

PSP 2.0

**MERRIMU
WURUNDJERI COUNTRY
PRECINCT STRUCTURE PLAN**

**Key Issues &
Opportunities**

JULY 2022

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Contents

1	Outcomes & next steps	5
2	Introduction	10
3	Strategic context	14
4	Precinct features	17
5	Infrastructure & services	35
6	References	38

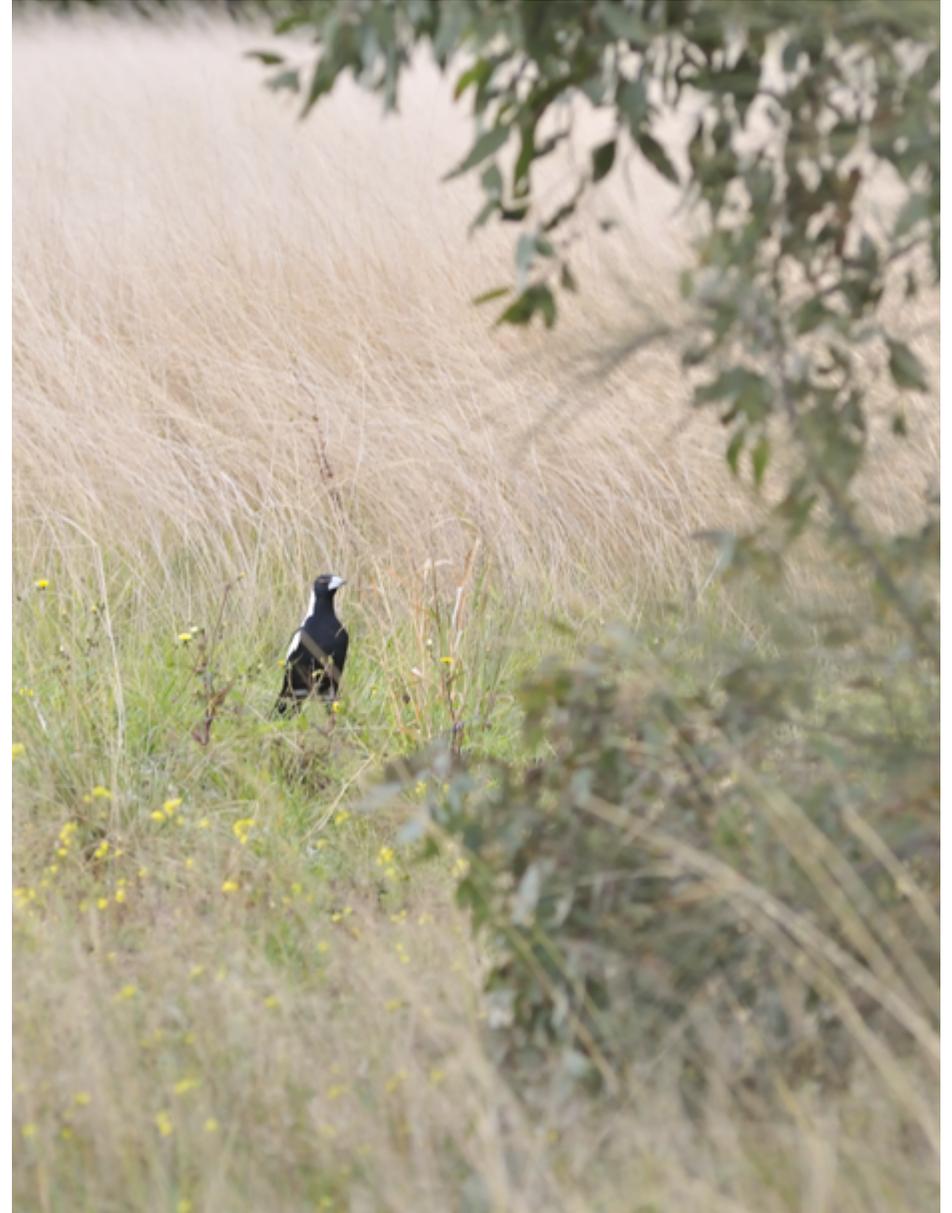
Graphics

Figure 1	Merrimu key considerations map	8
Figure 2	Cover of Precinct Structure Planning Guidelines	11
Figure 3	Aerial map of Merrimu	13
Figure 4	Merrimu PSP's regional context	14
Figure 5	Strategic outcome areas as identified in the Bacchus Marsh UGF	15
Figure 6	Key physical features	17
Figure 7	Separation distances	18
Figure 8	Cultural heritage sensitivity in Merrimu PSP	20
Figure 9	Historic heritage in Merrimu PSP	21
Figure 10	Trees mapped in Merrimu and land access	22
Figure 11	Biodiversity assessment areas (EHP, 2021)	23
Figure 12	Flora and fauna within Merrimu PSP	24
Figure 13	Ecological communities within Merrimu PSP	25
Figure 14	Bushfire planning – VPA map depicting setbacks as recommended in Bushfire Assessment and Development Report (Southern Cross Town Planning Pty Ltd, April 2021)	27
Figure 15	Proposed Western Renewables Link in the context of Merrimu PSP	29
Figure 16	Hydrological features of Merrimu PSP	31
Figure 17	Qualitative risk ranking for potential on and off-site sources of contamination (Jacobs, 2017)	32
Figure 18	Cross section of soils at or near the surface of the site (Source: Coffey, November 2020)	33
Figure 19	BMELR options that impact Merrimu precinct	36

Acknowledgement of Traditional Custodians

Before European settlement in 1835, Aboriginal people lived on the land now called Bacchus Marsh for tens of thousands of years. We acknowledge Aboriginal people as Australia's first peoples and as the traditional owners and custodians of the land and water on which we rely.

We recognise and value the ongoing contribution of Aboriginal people and communities to Victoria and how this enriches us. We embrace the spirit of reconciliation, working towards the equality of outcomes and ensuring an equal voice.



1 Outcomes & next steps

1.1 Vision

The vision for this PSP has been developed through community and stakeholder engagement as part of the Bacchus Marsh Urban Growth Framework (UGF) and subsequent VPA-led stakeholder workshops.

The UGF states:

The Merrimu precinct is the largest land ensemble within Bacchus Marsh. This area is capable of accommodating all of Bacchus Marsh's estimated growth to 2041. There is potential within Merrimu to create a number of smaller villages that provide different and complementary characters to suit a range of housing preferences. The projected population could support a number of activity centres. These will likely not only support the future Merrimu population, but also the Hopetoun Park and Long Forest communities.

Housing should be delivered at a range of densities, noting that some existing estates such as Dodemaide Court and Possum Tail Run are subject to covenants limiting future growth. These areas can be expected to remain as lifestyle lots. Elsewhere a mix of lot sizes will be appropriate, with transition in densities a key goal between older estates (such as Tucker Court, Streeton Drive) and newer housing estates.

Developer contributions from Merrimu's growth can be leveraged to deliver infrastructure that will benefit the wider district. Most prominently this will be the Eastern Link Road, but will also include essential community facilities and local roads. Merrimu should be developed in a progressive, continuous manner, moving from the existing urban areas (generally west to east and north to south, but ultimately guided by a precinct structure plan) and delivering an activity centre with each stage of development. An activity centre should be delivered in the early stages, to serve the existing Merrimu population.

Merrimu's anticipated population will create large-scale demand for activity centres and community facilities. This should be leveraged to deliver local jobs, including retail employment opportunities and jobs in health and community. A ratio of one job per housing lot would allow future residents the opportunity to live and work in the same neighbourhood.

Vision

The Merrimu PSP provides a robust framework for the delivery of a contemporary regional township that will deliver a distinctive, sustainable, high quality, high amenity community. Enhanced by an innovative approach to the early delivery of community and commercial facilities the community will provide a sensitive response to the unique landscape setting, creating a sense of connection and place that will be a hallmark of the precinct.

The Merrimu township will complement the existing Bacchus Marsh conurbation whilst maintaining a unique and distinct character. The Merrimu township will respond to the broader established character of Bacchus Marsh and maintain the rural setting of the precinct.

The western escarpment provides an opportunity for a continuous linear parkland corridor along the escapement edge that will provide a strategic active transport link and recreational trail. The escarpment edge will create a district local character and link the community to the surrounding areas.

1.2 Principles for the PSP

The following potential principles have been developed to give examples of the high-level aims that can be achieved through the PSP process:

- Plan for connected, sustainable communities
- Integrate transport and land use planning
- Create a precinct with high amenity and character and manage land use conflicts
- Create diverse and vibrant new communities
- Protect biodiversity, waterways and cultural heritage values
- Create integrated open space networks
- Ensure the efficient and orderly provision of infrastructure and services

These have been further refined to the following elements that will be considered during the place-based plan co-design workshop:

- Safe, accessible and well-connected
- High-quality public realm
- Land use and capability
- Connect people to jobs and higher order services
- Services and destinations
- Viable densities

1.3 Issues and opportunities

The issues and opportunities were identified through stakeholder engagement and technical analysis. They are grouped into four themes:

- 1 Heritage, environment and interfaces
- 2 Transport and movement
- 3 Community infrastructure and town centres
- 4 Housing densities and character.

Heritage, environment, water, sodic soils, and interfaces

Issues:

- Managing future development whilst protecting Aboriginal cultural heritage, post-colonial heritage and biodiversity
- Managing the interface with Bacchus Marsh Irrigation District, farming areas and the quarry to the west will be vital to ensure there are no conflicts between sensitive land uses and buffer throwing uses
- Managing bushfire risk and the need to locate vulnerable uses away from identified hazards
- Steep escarpment conditions and potential occurrence of erosive/sodic soils, which may constrain development opportunities and connections
- The impact of sodic and dispersive soils not being fully understood as well as the potential impact on the ability to supply services
- Location of the transmission line for the Western Renewables Link project is to be confirmed. Only a proposed alignment is known, which may impact visual amenity and views.

Opportunities:

- Protect Aboriginal cultural heritage and post-colonial heritage
- Escarpment provides precinct with unique view lines
- Unique biodiversity features and values can be preserved and incorporated into the precinct. Notable features include the escarpment and the interface with the Long Forest Flora and Fauna Reserve.
- Aspirational permeability targets, implementing best practice water capturing and closed loop system, passive irrigation innovations and use of alternate water
- Sodic soil further investigations are required to establish the large areas of the unencumbered landscape above the escarpment.

Transport and movement**Issues:**

- Risk of being isolated from public transport and good active transport to Bacchus Marsh
- Potential risk of creating a heavily car dominated precinct
- Escarpment and steep topography impact connectivity
- Increased demand on local road networks and associated performance issues with network
- Unknown preferred alignment Bacchus Marsh Eastern Link Road (BMELR) location.

Opportunities:

- Increased demand for more frequent or on-demand bus services,
- Develop active transport connections into Bacchus Marsh and Darley, and inclusion of walking and cycling tracks along the escarpment
- Develop well connected transport networks to support the 20-minute neighbourhood principle including connections to the BMELR

Community infrastructure and town centres**Opportunities**

- Location of town centres to best accommodate the 20-minute neighbourhood principle
- Precinct is large enough for a local town centre, primary school (government and non-government) and open space reserves
- Potential for Merrimu to be a regional tourism destination
- New office/co-working spaces
- Creating biodiversity links and green corridors
- Connection to Long Forest Flora and Fauna Reserve.

Housing densities and character**Issues:**

- Topography poses a risk that new development might negatively impact views and character of the existing Bacchus Marsh township if not well managed
- Landscaping (e.g. accommodating canopy trees, high value trees) contributes to neighbourhood character but there are concerns with resource and capacity to maintain canopy trees in good health.

