 168 Bennett Road, Gisborne

Prepared for

G2 Urban Planning

November 2021



Ecology and Heritage Partners Pty Ltd

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Table 1. Development Plan Overlay (DPO18) requirements.

Requirement	Summary of response
<p>Identification of any existing native or significant vegetation on the site</p>	<p>Native vegetation adjacent to the creek line will be retained and stock excluded. Native vegetation in the study area is representative of four EVCs characteristic of the Victorian Volcanic Plains: Plains Grassland Heavier-soils (EVC 132_61), Plains Sedgy Wetland (EVC 647), Tall Marsh (EVC 821) and Stony Knoll Shrubland (EVC 649). The presence of these EVCs is generally consistent with the modelled pre-1750s native vegetation mapping (DELWP 2017b).</p> <p>The remainder of the study area comprises introduced and planted vegetation, present as stands of non-Victorian eucalypt species, pasture and Victorian Eucalypts. (Section 3.1).</p> <p>At the time of the planning permit application (Clause 52.17), targeted surveys are recommended for Matted Flax-lily (May – August), Swamp Everlasting (November – March) and Swamp Fireweed (November – March) adjacent to the creek line/drainage line.</p>
<p>Identification of any significant fauna and associated habitat</p>	<p>Despite current land uses, the study area contains patches of native vegetation, scattered trees and some introduced vegetation that is of value to fauna. Patches of Plains Grassland and remnant riparian vegetation along the creek line may provide potential habitat for significant species.</p> <p>At the time of the planning permit application (Clause 52.17), targeted surveys are recommended for Golden Sun Moth across the whole study area during the summer flying season (late November – early January) (DEWHA 2009).</p> <p>Targeted surveys are recommended for Growling Grass Frog along the creek line during the species’ breeding season (November – March) (DEWHA 2009).</p>
<p>Identification of the relevant legislative requirements for flora and fauna</p>	<p>The <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) establishes a Commonwealth process for the assessment of proposed actions likely to have a significant impact on any matters of National Environment Significance (NES).</p> <p>The study area is located within the Macedon Ranges municipality and is zoned Rural Living Zone 2 (RLZ2). Development Plan Overlay (DPO18) applies to the land proposed for subdivision.</p> <p>A Planning Permit from Macedon Ranges Council will be required to remove, destroy or lop any native vegetation on site. A Planning Permit will be assessed in accordance with the ‘The Guidelines for the removal, destruction or lopping of native vegetation’ (Guidelines) and Clause 52.17 of the Whittlesea Planning Scheme.</p> <p>Any persons engaged to remove, salvage, hold or relocate native fauna during construction must hold a current Management Authorisation under the <i>Wildlife Act 1975</i>, issued by DELWP.</p> <p>Weeds listed as noxious under the <i>Catchment and Land Protection Act 1994</i> (CaLP Act) (Artichoke Thistle, Fennel, Paterson’s Curse, African Box-thorn, Blackberry, Chilean Needle-grass and Serrated Tussock) were recorded during the assessment. Weeds should be managed in accordance with the Act.</p> <p>See Section 4 for further detail on how legislative requirements will be met.</p>
<p>Identification of existing vegetation to be retained as per DPO18 requirements</p>	<p>Native vegetation up to 30 metres either side of the creek line (or drainage line) will be retained and stock excluded. Dwellings will be set back from drainage line by at least 20 metres. Trees within the road reserve, including revegetation, will be retained where possible (Appendix 1)</p>

1 INTRODUCTION

1.1 Background

Ecology and Heritage Partners Pty Ltd conducted and produced an Existing Conditions Report in February 2020, at the Bennett Road Precinct, to satisfy the requirements for a Development Plan Overlay – Schedule 18 (DPO18) according to the Macedon Ranges Planning Scheme.

Following the assessment detailed in the 2020 report, Ecology and Heritage Partners Pty Ltd undertook targeted surveys for significant flora and fauna species that had potential to occur in the study area based on the availability of suitable habitat (Ecology and Heritage Partners Pty Ltd 2021). The surveys indicated that there were no Matted Flax-lily, Swamp Everlasting, Swamp Fireweed, Growling Grass Frog or Golden Sun Moth in the Development Plan area.

This November 2021 version of the Existing Conditions Report, updates the discussion about significant flora, fauna and ecological communities, references the results of the targeted surveys, which are documented in (Ecology and Heritage Partners Pty Ltd 2021), and references a 2021 Development Plan.

1.2 Objectives

The objective of this assessment is to support the submission of a Development Plan, according to DPO18, which outlines the overall requirements for the proposed subdivision of 50 Lots (two hectares per Lot) to proceed.

The existing conditions assessment involved identifying the extent and type of remnant native vegetation present within the study area in accordance with Victoria's *Guidelines for the removal, destruction or lopping of native vegetation* (DELWP 2017). It also determined the likely presence of significant flora and fauna species and/or ecological communities protected under Commonwealth and State legislation and policy.

This report presents the results of the existing conditions report and discusses the potential ecological and legislative implications associated with the proposed subdivision. The report also provides recommendations to address or reduce impacts and, where necessary, highlights components that require further investigation.

1.3 Study Area

The study area is at the Bennett Road Precinct, located approximately six kilometres south of Gisborne and approximately 53 kilometres north-west of Melbourne's CBD (Figure 1). The site covers approximately 130 hectares and is bound by McGregor Road to the north, private property to the south, Coney Court to the east and the Calder Freeway to the west.

The study area is mostly undulating cleared agricultural land with introduced grasses, planted windrows of trees and some patches of native vegetation to the south of the study area trees. Patches of native vegetation, characteristic of Plains Sedgy Wetland and Tall Marsh Ecological Vegetation Classes (EVCs) are present along the creek line (Figures 2b, 2c). Patches of native vegetation (characteristic of Stony Knoll shrubland EVC) occurs in the south-east of the study area, but this has been grazed by livestock and the patches are highly degraded (Figure 2b). One continuous patch of native vegetation (characteristic of Plains Grassland EVC), is present adjacent to a driveway planted with windrow trees, in the south of the study area (Figure 2a).

According to the Department of Environment, Land, Water and Planning (DELWP) Native Vegetation Information Management (NVIM) Tool (DELWP 2018a), the study area occurs within the Victorian Volcanic Plain bioregion. It is located within the jurisdiction of the Port Philip and Westernport Catchment Management Authority (CMA) and the Macedon Ranges Shire municipality.

1.4 The Development Plan and Subdivision Concept Plan

The Development Plan prepared by Terraco Pty Ltd (2021) outlines the overall site characteristics and proposed road network to facilitate the consideration of a future subdivision application for 2-hectare residential allotments (Appendix 1.1; Appendix 1.2).

The Development Plan addresses the DPO18 requirement (Section 3.0) to identify measures for the preservation of remnant vegetation along drainage lines from the creek line to protect and manage waterway corridors. The Subdivision Concept Plan (2021) details the proposed subdivision including building envelopes within the study area.

While currently not incorporated into the Macedon Ranges Planning Scheme, the Biodiversity Strategy (2018) recommends the following urban biodiversity actions and local planning policies:

- Seek opportunities to transfer waterways and buffer areas to public ownership;
- Promote the use of native street trees in new subdivisions, and;
- Emphasise the importance of remnant native vegetation and their role in maintaining connected habitat for native flora and fauna.

2 METHODS

2.1 Desktop Assessment

Relevant literature, online-resources and numerous databases were reviewed to provide an assessment of flora and fauna values associated with the study area. The following information sources were reviewed:

- The Commonwealth Department of the Environment and Energy (DoEE) Protected Matters Search Tool (PMST) for matters of National Environmental Significance (NES) protected under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (DoEE 2019) (Not updated as apart from those species already searched for during targeted surveys, no additional matters are considered relevant);
- The Native Vegetation Information Management (NVIM) Tool (DELWP 2019b) for modelled biodiversity data;
- DELWPs VicPlan Online to ascertain current zoning and environmental overlays (DELWP 2019d);
- DELWP's NatureKit mapping tool modelled mapping of 2005 extant and pre-1750's native vegetation and Ecological Vegetation Classes (EVCs) (DELWP 2019c);
- Victorian Guidelines for the Removal, Destruction or Lopping of Native Vegetation (the Guidelines) (DELWP 2017b),
- The Victorian Biodiversity Atlas (DELWP 2018a) for previously documented flora and fauna records within the project locality, and;
- Aerial photography of the study area.

2.2 Field Assessments

3.2.1 Biodiversity Assessment

A field assessment was undertaken on 17 and 21 May 2018 to obtain information on flora and fauna values within the study area. The study area was walked, with all observed vascular flora and fauna species recorded, any significant records mapped and the overall condition of vegetation and habitats noted. EVCs were determined with reference to DELWP pre-1750 and extant EVC mapping and their published descriptions (DELWP 2019c).

3.3 The Guidelines

Under the Planning and Environment Act 1987, Clause 52.17 of the Planning Schemes requires a planning permit from the relevant local Council to remove, destroy or lop native vegetation. The assessment process for the clearing of vegetation follows the *Guidelines for the removal, destruction or lopping of native vegetation* (Guidelines) (DELWP 2017b). The *Assessor's handbook – applications to remove, destroy or lop native vegetation* (Assessor's handbook) (DELWP 2017c) provides clarification regarding the application of the Guidelines.

3.3.1 Assessment Pathway

Guidelines manage the impacts on biodiversity from native vegetation removal (DELWP 2017b). The assessment pathway for an application to remove native vegetation reflects its potential impact on biodiversity and is determined from the location and extent of the native vegetation to be removed. The location risk categories (1, 2 or 3) has been determined for all areas in Victoria and is available on DELWP’s NVIM Tool (DELWP 2019b). Determination of assessment pathway is summarised in Table 1.

Table 1. Assessment pathways for applications to remove native vegetation (DELWP 2017a)

Extent		Location		
		1	2	3
Native Vegetation	< 0.5 hectares, and not including any large trees	Basic	Intermediate	Detailed
	Less than 0.5 hectares, and including one or more large trees	Intermediate	Intermediate	Detailed
	0.5 hectares or more	Detailed	Detailed	Detailed

Notes: For the purpose of determining the assessment pathway of an application to remove native vegetation the extent includes any other native vegetation that was permitted to be removed on the same contiguous parcel of land with the same ownership as the native vegetation to be removed, where the removal occurred in the five year period before an application to remove native vegetation is lodged.

2.2.1 Vegetation Assessment

Native vegetation (as defined in Table 2) is assessed using two key parameters: extent (in hectares) and condition. Extent is determined through a field assessment. The condition score for Detailed Assessment pathways must be assessed through a habitat hectare¹ assessment conducted by a qualified ecologist. The condition score for Basic Assessment pathways may be based on either modelled data available on the NVIM Tool (DELWP 2019b), or through a habitat hectare assessment.

Table 2. Determination of remnant native vegetation (DELWP 2017b)

Category	Definition	Extent	Condition
Remnant patch of native vegetation	An area of vegetation where at least 25 per cent of the total perennial understorey plant cover is native. OR An area with three or more native canopy trees where the drip line of each tree touches the drip line of at least one other tree, forming a continuous canopy.	Measured in hectares. Based on hectare area of the remnant patch.	Vegetation Quality Assessment Manual (DSE 2004).

¹ A ‘habitat hectare’ is a unit of measurement which combines the condition and extent of native vegetation.

Category	Definition	Extent	Condition
Scattered tree	A native canopy tree that does not form part of a remnant patch.	<p>Measured in hectares.</p> <p>A small tree is assigned an extent of 0.031 hectares (10m radius).</p> <p>A large tree is assigned an extent of 0.071 hectares (15m radius).</p>	Scattered trees are assigned a default condition score of 0.2.

Notes: Native vegetation is defined in the Victoria Planning Provisions as ‘plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses’.

2.2.2 Offsets

Offsets are required to compensate for the permitted removal of native vegetation. The offset requirements for Basic and Intermediate Assessment pathway applications are calculated using the NVIM Tool and the resulting Native Vegetation Removal Report will be provided as a separate report/s to accompany the planning permit application.

2.3 Assessment Qualifications and Limitations

The site assessment was undertaken during a sub-optimal season for the identification of flora and fauna species (autumn). This meant that the assessment undertaken only captured species present at the time of surveys and is not a complete representation of species diversity or extent.

Targeted flora or fauna surveys were not undertaken, as the purpose of this existing conditions assessment was to ascertain whether significant species are likely to occur based on native vegetation and habitat values at the site. If significant flora and fauna are considered by an ecologist to have a moderate – high likelihood of occurring at the site, then targeted surveys are recommended.

This assessment is considered sufficient for the purpose of the Development Plan approval, which is to provide an overview of the existing flora and fauna present in the study area and satisfy the DPO18 requirements under the Macedon Ranges planning scheme. It is appropriate that a detailed assessment, including habitat hectares and targeted surveys, are undertaken at the time of subdivision as part of a planning permit application.

