

# Parwan Precinct



## Landscape and Visual Character Assessment

Prepared for Victorian Planning Authority

# Acknowledgement of Country



We pay our respects to the Traditional Custodians of Country throughout Australia, their Elders and ancestors, recognising their rich heritage and enduring connection to Country and acknowledging the ongoing sovereignty of all Aboriginal and Torres Strait Islander Nations.

We recognise the profound connection to land, waters, sky and community of the First Nations peoples, with continuing cultures that are among the oldest in human history. We recognise that they are skilled land shapers and place makers, with a deep and rich knowledge of this land which they have cared for, protected and balanced for millennia.

**Our Country, 2022**  
88 x 119 cm Acrylic on canvas  
Original artwork by  
Alfred Carter  
Gunaikurnai

# Quality Assurance

## Parwan Precinct

Landscape and Visual Character Assessment  
Parwan Precinct Framework

## Prepared for

Victorian Planning Authority

## Project Number

322-0740-00-L-01-RP02

## Revisions

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# 1 Introduction

## 1.1 Introduction

This study provides a Landscape Character Assessment of an identified study area referred to as the 'Parwan PSP' within its regional and local context. The purpose of the Landscape Character Assessment process is to provide:

- Landscape, environmental and visual assessment that provides a basis for environmentally sustainable design, site conservation and rehabilitation.
- A site-specific foundation structure for the development of a future PSP (an overarching Landscape Framework).

The Landscape Framework aims to identify strategic requirements to guide future site development based on the landscape and visual conditions identified within the Parwan Precinct. The intention of this Framework Plan is to inform development patterns, site characteristics and connections for the future PSP of the Parwan Precinct.

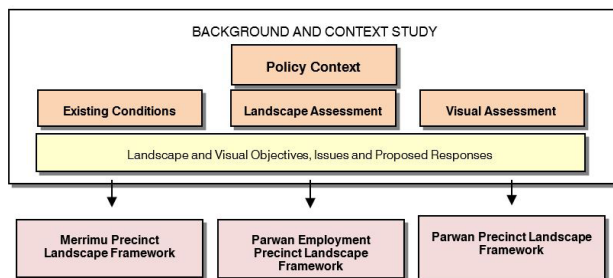


Figure 1. Study Approach

## 1.2 Study Approach

The approach adopted for this study was to first understand and assess the study area on a regional scale. This is reflected in the Background Report (Merrimu, Parwan and Parwan Employment Precincts – Background and Context Study, 2023).

The background report provided a general understanding of the Precinct and contextual surrounds, while this report provides Precinct specific summary of relevant findings within:

- **Section 2: Planning policy & strategic context**
- **Section 3: Existing conditions**
- **Section 4: Landscape character & scenic quality**
- **Section 5: Visual assessment**

The assessment of the Precinct's condition has been developed into specific recommendations for Parwan Precinct as landscape and visual Opportunities and Constraints.

- **Section 6: Opportunities and Constraints**
- **Section 7: Framework Plan**

A dedicated Landscape Framework for the precinct has then been provided. The Framework includes landscape and visual objectives, a Framework Plan and a series of supporting Strategies and Guidelines to guide future decision making.

## 1.3 Study Area

The Parwan Precinct (PSP) is located south of the Bacchus Marsh town centre at an area of approximately 472 hectares, comprising of a mix of rural living and individual homesteads, as well as a range of rural activities including dog boarding and some equestrian trotting tracks.

This precinct is expected to cater for up to approximately 10,000 residents.

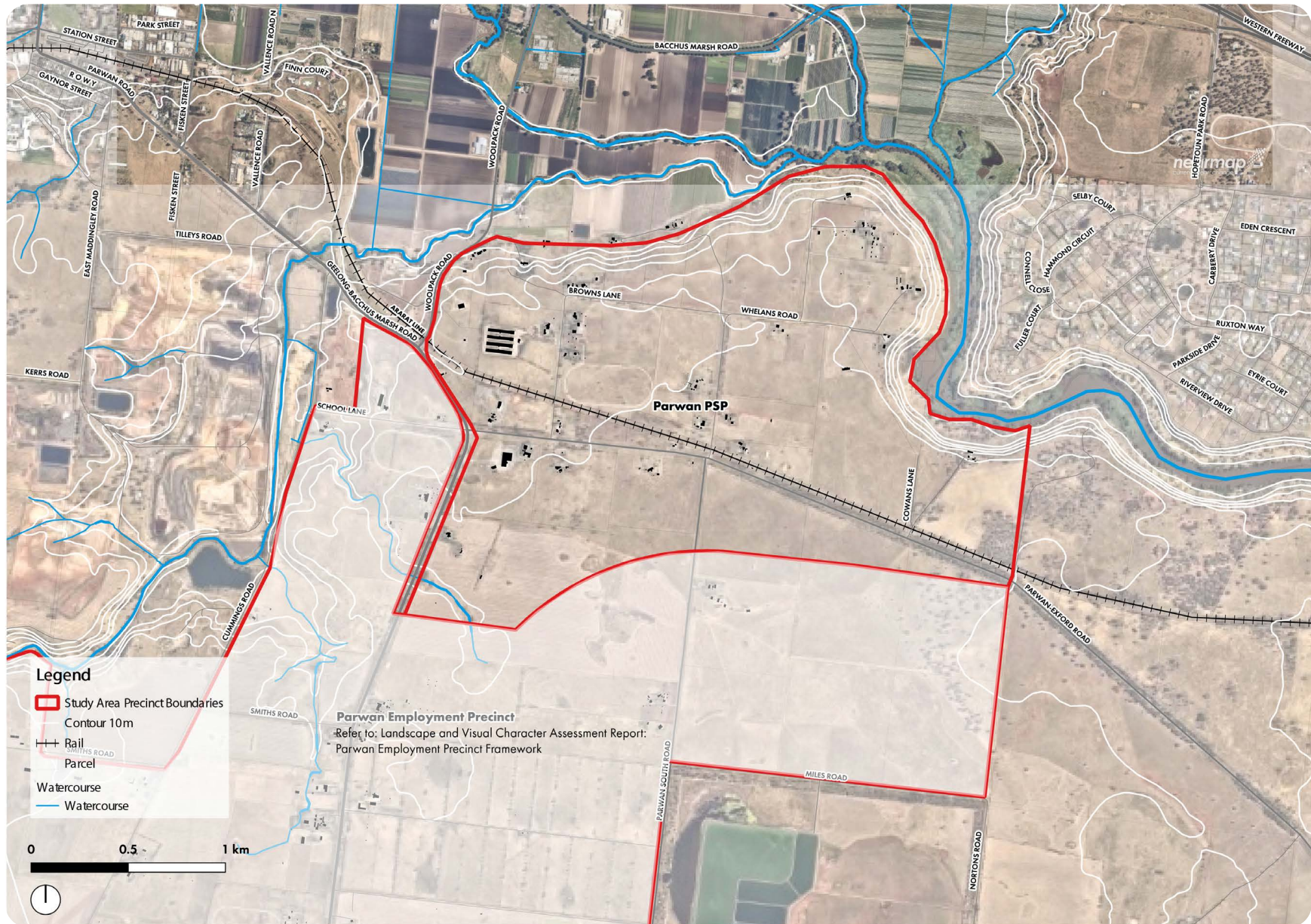


Figure 2. Parwan PSP Study Area

## 2 Planning Policy, Strategic Context and Major Projects

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The purpose of this section is to identify the policies, planning controls that can inform or provide an appropriate reference for the assessment of landscape values.

### 2.1 Policy context

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Planning Zones:

- Future zoning for Parwan Precinct will include transit oriented residential and employment.

Planning Overlays:

- DDO2 protects the visual amenity in rural, township and vegetated areas.
- HO's conserve and enhance the heritage places of natural and cultural significance.
- ESO2 protects waterways for 100m on either side thereof through conservation / appropriate uses.
- ESO3 protects the natural, scientific and scenic integrity of the significant Long Forest Reserve.
- ESO8 protects the Red River Gums, which represent the oldest living natural heritage.
- SLO1 protects the natural scenic qualities of the hilltops and ridge line areas through minimising the visual impact of development.

- LSIO protects waterways within the 1:100-year flood zones and other flood prone areas, ensured flood passage and improves floodplain health.

The following strategic context plans relevant for the Merrimu Precinct include:

- Urban Growth Framework (2018)
- Parwan PSP Co-Design Workshop Summary Report
- Parwan Station Key Issues and Opportunities Paper

#### 2.1.1 Bacchus Marsh Urban Growth Framework (Victorian Planning Authority, 2018)

*... Ensure that buffer interface areas are sufficient...*

*... Ensure that development is set back from the top of the escarpment, to minimise impacts on landscape based on appropriate landscape sensitivity analysis as well as to limit interface issues with agricultural land use (i.e. to avoid land use conflict)...*

*... Avoid new sensitive land uses from establishing within relevant buffers to the Maddingley Waste Resource and Recovery Hub.*

*... Consider interfaces between development and escarpments, to ensure views are not lost to and from escarpments, and to protect and*

*enhance biodiversity values...*

*... Consider interfaces with environmental assets such as Werribee River, Parwan Gorge and BMID, to protect and enhance biodiversity values and agricultural land uses, and to achieve attractive development for local residents...*

*... Ensure that sequencing of Parwan precinct protects the existing use rights of the broiler farm at 51 Browns Lane, by identifying an amenity buffer where no sensitive uses will be permitted until such time as the broiler farm use cease*

*Recreational open space be designated around tree clusters which would not only preserve habitat for wildlife but could also become a significant health and well-being asset for the community.*

*... Identify new public open space networks (environmental values/features, biolinks and cycling/walking trail networks), and show how these integrate with existing/proposed networks beyond the precinct...*



Planning considerations include:

‘Define the northern and eastern edge with the escarpment:

- Provide a perimeter road along the top edge of the escarpment with pedestrian and cycling trails on the outer edge of the road cross-section.
- Establish building envelope limits along the northern escarpment to manage views from the Western Freeway and Avenue of Honour.