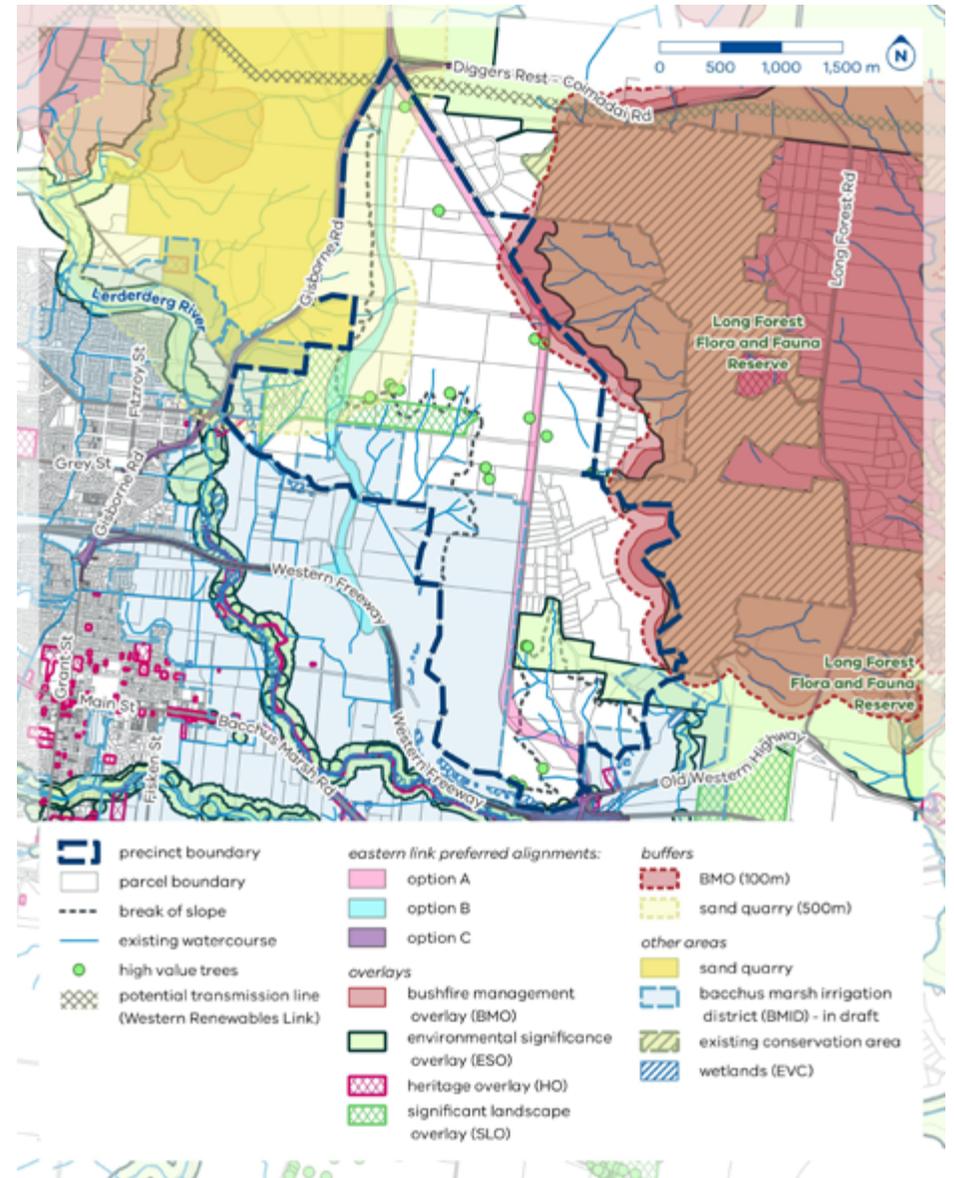
Opportunities:

- Escarpment provides precinct with unique view lines
- Higher densities within/around town centres to promote 20 minute neighbourhood principles.

1.4 Key considerations

Figure 1 presents a summary of key spatial considerations identified through technical studies for Merrimu.

Figure 1 Merrimu key considerations map



1.5 Next steps

Planning process

- 1 Co-design and community and stakeholder engagement to discuss key issues paper and drafting of the place-based plan.
- 2 Analysis and scenario testing that will inform the draft place-based plan.
- 3 Completion of Phase 2 background technical studies and any outstanding Phase 1 studies.
- 4 Community consultation.
- 5 Targeted agency validation of place-based plan and preparation of a draft planning scheme amendment package including draft precinct structure plan (PSP) and development contribution plan (DCP) that draws upon the key issues and opportunities paper, Phase 2 technical studies, and input received from council, state agencies, land-owners, developers and other stakeholders, as well as the community.
- 6 Exhibition via formal public engagement on the PSP, DCP and planning scheme amendment.
- 7 Submissions received and considered; may lead to changes to the exhibited plan and amendment documentation.
- 8 Unresolved submissions to be referred to Planning Panels Victoria.
- 9 Planning panel to be established to consider the amendment and submissions.
- 10 Planning Panels Victoria to prepare a planning report with the recommendations on the amendment.
- 11 PSP, DCP and planning scheme amendment is finalised in response to Planning Panels Victoria's recommendations.
- 12 The PSP, DCP and planning scheme amendment is submitted to the Minister Planning for approval to be incorporated into the Moorabool Planning Scheme.
- 13 Gazettal.

2 Introduction

The Victorian Planning Authority (VPA) in partnership with Moorabool Shire Council (MSC) is preparing the Merrimu Precinct Structure Plan (PSP). The Merrimu PSP will be designed to guide the urban development of Merrimu by setting a vision and developing a plan for new communities. The PSP is a long-term plan that will determine how the future community of Merrimu will develop.

This report provides context for the planning of the PSP and outlines how the preparation of the PSP will be guided by the range of strategies and policies that apply to the area, including:

- *Plan Melbourne 2017–2050*
- *Central Highlands Regional Growth Plan*
- *C81 The Bacchus Marsh Urban Growth Framework (UGF) November 2018*
- *The Moorabool Planning Scheme.*

2.1 Purpose of this report

This *Merrimu Precinct Structure Plan – Key Issues and Opportunities Paper* (the report) identifies the key issues for the precinct based on a site context analysis, review of existing literature, technical studies and consultation with key stakeholders.

Technical studies for Merrimu are being undertaken in two phases; this report contains key findings from Phase 1.

The objectives of this report are:

- To place the Merrimu precinct within a wider context including its relationship to the adjoining residential and employment areas including the Bacchus Marsh township, Hopetoun Park, Parwan Station Precinct and Parwan Employment Precinct.
- To identify significant features within the Merrimu precinct area and present the key opportunities and constraints for development
- To identify key elements and points of difference to surrounding areas that will inform the precinct's sense of place, community focus and structure

- To summarise the contents of the Phase 1 technical reports.

The report has been created as a background document and forms the basis of upcoming engagement with stakeholders as part of VPA's PSP 2.0 process and place-based plan co-design workshop and will be reflected in the draft place-based plan (PBP). It will ultimately inform the draft PSP.

2.2 PSP 2.0

The PSP 2.0 process sets aspirational targets including co-design of the precinct structure plan (PSP), streamlining PSP preparation and optimising the PSP product to embrace innovation, delivering government policy.

The 2.0 process aims to:

- Co-design a place-based plan
- Achieve up-front, early resolution of issues
- Gain better and earlier information on infrastructure demands to inform agency planning and budget bids
- Update guidance on PSP content reflecting new government policy and promoting innovation
- Provide stronger guidance in PSPs for staging of development.

Co-design for better development

Collaboration and co-design are at the heart of the new approach, bringing everyone to the table right from the start to plan, share ideas and opportunities, and to problem-solve early and collaboratively. Innovation is embraced and vision guides the process.

Each precinct structure plan will be planned with a unique vision and purpose, capitalising on the opportunities and constraints that set the precinct apart and ensure communities of the future are thriving and sustainable ones.

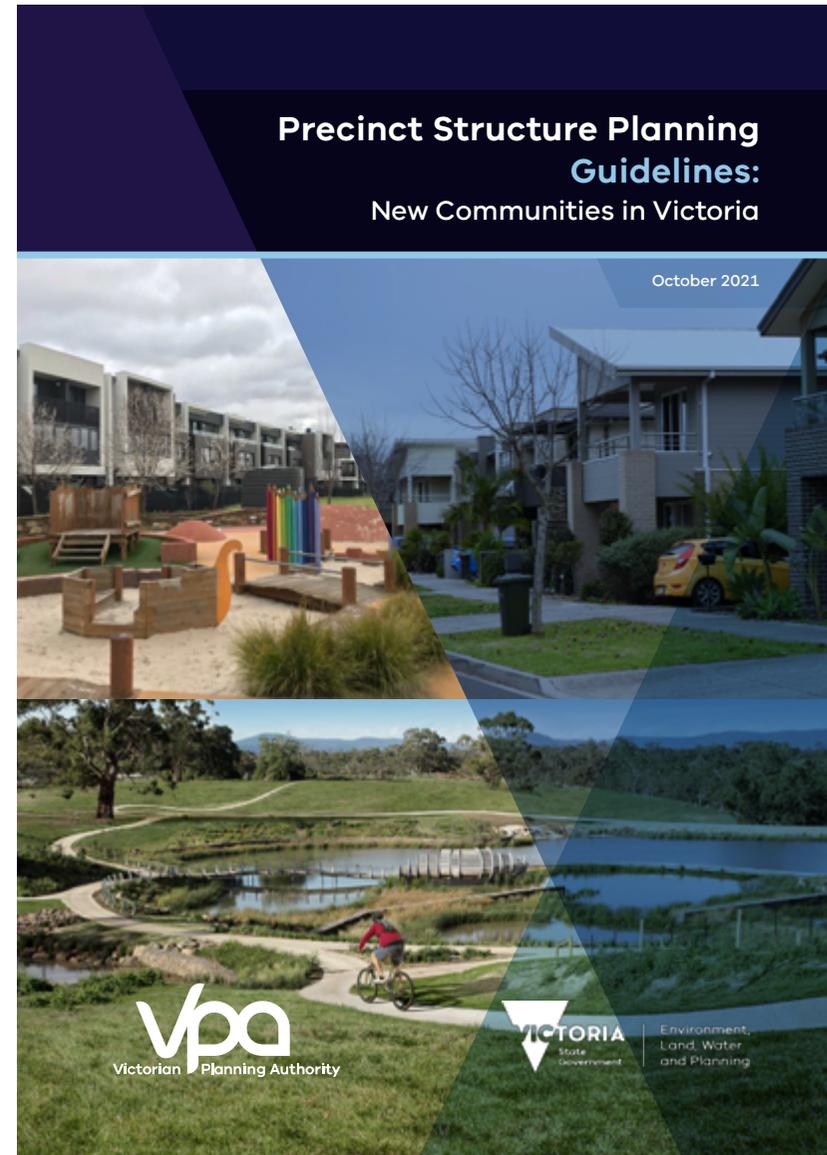
2.3 Precinct Structure Planning Guidelines: New Communities in Victoria (October 2021)

The *Precinct Structure Planning Guidelines: New Communities in Victoria* (the guidelines) is a Victorian Government initiative to ensure the Victorian Planning Authority (VPA) and other planning authorities prepare plans for places that enable best practice, liveable new communities for Victoria. It was released in October 2021 and is available on the [VPA website](#).

The purpose of the guidelines is to provide the framework for preparing PSPs that guarantees quality outcomes while also being flexible, responsive and supportive of innovation by setting aspirational goals for our future communities. The approach provides a transitory model enabling 20-minute neighbourhoods to evolve over time and achieve the objectives as the area matures.

The guidelines is based on planning for 20-minute neighbourhoods, a principle in *Plan Melbourne 2017–2050* (Plan Melbourne) that advocates for living locally to ensure accessible, safe and attractive local communities.

Figure 2 Cover of Precinct Structure Planning Guidelines



2.4 Overview of technical studies

The Phase 1 and Phase 2 technical studies are in various stages of completion. [Table 1](#) and [Table 2](#) summarise the status of each study.

Table 1 Status of Phase 1 studies

Phase 1 studies	Status
Aboriginal and historic heritage assessment	Undertaken over three separate reports. Awaiting review by registered Aboriginal party before they are published on VPA website
Arboriculture assessment	Finalised and published on VPA website
Biodiversity assessment	Draft report, published on VPA website
Buffers assessment	Draft report, working to resolve matters raised by EPA
Bushfire assessment	Draft report, published on VPA website
Integrated water management (IWM)	Bacchus Marsh IWM Strategy finalised in July 2021. Additional work specific to the Merrimu PSP will be undertaken in Phase 2
Soil sodicity and dispersiveness assessment	Draft report, published on VPA website Peer review of current study is being procured by VPA
Land capability assessment (contamination, geology, hydrology)	Draft report, published on VPA website
High level utility, servicing and infrastructure assessment	Draft report, published on VPA website

Table 2 Status of Phase 2 studies

Phase 2 studies	Status
Community infrastructure assessment	Draft jointly being prepared by VPA and council
Economic and retail assessment	Commenced
Integrated transport assessment	Commenced but on hold pending decision on the Bacchus Marsh Eastern Link Road
Integrated water management assessment	Consultant procurement underway
Infrastructure costing/land valuation estimates	Dependent on Bacchus Marsh Eastern Link preferred alignment resolution before commencement
Landscape and visual impact assessment	Consultant procurement underway

2.5 Merrimu Precinct Structure Plan

The Merrimu precinct was identified for future growth in the *Bacchus Marsh District Urban Growth Framework* (UGF). It will be a major new residential growth front to the north-east of Bacchus Marsh.