3 RESULTS

3.1 Vegetation Condition

The majority of the study area comprises introduced and planted vegetation in the form of crops, pasture, windrows and ornamental plantings. However, there are some small areas of native vegetation scattered within the study area.

3.1.1 Remnant Patches

Remnant native vegetation in the study area is representative of four Ecological Vegetation Classes (EVCs) of the Victorian Volcanic Plain bioregion (Figure 2): Plains Grassland Heavier-soils (EVC 132_61), Plains Sedgy Wetland (EVC 647), Tall Marsh (EVC 821) and Stony Knoll Shrubland (EVC 649). The presence of these EVCs is generally consistent with the modelled pre-1750s native vegetation mapping (DELWP 2017b). The remainder of the study area comprises introduced and planted vegetation in the form of crops, pasture, windrows and ornamental plantings. Specific details relating to observed EVCs are provided below.

3.1.1.1 Plains Grassland

Heavier-soils Plains Grassland, associated with at least 500 mm of annual rainfall, is located beneath windrows and ornamental planting to the north of the study area (Figure 2). It has a bioregional conservation status of Endangered. The habitat zone has 40% cover of indigenous perennial grasses, in particular Spear Grass *Aurolistia* spp and Common Wallaby-grass *Rytidosperma caespitosum* (Plate 1). There is low diversity within patches, with an absence of native herb diversity (Plate 2).



Plate 1. Degraded Plains Grassland within the study area (Ecology and Heritage Partners Pty Ltd 22/05/2018).



Plate 2. Plains Grassland within the study area (Ecology and Heritage Partners Pty Ltd 22/05/2018).

Stony Knoll Shrubland

Stony Knoll Shrubland would have historically been spread widely across ridges within the study area. It has a Vulnerable bioregional conservation status. Historic clearing for pasture has limited its distribution to small patches which are of poor condition, where the cover of native grasses and sedges only reaches 25-30%.

The extant patches are characterised by the presence of Tall Rush *Juncus procerus*, and Slender Wallaby-grass *Rytidosperma racemosum* var. *racemosum* (Plate 3). Patch herb diversity is low/non-existent, most likely as a consequence of grazing by domestic livestock. The bryophyte and lichen life form component cover is high (20%) and diverse with >5 species present (Plate 4).



Plate 3. Stony Knoll Shrubland within the study area (Ecology and Heritage Partners Pty Ltd 22/05/2018).



Plate 4. Stony Knoll Shrubland within the study area (Ecology and Heritage Partners Pty Ltd 17/05/2018).

Plains Sedgy Wetland

The creek running through the south/ south-east of the study area contains native vegetation with the highest diversity and condition. Plains Sedgy Wetland is patchy along the creek alignment, ranging from moderate to low condition (Plate 5). The southern half of the creek is dominated by Common Tussock Grass *Poa labillardierei* along the slopes of the creek line (Plate 6), with a diversity of sedges and herbs being present in wetter areas. Common species in these areas include: Bidgee-widgee *Acaena novae-zelandiae*, Tall Rush *Juncus procerus*, Swamp Crane’s-bill *Geranium spp.*, and Kidney-weed *Dichondra repens* (Plate 7).

Weed species, including Spiny Rush *Juncus acutus*, Toowoomba Canary-grass *Phalaris aquatica*, Large Quaking-grass *Briza maxima*, Cocksfoot *Dactylis glomerate*, Serrated Tussock *Nassella trichotoma* and Soursob *Oxalis pes-caprae* were commonly found throughout many of the remnant patches.



Plate 5. Patchy Plains Sedgy Wetland within the study area (Ecology and Heritage Partners Pty Ltd 17/05/2018).



Plate 6. Plains Sedgy Wetland dominated by Tussock Grass within the study area (Ecology and Heritage Partners Pty Ltd 21/05/2018).



Plate 7. High diversity Plains Sedgy Wetland within the study area (Ecology and Heritage Partners Pty Ltd 17/05/2018).

Tall Marsh

Tall Marsh is restricted to the artificial dam located to the south of the study area (Figure 2). It has a bioregional conservation status of Least Concern. The inflow drain is densely populated with sedges (Plate 8), with emergent vegetation occurring in the centre and perimeter of the dam (Plate 9). Condition of this vegetation is high owing to the diversity of life forms, and lack of weeds. Emergent vegetation includes Common Spike-sedge *Eleocharis acuta*, Common Reed *Phragmites australis* and Narrow-leaf Cumbungi *Typha domingensis*.



Plate 8. Tall Marsh native vegetation surrounding and emerging from dam (Ecology and Heritage Partners Pty Ltd 17/05/2018).



Plate 9. Tall Marsh lining and emerging from dam (Ecology and Heritage Partners Pty Ltd 17/05/2018).

3.1.2 Introduced and Planted Vegetation

Introduced Vegetation

Areas not supporting remnant native vegetation have a high cover (>80%) of exotic grass species, many of which have been direct-seeded for use as pasture (Plate 10). Scattered planted native grasses are generally present in these areas, however they do not have the required 25% cover to be considered a remnant patch under the Guidelines. Removal of embedded rock has also been undertaken to facilitate the direct seeding of pasture grasses in some locations.

Disturbed areas were dominated by environmental weeds such as Toowoomba Canary-grass, Rye-grass *Lolium* spp., Meadow Fox-tail *Alopecurus pratensis*, Galenia *Galenia pubescens* var. *pubescens*, Ribwort *Plantago lanceolata*, Couch *Cynodon dactylon* var. *dactylon* and Wild Oat *Avena fatua*.

Noxious weeds are present throughout the study area, with scattered occurrences of Artichoke Thistle *Cynara cardunculus*, Spiny Rush *Juncus acutus* subsp. *acutus*, and Spear Thistle *Cirsium vulgare*, along with the Weeds of National Significance (WONS), African Boxthorn *Lycium ferocissimum* and Serrated Tussock.

Planted Vegetation

Planted vegetation in the study area consists of exotic and non-indigenous tree species, most commonly Sugar Gum *Eucalyptus cladocalyx* and Pine *Pinus* spp. (Plate 10), which are planted in windrows around dwellings, sheds and laneways. A variety of ornamental shrubs have also been planted around sheds and dwellings.



Plate 10. Planted vegetation within the study area (Ecology and Heritage Partners Pty Ltd 21/05/2018).

3.2 Fauna Habitat

Planted native vegetation is likely to provide habitat for mobile fauna species, in the form of vantage points and nesting/ roosting areas for birds and small mammals (bats, gliders). Planted eucalypts may also provide stepping-stones for mobile species, including reptiles, small mammals and birds moving through the study area, enhancing landscape connectivity for native fauna.

The patches of Plains Grassland are characterised by native Wallaby Grass *Rytidosperma* spp. and Spear Grass *Austrostipa* spp., which are known to provide habitat for the nationally significant Golden Sun Moth *Synemon plana*. Golden Sun Moth, if present within the study area, are most likely to occur in association with native vegetation, identified to the south/ south-east of the study area, near the creek line (Figure 2b and c).

The entire reach of creek line that intersects the study area, in association with identified native vegetation (Figure 2b and c), provides potential suitable habitat for the nationally significant Growling Grass Frog *Litoria raniformis*.

The Stony Knolls, characteristic of Stony Knoll Shrubland EVC (Plates 3, 4), are highly degraded and are unlikely to provide habitat for significant species. Considering that Striped Legless Lizard *Delma impar* were not recorded within 10 kilometres of the study area, targeted surveys are not considered necessary.

3.3 The Guidelines

A planning permit will be required if any clearing of native vegetation is undertaken.

Under the *Planning and Environment Act 1987*, Clause 52.17 of the Planning Schemes requires a planning permit from the relevant local Council to remove, destroy or lop native vegetation. The assessment process for the clearing of vegetation follows the Guidelines (DELWP 2017b).

Based on the NVIM Tool (2019b), the study area is assessable under the Guidelines (DELWP 2017b) and is within Locations 1 and 2. As the Site Concept Plan for the proposed subdivision is not available at this stage, the assessment pathway (Basic/Intermediate/Detailed), based on the location and extent of native vegetation

to be cleared cannot be determined. This assessment pathway will determine the permit application requirements to remove native vegetation under the Guidelines (DELWP 2017b).

3.4 Significance Assessment

At the Development Plan stage, targeted surveys for significant species (EPBC Act 1999) are not required. The national and state legislative requirements must be addressed as part of the planning permit application, prior to any development proceeding (Section 4).

Targeted surveys are required to determine if any significant flora or fauna listed under the EPBC Act 1999 occur in the study area. If any matters of National Environmental Significance (NES) are likely to be significantly impacted by the proposed subdivision, then an EPBC Act referral is required (Section 4.1 and Section 5).

3.4.1 Flora

The VBA contains records of several National and State significant flora species within 10 kilometres of the study area (DELWP 2018a), including EPBC Act listed Matted Flax-lily *Dianella amoena*, Swamp Everlasting *Xerochrysum palustre* and Swamp Fireweed *Senecio psilocarpus* (Appendix 2.1). Recent records of Matted Flax-lily *Dianella amoena* (2016 record) were found within a five kilometre search radius, including along the Gisborne railway line and, most recently, within a few kilometres east of the study area in the Dalrymple Road Reserve (Figure 3). Swamp Everlasting *Xerochrysum palustre* and Swamp Fireweed *Senecio psilocarpus* were also found within five kilometres of the study area (2016 records), however all were found within the Gisborne Flora Reserve (Figure 3).

Due to the highly modified nature of the study area and current grazing history, the presence of Matted Flax-lily, Swamp Everlasting and Swamp Fireweed is considered unlikely across the entire study area. However, given the proximity of previous records within 5 kilometres of the study area, targeted surveys are recommended for Matted Flax-lily, Swamp Everlasting and Swamp Fireweed adjacent to the creek line in association with identified native vegetation patches (Figure 2b and 2c).

3.4.2 Fauna

The VBA contains records of a range of National, State and regionally significant fauna species within 10 kilometres of the study area (DELWP 2018a), including EPBC Act listed Growling Grass Frog, Golden Sun Moth and Australasian Bittern *Botaurus poeciloptilus* (Appendix 3.1). Of these species, only Growling Grass Frog (2000 record) and Golden Sun Moth (2006 record) are considered moderately likely to use the study area, based on land use history and available habitat.

Growling Grass Frog has a moderate likelihood of occurring in the south/ south-east of the study area, based on suitable available habitat, given their ability to persist in relatively disturbed aquatic environments including farm dams (Pyke 2002).

Golden Sun Moth has a moderate likelihood of occurring to the south/ south-east of the study area where small patches of native vegetation, including surrounding stony knolls, were identified (Figure 2a and 2b). Remnant native vegetation may provide limited food sources for Golden Sun Moth within the study area (Wallaby Grass and Spear Grass), however the diversity of grasses can be better quantified during the spring-summer seasons when grasses are in seed.

Other nationally significant fauna are considered unlikely to occur within the study area due to the lack of suitable habitat and the disturbed nature of the site. Australasian Bittern (2016 record) was recently recorded

within five kilometres of the study area. However, this species is very cryptic in nature and due to the limited vegetation cover (typically dense beds of reeds and rushes) available at the site, the species is considered unlikely to occur. Swift Parrot *Lathamus discolor* (2001 record) and Diamond Firetail *Stagonopleura guttata* (2005 record) are significant bird species that were recorded within a 10-kilometre radius but are considered unlikely to occur in the study area due to the lack of scattered large native trees and understorey habitat. Striped Legless Lizard *Delma impar* is an EPBC Act listed species known to occur on areas of the Victorian Volcanic Plain, but were not previously recorded within 10 kilometres of the study area and so are considered unlikely to occur on-site.

It is possible that other significant migratory bird species, may visit the study area occasionally or opportunistically whilst en-route to more suitable sites, however it is unlikely that they would reside within the study area.

3.4.3 Communities

Five nationally listed threatened ecological communities may occur within 10 kilometres of the study area based on the PMST (DoEE 2015) Report created, 16/05/18:

- Grassy Eucalypt Woodland of the Victorian Volcanic Plain (Critically Endangered);
- Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia (Endangered);
- Natural Temperate Grassland of the Victorian Volcanic Plains (Critically Endangered);
- Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains (Critically Endangered); and,
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland (Critically Endangered).

However, vegetation surveyed within the study area did not meet the condition thresholds that define any national or State-significant communities.

4 LEGISLATIVE AND POLICY IMPLICATIONS

4.1 *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth)

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) establishes a Commonwealth process for the assessment of proposed actions likely to have a significant impact on any matters of National Environment Significance (NES).

Targeted surveys conducted for significant flora and fauna species in late 2020 (Ecology and Heritage Partners 2021) did not detect Matted Flax-lily, Swamp Everlasting, Swamp Fireweed, Golden Sun Moth or Growling Grass Frog within the study area. As a result, an EPBC Referral is not required.

4.2 *Flora and Fauna Guarantee Act 1988* (Victoria)

The FFG Act is the primary legislation dealing with biodiversity conservation and sustainable use of native flora and fauna in Victoria. Proponents are required to apply for an FFG Act Permit to 'take' listed and/or protected flora species, listed vegetation communities and listed fish species in areas of public land (i.e. within road reserves, drainage lines and public reserves). An FFG Act permit is generally not required for removal of species or communities on private land, or for the removal of habitat for a listed terrestrial fauna species.