Amenity buffer interface areas:

- Finalise the buffer distance to the Bacchus Marsh Recycled Water Plant, in consultation with Western Water.
- Provide appropriate interfaces to the employment precinct.
- Define the range of land uses that can occur within buffer interface areas.
- Apply a different zone control to these areas (i.e. different to the balance of the precinct)
- To ensure that sensitive uses and uses with adverse amenity potential (i.e. intensive animal husbandry, sale yard, mineral extraction and uses listed under VPP Clause 52.10) are prohibited.
- Consider opportunities for commercial land uses which support either the employment precinct or the residential precinct. Any such uses must not generate a need for buffers from sensitive uses.’

### 2.1.2 Parwan Station Key Issues and Opportunities Paper (Victorian Planning Authority, 2022):

The Werribee River and escarpment provide a unique interface with the precinct. The view lines and the river corridor provide landscape design, active transport, and open space opportunities. These physical features are also linked to biodiversity and Aboriginal Cultural Heritage values that should be utilised and enhanced...’

Within this precinct it has been recommended:

- 5 ‘Very High’ retention value trees and 128 ‘High’ retention value trees were identified, and it was proposed that these be incorporated into final design plans and are retained.
- **Recreational open space be designated around tree clusters** which would not only preserve habitat for wildlife but could also become a significant health and well-being asset for the community.

### 2.1.3 Bacchus Marsh Eastern Link Road (BMELR) – Assessment and Recommendations

Regional Roads Victoria have nominated Option B Alternative as the preferred alignment after examining a range of potential options for a future north-south route to the east of the Bacchus Marsh township. The following section provides a brief Visual Impact Assessment and Recommendations on the preferred alignment for the potential Bacchus Marsh Eastern Link Road (BMELR). The assessment is based upon potential impacts to visual amenity, sense of place and landscape character.

The assessment and recommendations are as follows:

- **Option B Alternative:** The proposed road alignment will potentially fragment the precinct as the alignment runs north/south through Parwan. This will potentially impact on sense of place and obstruct continuity in the precinct landscape. This alignment may create pockets of disconnected land within the precinct. Interface treatments to the BMELR must be strongly considered to ensure the best landscape and visual outcomes.

## 3 Existing Conditions

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This section provides a summary of the conditions that currently exist within the study area and surrounds, as identified within the Merrimu, Parwan and Parwan Employment Precincts – Background and Context Study.

The existing conditions have informed the Parwan PSP Landscape Framework Plan.

### 3.1 Existing Conditions Summary

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#### 3.1.1 Geology and Soil

Geology within Parwan includes:

- Newer Volcanic Group - basalt flows (Neo):generic
- Darley Gravel (Neo): generic

Other geological areas of interest include the Parwan caves which are located in the Parwan Employment Precinct; a lava tube with a partially collapsed roof that forms the cave entrance. The only surface expression of the caves is a small entrance that is partially obscured by vegetation. It is unknown if the caves form part of a larger network or are a single gentility.

The caves are structural, not erosional, features and therefore are not especially sensitive to changes in surface hydrology following development. The presence of caves beneath the plateau does poses some risk to public safety due to the small opening, and some risk to overlying structures.’ (Alluvium Consulting Australia, 2021).

#### 3.1.2 Hydrology, Landform and Slope

(Figure 3 and 4)

- The study area is characterised by flat floodplains and steep escarpments characterise the drop from the plateaux/plains to the Werribee River and floodplains below.
- The Parwan Creek is located south of the study area.
- The majority of the Precinct site is characterised by a gradual downhill slope from south to north towards the creek, with a steep slope of 10% along the northern edge of the precinct.
- Flooding occurs along the Werribee River after prolonged rainfall as well after high intensity events.
- Steep topography (>5%) represents an erosion risk.
- Very flat topography (<1%) does not facilitate runoff and ponding occurs (specific to the wetland on the northern end of the precinct).
- Buffers and setback recommendations from watercourses are outlined in the Parwan and Parwan Employment Precinct Structure Plans Geomorphology and vegetation assessment (Alluvium, December 2021).
- The geomorphology of the plateau top is largely stable, but the headwater stream that flow towards Parwan Creek are steep and sensitive to erosion under existing and developed conditions (Alluvium, December 2021).

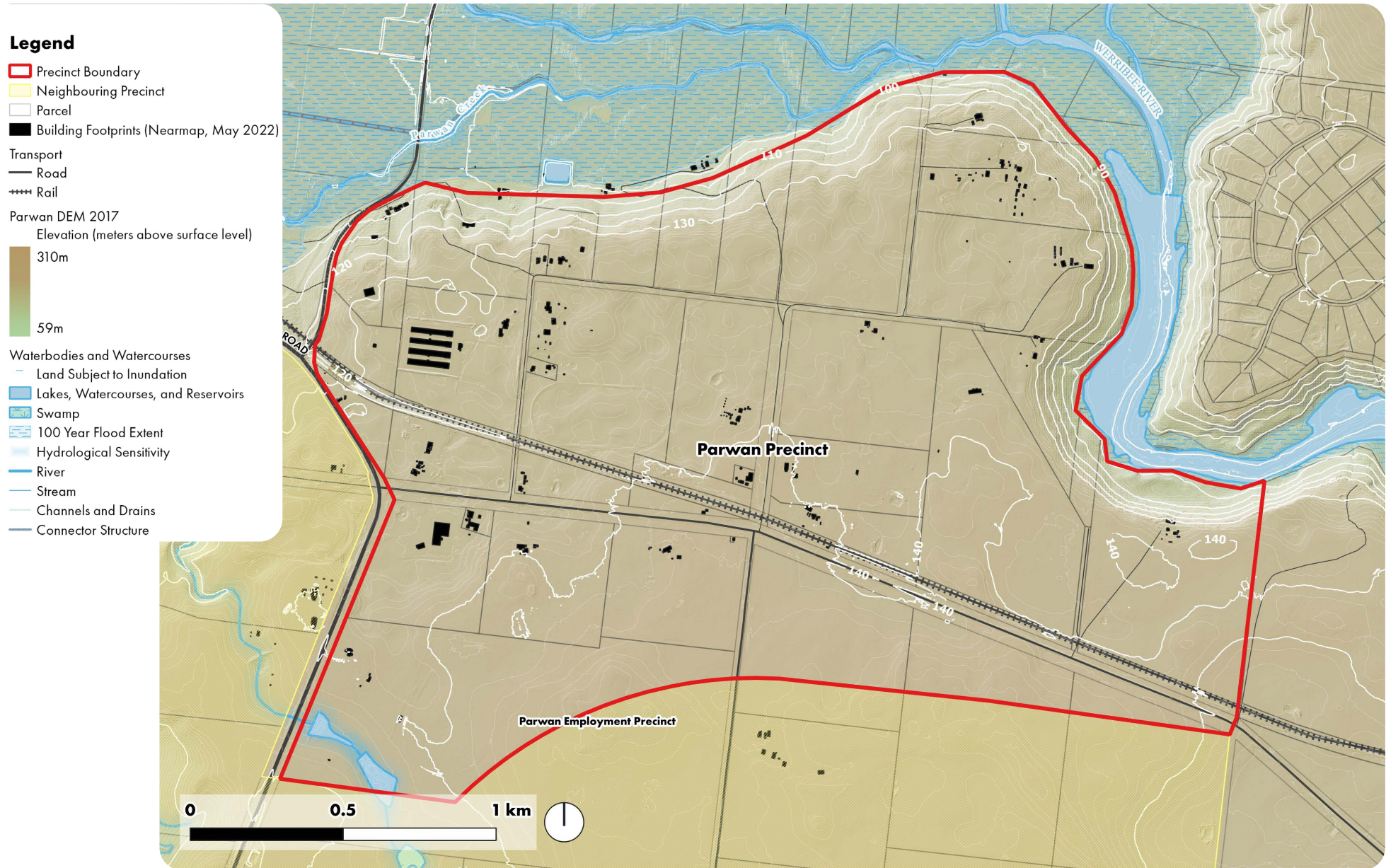


Figure 3. Parwan PSP - Hydrology and Landform

### 3.1.3 Vegetation and Biodiversity *(Figure 5)*

This Precinct is located within the Victorian Volcanic Plains, and the following Ecological Vegetation Classes (EVC's) characterise the study area:

- Plains Grassland (EVC 132) on the plains south of the Parwan Creek. Some remnants of this EVC occur on the Parwan plains.
- Plains Grassy Woodland (EVC 175) on the slopes towards the Northwest of the study area.