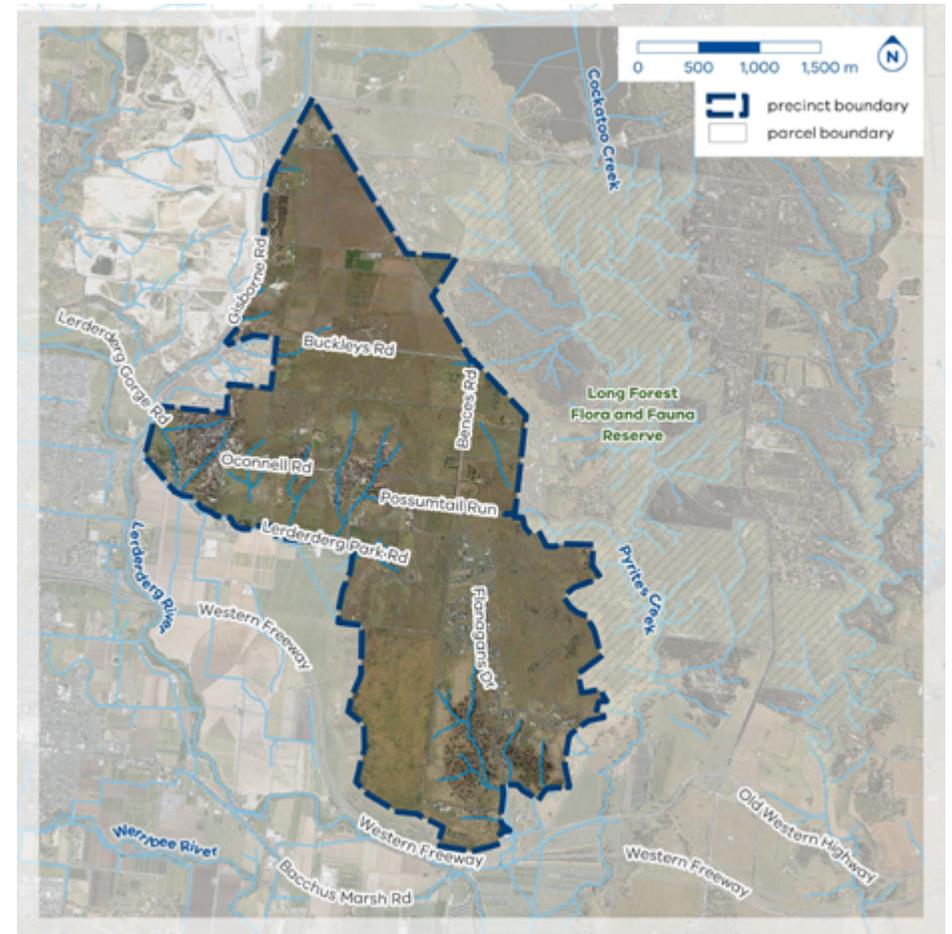
Merrimu will be a physically separate and distinct community, sitting atop an elevated plateau, but with strong connections to other communities in the Bacchus Marsh region, including Darley and central Bacchus Marsh to the west and Parwan to the south. It is located near other precincts identified in the UGF such as Parwan and Hopetoun Park North (see [Figure 5](#)).

The precinct could accommodate between approximately 5,980 to 6,800 households and up to 1,800 jobs, however lower yields may be a more appropriate planning response, given the often challenging land form, and peri-urban context. It will provide for a full range of local shopping and services and will be well-connected to central Bacchus Marsh for regional employment and services.

The study area is bound by Gisborne Road, Diggers Rest–Coimadai Road and Bences Road to the north and the Western Freeway to the south. The western boundary follows Gisborne Road, Lerderderg Park Road, rural property boundaries and at its most western extent Lerderderg River. The eastern boundary follows Cockatoo Creek (Pyrites Creek) and the western extent of Long Forest Nature Reserve.

The Lerderderg River runs to the south-west of the study area, and Pyrites Creek lays to the east of the study area. Both continue south to meet the Werribee River.

Figure 3 Aerial map of Merrimu



3 Strategic context

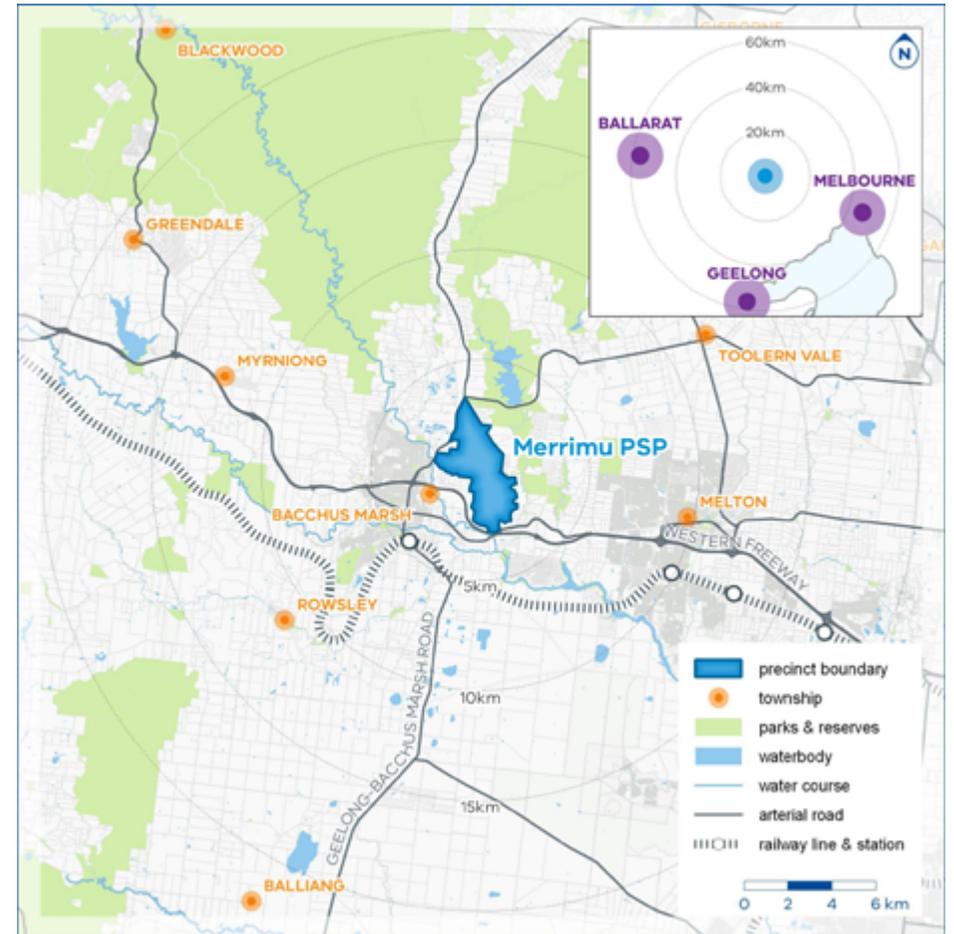
3.1 Regional context

Merrimu precinct is located in Bacchus Marsh, an urban centre located approximately 50 kilometres north-west of the Melbourne and 14 kilometres west of Melton. It is at a near equidistance to the major cities of Melbourne, Ballarat and Geelong.

Bacchus Marsh is experiencing rapid growth due to its ideal location and the jobs and opportunities this brings. Lifestyle and amenity are key growth drivers, along with affordable land and housing, and quality regional health and education facilities. High-quality surrounding rural landscapes and open space enhance liveability. Agriculture, natural resources (sand and coal) and local industry provide employment opportunities.

Bacchus Marsh is the largest urban area in the local government area of Shire of Moorabool. It is the second largest settlement in the Central Highlands region and the closest to Melbourne and is set to grow significantly over the coming decades.

Figure 4 Merrimu PSP's regional context



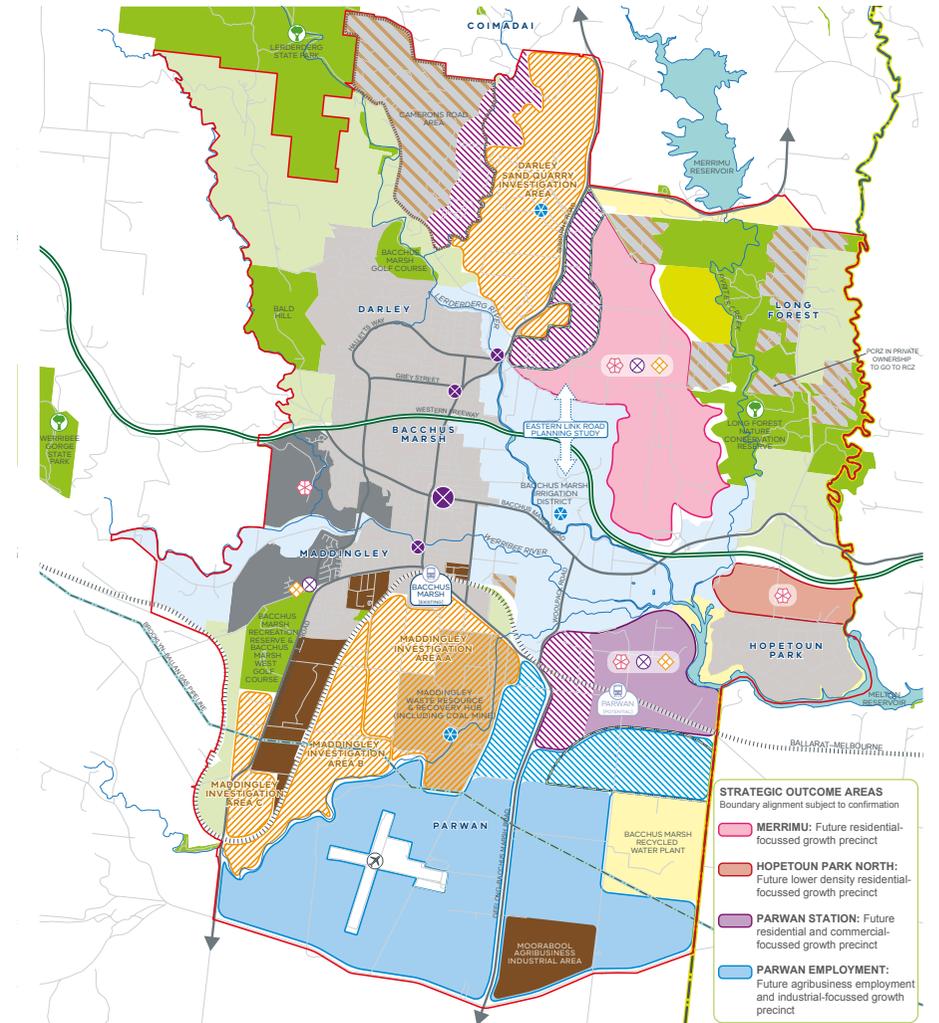
3.2 C81 Bacchus Marsh Urban Growth Framework 2018

The Bacchus Marsh Urban Growth Framework (UGF) was jointly prepared by Moorabool Shire Council and the VPA. State Planning Policy identified Bacchus Marsh as a peri-urban regional centre with potential for significant growth.

The UGF provides a long-term land use vision of how growth can be planned for, matched with coordinated infrastructure delivery by agencies and other stakeholders.

Merrimu is one of four **strategic outcome areas** identified to accommodate the bulk of future planned growth in the Bacchus Marsh district within the UGF (Figure 5). It is envisioned that it will encompass a large proportion of residential growth anticipated for Bacchus Marsh. The PSP is well located near other key development sites and will become a new suburb of Bacchus Marsh.

Figure 5 Strategic outcome areas as identified in the Bacchus Marsh UGF



3.3 Demographics

According to the Australian Bureau of Statistics (ABS), the estimated resident population of the Bacchus Marsh Statistical Area 2 (i.e. SA2 including Darley, Maddingley and Long Forest) in 2021 was just over 24,400. The latest ABS Census (2021) indicates that average household size was 2.7 in the same region.

The population of Bacchus Marsh is projected to double over the next two decades to around 40,000 residents (UGF) and will continue to grow beyond 2040 as the growth areas are built out. This will likely be driven by families with children as well as migrants (from interstate and overseas) based on patterns found in comparable areas. Consideration will need to be given to the potential effects of COVID-19 on demographic projections.

Considerations for the PSP

The PSP will plan for the future community by:

- Planning for housing diversity by guiding a range of residential densities and encouraging a range of housing types. It is envisioned that there will be higher densities around town centre hub locations with lower densities around the interface with rural areas, or potentially in areas with challenging land form.
- Providing community infrastructure in accordance with standard provision ratios and in consideration of facilities available in the surrounding areas.