The information presented in this report reflects the data available prior to The Flora and Fauna Guarantee Amendment Act 2019 (the Amendment Act), which came into effect on June 1st 2020, and included an updated and consolidated threatened species. As a result, the significant species data presented in Appendix 2.1 and Appendix 2.3 has been cross-referenced with the latest FFG Act threatened species list (August 2021) in order to ensure that they adequately capture any changes to recently listed species. Based upon the cross-referencing, apart from those species already searched for during targeted surveys, there are no additional species considered relevant.

One species present in the study area is protected under the FFG Act due its membership of a protected group, the Wattles (*Acacia*): Black Wattle *Acacia mearnsii*.

There is suitable habitat within the study area for several species listed or protected under the FFG Act. However, as the study area is privately owned, a permit under the FFG Act is not required.

4.3 *Planning and Environment Act 1987* (Victoria)

The *Planning and Environment Act 1987* outlines the legislative framework for planning in Victoria and for the development and administration of planning schemes. All planning schemes contain native vegetation provisions at Clause 52.17 which require a planning permit from the relevant local Council to remove, destroy or lop native vegetation on a site of more than 0.4 hectares, unless an exemption under clause 52.17-7 of the Victorian Planning Schemes applies or a subdivision is proposed with lots less than 0.4 hectares². Local planning schemes may contain other provisions in relation to the removal of native vegetation (Section 4.3.1).

² In accordance with the Victorian Civil and Administrative Tribunal's (VCAT) decision *Villawood v Greater Bendigo CC* (2005) VCAT 2703 (20 December 2005) all native vegetation is considered lost where proposed lots are less than 0.4 hectares in area and must be offset at the time of subdivision.

4.3.1 Local Planning Schemes

The study area is located within the Macedon Ranges Shire Council municipality and is zoned Rural Living Zone – Schedule 2 (RLZ2). The following overlays apply:

- Development Plan Overlay – Schedule 18 (DPO18) of the Macedon Ranges Planning Scheme
 - The Development Plan requires a buffer up to 30 metres either side of the creek/drainage line, that is maintained for the purpose of protecting native vegetation and excluding stock.

4.3.2 Relevant Exemptions

Native planted vegetation in the study area is exempt from planning permit requirements under Clause 52.17-7 (Table of Exemptions) as it is planted on private land for amenity purposes (DELWP 2018f). In the study area, this includes the planted River Red Gums, Yellow Box and Red Box.

4.3.3 The Guidelines

The State Planning Policy Framework and the decision guidelines at Clause 52.17 (Native Vegetation) and Clause 12.01 require Planning and Responsible Authorities to have regard for '*The Guidelines for the removal, destruction or lopping of native vegetation*' (Guidelines) (DELWP 2017h).

4.3.4 Implications

A Planning Permit from Macedon Ranges Shire is required to remove, destroy or lop any native vegetation.

4.4 *Wildlife Act 1975* and *Wildlife Regulations 2013* (Victoria)

The *Wildlife Act 1975* (and associated *Wildlife Regulations 2013*) is the primary legislation in Victoria providing for protection and management of wildlife. Authorisation for habitat removal may be obtained under the *Wildlife Act 1975* through a licence granted under the *Forests Act 1958*, or under any other Act such as the *Planning and Environment Act 1987*. Any persons engaged to remove, salvage, hold or relocate native fauna during construction must hold a current Management Authorisation under the *Wildlife Act 1975*, issued by DELWP.

4.5 *Catchment and Land Protection Act 1994* (Victoria)

The *Catchment and Land Protection Act 1994* (CaLP Act) contains provisions relating to catchment planning, land management, noxious weeds and pest animals. Landowners are responsible for the control of any infestation of noxious weeds and pest fauna species to minimise their spread and impact on ecological values.

Weeds listed as noxious under the CaLP Act (Artichoke Thistle, Fennel, Paterson's Curse, African Box-thorn, Blackberry, Chilean Needle-grass and Serrated Tussock) were recorded during the assessment. Weeds should be managed in accordance with the Act.

4.6 Best Practice Mitigation Measures

This assessment identifies the creek line to provide the greatest ecological value (Figure 2). In particular, the native vegetation adjacent to the creek line is in moderate-high condition and development in this area should be avoided and minimised, where possible. The linear strip of Plains Grassland and small patches of Stony Knoll Shrubland identified (Figure 2) are of lesser quality and while efforts should be made to retain this native vegetation, it is unlikely to provide important habitat for significant species.

The creek line which intersects the south/ south-east section of the study area contains patches of native vegetation. While the riparian vegetation provides potential habitat for Growling Grass Frog, targeted surveys conducted in accordance with the survey guidelines (DEWHA 2009) in late 2020 did not detect the species within the creek line habitat (Ecology and Heritage Partners 2021). Similarly, while the entire extent of the study area provides potential habitat for Golden Sun Moth, targeted surveys did not detect the species in the study area (Ecology and Heritage Partners 2021).

The mapped Stony Knoll Shrubland located to the south-east of the study area, while very degraded, is identified as native vegetation. While generally this is typical habitat for Striped Legless Lizard, given the lack of records within a 10 kilometre radius of the study area and the degraded nature of the habitat, the species is considered unlikely to occur and targeted surveys were not deemed necessary.

Recommended measures to mitigate impacts upon terrestrial and aquatic values present within the study area may include:

- Minimise impacts to native vegetation and habitats through construction and micro-siting techniques, including fencing retained areas of native vegetation. If indeed necessary, trees should be lopped or trimmed rather than removed. Similarly, soil disturbance and sedimentation within wetlands should be avoided or kept to a minimum, to avoid, or minimise impacts to fauna habitats;
- All contractors should be aware of ecologically sensitive areas to minimise the likelihood of inadvertent disturbance to areas marked for retention. Habitat Zones (areas of sensitivity) should be included as a mapping overlay on any construction plans;
- Tree Retention Zones (TRZs) should be implemented to prevent indirect losses of native vegetation during construction activities (DSE 2011). A TRZ applies to a tree and is a specific area above and below the ground, with a radius 12 x the DBH. At a minimum standard a TRZ should consider the following:
 - A TRZ of trees should be a radius no less than two metres or greater than 15 metres;
 - Construction, related activities and encroachment (i.e. earthworks such as trenching that disturb the root zone) should be excluded from the TRZ;
 - Where encroachment exceeds 10% of the total area of the TRZ, the tree should be considered as lost and offset accordingly;
 - Directional drilling may be used for works within the TRZ without being considered encroachment. The directional bore should be at least 600 millimetres deep;
 - The above guidelines may be varied if a qualified arborist confirms the works will not significantly damage the tree (including stags / dead trees). In this case the tree would be retained and no offset would be required; and,
 - Where the minimum standard for a TRZ has not been met an offset may be required.

- Where possible, construction stockpiles, machinery, roads, and other infrastructure should be placed away from areas supporting native vegetation, LOTs and/or wetlands, and;
- Ensure that best practice sedimentation and pollution control measures are undertaken at all times, in accordance with Environment Protection Authority guidelines (EPA 1991; EPA 1996; Victorian Stormwater Committee 1999) to prevent offsite impacts to waterways and wetland.

5 FURTHER REQUIREMENTS

The DPO18 requirements to support the Development Plan, as well as further requirements associated with development of the study area, are provided in Table 3.

This assessment responds to the DPO18 requirements in support of a Development Plan and provides an overview of ecological values present or likely to occur in the study area.

Table 3. Further requirements associated with development of the study area

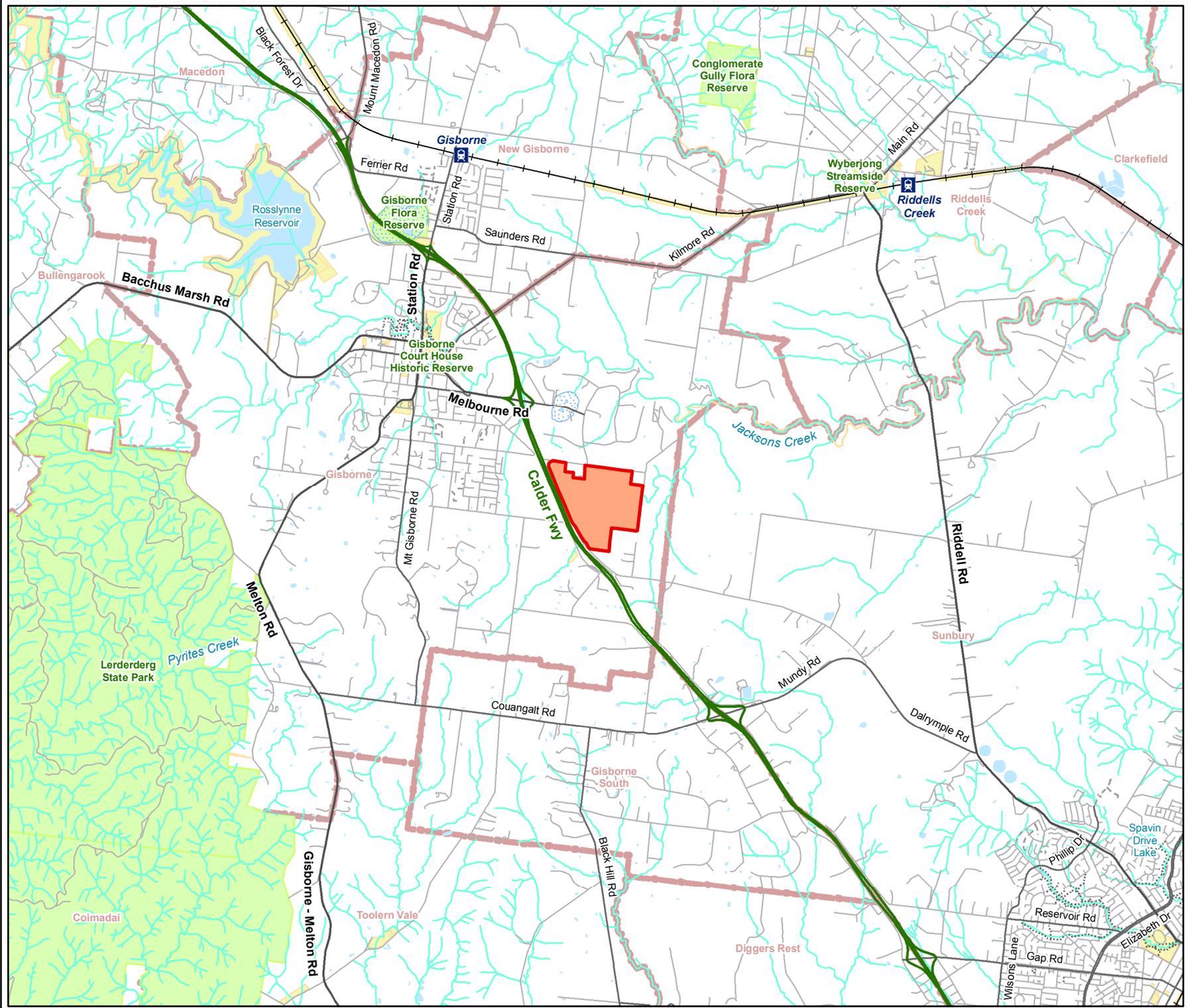
Relevant Legislation	Implications	Further Action
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Targeted surveys conducted for significant flora and fauna species in late 2020 (Ecology and Heritage Partners 2021) did not detect Matted Flax-lily, Swamp Everlasting, Swamp Fireweed, Golden Sun Moth or Growling Grass Frog within the study area, As a result, an EPBC Referral is not required.	No further action required.
<i>Flora and Fauna Guarantee Act 1988</i>	There is suitable habitat within the study area for several species listed or protected under the FFG Act. However, as the study area is privately owned, a permit under the FFG Act is not required.	No further action required.
<i>Planning and Environment Act 1987</i>	A Planning Permit from Macedon Ranges Shire is required to remove, destroy or lop any native vegetation.	Native vegetation adjacent to the creek line will be retained and stock excluded. At the time of subdivision, a planning permit is required for the removal of any native vegetation, which includes: <ul style="list-style-type: none"> • Demonstrated avoidance and mitigation of native vegetation (DELWP 2017) • Required state Offsets.
<i>Catchment and Land Protection Act 1994</i>	Several weed species listed under the CaLP Act were recorded within the study area. To meet requirements under the CaLP Act, listed noxious weeds should be appropriately controlled throughout the study area.	Manage weeds in accordance with the CaLP Act.
<i>Wildlife Act 1975</i>	Any persons engaged to remove, salvage, hold or relocate native fauna during construction must hold a current Management Authorisation or Research Permit under the <i>Wildlife Act 1975</i> , issued by DELWP.	No further action required.

