Hawkstowe Station West Development Plan

Development Plan Overlay Schedule 5 and Schedule 27

Whittlesea Planning Scheme

July 2025

Document Management

Version	Date	Details	Author
1	20/07/2023	Preliminary Development Plan	Gregory Bursill
2	17/12/2023	Revised Development Plan to address Council feedback	Gregory Bursill
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Technical Design Team:

- BPD Civil Engineering and Urban Design.
- Taylors, Survey.
- Urban Edge Landscape Architects.
- Traffic Works, Traffic Impact Assessment.
- Biosis, Historic Heritage.
- Alluvium, Surface Water Management Strategy.
- Tree Logic Arborist.
- Ecology and Heritage Partners, Native Vegetation Assessment.
- Senversa, Preliminary Risk Screen Assessment.

Contents

Figures

1 Introduction

1.1 Purpose

This Development Plan is proposed to be endorsed by the City of Whittlesea to satisfy a requirement to prepare a Development Plan specified in:

- Development Plan Overlay (DPO) Schedule 5.
- DPO Schedule 27.

The purpose of the Development Plan as set out in the DPO is:

- To implement the Municipal Planning Strategy and the Planning Policy Framework.
- To identify areas which require the form and conditions of future use and development to be shown on a development plan before a permit can be granted to use or develop the land.
- To exempt an application from notice and review if a development plan has been prepared to the satisfaction of the responsible authority.

This Development Plan facilitates the transition of the land from farming purposes to a residential development generally in accordance with the Mernda Strategy Plan.

The process to approve construction of the development is:

- Step 1. Approval of this Development Plan.
- Step 2. Approval of a future planning permit (or permits) for the subdivision and development of the land.
- Step 3. Construction of the subdivision, followed by the construction of new homes.

1.2 Development Plan Structure

The report is structured as follows:

2. Context.
3. Site Analysis.
4. Vision.
5. Design Response.
6. Implementation.

This Development Plan applies to the land shown in Figure 1.

Figure 1: Area to Which the Development Plan Applies

1.3 Technical Reports

The following technical assessments have been completed to support the preparation of this Development Plan:

- **Preliminary Risk Screen Assessment (PRSA)**. Senversa, 2023.
- **Feature and Level Survey.** Taylors, December 2023.
- **Dry Stone Wall Assessment**, Biosis, December 2023.
- **Arborist.** Arboricultural Assessment Report, May 2023.
- **Servicing Strategy.** Breese Pitt Dixon, April 2025.
- **Ecology.** Ecology and Heritage Partners, Native Vegetation Assessment, December 2023.
- **Landscape Concept**. Landscape Concept Report, Urban Edge Landscape Architects, April 2025.
- **Traffic Assessment**. Transport Assessment Report, Traffic Works, July 2025.
- **Historic Heritage**. Conservation Management Plan, Biosis Research, February 2025.
- **Surface Stormwater Management Strategy**. Alluvium, June 2025.

2 Context

2.1 Strategic Context Statement

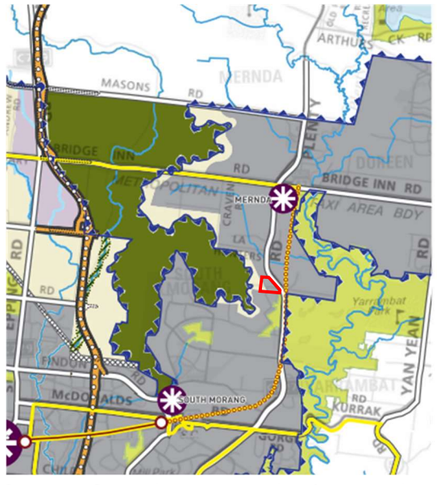
The land was designated for urban development through two separate strategic planning processes:

- Most of the land was identified through the Mernda Strategy Plan (see 2.2 below) in 1994.
- The balance of the land, being a small part of the south western corner of the land, was identified through the Growth Corridor Plan in August 2010.

Planning scheme amendment VC68, amongst other changes, amended the location of the Urban Growth Boundary (UGB) in August 2010 as the boundary was shifted to the west providing for an increased development footprint. That part of the land which was included within the expanded UGB was rezoned from the Rural Conservation Zone to Residential 1 Zone via planning scheme amendment C166 part 1 in November 2012. This amendment also applied the DPO Schedule 27 to the land. DPO Schedule 5 already applied to the land within the Mernda Strategy Plan area.