4 Precinct features

The Merrimu precinct covers approximately 1,016 ha in total area and lies in the north-eastern area of Bacchus Marsh. It currently comprises both agricultural land and nature reserves and is partly located within the Bacchus Marsh Irrigation District. Once developed, it is envisioned to be a largely residential precinct with employment uses.

Lying on an elevated plateau, the area has a strong visual landscape with rolling hills and views that extend down to Bacchus Marsh. The plateau is relatively flat with extreme steepness around the escarpment where development is highly constrained. The escarpment area has the potential for Aboriginal cultural heritage and biodiversity values. Long Forest Reserve defines Merrimu PSP's eastern boundary and is a strong feature of the landscape in the area.

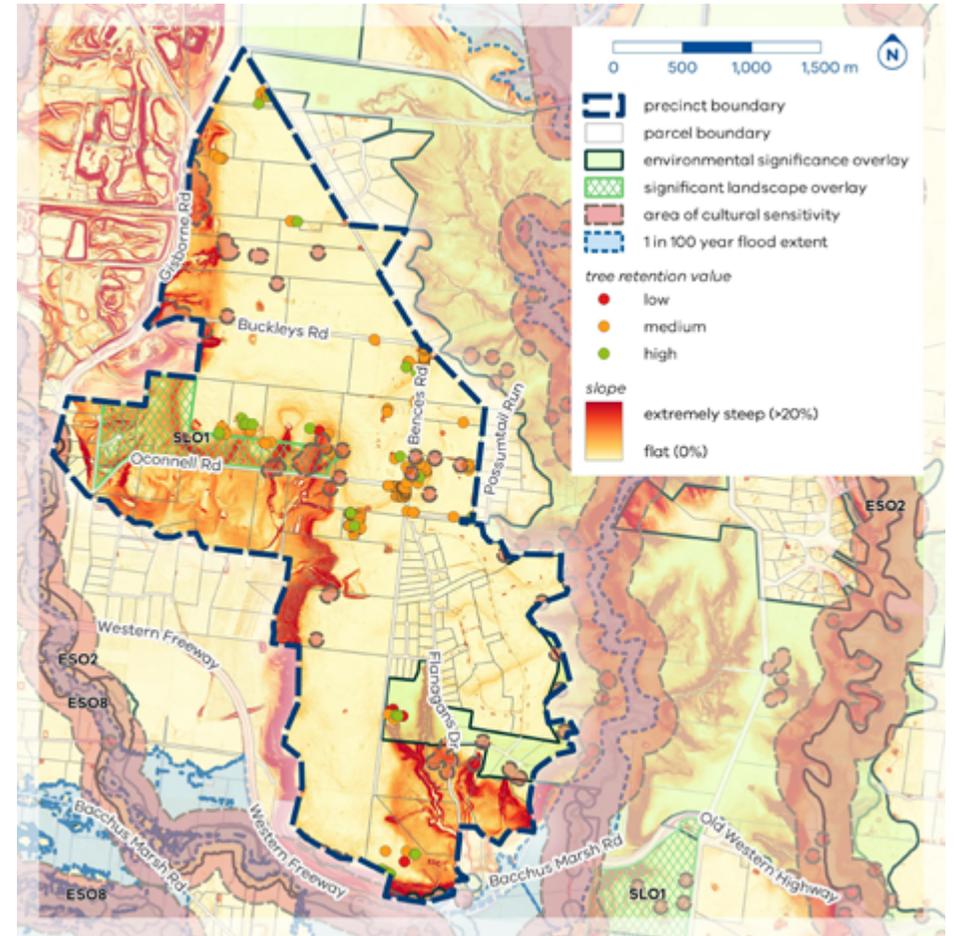
Considerations for the PSP

The steep areas near the escarpment will be highly constrained for development. Visual impact to the surrounding area will also be key.

Emerging opportunities

As part of an integrated approach, the PSP should take advantage of its natural features including the escarpment and the Long Forest Reserve. These are key landscape features that provide the opportunity for passive recreation, revegetation and education opportunities whilst also being a key view line within the precinct.

Figure 6 Key physical features



4.1 Buffers

There are three existing quarries in proximity to the subject area:

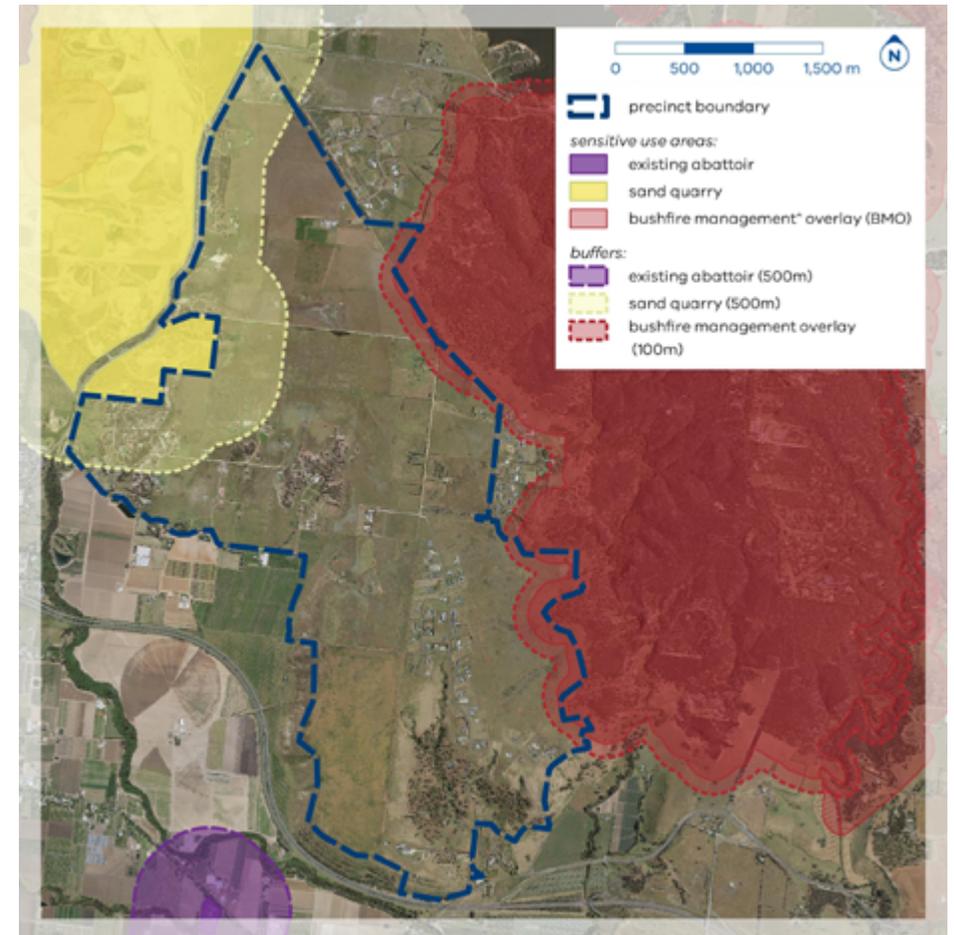
- **Boral sand quarry** – Rehabilitation in progress but still undertaking processing of materials
- **Boral sand quarry** – Continual rehabilitation in progress while extraction operation moves north, and
- **Hanson sand quarry** – Rehabilitation in progress but still undertaking processing of materials.

All three quarries contain respirable crystalline silica however blasting currently only occurs at the Boral quarry. The *Bacchus Marsh District Urban Growth Framework* imposed a 500 metre buffer interface required for sensitive uses (buffer) in accordance with *EPA Publication 1518 – Recommended Separation Distances for Industrial Residual Air Emissions, 2013* on the grounds that blasting occurs at the Boral quarry and all three quarries contain respirable crystalline silica.

Considerations for the PSP

During the C81 panel, Department of Jobs, Premier and Cabinet (DJPR) acknowledged that the buffer areas may be reduced, subject to a more detailed study. DJPR has identified the Darley Sand Quarries Investigation Area as being of State Significance due to its high potential to supply material, taking into account the surrounding natural, cultural, and existing land uses, and supporting transport networks.

Figure 7 Separation distances



4.2 Aboriginal cultural heritage assessment and cultural values assessment

This section has been redacted, pending finalisation of the Aboriginal Cultural Heritage Impact Assessment and Cultural Values Assessment, in association with the Wurrundjeri Woi Wurrung Cultural Heritage Corporation

This section has been redacted, pending finalisation of the Aboriginal Cultural Heritage Impact Assessment and Cultural Values Assessment, in association with the Wurrundjeri Woi Wurrung Cultural Heritage Corporation

4.3 Historic heritage

Post-contact heritage of the Merrimu precinct has been investigated over three separate studies:

- *Bacchus Marsh Urban Growth Framework Precinct Structural Plan, Merrimu, Victoria: Aboriginal and Historical Heritage Assessment* (Ecology and Heritage Partners, 3 December 2020)
- *Proposed Precinct Structure Plan (PSP), Additional Areas 1–4, Merrimu, Victoria: Aboriginal and Historical Heritage Assessment* (Ecology and Heritage Partners, 6 March 2020)
- *Bacchus Marsh Urban Growth Framework Precinct Structural Plan, Merrimu, Victoria: Desktop Aboriginal and Historical Heritage Assessment (Gap Study)*, (Ecology and Heritage Partners, 3 December 2020)

The studies document the known and potential post-contact heritage values throughout the Merrimu precinct.

One known historical heritage site is contained within the Merrimu precinct, HO180 (former Djerriwarrh State School/Djerriwarrh Creek School, 21 Lerderderg Park Road). No other historical heritage sites have been identified within the Merrimu precinct.

Some parcels were not able to be accessed during the studies. These parcels are considered to exhibit low potential for the presence of historical archaeological deposits. Further detailed survey of these parcels is highly recommended in order to avoid potential impacts to unidentified historical heritage.

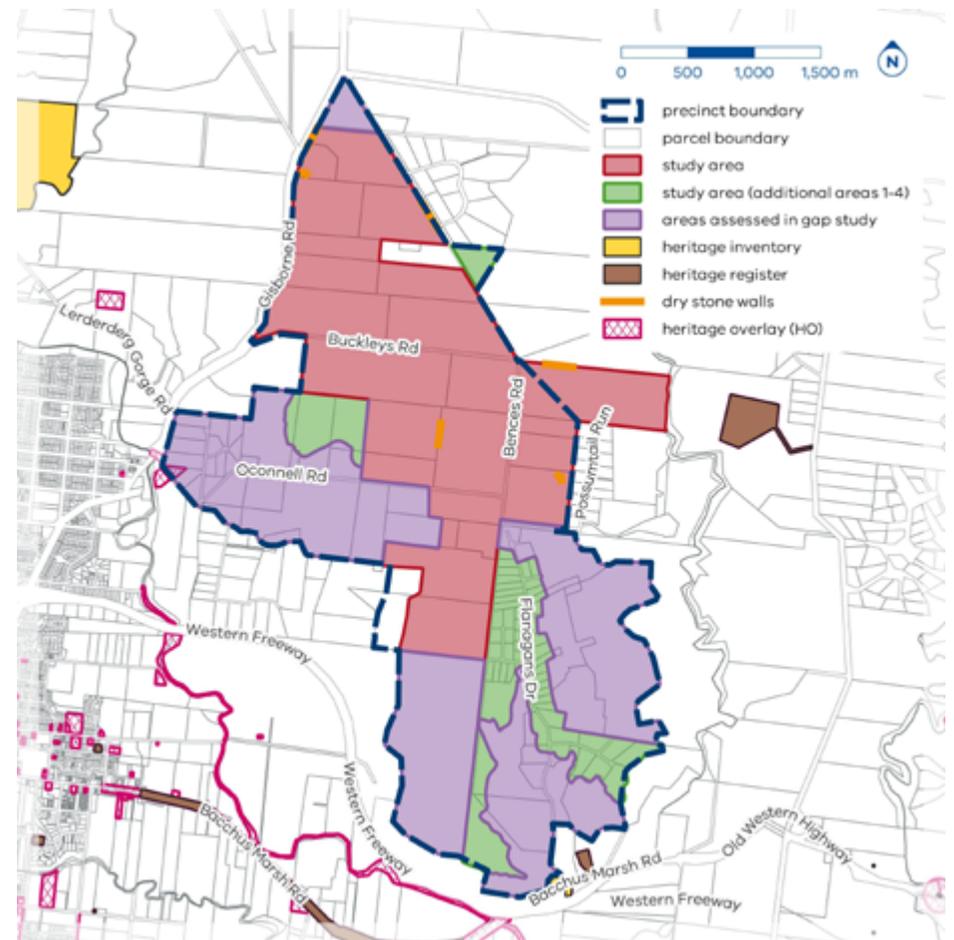
Considerations for the PSP

Recognition and retention of key historic areas will be vital in creating a sense of place and identity for the future community. This includes the former Djerriwarrh State School on Lerderderg Park Road which is the most significant known area of historic heritage within the precinct. Future development of historic heritage places should be minimised.