REFERENCES

- DELWP 2017a. *Flora and Fauna Guarantee Act 1988* Protected Flora List – June 2017. Victorian Department of Environment, Land, Water and Planning, Melbourne, Victoria.
- DELWP 2017b. *Guidelines for the removal, destruction or lopping of native vegetation*. December 2017. Victorian Department of Environment, Land, Water and Planning, Melbourne, Victoria.
- DELWP 2017c. *Assessor's handbook – applications to remove, destroy or lop native vegetation*. Victorian Department of Environment, Land, Water and Planning, Melbourne, Victoria.
- DELWP 2018a. Victorian Biodiversity Atlas. Sourced from GIS layers: "VBA_FLORA25", "VBA_FLORA100", "VBA_FAUNA25", "VBA_FAUNA100". March 2018. Victorian Department of Environment, Land, Water and Planning, Melbourne, Victoria.
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- DSE 2004. Vegetation quality assessment manual: Guidelines for applying the habitat hectares scoring method. Version 1.3. Victorian Department of Sustainability and Environment, Melbourne Victoria
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- DEWHA 2009. Significant impact guidelines for the Golden Sun Moth. Department of the Environment, Water, Heritage and the Arts.
- Ecology and Heritage Partners 2021. Targeted Significant Flora and Fauna Surveys, Bennett Road Development Plan, Victoria. Prepared for G2 Urban Planning.
- Gullan, P. 2017. Illustrated Flora Information System of Victoria (IFISV). Viridans Pty Ltd, Victoria.
- Macedon Ranges Shire Council 2018. Biodiversity Strategy. Adopted at the 19 December 2018 Ordinary Council Meeting.

Terraco 2020. Bennett Road Precinct Development Plan and Subdivision Concept Plan. Version 19.

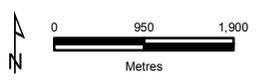
FIGURES



- Legend**
- Study Area
 - Railway
 - Freeway
 - Major Road
 - Collector Road
 - Minor Road
 - Proposed Road
 - Walking Track
 - Minor Watercourse
 - Permanent Waterbody
 - Land Subject to Inundation
 - Parks and Reserves
 - Crown Land
 - Localities



Figure 1
Location of the study area
Biodiversity Assessment for
Bennett Road, Gisborne



VicMap Data: The State of Victoria does not warrant the accuracy or completeness of information in this publication and any person using or relying upon such information does so on the basis that the State of Victoria shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information.

10631 Fig01 StudyArea 30/05/2018 jyan

APPENDICES

Appendix 1.1 – Development Plan



Bennett Road Precinct Development Plan

Printed: 2021-09-29 11:48 AM

Ver	Revision Description	Date	Checked	Checked
23	Minor Amendments	22/09/2021	Drafted J.Sens Sep 2021	Checked P.Bowe Sep 2021
22	Addressed Council Feedback	25/06/2021		
21	Minor Amendments	29/07/2020		
20	Addressed Council Feedback	21/07/2020		
19	Amended Notations	21/02/2020	Approved	
18	Amended Notations and Layout	13/12/2019		
17	Amended Drainage Line Details	25/10/2019		

Notes/Legend



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Scale (m) NTS
 All lengths are in metres
 and all levels are to Australian Height Datum
 (Original Sheet Size is A3)
 Drawing file: 17085_00_Face Sheet V23.dwg

Macedon Ranges Shire Council - Gisborne

Bennett Road Precinct

Drawing file:	LTO Ref:	Council Ref:	Water Auth. Ref:	Our Ref:	Version	Sheet
17085_00_Face Sheet V23.dwg	-	-	-	17085	23	1 of 4



LEGEND

- Trees within road reserve
- Dwelling
- Outbuilding
- Dam
- Drainage line

NOTES

- * Contours shown represent approximate existing surface.
- * Contour interval 1m.
- * Drainage line only flows during periods of heavy rainfall.
- * Total Area = 132.62 hectares.
- * Original sheet size is A1.

Bennett Road Precinct: Site Context

Ver	Revision Description	Date	Notes/Status
23	Minor Amendments	22/09/2021	Drafted
22	Addressed Council Feedback	25/06/2021	Checked
21	Minor Amendments	29/07/2020	J.Sens P.Bove Sep 2021
20	Addressed Council Feedback	21/07/2020	Approved
19	Amended Notations	21/02/2020	
18	Amended Notations and Layout	13/12/2019	
17	Amended Drainage Line Details	25/10/2019	

Notes/Legend

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Scale (m) 1:4000 0 40 80

All lengths are in metres
 and all levels are to Australian Height Datum
 (Original Sheet Size is A1)

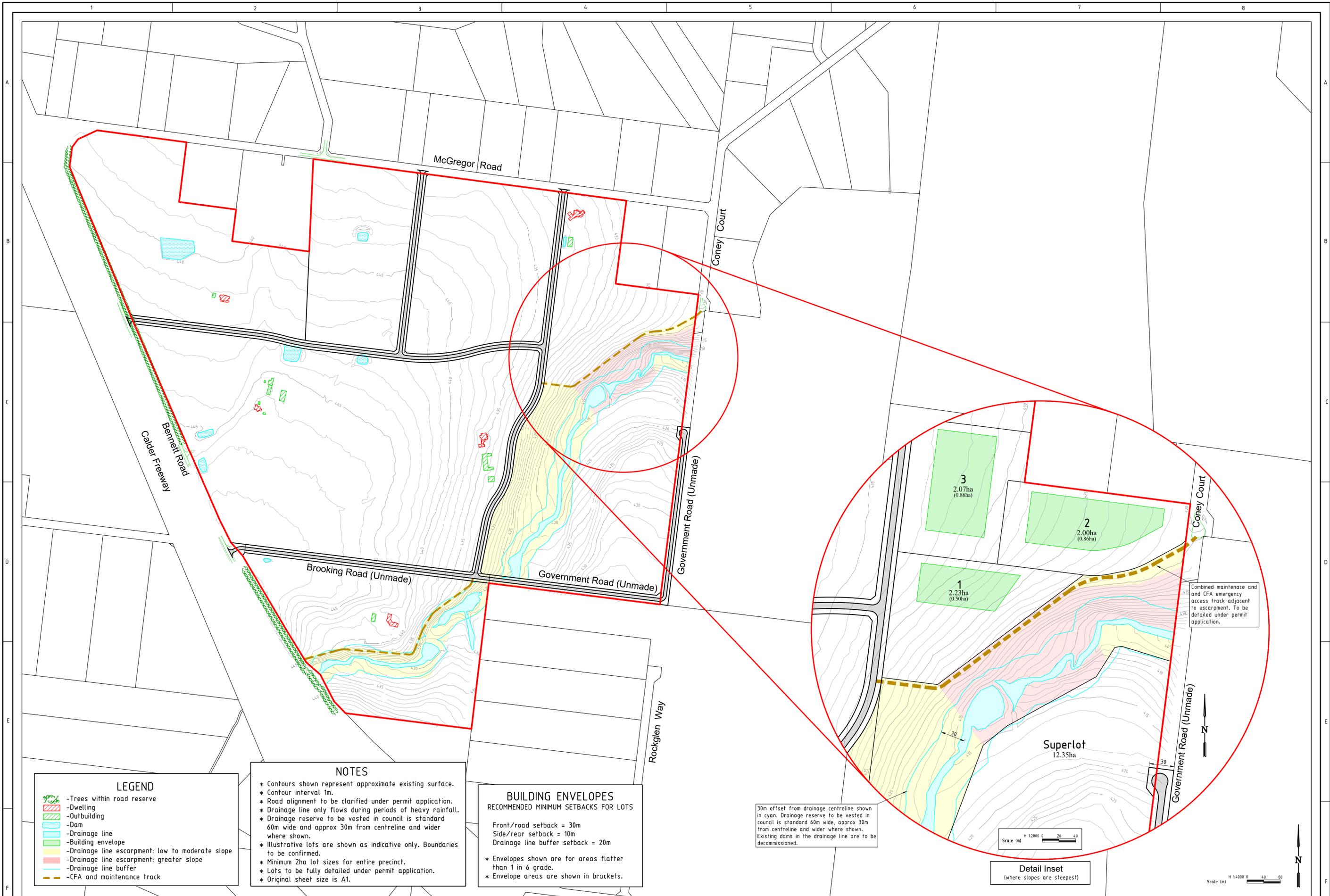
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Macedon Ranges Shire Council - Gisborne

Bennett Road Precinct

Council Ref: - Water Auth. Ref: - Our Ref: 17085 Version: 23 Sheet: 2 of 4

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LEGEND

- Trees within road reserve
- Dwelling
- Outbuilding
- Dam
- Drainage line
- Building envelope
- Drainage line escarpment: low to moderate slope
- Drainage line escarpment: greater slope
- Drainage line buffer
- CFA and maintenance track

NOTES

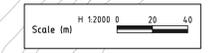
- * Contours shown represent approximate existing surface.
- * Contour interval 1m.
- * Road alignment to be clarified under permit application.
- * Drainage line only flows during periods of heavy rainfall.
- * Drainage reserve to be vested in council is standard 60m wide and approx 30m from centreline and wider where shown.
- * Illustrative lots are shown as indicative only. Boundaries to be confirmed.
- * Minimum 2ha lot sizes for entire precinct.
- * Lots to be fully detailed under permit application.
- * Original sheet size is A1.

BUILDING ENVELOPES
RECOMMENDED MINIMUM SETBACKS FOR LOTS

Front/road setback = 30m
Side/rear setback = 10m
Drainage line buffer setback = 20m

- * Envelopes shown are for areas flatter than 1 in 6 grade.
- * Envelope areas are shown in brackets.

30m offset from drainage centreline shown in cyan. Drainage reserve to be vested in council is standard 60m wide, approx 30m from centreline and wider where shown. Existing dams in the drainage line are to be decommissioned.



Detail Inset
(where slopes are steepest)



Bennett Road Precinct: Indicative Layout Concept Adjoining Drainage Line Escarpment

Ver	Revision Description	Date	Drawn	Checked	Notes/Legend
23	Minor Amendments	22/09/2021	J.Sens	P.Bowe	
22	Addressed Council Feedback	25/06/2021	J.Sens	P.Bowe	
21	Minor Amendments	29/07/2020	J.Sens	P.Bowe	
20	Addressed Council Feedback	21/07/2020	J.Sens	P.Bowe	
19	Amended Notations	21/02/2020	J.Sens	P.Bowe	
18	Amended Notations and Layout	13/12/2019	J.Sens	P.Bowe	
17	Amended Drainage Line Details	25/10/2019	J.Sens	P.Bowe	

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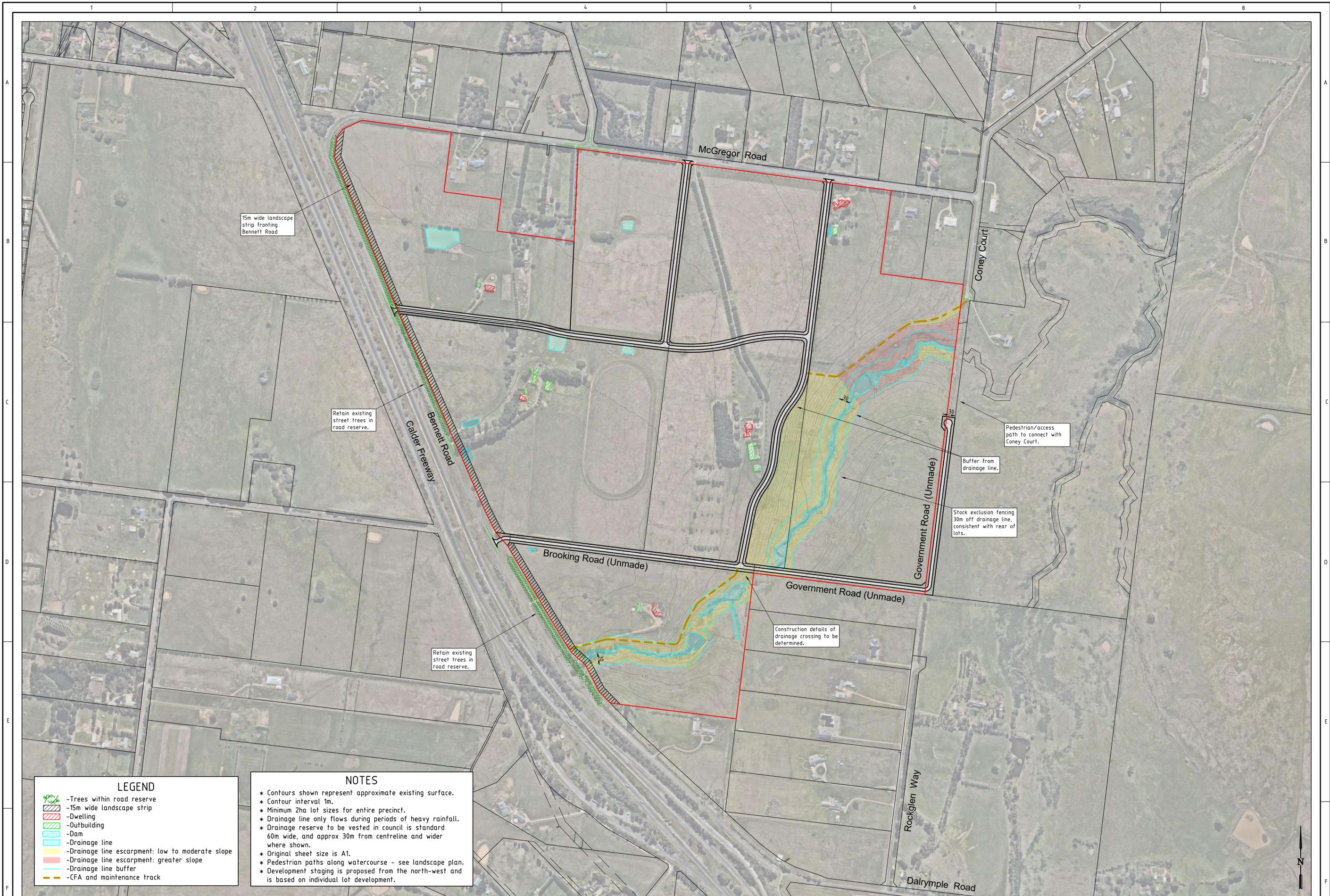
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Scale (m) SCALE AS SHOWN