Alluvium (2021) additionally identified Plains Grassy Wetland (EVC 125) and Lignum Swamp (EVC 104) within Parwan, which are confined to wetland environs.

- Water dependent riparian and wetland ecosystems are sensitive environments. Many of these are disturbed by land use / invaded by exotics that compromising native vegetation.
- 5 'Very High' retention value trees and 128 'High' retention value trees were identified.

Biodiversity Assessment: Parwan Employment and Parwan Precinct Structure Plan (PSP) (VPA/EHP 2022) outlines several Precinct design principles:

- Large areas of native vegetation should protected.
- Create linear habitat corridors along water ways and drainage lines.
- Retain native trees in urban active and passive open space areas.

### 3.1.4 Cultural Heritage & Heritage Items

According to the Moorabool Planning Scheme, areas of Cultural Heritage Sensitivity are allocated along the larger rivers within the study area, including the Parwan Creek.

*'The Bacchus Marsh Valley was a significant place for the Wurundjeri and Wathaurong people who shaped the surrounding landscape, encouraging the grassland characteristics of Parwan and Balliang through the use of fire and land management. 'There are many sites of cultural heritage and/or geological significance across the district. In many cases these are of state significance, such as Parwan Lava Caves' (Victorian Planning Authority & Moorabool Shire Council, 2018).*

The following are noted to be relevant within this Precinct (Victorian Planning Authority, 2022):

- Two previously recorded Aboriginal Cultural Heritage places have been identified within the study area, all resulting from previous archaeological assessments with surface and subsurface investigations. In addition, two previously unregistered Aboriginal places were identified during this assessment.
- Two dwellings in Browns Lane (HO194).
- The CFA building should also be protected to enhance the historic identity of the area.

### 3.1.5 Settlement & Land Cover

European settlement of the Shire dates from the 1830s, with significant growth from the 1850s stimulated by the discovery of gold in Buninyong, Gordon and Ballarat. The townships of Bacchus Marsh and Ballan grew rapidly due to their role as stopping points between Melbourne and the goldfields.

Significant development has occurred in and around Bacchus Marsh and Ballan in recent decades, particularly from the early 1990s. '... Bacchus Marsh is noted for its historic buildings and structures. Preservation and management of these assets is important to the local economy, tourism opportunities and connection with place. The town centre also has heritage value as one of the first settlements in Victoria.' (Victorian Planning Authority & Moorabool Shire Council, 2018).

The dominant land cover and settlement features within the Parwan Precinct include:

- Regional Railway line
- Native Pasture/grassland
- Native Scrubland
- Exotic pasture/grassland

### Legend

- Precinct Boundary
- Neighbouring Precinct
- Parcel
- Building Footprints (Nearmap, May 2022)

### Transport

- Road
- Rail

### Slope Analysis

- Slope Percentage
- 0-2.5%
  - 2.5-5.0%
  - 5.0-7.5%
  - 7.5-10.0%
  - 10.0-12.5%
  - 12.5-15.0%
  - 15.0-20.0%
  - 20.0-30%
  - 30% or greater

### Waterbodies and Watercourses

- Land Subject to Inundation
- Lakes, Watercourses, and Reservoirs
- Swamp
- River
- Stream
- Channels and Drains
- Connector Structure

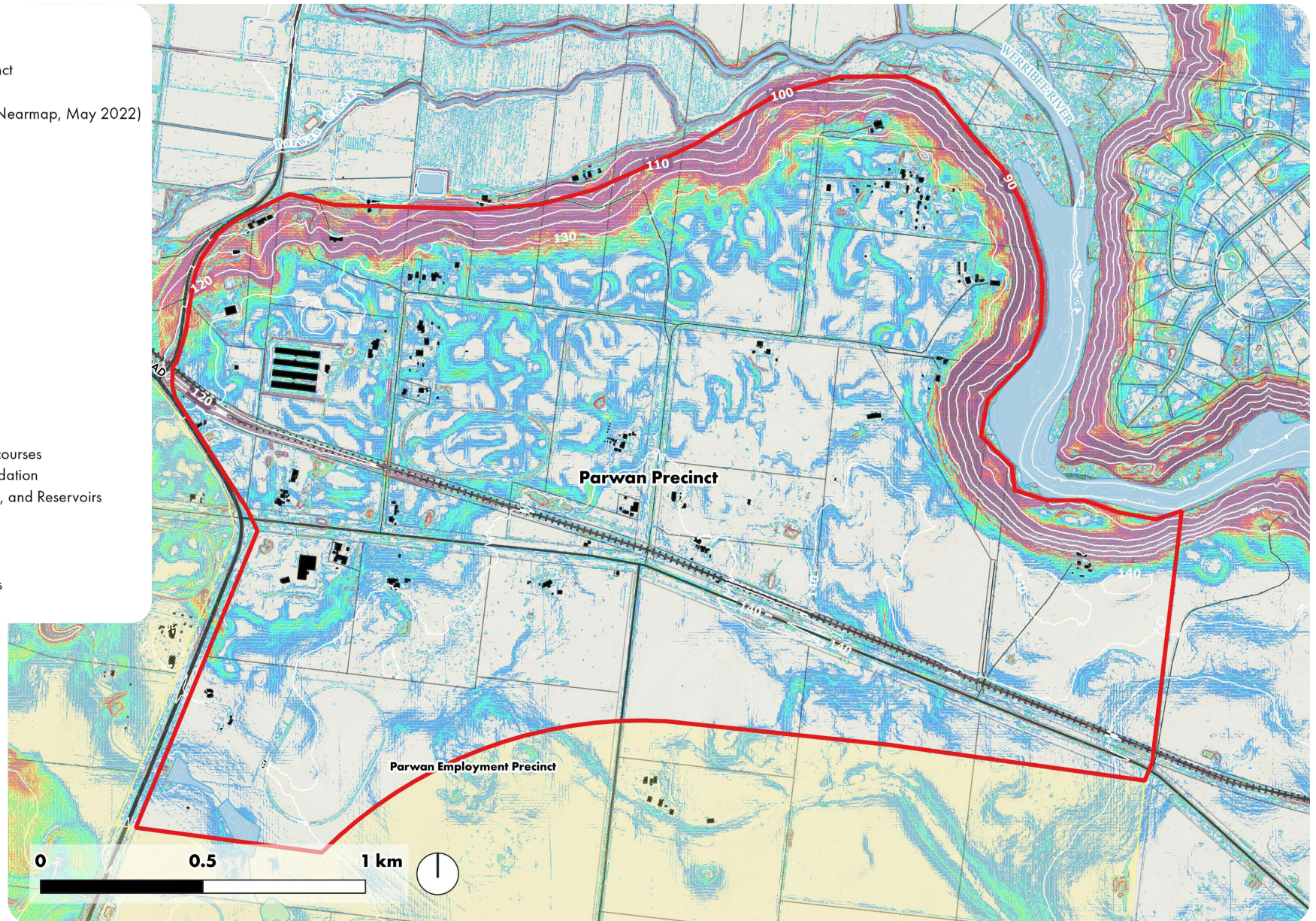


Figure 4. Parwan PSP - Vegetation

**Legend**

- Precinct Boundary
- Neighbouring Precinct
- Parcel
- Building Footprints (Nearmap, May 2022)
- Transport
- Road
- Rail
- Tree Assessment (Parwan & PEP Biodiversity Assessment)
- Buloke
- Grey Box
- River Red Gum
- Yellow Box
- Yellow Gum
- Stag
- Bioregions
- Central Victorian Uplands
- Victorian Volcanic Plain
- Tree Density
- Dense
- Medium
- Sparse
- Waterbodies and Watercourses
- Land Subject to Inundation
- Lakes, Watercourses, and Reservoirs
- Swamp
- River
- Stream
- Channels and Drains
- Connector Structure