Emerging opportunities

The former Djerriwarrh State School at Lerderderg Park Road will be protected for its significant historic heritage. The retention and enhancement of these features will preserve historical links and strengthen the sense of place and identity for the future community.

Figure 9 Historic heritage in Merrimu PSP



4.4 Arboricultural assessment

The [arboricultural assessment](#) prepared by Homewood Consulting (March 2020) recommends that 23 **high retention value** trees are incorporated into final design plans and are retained in the Merrimu precinct. These trees should be incorporated into the final design plans and protected during demolition and construction.

As many trees as practicable of the 209 **medium retention value** trees in the Merrimu precinct should be incorporated into the design plans and retained and protected throughout development of the precinct.

Considerations for the PSP

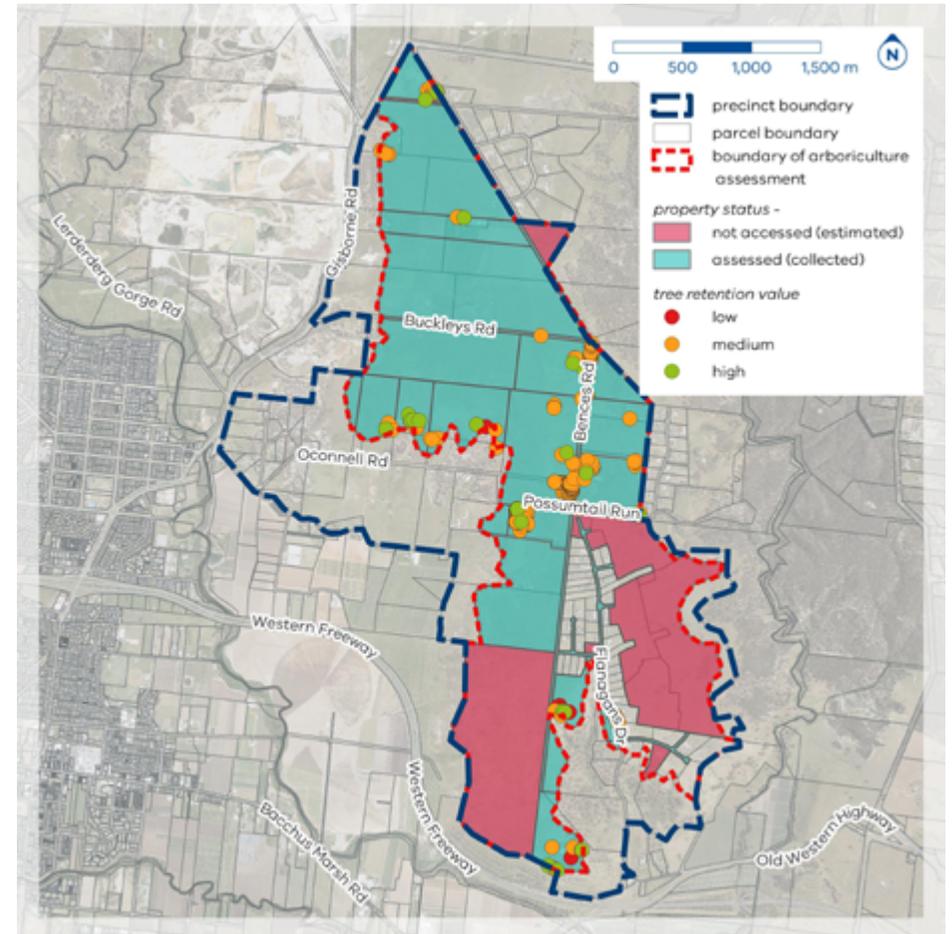
Tree protection measures need to be introduced to ensure retained trees are incorporated and continue to be assets in the landscape following subdivision and development. All trees to be retained require protection and the best way to protect trees is to establish a Tree Protection Zone (TPZ).

A native vegetation precinct plan will also need to be prepared during Phase 2 technical studies.

Emerging opportunities

Open space can be designated around tree clusters which would not only preserve habitat for wildlife but could also become a significant health and wellbeing asset for the community.

Figure 10 Trees mapped in Merrimu and land access



4.5 Biodiversity

Biodiversity assessment

Ecology and Heritage Partners (EHP) undertook a biodiversity assessment for the precinct. It is currently a draft and may be subject to change. Desktop and field assessments were undertaken by EHP. Additional surveys are required for some areas within the precinct as shown in [Figure 11](#). Some areas were assessed via desktop only due to restricted access. The PSP area was assessed in four sections:

- 1 BMD land
- 2 Long Forest Estate
- 3 Other assessed land (including BMELR alignment parcels 55 and 95 O’Connell Road)
- 4 Desktop assessment only.

Results

Most of the study area is highly modified due to past and current agricultural and farming practices and is dominated by pasture supporting non-indigenous grasses and weeds. Much of the indigenous vegetation and terrestrial fauna habitat remaining within the study area is confined to escarpments or agricultural areas not subjected to historical cropping activities.

Native vegetation, where present within existing farmland, is highly modified, with vegetation generally lacking structure and exhibiting a low diversity of native species.

See also [Figure 12](#) and [Figure 13](#).

Figure 11 Biodiversity assessment areas (EHP, 2021)

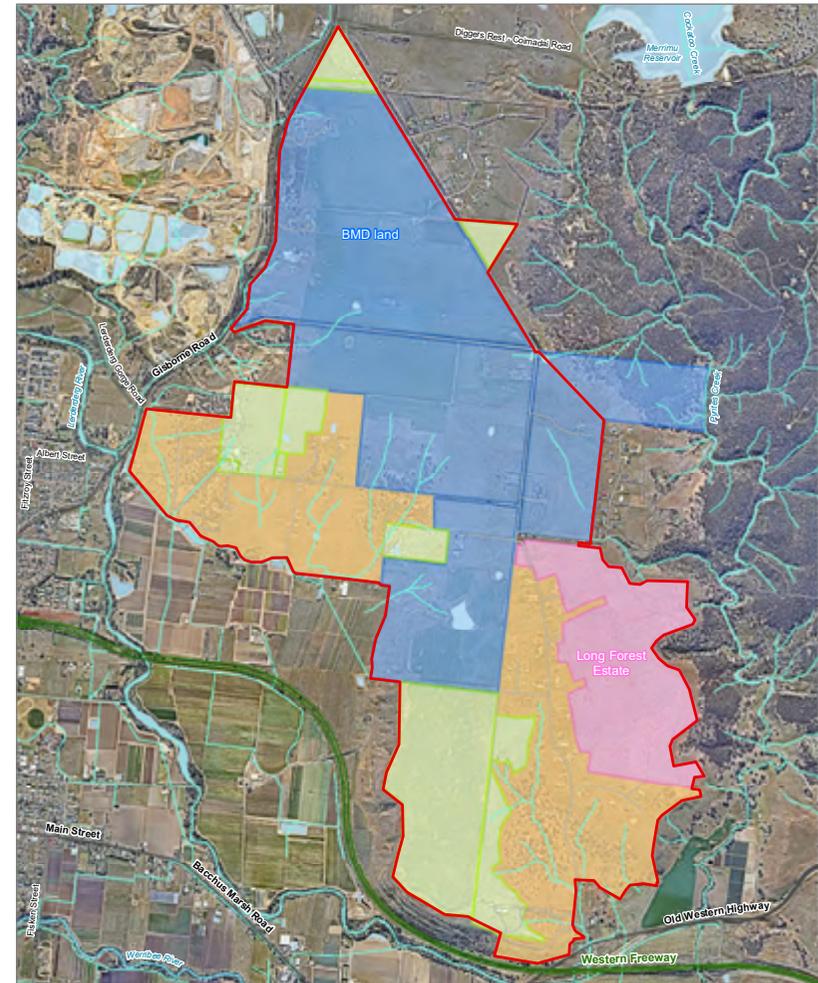


Figure 2
Assessment areas
Ecological Desktop
Assessment, Merrimu

Legend	
[Red outline]	Study Area
[Blue]	BMD land
[Pink]	Long Forest Estate
[Yellow]	Other assessed land
[Orange]	Desktop assessment only



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Aerial source: Nearmap 2018

Flora

The Spiny Rice-flower, a nationally-significant flora, exists on site. Other nationally-significant flora which has a high likelihood of occurrence in the study area include:

- Fragrant Saltbush
- Melbourne Yellow-gum
- Slender Bindweed
- Black Roly-poly
- Bacchus Marsh Wattle.

The above species are also considered State-significant species and were recorded within the study area.

There were also 15 species 'protected' under the *Flora and Fauna Guarantee Act 1988*.

There are suitable habitats in the study area for these State-significant species:

- Buloke
- Buloke Mistletoe
- Plains Joyweed
- Small Scurf-pea
- Austral Tobacco

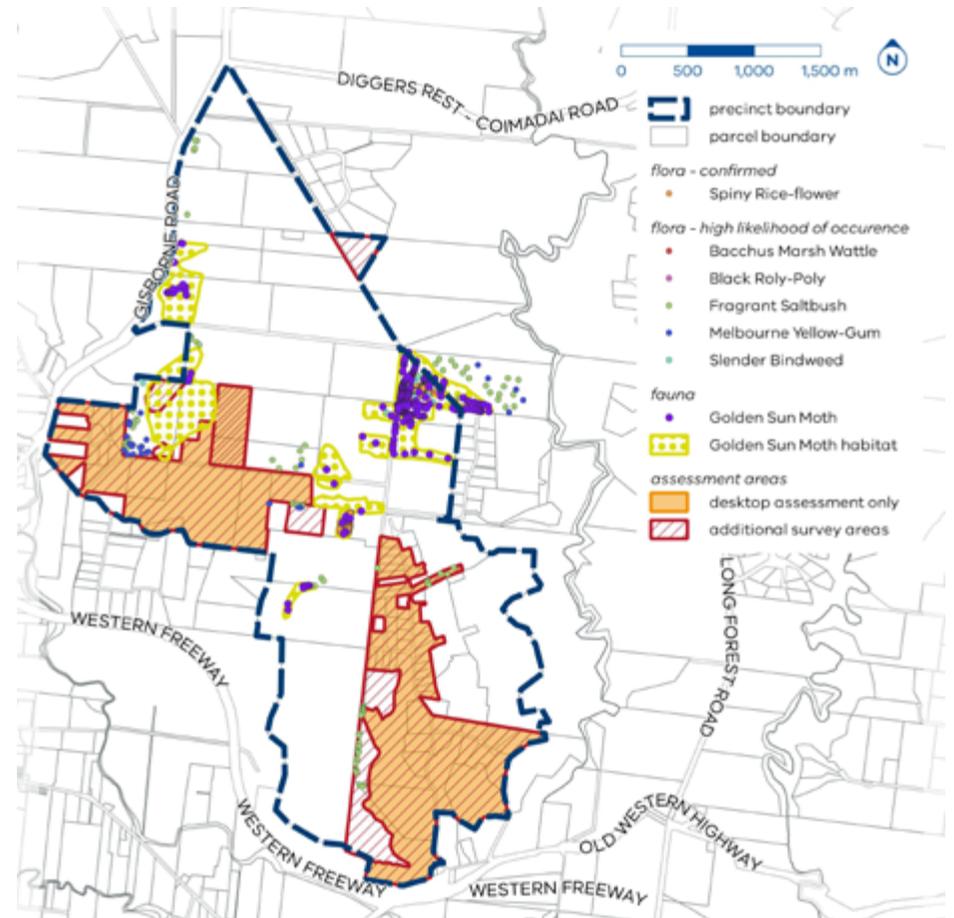
Fauna

Nationally-significant Golden Sun Moth was confirmed to be present within several properties in the PSP (Figure 12). Despite targeted surveys being undertaken, no Striped Legless Lizards were found. Growling Grass Frog was also not recorded despite targeted surveys.