Macedon Ranges Shire Council - Gisborne

Bennett Road Precinct

Drawing file: 17085_02_Layout_V23.dwg LTO Ref: - Council Ref: - Water Auth. Ref: - Our Ref: 17085 Version: 23 Sheet: 3 of 4



LEGEND

- Trees within road reserve
- 15m wide landscape strip
- Dwelling
- Outbuilding
- Dam
- Drainage line
- Drainage line escarpment: low to moderate slope
- Drainage line escarpment: greater slope
- Drainage line buffer
- CFA and maintenance track

NOTES

- * Contours shown represent approximate existing surface.
- * Contour interval 1m.
- * Minimum 2ha lot sizes for entire precinct.
- * Drainage line only flows during periods of heavy rainfall.
- * Drainage reserve to be vested in council is standard 60m wide, and approx 30m from centreline and wider where shown.
- * Original sheet size is A1.
- * Pedestrian paths along watercourse - see landscape plan.
- * Development staging is proposed from the north-west and is based on individual lot development.

Bennett Road Precinct: Development Plan - Roads

Ver	Revision Description	Date	Checked	Checked
23	Minor Amendments	22/09/2021	Drafted	P. Bove
22	Addressed Council Feedback	25/06/2021	J. Sims	Sep 2021
21	Minor Amendments	29/07/2020		
20	Addressed Council Feedback	21/07/2020		
19	Amended Notations	21/02/2020		
18	Amended Notations and Layout	13/12/2019		
17	Amended Drainage Line Details	25/10/2019		

Notes/Legend

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Scale (m) 1:4000 0 40 80

All lengths are in metres
 and all levels are to Australian Height Datum
 (Original Sheet Size is A1)

Drawing file: 17085_03_Development_V23.dwg

Macedon Ranges Shire Council - Gisborne

Bennett Road Precinct

Council Ref.	Water Auth. Ref.	Our Ref.	Version	Sheet
-	-	17085	23	4 of 4

Printed: 2021-09-29 11:05:55

Appendix 1.2 – Subdivision Concept Plan with Ecological Features



BAR treatments and street lights to be provided for all four proposed intersections onto Bennett Road and McGregor Road. Street light position shown indicatively.

Sheds on 128 Bennett Road to be relocated as necessary.

Roadside swales to terminate at lowpoints in road and allow overland drainage to watercourse. Locations are shown indicatively.

Combined maintenance and and CFA emergency access track adjacent to escarpment. To be detailed under permit application.

30m offset from drainage centreline shown in cyan. Proposed drainage reserve/creek (black) generally follows 30m offset from centreline other than where shown. Existing dams in the drainage line are to be decommissioned. See cross sections A to D on SHEET 4 for details.

Maximum of 6 lots for 134 McGregor Road superlot subject to detailed land capability assessment, avoidance of rock outcrops to maximum extent and setback of building envelopes from the waterway reserve. Building envelopes for all lots to be setback minimum 20m from reserve boundaries.

Indicative proposed road alignment along top of escarpment. See cross section E on SHEET 5.

Culvert crossing of watercourse to be detailed in future engineering design. See cross section F on SHEET 5.

Connection under proposed permit PLN 2018541.

- ### NOTES
- * Contours shown represent approximate existing surface.
 - * Contour interval 1m.
 - * Road alignment to be clarified under permit application.
 - * Drainage line/creek only flows during periods of heavy rainfall.
 - * Drainage reserve to be vested in council is standard 60m wide and approx 30m from centreline and wider where shown.
 - * Dams in watercourse are to be decommissioned. All other dams are to be considered at subdivision stage for any decommissioning.
 - * Illustrative lots are shown as indicative only. Boundaries to be confirmed.
 - * Minimum 2ha lot sizes for entire precinct.
 - * Lots to be fully detailed under permit application.
 - * Pedestrian paths along watercourse - see landscape plan. To be determined under permit applications at time of subdivision.
 - * Staging of development proposed from the north-west.
 - * See Servicing and Utilities Infrastructure Report for details on servicing and infrastructure provision to development sites. It outlines that all infrastructure cost within and adjoining development parcels and any required extension of roads and other infrastructure is to be borne by each development parcel.
 - * Lot yield and lot configuration of 94 McGregor Road to be subject to detailed review.
 - * Original sheet size is A1.

BUILDING ENVELOPES

RECOMMENDED SETBACKS FOR LOTS

Front/road setback = 30m
 Side/rear setback = 10m
 Drainage line buffer setback = 20m

*** Envelopes shown are for areas flatter than 1 in 6 grade to address the most sensitive land adjacent to the drainage line.**

* Envelope areas are shown in brackets.

- ### LEGEND
- Trees within road reserve
 - Indicative rock outcrops
 - Dwelling
 - Outbuilding
 - Dam
 - Drainage line
 - Building envelope (only illustrated adjacent to drainage line)
 - Drainage line escarpment: low to moderate slope
 - Drainage line escarpment: greater slope
 - Drainage line buffer (30m as shown)
 - CFA and maintenance track
 - Rural pedestrian path/bike track
 - Existing titles
 - BAR (Basic Right-Turn) Treatment
 - Indicative drainage outfall location
 - Proposed street light at intersection

SITE AREA AND YIELD		
SUBDIVISION CONCEPT SITE	AREA	LOTS
88 Bennett Road	16.2ha	6
128 Bennett Road	25.8ha	12
168 Bennett Road	16.6ha	8
15 McGregor Road	11.1ha	5
94 McGregor Road	31.9ha	12
134 McGregor Road	27.7ha	10
TOTAL	129.3ha	53

Subdivision Concept Development Plan and Subdivision Concept commissioned by 128 & 168 Bennett Road, and 134 McGregor Road. A concept for the remaining area is provided as sought by DP018 (as shown dashed).

Bennett Road Development Plan: Subdivision Concept Plan

Ver	Revision Description	Date	Checked	Approved
23	Minor Amendments	22/09/2021	J.Sens	P.Bove
22	Addressed Council Feedback	25/06/2021	J.Sens	P.Bove
21	Minor Amendments	29/07/2020	J.Sens	P.Bove
20	Addressed Council Feedback	21/07/2020	J.Sens	P.Bove
19	Amended Notations	21/02/2020	J.Sens	P.Bove
18	Amended Notations and Layout	13/12/2019	J.Sens	P.Bove
17	Amended Drainage Line Details	25/10/2019	J.Sens	P.Bove

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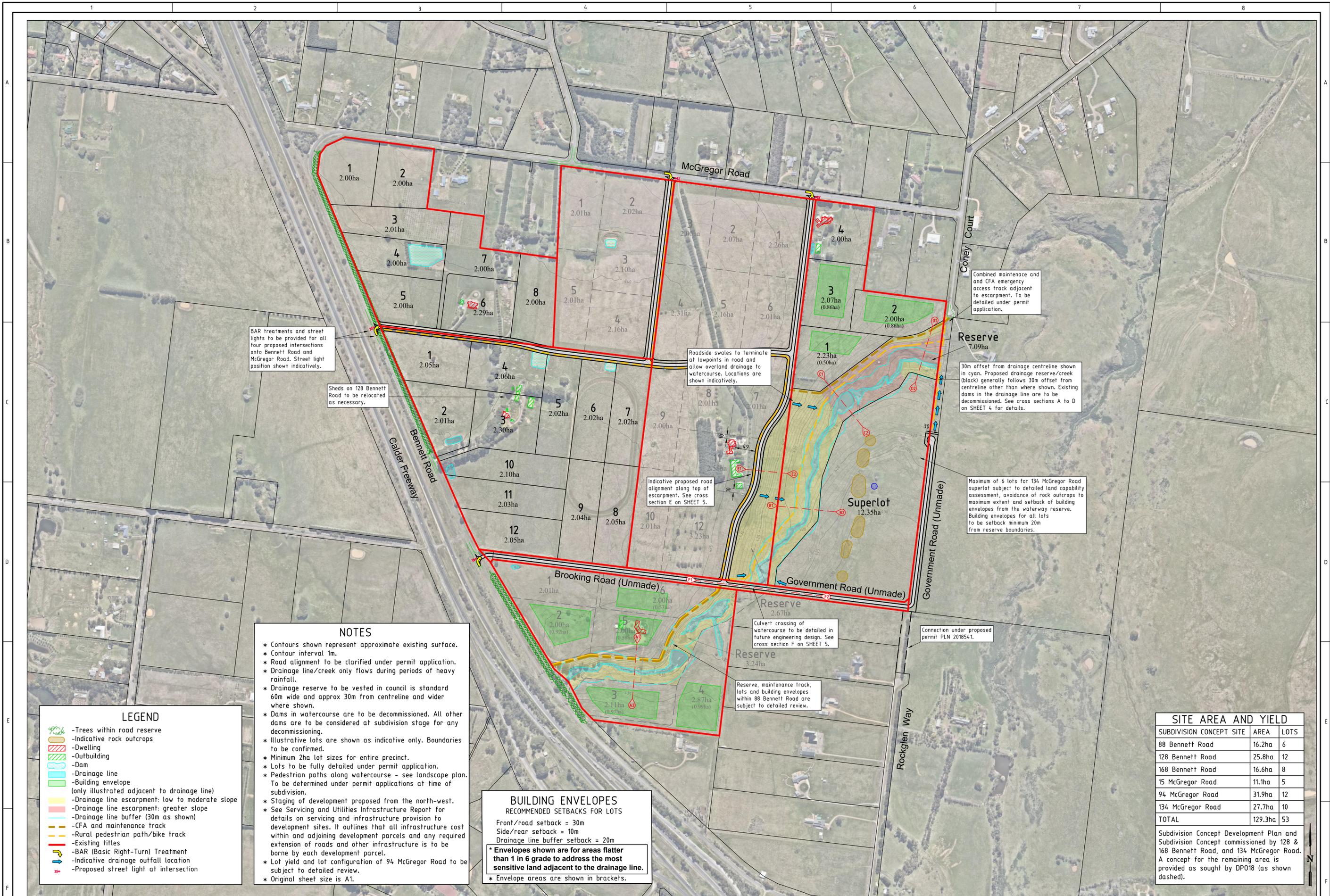
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Macedon Ranges Shire Council - Gisborne

Bennett Road Precinct

Drawing file: LTO Ref: Council Ref: Water Auth. Ref: Our Ref: Version: Sheet

17085 Concept V23.dwg - - - 17085 23 1 of 6



BAR treatments and street lights to be provided for all four proposed intersections onto Bennett Road and McGregor Road. Street light position shown indicatively.

Sheds on 128 Bennett Road to be relocated as necessary.

Roadside swales to terminate at lowpoints in road and allow overland drainage to watercourse. Locations are shown indicatively.

Combined maintenance and CFA emergency access track adjacent to escarpment. To be detailed under permit application.

30m offset from drainage centreline shown in cyan. Proposed drainage reserve/creek (black) generally follows 30m offset from centreline other than where shown. Existing dams in the drainage line are to be decommissioned. See cross sections A to D on SHEET 4 for details.

Maximum of 6 lots for 134 McGregor Road superlot subject to detailed land capability assessment, avoidance of rock outcrops to maximum extent and setback of building envelopes from the waterway reserve. Building envelopes for all lots to be setback minimum 20m from reserve boundaries.

Indicative proposed road alignment along top of escarpment. See cross section E on SHEET 5.

Culvert crossing of watercourse to be detailed in future engineering design. See cross section F on SHEET 5.

Connection under proposed permit PLN 2018541.

Reserve, maintenance track, lots and building envelopes within 88 Bennett Road are subject to detailed review.