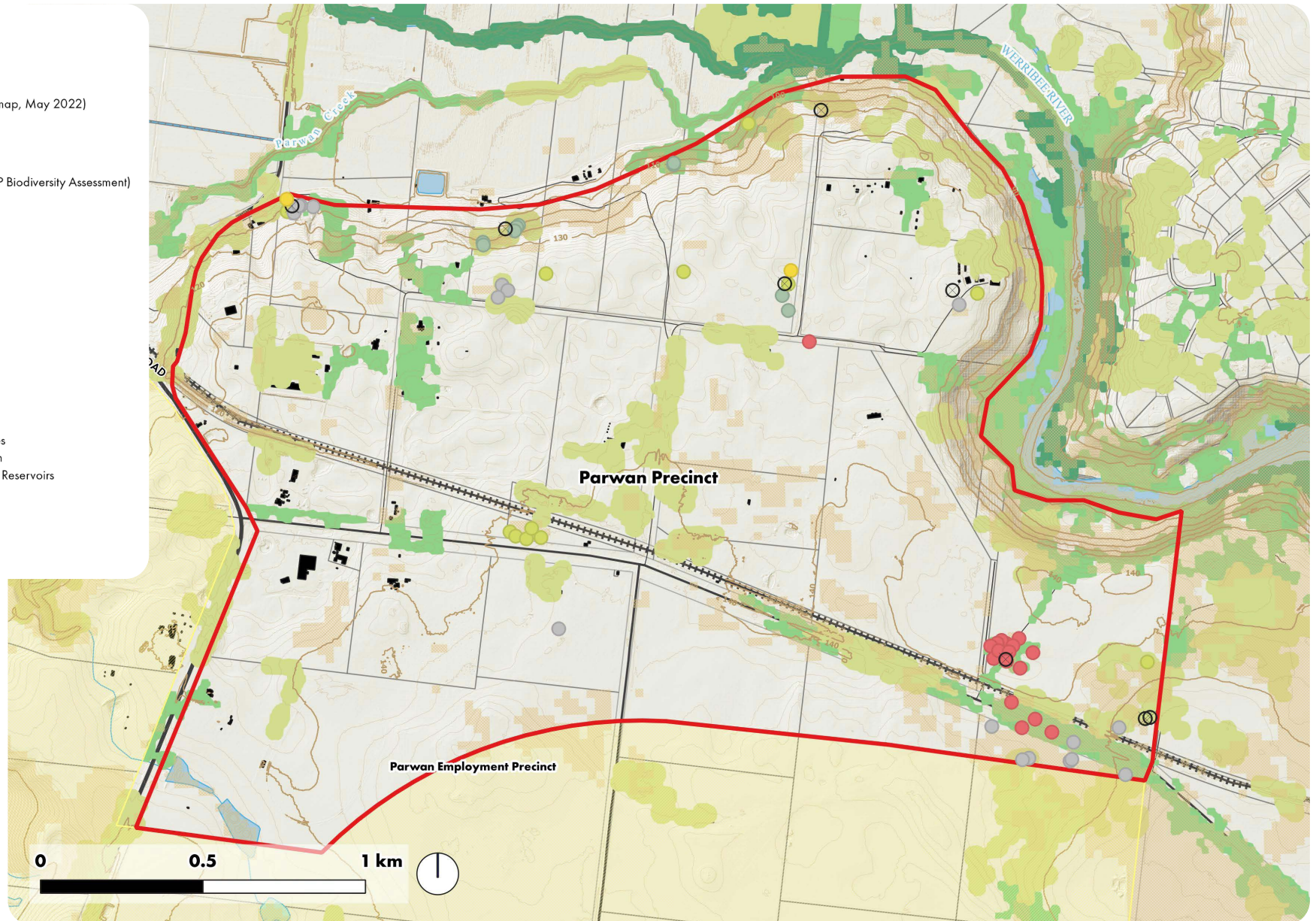


Figure 5. Parwan PSP - Vegetation and Biodiversity

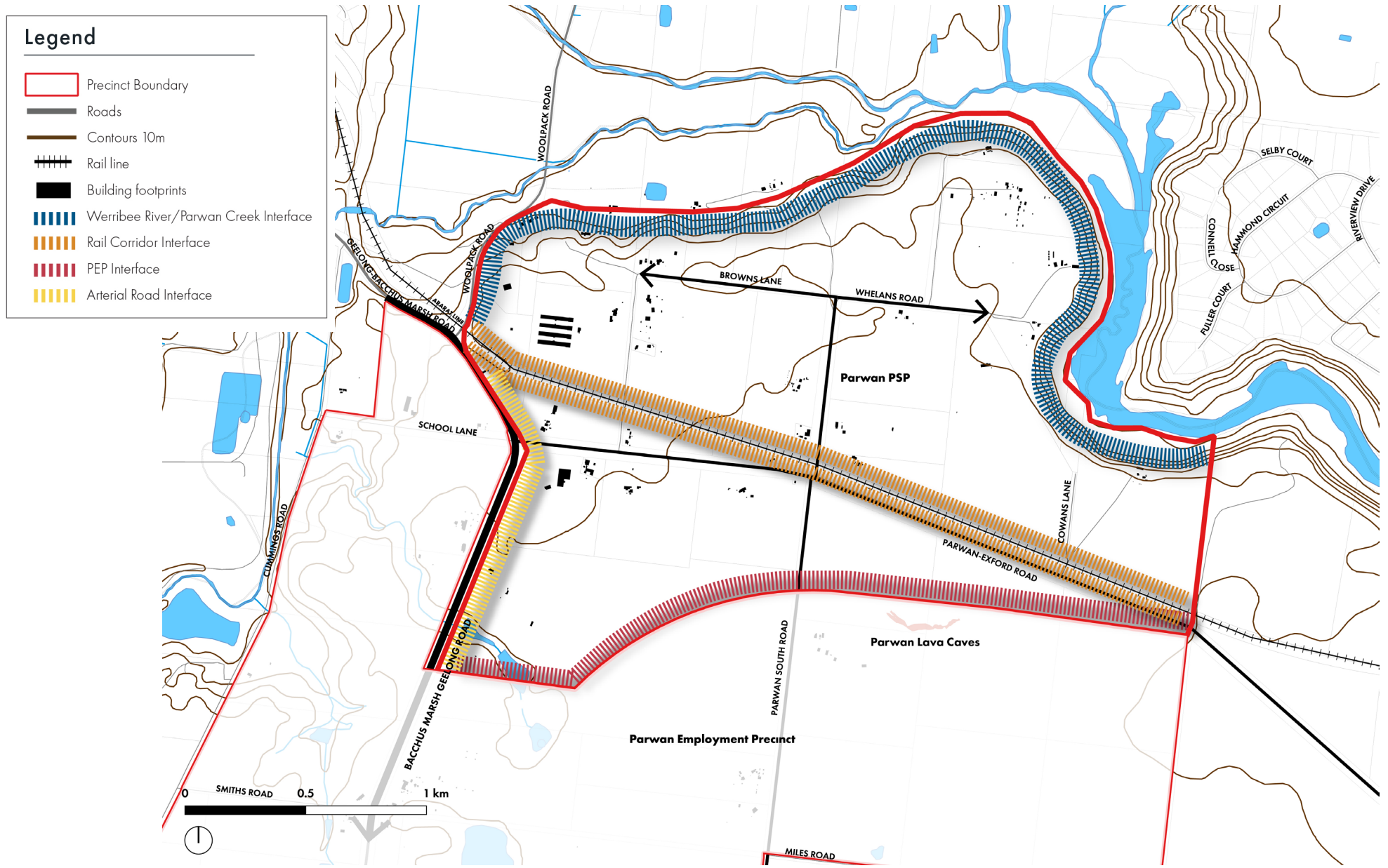


Figure 6. Parwan PSP - Interfaces

## 4 Landscape Character and Scenic Qualities

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Landscape character and scenic quality are assessed at two levels: **status** and **classification**.

### 4.1 Landscape Status

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The landscape includes features that are of regional status and the characteristics within this landscape have varied scenic qualities. The Precinct includes a large area of land that is predominantly identified as Farming Zone.

### 4.2 Landscape Classification

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The Parwan Precinct is positioned primary within the Western Plains Landscape Character type. Refer to the Merrimu, Parwan and Parwan Employment Precincts – Background and Context Study for further detailed information.

The Western Plains classification is predominantly a flat plain (mostly volcanic) including agricultural grasslands with shelter belt planting a common feature throughout.

### 4.3 Scenic Quality

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The frame of reference for scenic quality within the Western Plains is typically defined by landform, vegetation and water form.

Based on the Assessment within the Merrimu, Parwan and Parwan Employment Precincts – Background and Context Study the following key findings have been deemed relevant in terms of scenic quality within the Parwan Precinct:

- The small segments of Alluvial Floodplains has been identified to have a Moderate scenic quality.
- The Parwan River has been identified to have High scenic quality, as well as the sloped embankment.
- Distinctive stands or vegetation which may create a comparison to surrounding vegetation (typical grassland) is identified to have a High scenic quality.



**Figure 8.** View from Browns Lane rail bridge looking west towards the coal mine and Bacchus Marsh.



**Figure 7.** View from Whelans Road towards Merrimu plateau



**Figure 9.** View from Browns Lane, looking west towards Bacchus Marsh and the coal mine (left of image)



## 5 Visual Assessment

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### 5.1 Pattern of Viewing

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The pattern of viewing within the Precinct and surrounding area has been identified to be predominantly experienced while travelling along roads.

Examples of the pattern of viewing is shown below, the main views of interest included (shown on Figure 13):

- Access and Gateways
  - Views entering the precinct from Parwan Road/ Geelong-Bacchus (both approaching from the north and the south)
  - Views from Woolpack Road entering the precinct from the north and looking north into the BMID
- Views, Sightline and Visual Connections
  - Views from the northern side of the Werribee (Hopetoun Park residential area)



**Figure 10.** View entering Parwan from Geelong-Bacchus Marsh Road, crossing Parwan Creek.



**Figure 11.** View from Riverview Drive, Hopetoun Park. Looking south-west towards Parwan across the Werribee River.



Figure 12. View from Woolpack road looking north into the BMD.

## 5.2 Visibility Analysis

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A visibility analysis through Zone of Visual Influence (ZVI) modelling has been used to gain an understanding of the extent of visibility of the Parwan Precinct from representative viewpoints within the region. The ZVI modelling shows the potential visibility from a particular point and shows the areas that can be seen in 'line of sight'.