There is potential habitat for State-significant species:

- Brown Treecreeper
- Hooded Robin
- Diamond Firetail
- Bull-ant
- Speckled Warbler

Figure 12 Flora and fauna within Merrimu PSP

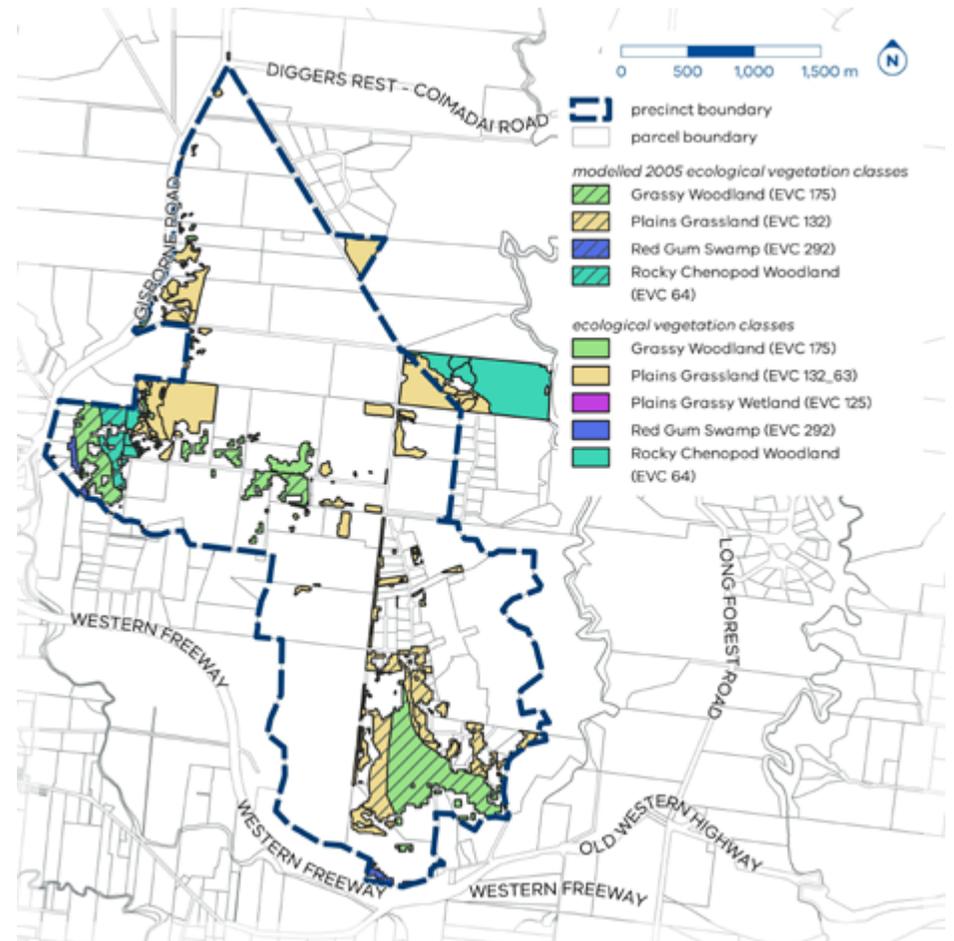


Ecological communities

Based on past and current mapping, a total of three significant ecological communities were recorded within the Merrimu PSP:

- 91.895 hectares of the nationally-significant Natural Temperate Grassland of the Victorian Volcanic Plain ecological community
- 90.065 hectares of the State-significant Western (Basalt) Plains Grassland ecological community, and
- 34.517 hectares of the State-significant Rocky Chenopod Open Scrub ecological community.

Figure 13 Ecological communities within Merrimu PSP



Considerations for the PSP

Based on the quality and extent of known habitats within the study area, it is highly likely that the extent of suitable habitat as shown on [Figure 12](#) and [Figure 13](#) extend beyond areas adequately surveyed to date. Given the time that has elapsed since the previous habitat hectare assessment within Long Forest Estate, it is recommended an updated assessment is undertaken to confirm the current quality and extent of native vegetation as well as the presence of suitable habitat for any significant flora and fauna.

Areas within the Merrimu PSP that have only been subject to a desktop assessment must also be subject to on ground assessments to confirm the current quality and extent of native vegetation as well as the presence of suitable habitat for any significant flora and fauna. Areas within the Merrimu PSP that have been identified as requiring further assessment are shown in [Figure 12](#).

Emerging opportunities

Retained ecological values should be enhanced and managed to assist in creating a more diverse, connected and resilient natural environment through improving ecosystem health, and develop a more ecologically connected urban landscape.

It is important that the enhancement of ecological values within the study area is not undermined through unrestricted and uncontrolled public access throughout retained areas. Public access should be restricted to clearly defined shared community facilities (i.e. BBQ areas, play equipment etc) that are accessible via a connected network of shared paths (walking and cycling shared paths).

Access to all other areas of retained high value native vegetation, revegetated areas and/or wetlands should be discouraged, and demarcated with informal signage and/or fencing where practical.

4.6 Bushfire

A bushfire assessment and development report (Southern Cross Town Planning Pty Ltd, April 2021) was commissioned for the Merrimu PSP. The draft report outlines how the future development of the precinct can be designed to mitigate and respond to the potential impact of bushfire threat.

The Merrimu PSP is within a Designated Bushfire Prone Area. There is a small area of land west of Bences Road within the PSP boundary that is subject to the Bushfire Management Overlay (BMO). The Merrimu precinct includes significant slopes around Pyrites Creek that influence bushfire behaviour.

Considerations for the PSP

The report recommends:

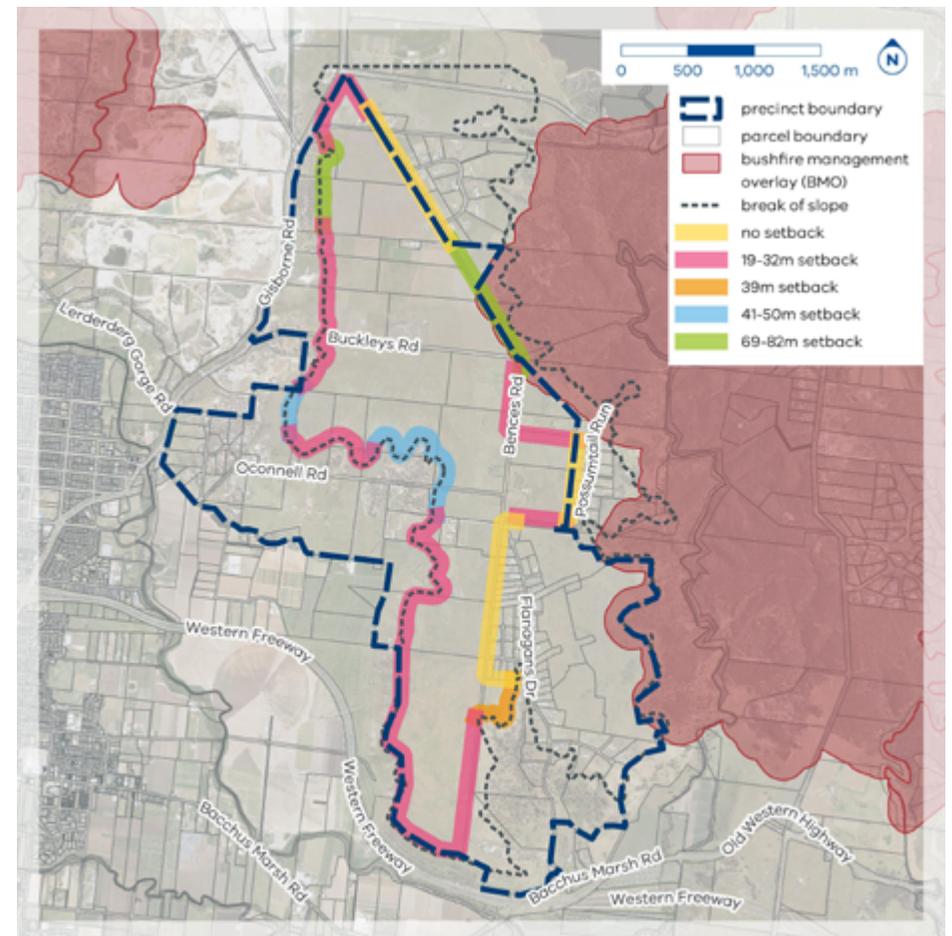
- Development should be located well-back from significant slopes around Pyrites Creek and forest vegetation to the east of the Merrimu precinct.
- Application of minimum BAL12.5 built form controls throughout the precinct in accordance with Bushfire Prone Area building requirements.
- Vegetation within the precinct to be managed in a low threat state.
- Careful consideration to the location of schools, childcare, community and aged-care facilities away from bushfire hazard to ensure no unnecessary risks to occupants and burdens to emergency services.
- Neighbourhood Safer Place to be located away from bushfire hazard and on a primary transport network.

Emerging opportunities

The report suggests that development of the Merrimu precinct can adequately respond to the bushfire hazard. The risk posed by landscape scale fires from the north and north-west are mitigated by

the distance to forested land and the interceding land use, vegetation type and topography. The Merrimu precinct should be designed to respond to and mitigate the bushfire risk posed by both the surrounding landscape and vegetation within the precinct.

Figure 14 Bushfire planning – VPA map depicting setbacks as recommended in Bushfire Assessment and Development Report (Southern Cross Town Planning Pty Ltd, April 2021)



4.7 Views

Due to the unique landscape of the precinct, there is an opportunity to maximise on views associated with the steep escarpment. A landscape and visual impact assessment will be undertaken as part of the Phase 2 studies to ensure that development does not negatively impact views in the area.

The landscape and visual impact assessment will provide recommendations to the VPA for requirements and guidelines in relation to the development potential of visually sensitive areas within the subject sites, which will likely form an important basis for neighbourhood design in environmentally or scenically sensitive areas.

The findings of this work will be provided in the future Stage 2 issues and opportunities paper.

Particular areas of consideration include:

1 Escarpment interface plan

Development at the edge of the plateau

- Consideration of how future residential land use and key infrastructure such as roads can be carefully aligned to minimize visual impact from key vantage points such as the Bacchus Marsh Irrigation District and Western Freeway.
- A landscape and visual amenity tests to assess the profile of possible development scenarios on elevated land and hilltops from key vantage points, including the Bacchus Marsh Town Centre, Bacchus Marsh Irrigation District and Western Freeway.

Development on the slopes of the escarpment

- Understand the management of development on sloping land.
- Identify the optimum potential for residential development in areas of the subject sites with a high slope, in line with best practice examples of similar development.
- Develop examples of street and residential development cross-sections on significant slope.

2 Development of a town centre concept plan

- Identify suitable locations and layout of town centres retail precincts and neighbourhood centres that maximise walkability and connectivity within the future precincts.
- Urban design and layout solutions that promote visual and physical linkages between the central areas of the future precincts and the escarpment and existing landscape environment (either rural or natural) beyond the subject site.

3 Buffers and transitions to sensitive areas and existing residential lots

- Identify potential outcomes/opportunities for a soft transition between conventional fine-grained suburban parcels to larger lot arrangements (in particular existing rural residential settlements and environmentally sensitive areas).
- Consideration of the environmental constraints and risks such as biodiversity, soil type and bushfire protection.

4.8 Western Renewables Link Project

The AusNet Transmission Group Pty Ltd (AusNet Services) via its commercial division, Mondo Power Pty Ltd is proposing to deliver the Western Renewables Link, a proposed new 190km overhead high voltage electricity transmission line from Bulgana to Sydenham. The Western Renewables Link enables renewable energy connections from the west of Victoria to the National Electricity Market.

The current proposed alignment (specifically where the 500kV transmission line is proposed) falls within the northern portion of the Merrimu precinct (see [Figure 15](#)). The proposed alignment is yet to be approved and is subject to an environment effects statement, which is being prepared by AusNet Services.