NOTES

- * Contours shown represent approximate existing surface.
- * Contour interval 1m.
- * Road alignment to be clarified under permit application.
- * Drainage line/creek only flows during periods of heavy rainfall.
- * Drainage reserve to be vested in council is standard 60m wide and approx 30m from centreline and wider where shown.
- * Dams in watercourse are to be decommissioned. All other dams are to be considered at subdivision stage for any decommissioning.
- * Illustrative lots are shown as indicative only. Boundaries to be confirmed.
- * Minimum 2ha lot sizes for entire precinct.
- * Lots to be fully detailed under permit application.
- * Pedestrian paths along watercourse - see landscape plan. To be determined under permit applications at time of subdivision.
- * Staging of development proposed from the north-west.
- * See Servicing and Utilities Infrastructure Report for details on servicing and infrastructure provision to development sites. It outlines that all infrastructure cost within and adjoining development parcels and any required extension of roads and other infrastructure is to be borne by each development parcel.
- * Lot yield and lot configuration of 94 McGregor Road to be subject to detailed review.
- * Original sheet size is A1.

BUILDING ENVELOPES
RECOMMENDED SETBACKS FOR LOTS

Front/road setback = 30m
Side/rear setback = 10m
Drainage line buffer setback = 20m
*** Envelopes shown are for areas flatter than 1 in 6 grade to address the most sensitive land adjacent to the drainage line.**
* Envelope areas are shown in brackets.

LEGEND

- Trees within road reserve
- Indicative rock outcrops
- Dwelling
- Outbuilding
- Dam
- Drainage line
- Building envelope (only illustrated adjacent to drainage line)
- Drainage line escarpment: low to moderate slope
- Drainage line escarpment: greater slope
- Drainage line buffer (30m as shown)
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- Rural pedestrian path/bike track
- Existing titles
- BAR (Basic Right-Turn) Treatment
- Indicative drainage outfall location
- Proposed street light at intersection

SITE AREA AND YIELD

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15 McGregor Road	11.1ha	5
94 McGregor Road	31.9ha	12
134 McGregor Road	27.7ha	10
TOTAL	129.3ha	53

Subdivision Concept Development Plan and Subdivision Concept Development Plan for 128 & 168 Bennett Road, and 134 McGregor Road. A concept for the remaining area is provided as sought by DP018 (as shown dashed).

Bennett Road Development Plan: Subdivision Concept Plan with Aerial

Ver	Revision Description	Date	Checked	Approved
23	Minor Amendments	22/09/2021	Drafted	
22	Addressed Council Feedback	25/06/2021	Checked	
21	Minor Amendments	29/07/2020	J.Sens	P.Bowe
20	Addressed Council Feedback	21/07/2020	Sep 2021	Sep 2021
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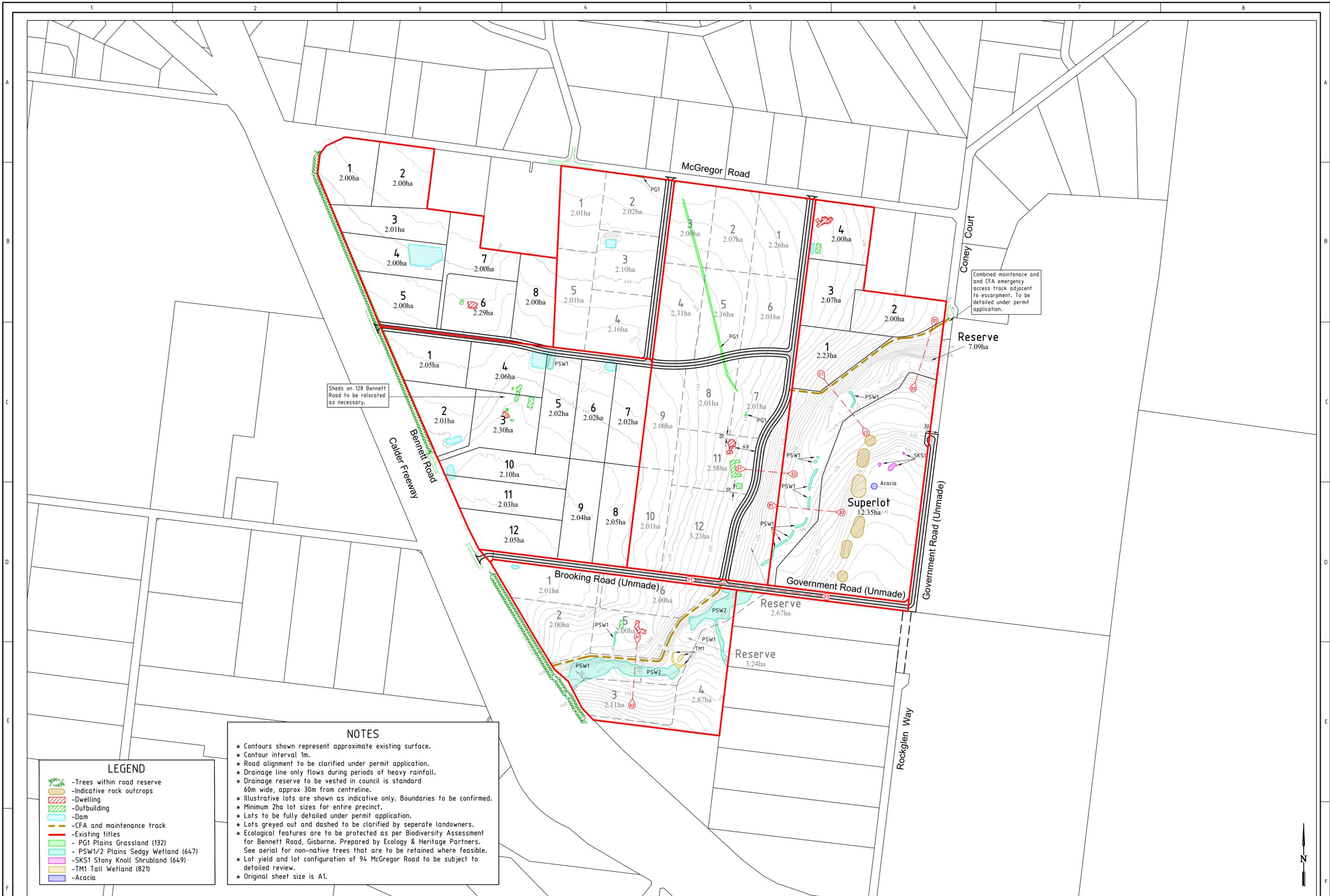
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All lengths are in metres and all levels are to Australian Height Datum (Original Sheet Size is A1)
Drawing file: 17085 Concept V23.dwg
LTO Ref: -
Council Ref: -
Water Auth. Ref: -
Our Ref: 17085
Version: 23
Sheet: 2 of 6

Macedon Ranges Shire Council - Gisborne
Bennett Road Precinct



Sheds on 128 Bennett Road to be relocated as necessary.

Combined maintenance and CFA emergency access track adjacent to escarpment. To be detailed under permit application.

NOTES

- * Contours shown represent approximate existing surface.
- * Contour interval 1m.
- * Road alignment to be clarified under permit application.
- * Drainage line only flows during periods of heavy rainfall.
- * Drainage reserve to be vested in council is standard 60m wide, approx 30m from centreline.
- * Illustrative lots are shown as indicative only. Boundaries to be confirmed.
- * Minimum 2ha lot sizes for entire precinct.
- * Lots to be fully detailed under permit application.
- * Lots greyed out and dashed to be clarified by separate landowners.
- * Ecological features are to be protected as per Biodiversity Assessment for Bennett Road, Gisborne. Prepared by Ecology & Heritage Partners. See aerial for non-native trees that are to be retained where feasible.
- * Lot yield and lot configuration of 94 McGregor Road to be subject to detailed review.
- * Original sheet size is A1.

LEGEND

- Trees within road reserve
- Indicative rock outcrops
- Dwelling
- Outbuilding
- Dam
- CFA and maintenance track
- Existing titles
- PG1 Plains Grassland (132)
- PSW1/2 Plains Sedgy Wetland (647)
- SKS1 Stony Knoll Shrubland (649)
- TM1 Tall Wetland (821)
- Acacia

Bennett Road Development Plan: Subdivision Concept Plan with Ecological Features

Ver	Revision Description	Date	Checked	Approved
23	Minor Amendments	22/09/2021	Drafted J.Sens	
22	Addressed Council Feedback	25/06/2021	Checked P.Bowe	
21	Minor Amendments	29/07/2020	Sep 2021	
20	Addressed Council Feedback	21/07/2020		
19	Amended Notations	21/02/2020		
18	Amended Notations and Layout	13/12/2019		
17	Amended Drainage Line Details	25/10/2019		

Notes/Legend

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Scale (m) 1:14,000

All lengths are in metres and all levels are to Australian Height Datum (Original Sheet Size is A1)

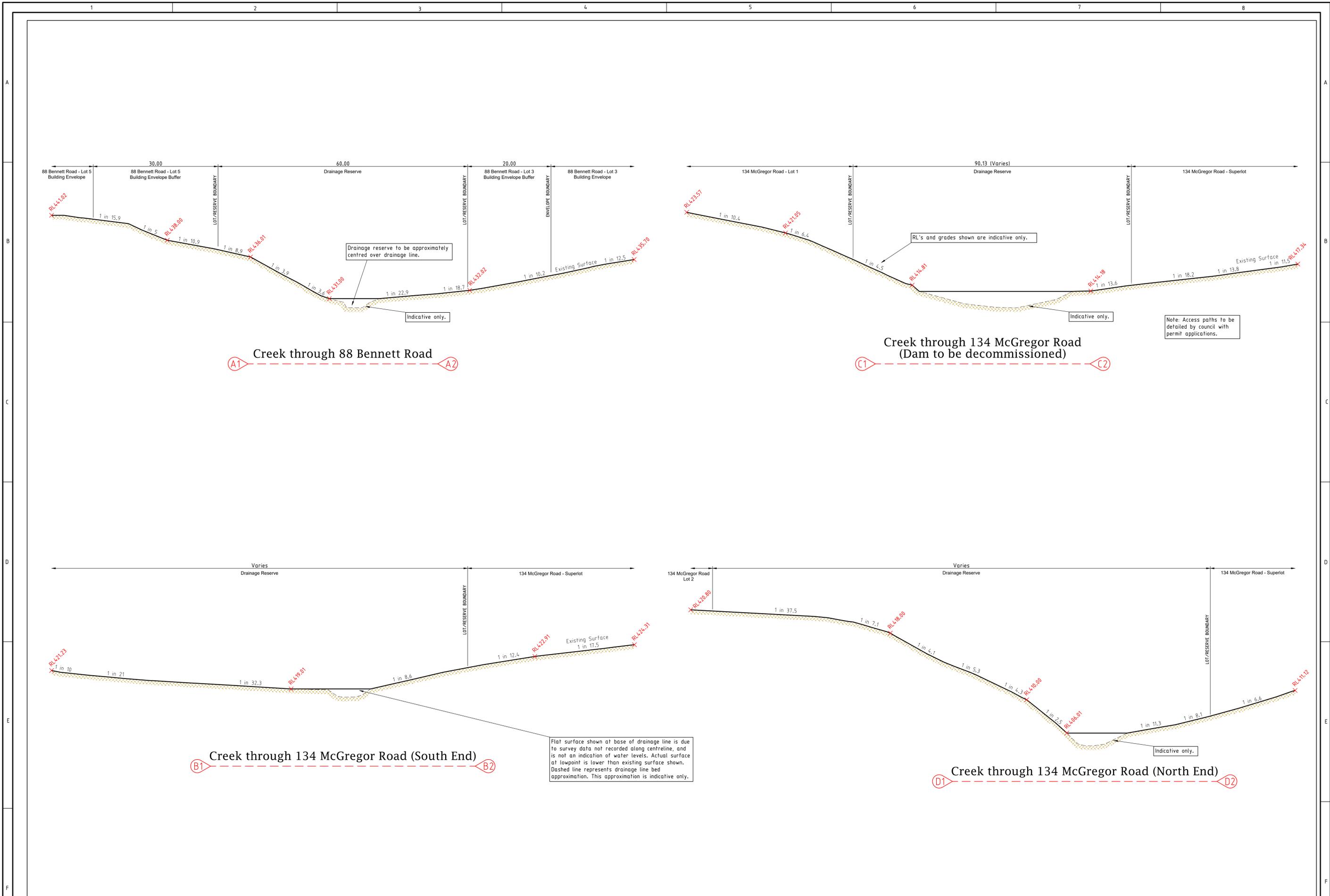
Drawing file: 17085 Concept V23.dwg

Macedon Ranges Shire Council - Gisborne

Bennett Road Precinct

Council Ref: -
Water Auth. Ref: -
Our Ref: 17085
Version: 23
Sheet: 3 of 6

Printed: 2021-10-11 9:58:08



Bennett Road Development Plan: Drainage Line Cross Sections

Ver	Revision Description	Date	Checked	Checked Date
23	Minor Amendments	22/09/2021	Drafted	J.Sens
22	Addressed Council Feedback	25/06/2021	Checked	P.Bowe
21	Minor Amendments	29/07/2020	Approved	Sep 2021
20	Addressed Council Feedback	21/07/2020		
19	Amended Notations	21/02/2020		
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17	Amended Drainage Line Details	25/10/2019		