ZVI modelling makes use of a Digital Terrain Model using 1m contour data, but without considering existing vegetation or other local features such as houses, fencing and other development. This results in a 'worst case' scenario in terms of the theoretical extent of visibility from the viewpoint. Actual levels of visibility will be less than the modelled results due to existing vegetation, built form and localised topographic elements that may not be included in the terrain model.

In terms of the actual nature of views, the distance between the viewpoint and the object will influence the magnitude of its visual effect. The distance factors and related visual effects will depend on a range of factors, including the scale of the object that is being viewed.

For Parwan, an analysis of representative viewpoints was undertaken to explore its theoretical visibility along:

- The Geelong-Bacchus Marsh Road – north of the Precinct.
- The Geelong-Bacchus Marsh Road – south of the Precinct
- Hopetoun Park plateau – residential area located north of the Werribee River

These viewpoints are considered most representative as they include both a highly sensitive visual as well as a very high use corridor receptor (i.e. the gateway into Parwan).

## 5.3 Visual Assessment Findings

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The visual assessment identified the following for Parwan Precinct:

- Visibility from Hopetoun Park and escarpment edge
- Potential visibility from Ta'Pinu Shrine.
- Potential visibility from the Western Freeway and Bacchus Marsh Road and associated gateways.
- Potential visibility from the BMID, Avenue of Honour and Bacchus Marsh old town.
- Potential visibility from Geelong Bacchus Marsh Road and associated gateway.
- Potential regional visibility from the high lying areas in

the west and formal viewpoints.

- Potential views over the BMID from the escarpment edge.
- Views to the mountains in the west.
- Potential visibility (and noise) of the Western Freeway.
- Potential visibility (and noise) of the railway line.
- Potential visibility (and noise) of the proposed Eastern link road (southern alignments).
- Potential visibility from Merrimu and escarpment edge.

### Implications to the Landscape Framework:

As there are minimal physical features across the Parwan landscape, the Landscape Framework must construct a strong emphasis on celebrating existing features of value such as the interface to the Werribee River and the Parwan Creek.

The Framework should maximise views towards the Bacchus Marsh to establish a visual connection to the township. Entry to the precinct via Woolpack Road and the Geelong-Bacchus Marsh Road should be softened with landscape and visually managed built form.