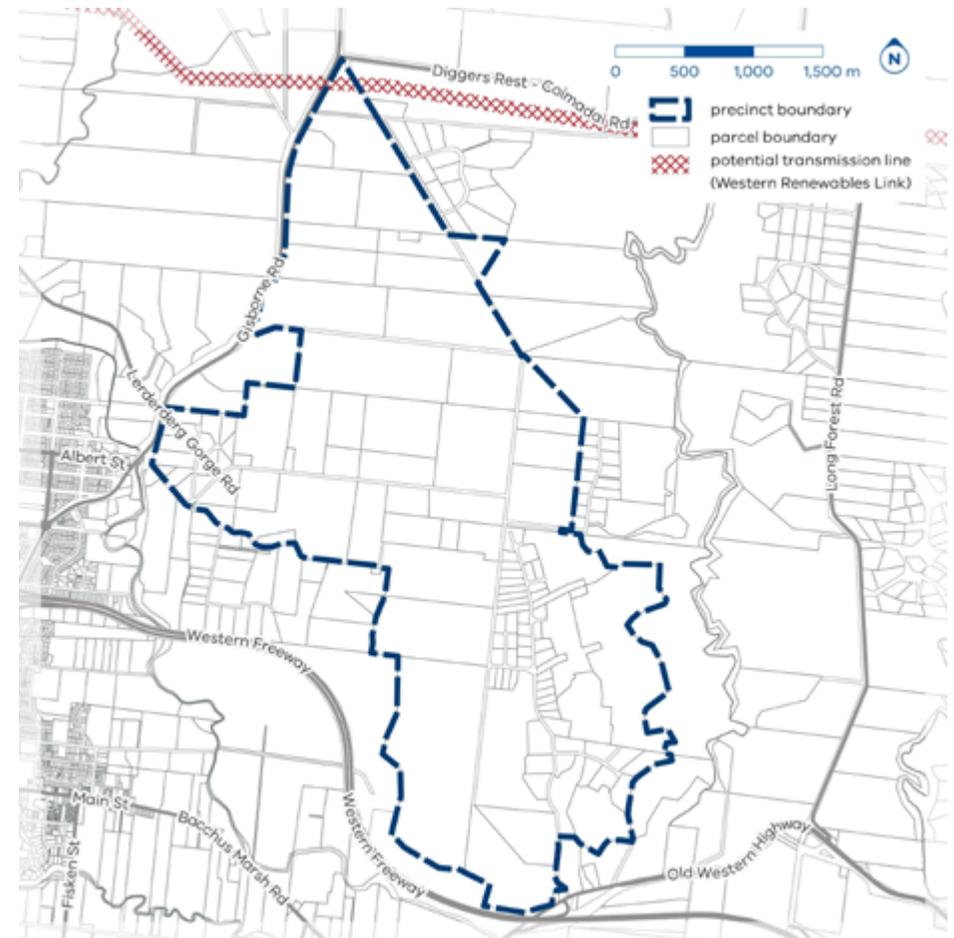
Considerations for the PSP

The transmission line itself will not service the Merrimu precinct but it will likely have a landscape and visual impact to the Merrimu precinct. The Western Renewables Link environment effects statement will need to undertake a landscape and visual impact assessment (LVIA). The VPA has expressed the need for the Western Renewables Link LVIA to consider the impact to future residential areas such as the Merrimu precinct.

The VPA is undertaking background and technical studies on the Merrimu precinct and will shortly undertake co-design workshops, which AusNet will be invited to attend and participate in.

The Merrimu PSP should consider appropriate uses within/around future easements related to the Western Renewables Link project. The PSP should also consider how future dwellings are designed to minimise the visual impact of the transmission line.

Figure 15 Proposed Western Renewables Link in the context of Merrimu PSP



4.9 Hydrology and geotechnical

Land capability assessment (draft)

Jacobs Group Australia Pty Ltd (Jacobs) was commissioned to prepare a land capability assessment report in March 2018. The report is further being reviewed to ensure it is fit for purpose and meets VPA and Moorabool Shire Council's requirements for the Merrimu PSP. Therefore, the land capability assessment is currently a draft and may be subject to change.

The assessment aims to identify the potential for contamination within the precinct and to identify issues or considerations for development of the precinct.

Jacobs undertook desktop investigations (Phase 1 environmental site assessment) to assess the environmental conditions of the area in the areas summarised below.

Geotechnical assessment

Indicative findings are consistent with the soil sodicity and dispersiveness report (see [Coffey's report](#) for further details on geotechnical matters), which identifies soils of Newer Volcanics Formation.

Hydrogeological assessment

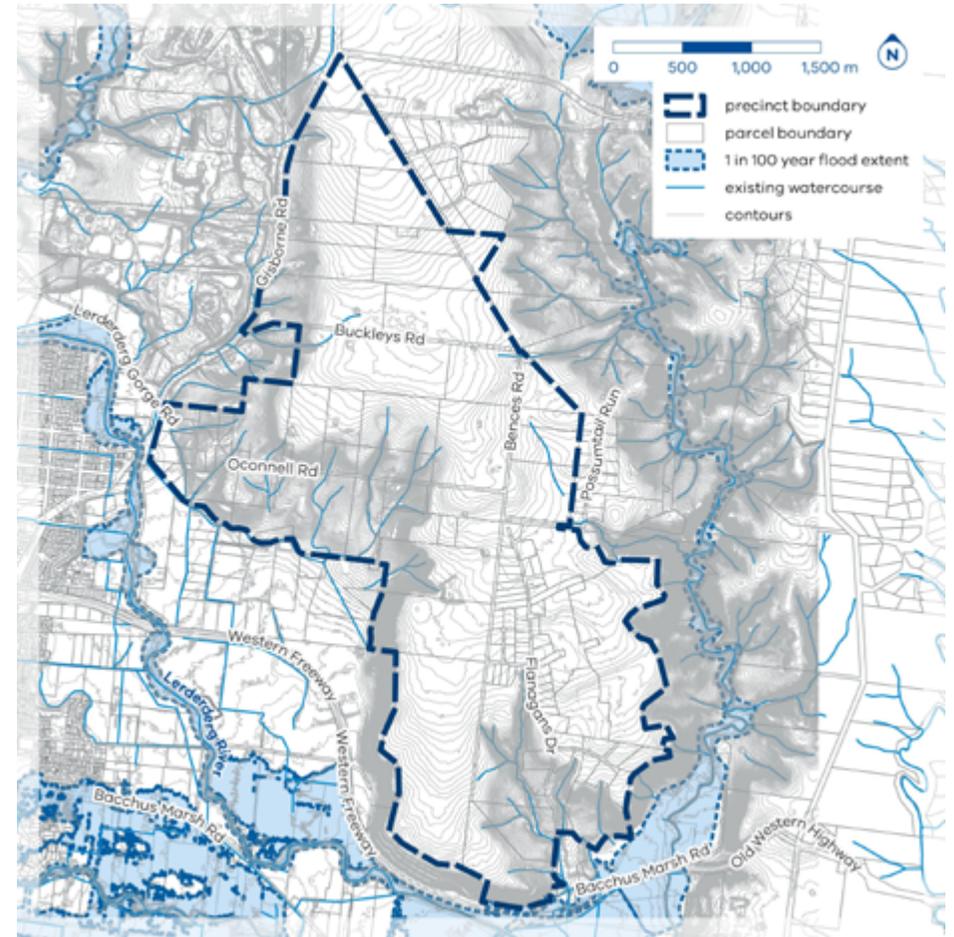
Whilst the area does not appear to have significant hydrogeological constraints, opportunities for groundwater use may be limited due to water salinity. The following need to be considered in planning for the Merrimu PSP:

- Shallow water table along the watercourses, which exist across the area may cause groundwater inflow excavations.
- Groundwater salinity may require monitoring if dewatering or extraction are undertaken
- Potential negative impacts to ecological health of local waterways given potential for decreased local groundwater discharge in winter and early spring.

Hydrological assessment

There are no significant hydrological constraints to the area. Appropriate management of local surface water flows and water quality control are required throughout the design and development process to maintain overland flow paths, avoid adverse impacts to adjoining properties, the quality of surface water runoff and the health of downstream waterways.

Figure 16 Hydrological features of Merrimu PSP



Contamination assessment

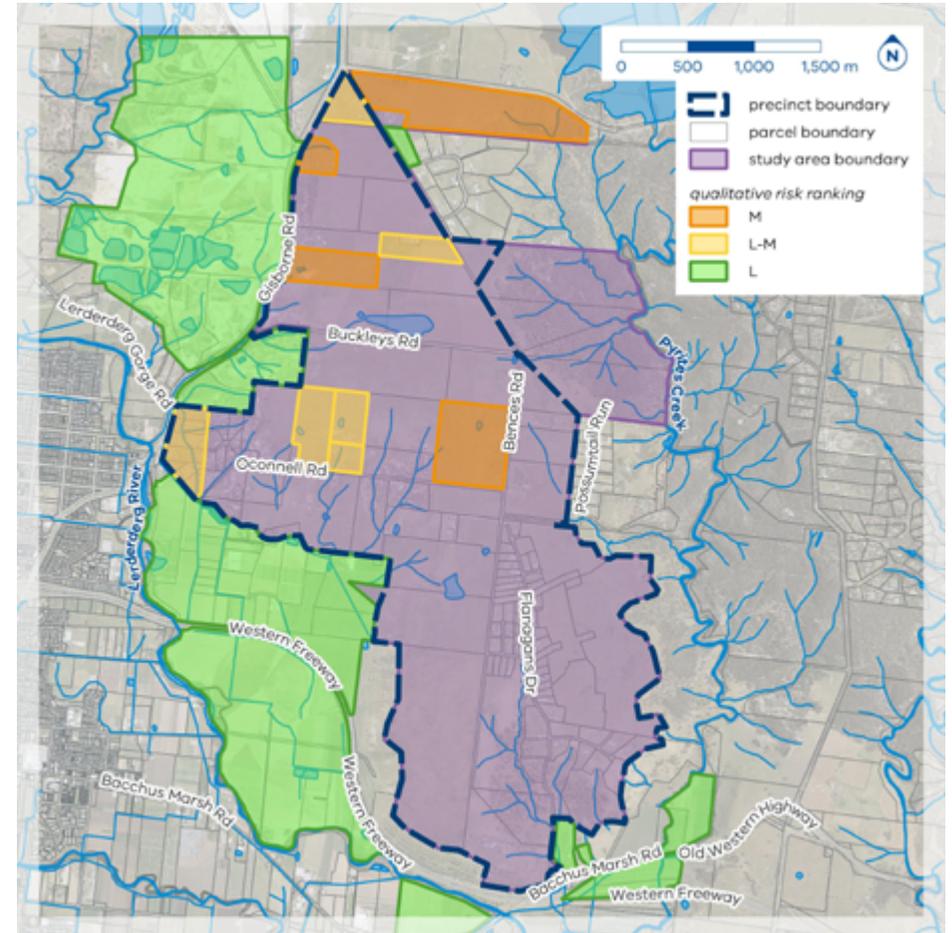
Several on-site areas were identified as having low to medium or medium contamination risk. Three areas of interest were identified as having moderate contamination risk on-site as shown in [Figure 17](#).

Several off-site sources of contamination were identified as having low potential contamination risk and one site with medium risk as shown in [Figure 17](#).

The report recommends further work on the following:

- Site specific commentary following the proposed future urban structure has been finalised
- Site specific testing to confirm the degree of salinity
- Undertake an exploratory soil and groundwater investigation at the three areas of interest with moderate contamination risk to determine site specific constraints
- Undertake property inspections on sites with low to medium potential contamination risk prior to development.

Figure 17 Qualitative risk ranking for potential on and off-site sources of contamination (Jacobs, 2017)

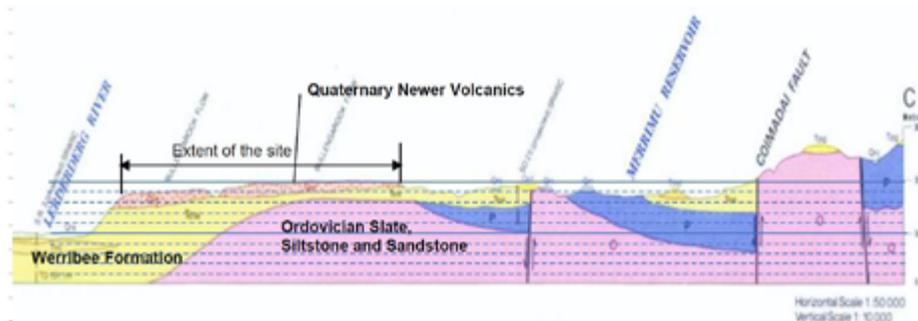


Soil sodicity and dispersiveness (draft)

In 2019, Coffey Services Australia Pty Ltd (Coffey) undertook preliminary geotechnical investigations for the precinct. Subsequently, Coffey prepared the *Merrimu Precinct Additional Geotechnical Investigation: Soil Sodicity and Dispersiveness Assessment* (November 2020), which was prepared based on laboratory tests and test pit engineering logs. The purpose of the assessment was to understand the surface, subsurface and groundwater conditions of the Merrimu precinct. The VPA are currently in the process of undertaking a peer review and assessment of the Coffey report to better inform planning for the precinct as part of the Phase 2 studies.

Coffey's assessment confirmed that sodic and/or dispersive soils are present across the Merrimu precinct, meaning the soils may be prone to dispersion and erosion when they come into contact with water. Soils of Newer Volcanics are present within the Merrimu precinct, particularly on the plateau and upper slopes, where future development is likely. Soils of the Werribee Formation that are highly dispersive are present along the escarpment of the plateau as shown in [Figure 18](#). The key issue is managing the surface water run-off during and after development.