Notes/Legend

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Scale (m)

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V 1:2000	0	2	4

All lengths are in metres and all levels are to Australian Height Datum (Original Sheet Size is A4)

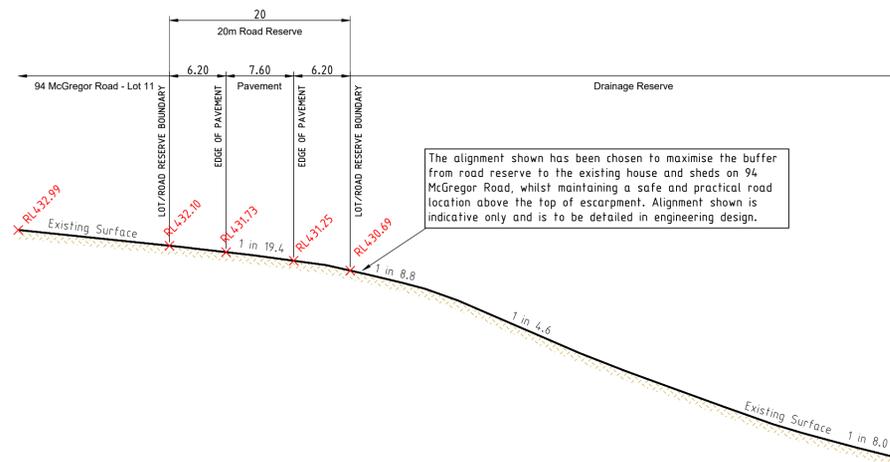
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Macedon Ranges Shire Council - Gisborne

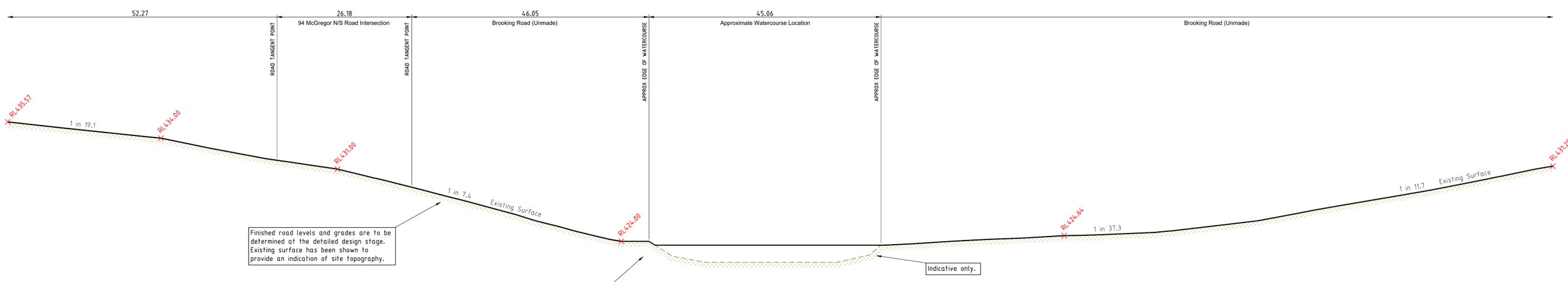
Bennett Road Precinct

Drawing Ref:	LTO Ref:	Council Ref:	Water Auth. Ref:	Our Ref:	Version	Sheet
17085 Concept	V23.dwg	-	-	17085	23	4 of 6

Printed: 2021-10-11 9:50:08



Road Alignment in 94 McGregor Road
Cross Section



Culvert Crossing of Watercourse
Longitudinal Section

Bennett Road Development Plan: Road Sections

Ver	Revision Description	Date	Checked	Checked Date
23	Minor Amendments	22/09/2021	Drafted	
22	Addressed Council Feedback	25/06/2021	J.Sent	Sep 2021
21	Minor Amendments	29/07/2020	P.Bowe	Sep 2021
20	Addressed Council Feedback	21/07/2020		
19	Amended Notations	21/02/2020	Approved	
18	Amended Notations and Layout	13/12/2019		
17	Amended Drainage Line Details	25/10/2019		

Notes/Legend	

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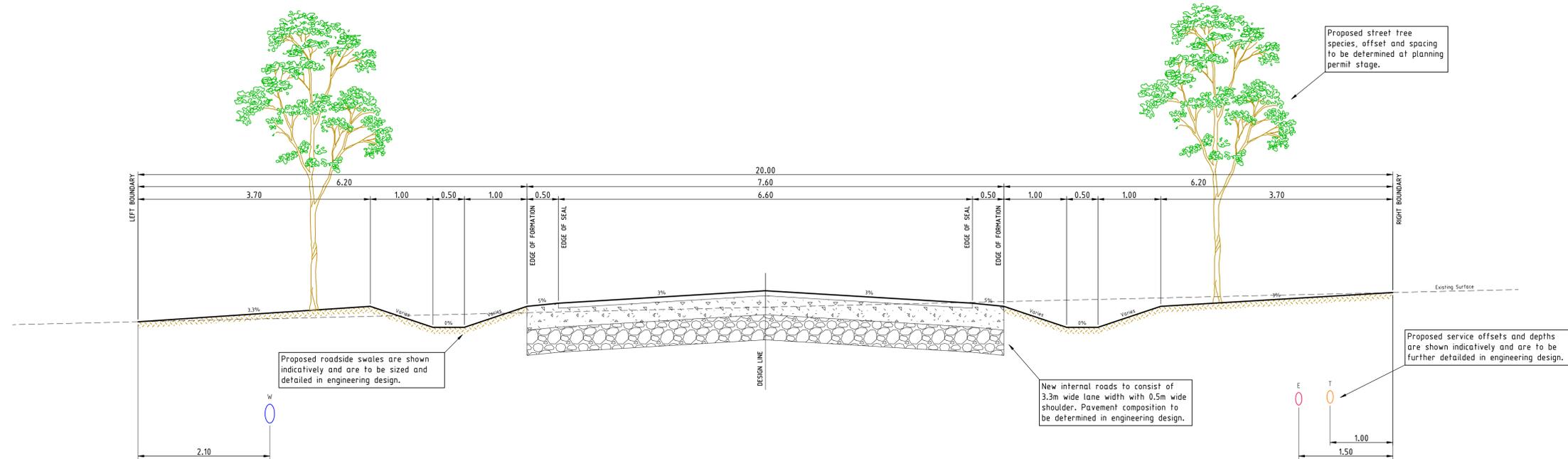
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Scale (m)
H 1:4000 0 4 8
V 1:2000 0 2 4

Macedon Ranges Shire Council - Gisborne
Bennett Road Precinct

Drawing file: 17085 Concept V23.dwg
LTO Ref: -
Council Ref: -
Water Auth. Ref: -
Our Ref: 17085
Version: 23
Sheet: 5 of 6

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Typical Cross Section - Internal Roads

Bennett Road Development Plan: Typical Road Cross Sections

Ver	Revision Description	Date	Drafted J.Sens Sep 2021	Checked P.Bowe Sep 2021	Approved
23	Minor Amendments	22/09/2021			
22	Addressed Council Feedback	25/06/2021			
21	Minor Amendments	29/07/2020			
20	Addressed Council Feedback	21/07/2020			
19	Amended Notations	21/02/2020			
18	Amended Notations and Layout	13/12/2019			
17	Amended Drainage Line Details	25/10/2019			

Notes/Legend

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Scale (m)

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0	0.2	0.4	0.8

All lengths are in metres
and all levels are to Australian Height Datum
(Original Sheet Size is A3)

Drawing file: 17085_Concept_V23.dwg
LTO Ref: -
Council Ref: -
Water Auth. Ref: -
Our Ref: 17085
Version: 23
Sheet: 6 of 6

Printed: 2021-10-11 9:04:08

Appendix 2.1 – Significant flora species

Table A2.2 Significant flora recorded within 10 kilometres of the study area

Key:

EPBC *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)

FFG *Flora and Fauna Guarantee Act 1988* (FFG Act)

DEPI *Advisory List of Threatened Flora in Victoria* (DEPI 2014)

EX	Extinct	X	Extinct
CR	Critically endangered	e	Endangered
EN	Endangered	v	Vulnerable
VU	Vulnerable	r	Rare
K	Poorly Known (Briggs and Leigh 1996)	k	Poorly Known
#	Records identified from EPBC Act Protected Matters Search Tool.	L	Listed
*	Records identified from the FIS		

1	Known occurrence	Recorded within the study area recently (i.e. within ten years)
2	High Likelihood	Previous records of the species in the local vicinity; and/or, The study area contains areas of high quality habitat.
3	Moderate Likelihood	Limited previous records of the species in the local vicinity; and/or, The study area contains poor or limited habitat.
4	Low Likelihood	Poor or limited habitat for the species however other evidence (such as a lack of records or environmental factors) indicates there is a very low likelihood of presence.
5	Unlikely	No suitable habitat and/or outside the species range.

Scientific name	Common name	Total # of documented records	Last documented record	EPBC	FFG	DEPI	Likely occurrence in study area
NATIONAL SIGNIFICANCE							
<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass #	-	-	VU	-	-	4
<i>Caladenia versicolor</i>	Candy Spider-orchid #	-	-	VU	L	e	5
<i>Dodonaea procumbens</i>	Trailing Hop-bush #	-	-	VU	-	v	5
<i>Eucalyptus aggregata</i>	Black Gum #	-	-	VU	L	e	5
<i>Glycine latrobeana</i>	Clover Glycine #	-	-	VU	L	v	4
<i>Pterostylis chlorogramma</i>	Green-striped Greenhood	1	1990	VU	L	v	4
<i>Senecio macrocarpus</i>	Large-headed Fireweed	1	1984	VU	L	e	4
<i>Senecio psilocarpus</i>	Swamp Fireweed	3	2016	VU		v	2
<i>Thelymitra matthewsii</i>	Spiral Sun-orchid #	-	-	VU	L	v	5
<i>Xerochrysum palustre</i>	Swamp Everlasting	9	2016	VU	L	v	2
<i>Caladenia tensa</i>	Greencomb Spider-orchid #	-	-	EN	-	v	4
<i>Dianella amoena</i>	Matted Flax-lily	27	2016	EN	L	e	2
<i>Lachnagrostis adamsonii</i>	Adamson's Blown-grass #	-	-	EN	L	v	5
<i>Lepidium hyssopifolium</i> s.s.	Basalt Peppercross	1	1977	EN	L	e	4
<i>Leucochrysum albicans</i> var. <i>tricolor</i>	Hoary Sunray#	-	-	EN	-	e	5
<i>Prasophyllum frenchii</i>	Maroon Leek-orchid #	-	-	EN	L	e	5
<i>Rutidosia leptorhynchoides</i>	Button Wrinklewort #	-	-	EN	L	e	5
<i>Pimelea spinescens</i> subsp. <i>Pubiflora</i>	Wimmera Rice-flower #	-	-	CR	L	e	5
STATE SIGNIFICANCE							
<i>Acacia rostriformis</i>	Bacchus Marsh Wattle	8	2013		L	v	2
<i>Diuris punctata</i>	Purple Diuris	14	2001		L	v	3
<i>Geranium</i> sp. 1	Large-flower Crane's-bill	4	2010		L	e	3
<i>Pterostylis truncata</i>	Brittle Greenhood	35	2006		L	e	2

Scientific name	Common name	Total # of documented records	Last documented record	EPBC	FFG	DEPI	Likely occurrence in study area
<i>Stylidium armeria subsp. pilosifolium</i>	Hairy-leaf Triggerplant	7	2014		L	e	2
REGIONAL SIGNIFICANCE							
<i>Acacia howittii</i>	Sticky Wattle	4	2017			r	2
<i>Acacia leprosa s.s.</i>	Cinnamon Wattle	1	2009			k	2
<i>Acacia leprosa var. uninervia</i>	Large-leaf Cinnamon-wattle	1	2009			r	2
<i>Acacia nanodealbata</i>	Dwarf Silver-wattle	10	2011			r	2
<i>Austrostipa hemipogon</i>	Half-bearded Spear-grass	1	1990			r	5
<i>Bossiaea cordigera</i>	Wiry Bossiaea	1	2011			r	2
<i>Calochilus imberbis</i>	Naked Beard-orchid	5	1953			r	4
<i>Calochilus therophilus</i>	Slender Beard-orchid	1	2014			k	3
<i>Convolvulus angustissimus subsp. omnigracilis</i>	Slender Bindweed	3	2017			k	2
<i>Coronidium gunnianum</i>	Pale Swamp Everlasting	5	2011			v	3
<i>Corymbia maculata</i>	Spotted Gum	3	2017			v	1
<i>Desmodium varians</i>	Slender Tick-trefoil	2	2006			k	3
<i>Dianella callicarpa</i>	Swamp Flax-lily	1	2005			r	3
<i>Dianella sp. aff. longifolia (Benambra)</i>	Arching Flax-lily	1	2017			v	2
<i>Dipodium pardalinum</i>	Spotted Hyacinth-orchid	11	2017			r	2
<i>Diuris X palachila</i>	Broad-lip Diuris	1	1900			r	5
<i>Eucalyptus globulus subsp. globulus</i>	Southern Blue-gum	3	2017			r	2
<i>Eucalyptus leucoxylon subsp. connata</i>	Melbourne Yellow-gum	18	2017			v	2
<i>Eucalyptus sideroxylon subsp. sideroxylon</i>	Mugga	2	2017			r	2
<i>Eucalyptus yarraensis</i>	Yarra Gum	3	2010			r	3
<i>Geranium solanderi var. solanderi s.s.</i>	Austral Crane's-bill	2	2017			v	2
<i>Grevillea repens</i>	Creeping Grevillea	1	1932			r	4
<i>Grevillea rosmarinifolia</i>	Rosemary Grevillea	4	2017			P	2