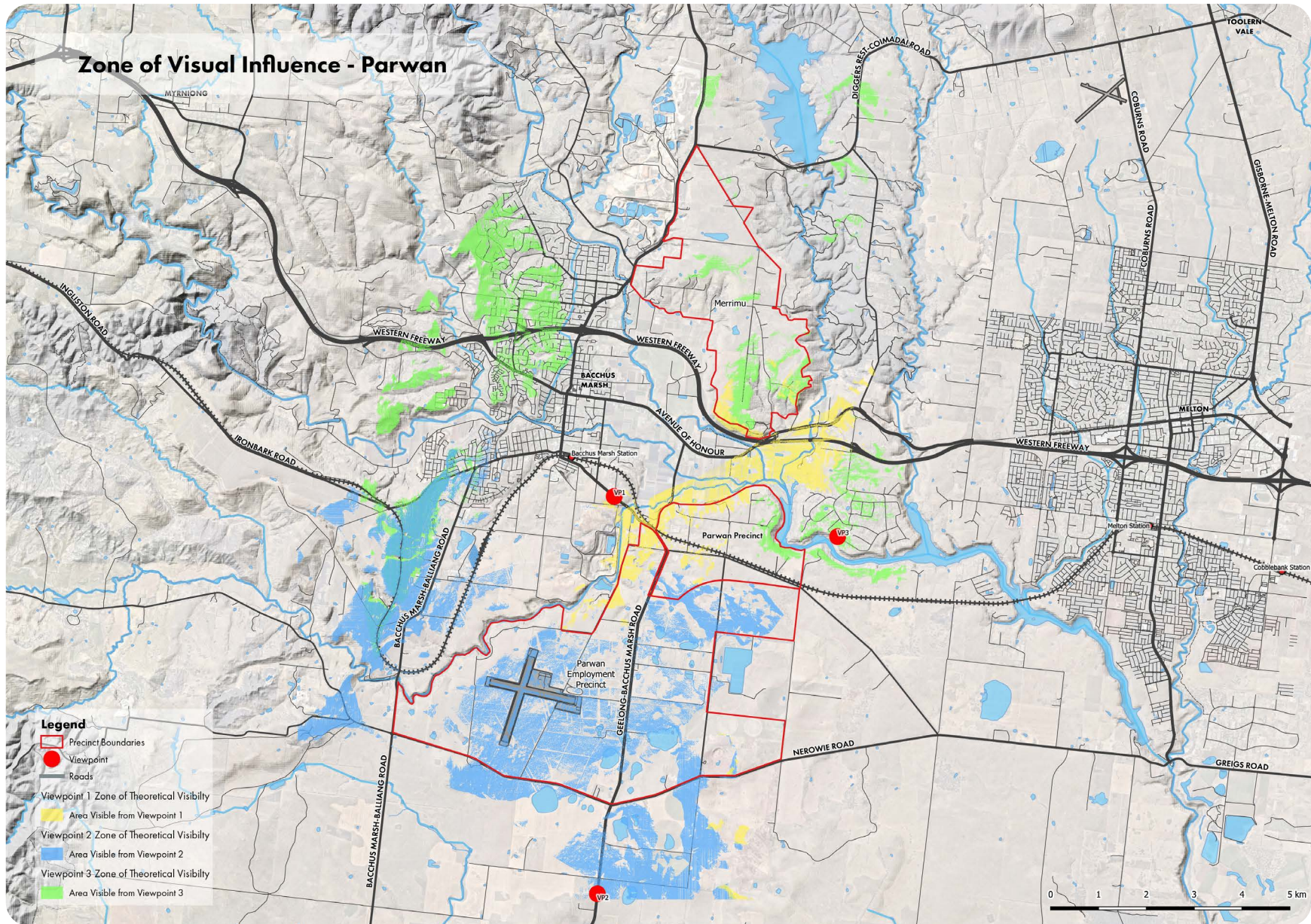


Figure 13. Cumulative ZVI from Representative Points

## 6 Precinct Opportunities and Constraints

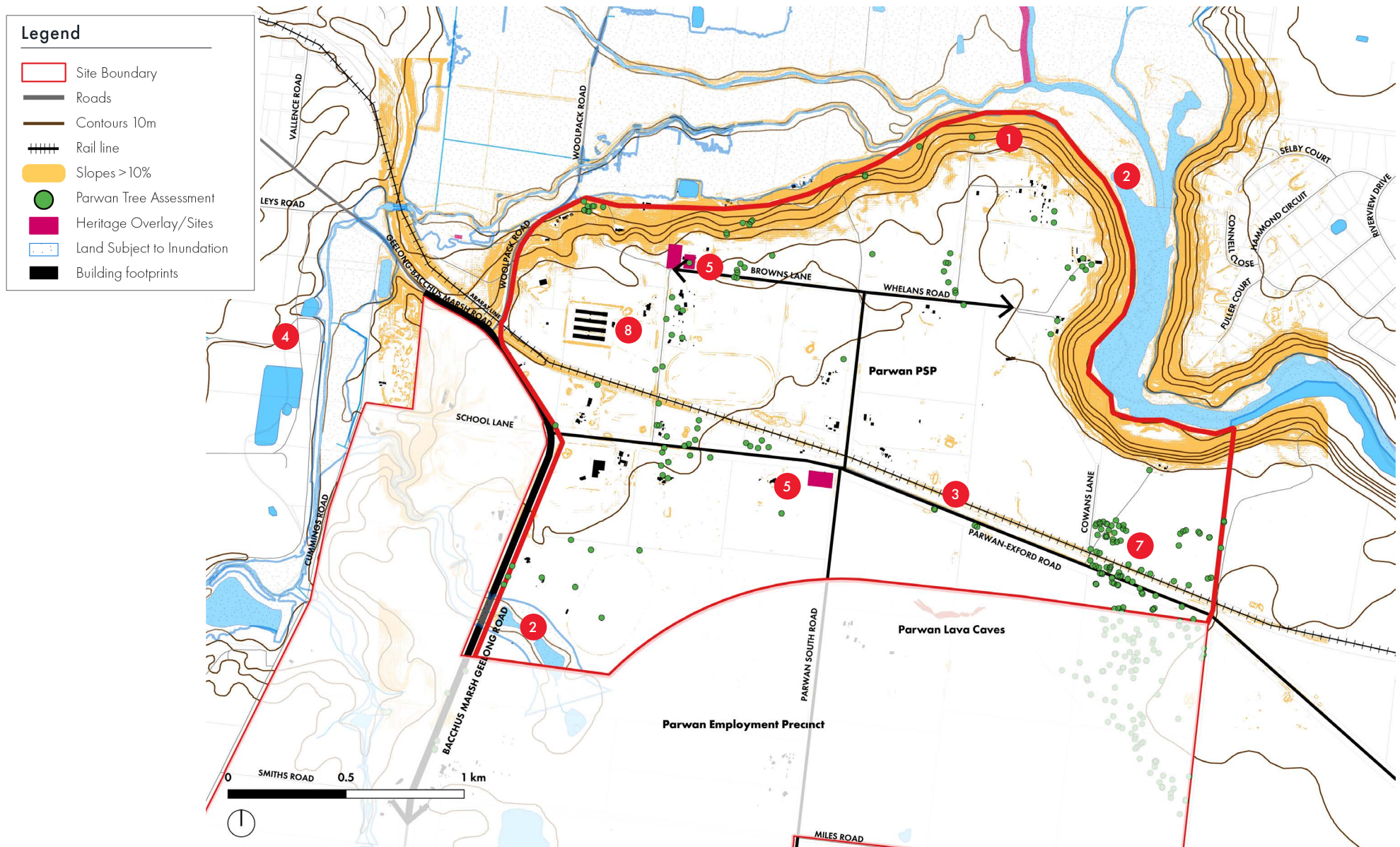


Figure 14. Parwan PSP - Opportunities and Constraints

## 6.1 Precinct Opportunities and Constraints

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1. Steep slopes (>10%) along the escarpment edge/ Parwan Creek and the Werribee River poses high erosion risk.
2. Existing waterbodies and tributaries of the Werribee River and the Parwan Creek poses inundation risks.
3. Rail line (at grade and within the trench) creates a both a physical and visual barrier within the precinct.
4. The neighbouring Maddingley Coal Mine provide poor visual amenity. Consider opportunities to divert/screen views to the facility.
5. Opportunity to retain heritage buildings and sites for placemaking value.
6. Interface to Parwan Employment Precinct and future agri-industrial use must be considered.
7. Opportunity to retain patches of vegetation and incorporate them into open space.
8. Existing broiler farm and associated buffer zone limits future land use. The PSP should consider the potential for the broiler farm to be relocated into the neighbouring PEP in the future.

## 7 Proposed Landscape Framework

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The following section details the rationale for the development of the recommended Landscape Framework Plan for the Parwan Precinct.

The Landscape and Visual Objectives for the three Precincts have been informed by the values identified in the Background Report.

The Framework plan has been informed by the strategic context and existing conditions summarised within this report.

### 7.1 Landscape and Visual Objectives

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The overarching objectives include:

1. A landscape that responds and contributes positively to the existing **natural environment**, including its features, its sensitivities and its systems.
2. A landscape that responds and contributes positively to the existing and future **built environment**, including land use planning, infrastructure and built form.
3. A landscape that acknowledges and respects the **cultural heritage** of the environment.
4. A landscape that aligns with the existing **character** of the region, but which is also distinct from other precincts.
5. A landscape that supports **visual quality and views** within, from and to the precinct.
6. A landscape that supports and facilitates a high quality of **everyday life** for users.
7. A landscape that supports and facilitates regional and local **tourism and recreation**.
8. A landscape that supports the development of **community identity** and the creation of a meaningful **sense of place**.
9. A landscape that functions as a sustainable **ecological system** that contributes both to environmental sustainability and biodiversity.
10. A landscape that responds and contributes positively to existing and future **biodiversity and conservation** planning both locally and regionally.



## 7.2 The Landscape Framework Vision

The Framework Vision for the Precinct includes a robust framework for the delivery of a con-temporary regional township that will deliver a distinctive, sustainable, high quality, high amenity community.

The community will support a environment-centric response to the unique landscape setting, creating a sense of connection and place that will be a hallmark of the precinct.

The precinct will complement the existing Bacchus Marsh region whilst maintaining a unique and distinct identity.

The UGF states that:

*“It is envisaged that the PSP will be a predominantly residential precinct with transit-oriented development that capitalises on the opportunities the future train station will provide. Significant passive and active open space along the Werribee River corridor highlight the biodiversity values present in the area. It will comprise a mix of residential densities, a neighbourhood centre and required community facilities, and include linkages into the surrounding pedestrian, cycling and public transport corridors”.*

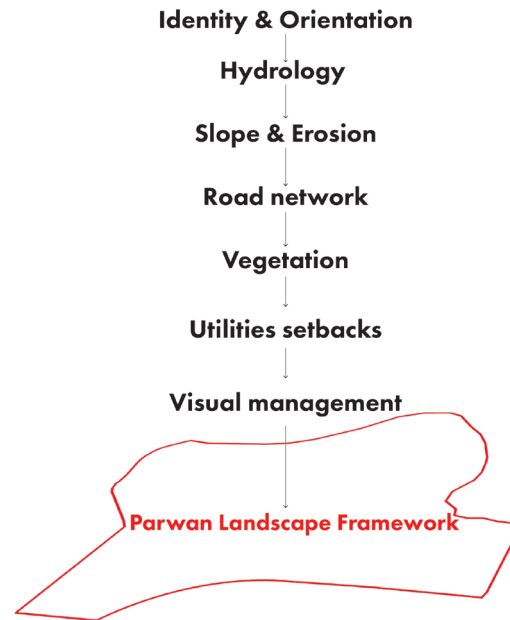


Figure 15. Diagram describing the Parwan Landscape Framework process.

### 7.3 The Landscape Framework Plan

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The Landscape Framework Plan is shown in Figure 23. The Landscape Framework adopts a three-tiered approach, supported by **Framework Strategies and Guidelines** in Section 7.4.

The Landscape Framework is structured as follows:

#### 1. Primary Framework - Conservation

This consists of elements that are set to be conserved within the precinct. These elements can range from:

- Sensitive and significant landscape, such as escarpments and high risk steep slopes that are prone to erosion. Due to the levels of dispersive subsoils within the Parwan Precinct, along with evidence of erosion, slopes of 10% or higher have been allocated as conservation to due their associated potential risks for built form and infrastructure. For further detail on erosion risk areas refer to: Parwan Station and Parwan Employment Precinct Structure Plans Geomorphology and vegetation assessment (Alluvium 2022).
- Areas with high levels of visual sensitivity, such as escarpments along the Werribee River and Parwan Creek.

- Drainage lines and wetlands with a 50-100m (minimum) riparian offset zone on either side. These drainage lines and wetlands have a mainly hydrological function, with additional conservation and/or open space potential
- Areas identified with high biodiversity and/or environmental value.
- Other landscape features, including the Parwan lava caves (located south of the Parwan PSP), Parwan Creek, Werribee River, rock outcrops, significant and large trees and cultural heritage sites.

#### 2. Secondary Framework - Management

This consists of elements that can be managed through urban design guidelines, best practice design principles and/or specific management plans (for example: slope and erosion management plans).

- Areas of medium risk with slopes of 10% or higher may require specific Slope and Erosion Management plans for future development.
- Areas that are highly visible and should be managed to support appropriate visual outcomes for future development within the precinct. The intention is to preserve the visual integrity of regional views onto the precinct.
- Relevant buffer areas associated with existing industrial uses.
- Sensitive interfaces, specifically to the escarpment, Werribee River and Parwan Creek.

- Interfaces to the rail corridor, existing arterial roads, and the agri-industrial uses of Parwan Employment Precinct.
- Connector and local roads to reflect the principles of the 20 Minute Neighbourhoods. Roads must also consider topography and framing of views. The PSP response would ultimately require input from a dedicated Traffic Study and Road Design.
- Built form, lot sizes and siting - further described under **Landscape Management Areas**.

#### 3. Tertiary Framework - Enhancement

This includes elements that will contribute to landscape character and visual amenity of the precinct. Some features may include:

- Establishment of new green corridors, specifically along roads.
- Additional parks and green links to contribute to the future open space network.
- New green corridors to support biodiversity between conservation areas, especially the Werribee River and Parwan Creek.
- Retention of significant mature vegetation where possible (within parks and along road reserves, or incorporated into roundabouts).
- Pockets of vegetation to provide visual screening.

### 7.3.1 Landscape Management Areas

As part of the Secondary Framework, it is proposed that Landscape Management Areas be considered to guide built form and siting outcomes for Parwan Precinct.

The following section outlines the proposed visual performance objectives for future land uses within the precinct:

<b>Landscape Management Area</b>	<b>Visual Performance Objectives/Outcomes</b>
<b>Residential</b>	<p>These areas should consist of variable lots and interfaces and domestic scale structures. Canopy tree planting should be prioritised to enhance landscape character. Sufficient setbacks which allows for front garden planting, with roadside vegetation screening would improve visual quality within the public realm and support landscape character. Align roads to maximise views towards open space and preserve scenic views towards the Bacchus Marsh township. Where possible, significant trees should be retained as features within parks and/or road reserves.</p>
<b>Visually Managed Development</b>	<p>These are areas within which development (either residential or commercial) should be controlled to preserve the visual integrity of regional views onto the precinct. This area is informed by the ZVI analysis and is shown is hatched on Figure 16 Parwan Precinct - Proposed Landscape Framework. The alignment shown on plan is based on ZVI modelling and will need further interrogation during the PSP process.</p> <p>These should be developed with strong consideration to slope and terrain. Development should maintain an offset from break of slope (from conservation - high risk erosion area) - to be confirmed by CFA.</p> <p>This area should prioritise tree planting to promote 'visual breaks' within the landscape. Large setbacks with generous road widths to support roadside vegetation will improve visual quality and enhance landscape character.</p>
<b>Civic</b>	<p>These would be local neighbourhood commercial nodes accommodating commercial and civil functions. These areas would accommodate larger scale buildings and a denser built form, capitalising on easy road access.</p> <p>These may include a variety of building sizes and scales that step down to meet the public realm at a human scale. Along the street interface, the integrity of the pedestrian realm should be retained through continuous vegetation / roadside planting - as well as canopy tree planting, high quality landscape amenity and interconnected civic and open spaces.</p>

Landscape and Visual Framework elements shown on the plan (Figure 16) are:

#### Primary Framework - Conservation

1. Areas of steep slope (over 10%) around the Werribee River/Parwan Creek should be designated as conservation. The purpose of this setback is to protect the escarpment from erosion and inappropriate development. This will also maintain the visual integrity of the landscape and river/creek environs.
2. Plan for a 50-100m offset each side from the creek to accommodate for 1 in 100 year flood level.