Figure 18 Cross-section of soils at or near the surface of the site (Source: Coffey, November 2020)



Coffey's report concludes that any development should ensure that appropriate plans are put in place to ensure that no additional runoff is discharged from the development to areas where Werribee Formation soils are exposed (such as gullies) to mitigate the potential of any increased erosion due to future development.

No groundwater inflow was detected at the time of Coffey's fieldwork. Perched groundwater could be anticipated in wetter conditions and seasonal variations in groundwater should be anticipated.

Integrated water management

Council prepared the *Bacchus Marsh Integrated Water Management Strategy* (E2 Design Labs, 2021) in partnership with VPA, DELWP and the water authorities. The strategy develops recommendations to inform development in Merrimu and other growth areas in the region.

Through the development of the strategy, key delivery partners and stakeholders came together. A catchment-wide IWM was prepared and is based on the following initiatives.

Five major IWM initiatives were recommended for the Bacchus Marsh area:

- Creating governance and delivery structures to support IWM
- Embed IWM solutions in new development areas
- Integrate passive irrigation of street trees in existing and new areas
- Determine feasibility of Bacchus Marsh Class A Recycled Water Scheme
- Detail proposals for managing and harnessing stormwater runoff from growth areas.

A set of actions was also recommended for each initiative with suggested timeframes and delivery partners attributed to each.

VPA is currently preparing an RFQ for additional IWM work. The VPA assessment will translate the initiatives and actions into PSP wording and layouts. This work will commence as part of Phase 2 studies.

Flooding and water quality

While not affecting Merrimu directly, Bacchus Marsh is susceptible to flooding from rivers and creeks overflowing after prolonged rainfall (riverine flooding) and also to flash flooding after high intensity rainfall often associated with thunderstorms. Riverine flooding in Bacchus Marsh is caused by flooding of the Werribee River.

Flooding tends to be deeper south of the Werribee River. The roads to Werribee and Geelong may also be affected.

Drainage and stormwater

The Merrimu PSP area has four Melbourne Water Drainage Services Schemes (DSS):

- Merrimu North DS
- Possumtail Run DS
- O'Connell Road DS, and
- Flanagans Drive DS.

Preparation is currently underway.

VPA is currently preparing an RFQ for additional IWM work which will consider information from the DSS including drainage and stormwater. The VPA assessment will translate the initiatives and actions into PSP wording and layouts. This work will commence as part of Phase 2 studies.

Planning Scheme Amendment C91 – Improving Flood Management in Moorabool Shire

Approved Amendment C91 to the Moorabool Planning Scheme, at the request of Melbourne Water as the relevant floodplain management authority. Amendment C91 applied the Land Subject to Inundation Overlay (LSIO) and the Special Building Overlay (SBO) to land affected by a 1 in 100 year flood event, in the eastern portion of Moorabool Shire (including land within the Merrimu PSP). The amendment has

been approved by the Minister for Planning and forms part of the Moorabool Planning Scheme.

Considerations for the PSP

The presence of sodic soils may result in additional works during construction stages which can increase the cost of development, including the cost of infrastructure. Further intrusive soil investigations and geotechnical site investigations will be needed to specifically address and mitigate this issue and understand development implications in greater detail.

Amendment C91 applied the Land Subject to Inundation Overlay (LSIO) and the Special Building Overlay (SBO) to land within the Merrimu PSP. This reflects flooding that currently occurs in Bacchus Marsh and indirectly Merrimu.

Once the DSS is completed, more will be known about drainage and stormwater in relation to Merrimu.

Emerging opportunities

The IWM will be a key opportunity for Merrimu. This will include recommendations on the following:

- Embed IWM solutions in new development areas
- Integrate passive irrigation of street trees in existing and new areas
- Determine feasibility of Bacchus Marsh Class A Recycled Water Scheme
- Detail proposals for managing and harnessing stormwater runoff from growth areas.

The escarpment will also be a key area to protect and enhance.

5 Infrastructure & services

5.1 Retail (under preparation)

An economic and retail assessment is currently being scoped by the VPA for the larger area consisting of the Merrimu precinct, Parwan precinct and Parwan Employment. The assessment, which will be finalised in Phase 2 seeks to gain an understanding of the potential growth in retail demand in the context of existing and proposed activity centres in the broader area.

5.2 Schools

Schools will be required to service the new community in Merrimu. A community infrastructure assessment is being undertaken, which will help assess the specific requirements for the area. This will be finalised in Phase 2.

While there are currently no primary or secondary schools in the Merrimu precinct, there are three government primary schools and one government secondary school in the surrounding Bacchus Marsh area, including one non-government primary and secondary school that enrol children from within the Merrimu area.

Considerations for the PSP

It is anticipated that two government primary schools will be required to serve the future community. There is also a potential for one secondary school to service the Bacchus Marsh region including the Parwan PSP area and the Merrimu PSP area, however, the location is yet to be determined.

Generally, P-6 schools are located, where practical, to optimise equitable distribution of and access to facilities as well as walkable catchments. Schools should generally be located on collector roads with or proximate to other community facilities and town centres.

The Department of Education and Training will advise on the need for government primary schools and secondary school in the PSP area, while considering the regional network within Bacchus Marsh and Ballan.

The Melbourne Archdiocese Catholic Schools, who are Catholic education providers will also be requested by the VPA to provide input for Catholic education needs in the Bacchus Marsh region.

5.3 Transport

Road network

Merrimu is currently only serviced by one major arterial road which is the Gisborne Road. This road is managed by the Department of Transport and is classified as Transport Zone 2 (TRZ2) under the Moorabool Planning Scheme.

The proposed road network for Merrimu PSP is currently undetermined and subject to detailed traffic reports to be prepared by qualified traffic engineers.

Stantec has been commissioned by VPA to conduct an integrated transport assessment. They are currently undertaking some preliminary work. Modelling will commence once a draft place-based plan has been developed.

Bacchus Marsh Eastern Link Road (BMELR)

The Moorabool Shire Council's *Integrated Transport Strategy and Urban Growth Framework* recognises an eastern bypass as key transport infrastructure required to alleviate congestion for Bacchus Marsh and service the new communities being planned for.

Regional Roads Victoria (RRV) has undertaken detailed studies and stakeholder consultation to determine the most suitable alignment for the BMELR. There are three shortlisted options that impact the PSP, shown in [Figure 19](#).

It is expected that a preferred alignment will be identified by late 2022.

Considerations for the PSP

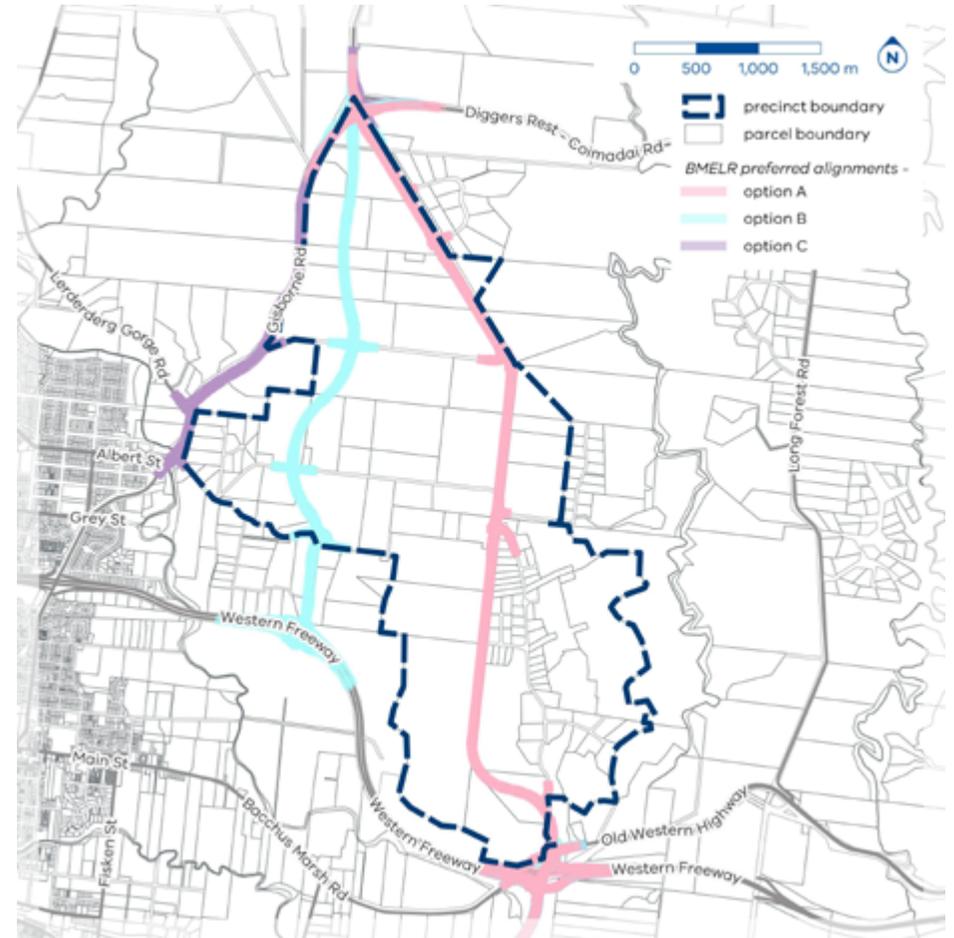
The PSP will aim to build upon some of the existing road infrastructure whilst ensuring there are adequate upgrades as well as new roads where needed. The precinct will require adequate active transport and public transport connections.

Emerging opportunities

The VPA will continue to work with RRV, council and appointed transport consultants to come to a suitable road network to service the new community.

An integrated transport assessment will be prepared as a part of the Phase 2 technical studies. This will include an understanding of the proposed road network as well as pedestrian and cycling opportunities within the precinct and connected to surrounding areas.

Figure 19 BMELR options that impact Merrimu precinct



5.4 Servicing (draft)

In March 2021, Creo was commissioned to prepare a *High-Level Utility Servicing and Infrastructure Assessment*. The report is being further reviewed by the VPA to ensure it is fit for purpose and meets the VPA requirements for the Merrimu PSP. Therefore, the LCA may be subject to change. The report provides high-level assessment of services including sewer, potable water, recycled water, electricity, gas and telecommunications for the Merrimu PSP.

Existing services must be upgraded to accommodate the ultimate future urban structure. Due to the significant growth and close proximity of other precincts to the Merrimu precinct, including Parwan, Maddingley, Hopetoun Park and Hopetoun Park North, there will be a shared reliance on the construction of new infrastructure servicing these precincts.

Key findings of the report:

- **Sewer** – Western Water advised that the likely strategy to service the precinct is by constructing a new sewer pump station or by upgrading the Avenue of Honour sewer pump station, which would likely require a new rising main along Woolpack Road or a similar path to *Bacchus Marsh Recycled Water Plan*. The details are yet to be determined by Western Water.
- **Potable water** – To ultimately service Merrimu precinct, a water main, earmarked for construction in 2033 from the Merrimu water filtration plant via Bences Road and Flanagans Drive is required as development progresses. For interim water supply to the precinct, a suitably-sized trunk main is required along Dodemaide Circuit to Bences Road from Western Water’s existing Merrimu water filtration plant.
- **Non-drinking water** – Bacchus Marsh is not within the mandated area for provision of Class A recycled water. Western Water’s preferred approach is to develop an irrigation scheme in Parwan–Balliang supplied by Class C recycled water from Sunbury, Melton

and Bacchus Marsh recycled water plants.

- **Electricity** – The existing infrastructure can only service up to 500 additional residential lots. Further investigations are required by Powercor to confirm the future network loads of a new transformer at Bacchus Marsh zone substation (estimated cost of \$7 million) and to what extent the Merrimu PSP area can be serviced with power.
- **Gas** – Whilst Bacchus Marsh is serviced by the existing City Gate gas interchange at Rowsley Station Road, there is no gas supply to the precinct. Interim gas supply can only be provided to a maximum of 250 dwellings from the existing 150mm diameter main located in Bacchus Marsh Road. Prior to the preparation of the draft PSP, landowners and developers will need to confirm whether gas is proposed to service the dwellings.
- **Telecommunications** – There are no known constraints to telecommunications being provided to the precinct, which is within the National Broadband Network’s fixed wireless network.

Considerations for the PSP

The VPA must confirm the preferred strategy in lieu of Bacchus Marsh not being within the mandated area for provision of Class A recycled water to the Merrimu precinct.

Based on the investigation and analysis of the engineering servicing report, there are no existing assets within the Merrimu precinct with effective capacity to service immediate future development within the precinct. This will require significant planned upgrades and augmentation of existing services to meet the demands of both interim and ultimate development. Future servicing should be considered within the context of other unapproved future PSPs such as Parwan and the Parwan Employment Precinct.

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