Scientific name	Common name	Total # of documented records	Last documented record	EPBC	FFG	DEPI	Likely occurrence in study area
<i>Lepidium pseudohyssopifolium</i>	Native Peppercress	1	1977			k	4
<i>Leucopogon microphyllus</i> var. <i>pilibundus</i>	Hairy Beard-heath	1	1980			r	4
<i>Melaleuca armillaris</i> subsp. <i>armillaris</i>	Giant Honey-myrtle	6	2016			r	2
<i>Microseris scapigera</i> s.s.	Plains Yam-daisy	2	1999			v	3
<i>Nicotiana suaveolens</i>	Austral Tobacco	1	1900			r	5
<i>Nymphoides montana</i>	Entire Marshwort	4	1985			r	4
<i>Platylobium montanum</i> subsp. <i>prostratum</i>	Mountain Flat-pea	4	2011			k	2
<i>Pleurosorus subglandulosus</i>	Glandular Blanket-fern	1	1895			k	5
<i>Poranthera corymbosa</i>	Clustered Poranthera	1	1982			r	4
<i>Prostanthera saxicola</i> var. <i>bracteolata</i>	Slender Mint-bush	3	1996			r	3
<i>Pterostylis rubescens</i>	Inland Red-tip Greenhood	1	2000			r	3
<i>Pultenaea reflexifolia</i>	Wombat Bush-pea	1	1932			r	4
<i>Rhagodia parabolica</i>	Fragrant Saltbush	10	2017			r	2
<i>Sclerolaena muricata</i> var. <i>muricata</i>	Black Roly-poly	2	1920			k	4
<i>Senecio cunninghamii</i> var. <i>cunninghamii</i>	Branching Groundsel	2	2010			r	3
<i>Senecio microbasis</i>	Slender Fireweed	1	2010			r	3
<i>Tetrateca stenocarpa</i>	Long Pink-bells	2	1996			r	3
<i>Thelymitra exigua</i>	Short Sun-orchid	1	1935			k	4

Data source: Victorian Biodiversity Atlas (DELWP 2015); Protected Matters Search Tool (DoE 2015).

Taxonomic order: Alphabetical.

Note: While the species listed in Table A3.2 are based on VBA data from 2018, the list has been cross-referenced with the latest FFG Act Threatened species list in order to ensure it appropriately reflects significant species data for the study area and surrounds. There are no changes to the conclusions and recommendations provided in the report.

Appendix 3.1 – Significant fauna species

Table A3.2. Significant fauna within 10 kilometres of the study area.

Habitat characteristics of significant fauna species previously recorded within 10 kilometres of the study area, or that may potentially occur within the study area were assessed to determine their likelihood of occurrence. The likelihood of occurrence rankings for each of the threatened species are:

1	High Likelihood	<ul style="list-style-type: none"> • Known resident in the study area based on site observations, database records, or expert advice; and/or, • Recent records (i.e. within five years) of the species in the local area (VBA 2011); and/or, • The study area contains the species' preferred habitat.
2	Moderate Likelihood	<ul style="list-style-type: none"> • The species is likely to visit the study area regularly (i.e. at least seasonally); and/or, • Previous records of the species in the local area (DSE 2011b); and/or, • The study area contains some characteristics of the species' preferred habitat.
3	Low Likelihood	<ul style="list-style-type: none"> • The species is likely to visit the study area occasionally or opportunistically whilst en route to more suitable sites; and/or, • There are only limited or historical records of the species in the local area (i.e. more than 20 years old); and/or, • The study area contains few or no characteristics of the species' preferred habitat.
4	Unlikely	<ul style="list-style-type: none"> • No previous records of the species in the local area; and/or, • The species may fly over the study area when moving between areas of more suitable habitat; and/or, • Out of the species' range; and/or, • No suitable habitat present.

EPBC *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)

FFG *Flora and Fauna Guarantee Act 1988* (FFG Act)

DSE Advisory List of Threatened Vertebrate Fauna in Victoria (DSE 2013); Advisory List of Threatened Invertebrate Fauna in Victoria (DSE 2009)

NAP National Action Plan (Cogger et al 1993; Duncan et al. 1999; Garnet and Crowley 2000; Lee 1995; Maxwell et al. 1996; Sands and New 2002; Tyler 1997)

EX	Extinct	DD	Data deficient (insufficiently or poorly known)
RX	Regionally extinct	L	Listed as threatened under FFG Act
CR	Critically endangered	I	Invalid or ineligible for listing under the FFG Act
EN	Endangered	#	Listed on the Protected Matters Search Tool
VU	Vulnerable	*	Additional information from the Victorian Fauna Database
RA	Rare		
NT	Near threatened		
CD	Conservation dependent		
LC	least concern		

Common Name	Scientific Name	Last Documented Record (VBA)	# Records (VBA)	EPBC Act	FFG ACT	DSE (2013)	National Action Plan	Likelihood
NATIONAL SIGNIFICANCE								
Eastern Quoll	<i>Dasyurus viverrinus</i>	1900	1	EN	L	RX	NT	4
Greater Glider	<i>Petauroides volans</i>	1990	4	VU	-	VU	VU	4
Long-nosed Potoroo	<i>Potorous tridactylus tridactylus</i> #	-	-	VU	L	NT	EN	4
Grey-headed Flying-fox	<i>Pteropus poliocephalus</i> #	-	-	VU	L	VU	VU	4
Smoky Mouse	<i>Pseudomys fumeus</i> #	-	-	EN	L	EN	RA	4
Australasian Bittern	<i>Botaurus poiciloptilus</i>	2017	4	EN	L	EN	VU	3
Plains-wanderer	<i>Pedionomus torquatus</i> #	-	-	CR	L	CR	EN	4
Australian Painted Snipe	<i>Rostratula australis</i> #	-	-	VU	L	CR	VU	4
Eastern Curlew	<i>Numenius madagascariensis</i> #	-	-	CR	-	VU	-	4
Curlew Sandpiper	<i>Calidris ferruginea</i> #	-	-	CR	-	EN	-	4
Swift Parrot	<i>Lathamus discolor</i>	2001	4	CR	L	EN	EN	3
Regent Honeyeater	<i>Anthochaera phrygia</i>	1975	2	CR	L	CR	EN	3
Painted Honeyeater	<i>Grantiella picta</i> #	-	-	VU	L	VU	NT	4
Pink-tailed Worm-Lizard	<i>Aprasia parapulchella</i> #	-	-	VU	L	EN	-	4
Striped Legless Lizard	<i>Delma impar</i> #	-	-	VU	L	EN	VU	4
Grassland Earless Dragon	<i>Tympanocryptis pinguicollis</i> #	-	-	EN	L	CR	VU	4
Growling Grass Frog	<i>Litoria raniformis</i>	2000	8	VU	L	EN	VU	2
Dwarf Galaxias	<i>Galaxiella pusilla</i> #	-	-	VU	L	EN	VU	4
Australian Grayling	<i>Prototroctes maraena</i> #	-	-	VU	L	VU	VU	4
Murray Cod	<i>Maccullochella peelii</i>	1974	2	VU	L	VU	-	4
Macquarie Perch	<i>Macquaria australasica</i>	1970	1	EN	L	EN	DD	4
Golden Sun Moth	<i>Synemon plana</i>	2006	4	CR	L	CR	-	2
STATE SIGNIFICANCE								
Brush-tailed Phascogale	<i>Phascogale tapoatafa</i>	2016	14	-	L	VU	NT	3
Common Dunnart	<i>Sminthopsis murina murina</i>	1990	2	-	-	VU	-	4
Musk Duck	<i>Biziura lobata</i>	1977	5	-	-	VU	-	3
Australasian Shoveler	<i>Anas rhynchotis</i>	1975	2	-	-	VU	-	3

Common Name	Scientific Name	Last Documented Record (VBA)	# Records (VBA)	EPBC Act	FFG ACT	DSE (2013)	National Action Plan	Likelihood
Hardhead	<i>Aythya australis</i>	1975	2	-	-	VU	-	3
White-throated Needletail	<i>Hirundapus caudacutus</i>	1990	6	-	-	VU	-	4
Eastern Great Egret	<i>Ardea modesta</i>	1977	7	-	L	VU	-	3
Intermediate Egret	<i>Ardea intermedia</i>	1975	2	-	L	EN	-	3
Black Falcon	<i>Falco subniger</i>	1975	2	-	-	VU	-	3
Lewin's Rail	<i>Lewinia pectoralis pectoralis</i>	2017	1	-	L	VU	NT	1
Baillon's Crake	<i>Porzana pusilla palustris</i>	1975	4	-	L	VU	-	3
Common Sandpiper	<i>Actitis hypoleucos</i>	1977	2	-	-	VU	-	3
Common Greenshank	<i>Tringa nebularia</i> #	-	-	-	-	VU	-	4
Caspian Tern	<i>Hydroprogne caspia</i>	1977	1	-	L	NT	-	3
Powerful Owl	<i>Ninox strenua</i>	2008	9	-	L	VU	-	3
Barking Owl	<i>Ninox connivens connivens</i>	1975	2	-	L	EN	NT	3
Masked Owl	<i>Tyto novaehollandiae novaehollandiae</i>	1975	2	-	L	EN	NT	3
Brown Treecreeper (south-eastern ssp.)	<i>Climacteris picumnus victoriae</i>	1977	3	-	-	NT	NT	3
Chestnut-rumped Heathwren	<i>Calamanthus pyrrhopygius</i>	1990	2	-	L	VU	-	4
Speckled Warbler	<i>Chthonicola sagittatus</i>	1990	8	-	L	VU	NT	4
Hooded Robin	<i>Melanodryas cucullata cucullata</i>	1990	3	-	L	NT	NT	4
Diamond Firetail	<i>Stagonopleura guttata</i>	2005	6	-	L	NT	NT	3
Tussock Skink	<i>Pseudemoia pagenstecheri</i>	2003	1	-	-	VU	-	2
Brown Toadlet	<i>Pseudophryne bibronii</i>	1989	3	-	L	EN	DD	3
REGIONAL SIGNIFICANCE								
Fat-tailed Dunnart	<i>Sminthopsis crassicaudata</i>	1967	3	-	-	NT	-	3
Pied Cormorant	<i>Phalacrocorax varius</i>	2017	3	-	-	NT	-	1
Nankeen Night Heron	<i>Nycticorax caledonicus hillii</i>	2011	5	-	-	NT	-	2
Royal Spoonbill	<i>Platalea regia</i>	1975	3	-	-	NT	-	3
Spotted Harrier	<i>Circus assimilis</i>	1977	1	-	-	NT	-	3
Latham's Snipe	<i>Gallinago hardwickii</i>	2016	7	-	-	NT	-	2
Pectoral Sandpiper	<i>Calidris melanotos</i> #	-	1	-	-	NT	-	4
Whiskered Tern	<i>Chlidonias hybridus javanicus</i>	1975	2	-	-	NT	-	3

Common Name	Scientific Name	Last Documented Record (VBA)	# Records (VBA)	EPBC Act	FFG ACT	DSE (2013)	National Action Plan	Likelihood
Azure Kingfisher	<i>Alcedo azurea</i>	1976	1	-	-	NT	-	3
Spotted Quail-thrush	<i>Cinlosoma punctatum</i>	1989	9	-	-	NT	-	3
Golden Perch	<i>Macquaria ambigua</i>	2012	3	-	-	NT	-	3

Data source: Victorian Biodiversity Atlas (DELWP 2015); Victorian Fauna Database (Viridans 2011b); Protected Matters Search Tool (DoE 2015).

Taxonomic order: Mammals (Strahan 1995 *in* Menkhorst & Knight 2004); Birds (Christidis & Boles, 2008); Reptiles and Amphibians (Cogger et al. 1983 *in* Cogger 1996); Fish (Nelson 1994).

Note: While the species listed in Table A3.2 . are based on VBA data from 2018, the list has been cross-referenced with the latest FFG Act Threatened species list in order to ensure it appropriately reflects significant species data for the study area and surrounds. There are no changes to the conclusions and recommendations provided in the report.

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