#### Secondary Framework - Management

3. Visually managed built form to be located along the northern boundary of the precinct (in alignment with the ZVI analysis) to protect the landscape character of the escarpment and the sensitive interface with the river/creek environs.
4. Open space/wetland feature to be provided around areas of potential inundation.

#### Tertiary Framework - Enhancement

5. Align roads to frame views towards open space and the Merrimu plateau beyond.
6. Open space to be provided where existing vegetation patches and mature trees can be retained as part of the landscape.
7. A linear open space along the Werribee River/Parwan Creek will protect the landscape and visual amenity of the escarpment and creek environs. Opportunity for a trail system to run along the creek corridor.
8. Open space to be provided along the rail corridor to improve visually amenity and to provide the opportunity for a linear east-west shared path.
9. Retain heritage buildings for placemaking opportunities. Heritage sites and features can be integrated into open space or other civic spaces, and be interpreted for public interest to enrich the landscape.

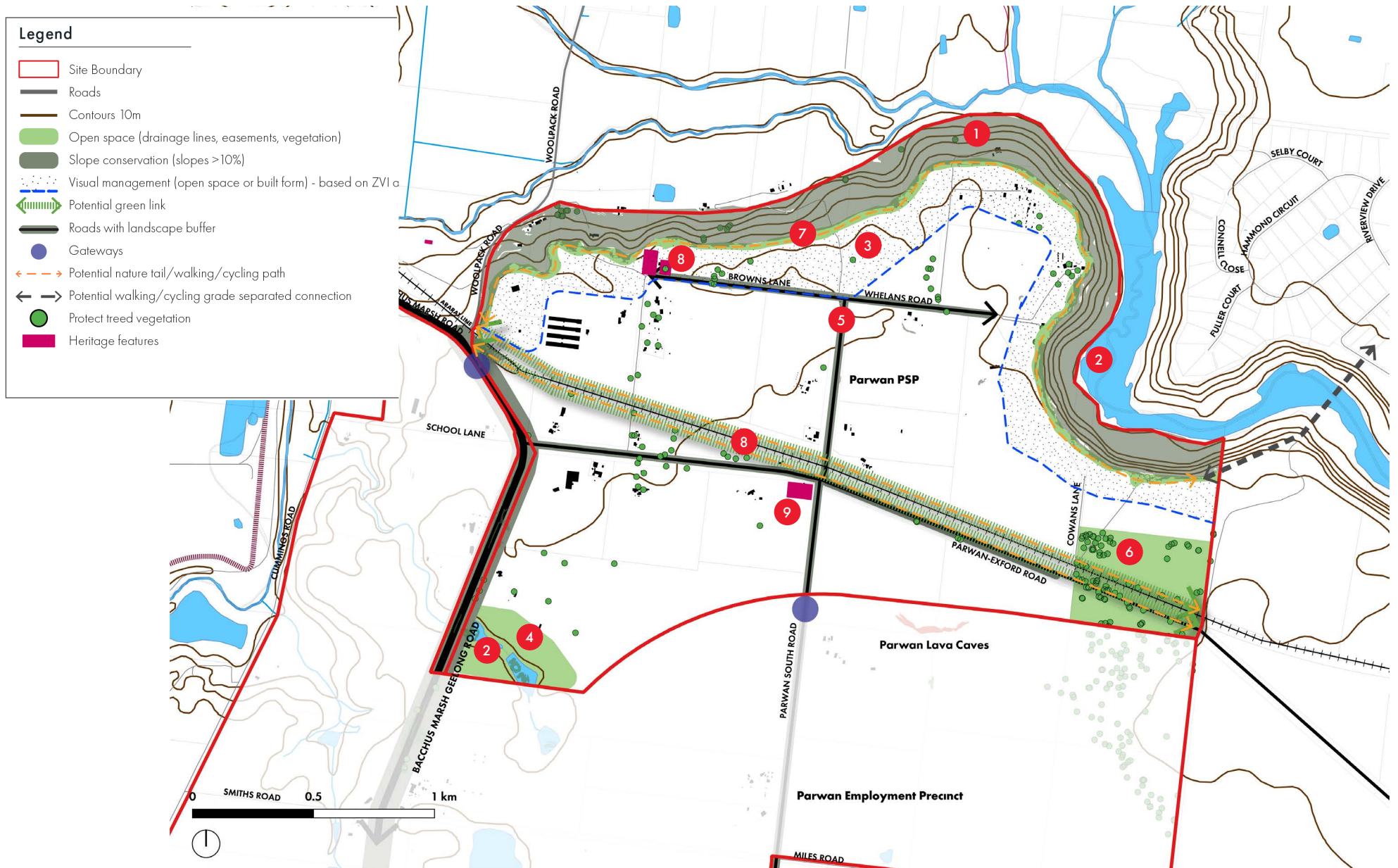


Figure 16. Parwan PSP - Proposed Landscape Framework Plan

## 7.4 Framework Strategies and Guidelines

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The Strategies and Guidelines included in this section are intended to support the framework. The aim is to protect the sensitive environments, conserve the character and optimise the landscape qualities of the precinct through an appropriate configuration and balance between built form and landscape areas.



Figure 17. Example of a mature tree retained as a landscape feature

### 7.4.1 Landscape Character

#### Strategy

- To support and enhance the Landscape Character of Parwan by retaining and supplementing key features.

#### Recommended Guidelines

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- Existing significant trees within the site should be retained / supplemented.
  - Appropriate property setbacks should be created along main and secondary roads to facilitate and support the continuity of new and existing planting.
  - Maximise landscape treatment of spaces rather than hard surface – being grass, garden beds and revegetation areas in addition to canopy trees.
  - Maximise opportunities for street tree planting throughout the precinct through supportive and complimentary infrastructure planning, such as undergrounding of electrical infrastructure and consolidated service corridors outside of vegetated road verges.
-

## 7.4.2 Key Views and View Lines

### Strategy

### Recommended Guidelines

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>To preserve views from the Bacchus Marsh township and from adjacent residential areas (such as Hopetoun Park) to the Parwan escarpment.</li> <li>To protect the visual amenity of the escarpment along the Werribee River and Parwan Creek interfaces.</li> </ul> | <ul style="list-style-type: none"> <li>Create opportunities for formal vantage points from the escarpment edge. Position vantage points at natural and / or planned points of interest in the landscape, such as at road junction points, significant tree stands, outcrops and/or site of Cultural significance.</li> <li>Orient streets to capture key views towards the Bacchus Marsh Valley and open spaces. Maintain views from adjoining areas to surrounding landscape elements.</li> </ul> |
| <ul style="list-style-type: none"> <li>To preserve and celebrate views from the escarpments towards the western mountains and over the Bacchus Marsh Valley.</li> </ul>  | <ul style="list-style-type: none"> <li>Create opportunities for formal vantage points from the escarpment edge. Position vantage points at natural and / or points of interest in the landscape.</li> </ul>  |
| <ul style="list-style-type: none"> <li>To create and maximise opportunities for short range views from roads and properties into open space.</li> <li>To screen and minimise views towards the Maddingley Coal Mine and protect visual amenity.</li> </ul>   | <ul style="list-style-type: none"> <li>Opportunities for views into open space should be created through the placement of roads and pathways along the edges of or cutting through open space areas.</li> <li>Incorporate strategic breaks in roadside and buffer planting that would frame views into open space areas and create visual connections with open space.</li> </ul>  |



Figure 18. View looking from Hopetoun Park towards Parwan.

### 7.4.3 Streetscapes

#### Strategy

- To provide streetscapes that add landscape value and amenity to the precinct.
- To encourage the retention of high value trees and planting of new trees.
- To ensure canopy tree planting is provided within all streets.

#### Recommended Guidelines

- Incorporate elements that will contribute to Parwan’s landscape character, through the provision of verges and incorporating existing significant vegetation. Verges should be wide enough to accommodate large street trees, particularly when located adjacent to a drainage reserve.
- Utilise street tree planting species and siting to reinforce the movement hierarchy and desired character for an area. This could include formalised avenue planting for areas such as key entries and planting to reinforce movement connections.



Figure 19. Example of a well-planted central median.



Figure 20. Example of open space/park interface.



#### 7.4.4 Edges and Interfaces

##### Strategy

##### Recommended Guidelines

<ul style="list-style-type: none"> <li>To protect and preserve the landscape of the escarpments that define the edge of Parwan.</li> </ul>	<ul style="list-style-type: none"> <li>Avoid any development, including roads and service infrastructure, along the escarpment (sensitive and erodible slopes) that are allocated a conservation function. Rehabilitate erosion damage and reinstate natural vegetation (preferably EVC) to stabilise the soils.</li> <li>Rehabilitate erosion damage and reinstate natural vegetation (preferably EVC) to stabilise the soils.</li> <li>Manage development on sensitive and erodible slopes steeper than 10% to landscape dominant land uses. Ensure that development controls and ongoing resource management requirements are in place to ensure the continued stability of the soils.</li> <li>Ensure that development on sensitive and erodible slopes steeper than 10% is sensitive in scale and considers suitable grading outcomes and avoids excess use of retaining walls.</li> <li>Establish a protective landscape buffer along the top edge of the escarpment, with an offset from the break in slope (to be confirmed by CFA) to protect steep and sensitive slopes from runoff emanating from adjacent land uses.</li> </ul>
<ul style="list-style-type: none"> <li>To protect and preserve the landscape, biodiversity and cultural heritage values of Parwan Creek and the Werribee River to the north.</li> <li>To protect the amenity of existing and future sensitive land uses.</li> </ul>	<ul style="list-style-type: none"> <li>Maintain and reinforce built form setbacks and landscape buffers to adjacent residential/sensitive uses, particularly along the northern interface to the Werribee River.</li> </ul> <p><b>Northern interface with the Werribee River and Parwan Creek</b></p> <ul style="list-style-type: none"> <li>Open space and/or a vegetated buffer should be prioritised along this interface to Werribee River/Parwan Creek to ensure the landscape, visual and environmental values of the Werribee River/Parwan Creek. The visual interface of this edge could be graded through the use of buffer vegetation to appear soft and natural.</li> </ul>
	<p><b>Interface to the Rail Corridor</b></p> <ul style="list-style-type: none"> <li>The interface to the rail corridor provides an opportunity for a linear park system within the rail reserve (with an offset from the tracks) providing east-west connectivity to the precinct. Existing mature trees can be retained in this area, which will also provide screening to the rail corridor. (See Figure 21 and 22)</li> </ul> <p><b>Interface to Parwan Employment Precinct (PEP)</b></p> <ul style="list-style-type: none"> <li>The interface between the agri-industrial land uses and existing rural properties should be softened with setbacks from the eastern precinct boundary to provide for a vegetated buffer and a visual break.</li> </ul>



Figure 21. The Ararat rail line which runs through Parwan.

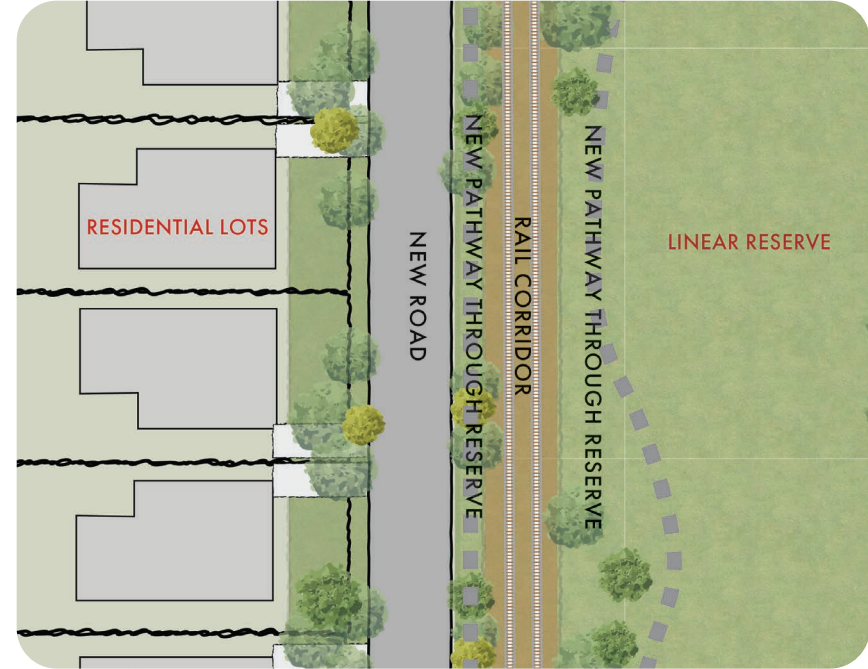


Figure 22. Example of Rail Interface treatment

#### 7.4.5 Place Making

##### Strategy

- To establish and build an identity for the Parwan Precinct that is distinct from that of surrounding landscapes and supports the desired contemporary character with high amenity.

- To maintain and support the identity of Parwan as part of the greater Bacchus Marsh landscape.

- To create human scale high amenity open spaces for residents and visitors.

##### Recommended Guidelines

- Integrate natural features and sites such as significant trees and outcrops, into open space or other civic spaces.
- Optimise open space networks (specifically along the edges of the Werribee River and Parwan Creek) and revegetate these as diverse conservation landscapes.

- Celebrate new gateways into the precinct as tree - lined avenues, creating a link to the history and heritage of Bacchus Marsh's Avenue of Honour.
- Integrate cultural and historical heritage sites and features into open space or other civic spaces and interpreted for public interest to enrich the landscape.
- Consider opportunities for pedestrian and cycling connections across Parwan Creek to connect surrounding residential communities.

- Provide an integrated network of parks, open space and trails to connect workers and visitors with the natural assets of the precinct, specifically along Parwan Creek and the Werribee River.
- Provide high quality, attractive landscaping that positively contributes to the streetscape, sensitive interfaces and the surrounding context, which considers opportunities to retain mature vegetation.
- Local places of community value (i.e. natural and cultural) within the precinct should ideally be connected through walking circuits with interpretive signage and a local palette of materials to encourage appreciation and build awareness.



Figure 23. Example of mature trees retained to be integrated as part of an open space.

### 7.4.6 Corridors

#### Strategy

- To enhance the ecosystem value of natural corridors within the precinct.

#### Recommended Guidelines

- Enhance the functionality and recreational value of conservation areas by creating an integrated network of trails along the Werribee River/Parwan Creek interface.
- Enhance roadways as green corridors, providing a framework for storm water management, biodiversity linkage and visual continuity.
- Planting along roadways, medians, and along property boundaries should be enriched and extended as continuous visual and ecological corridors.
- Drainage lines should be rehabilitated and reinstated as functional hydrological and ecological systems within the site, which link with regional systems within the greater area.
- Incorporate stormwater management into the design of all landscape beyond the drainage lines and wetlands to reduce runoff stress on drainage lines.

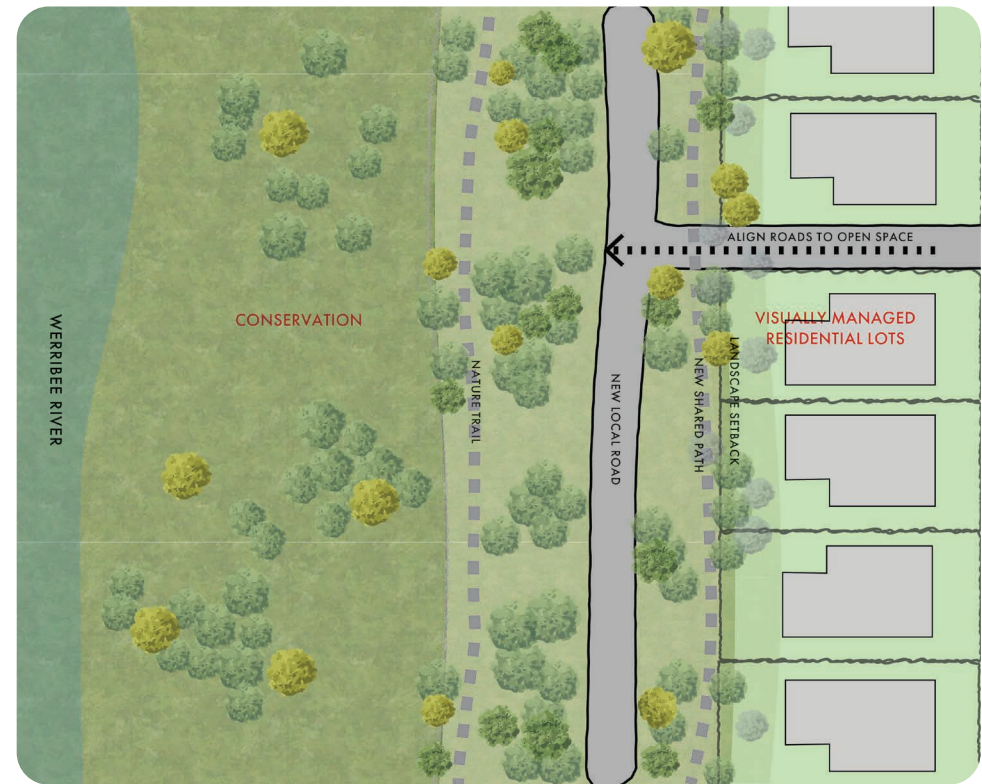


Figure 24. Interface to the Werribee River and conservation area.



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