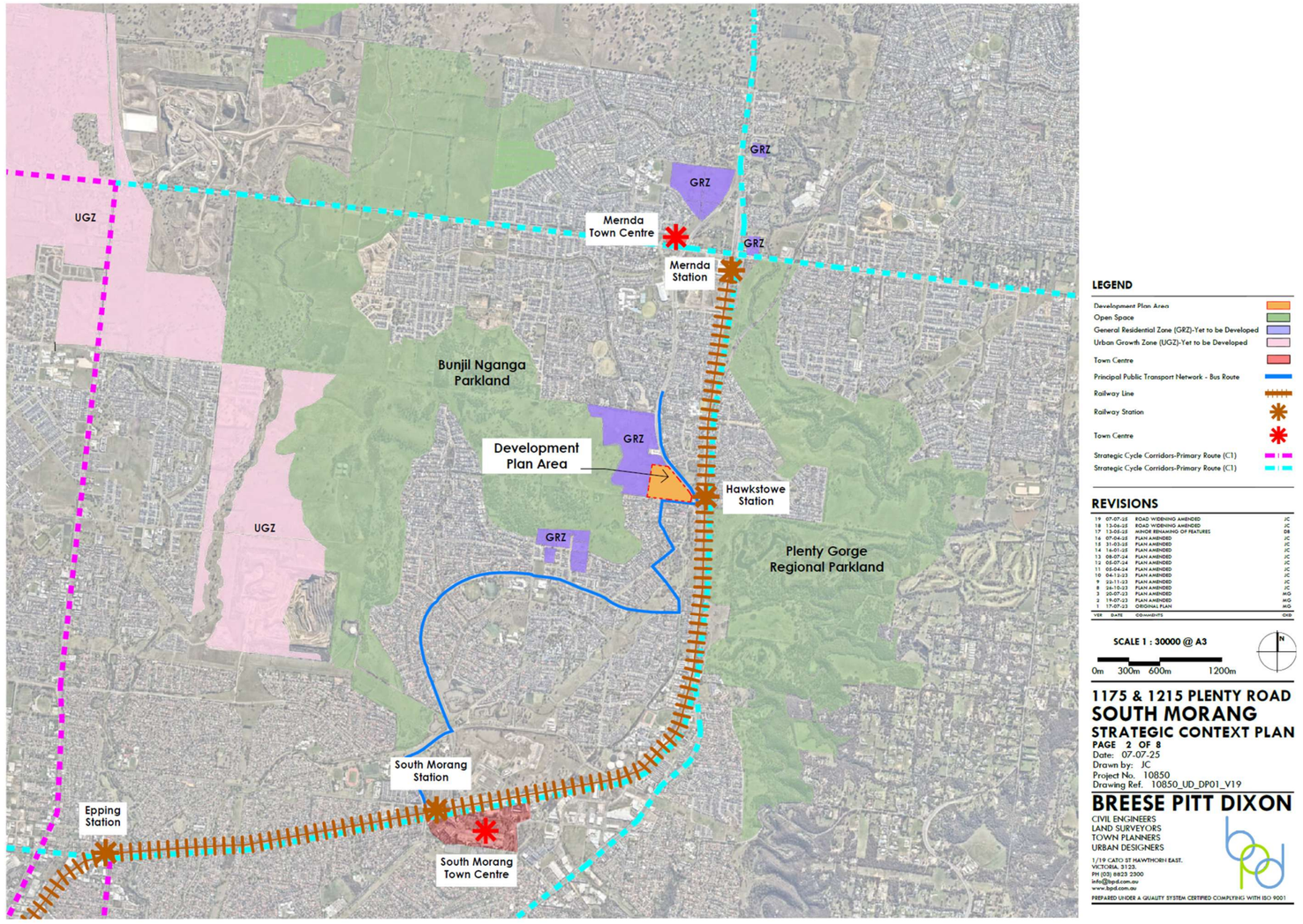
The Growth Corridor Plan in Figure 2 below shows the land as an established urban area except within DPO Schedule 27 which is future urban.

Figure 2: Extract from the Growth Corridor Plan



Source: Growth Areas Authority, Northern Growth Corridor Plan

Figure 3: Strategic Context Plan



The land is about 25km from the Melbourne CBD. Some of the key features of the site's strategic context are:

- The land is adjacent to the Hawkstowe Rail Station.
- The land is midway between the major town centres of South Morang and the emerging centre at Mernda.
- The land is within walking distance of both the Bunjil nganga Parkland and the Plenty Valley Parklands.
- The land has access to Plenty Road which is a Primary Arterial servicing the Mernda Growth Area.
- The land is adjacent to the strategic cycling corridor.
- The land is adjacent to the Principal Public Transport Network (PPTN) which is planned to be a higher frequency and capacity bus service.

2.2 Mernda Strategy Plan

This a written report required by DPO Schedule 5 which explains how this Development Plan is generally in accordance with the Mernda Strategy Plan (MSP), including how it responds to and applies the design principles and key objectives of the relevant plans.

The MSP was approved by Council in October 2004 and an amended version was subsequently approved in July 2017 through Amendment C123 to the Whittlesea Planning Scheme. The strategy provides broad strategic direction and land use outcomes to guide development of the Mernda Growth Area.

The land is included within Incorporated Plan Overlay (IPO) Schedule 1 which relates to the MSP. The IPO requires development to be generally in accordance with the MSP.

The MSP provides more detailed plans for 5 precincts. Figure 4 is an extract from the MSP which is the Precinct 4 Plan. The Precinct 4 Plan includes the subject land.

The following is relevant from Figure 4:

- The land is designated as residential.
- Existing River Red Gum trees are shown on the plan for protection and an environmentally sensitive design area is shown around the existing River Red Gums.
- A low-density transition is shown to the west.

The following relevant planning context changes have occurred since the MSP was adopted:

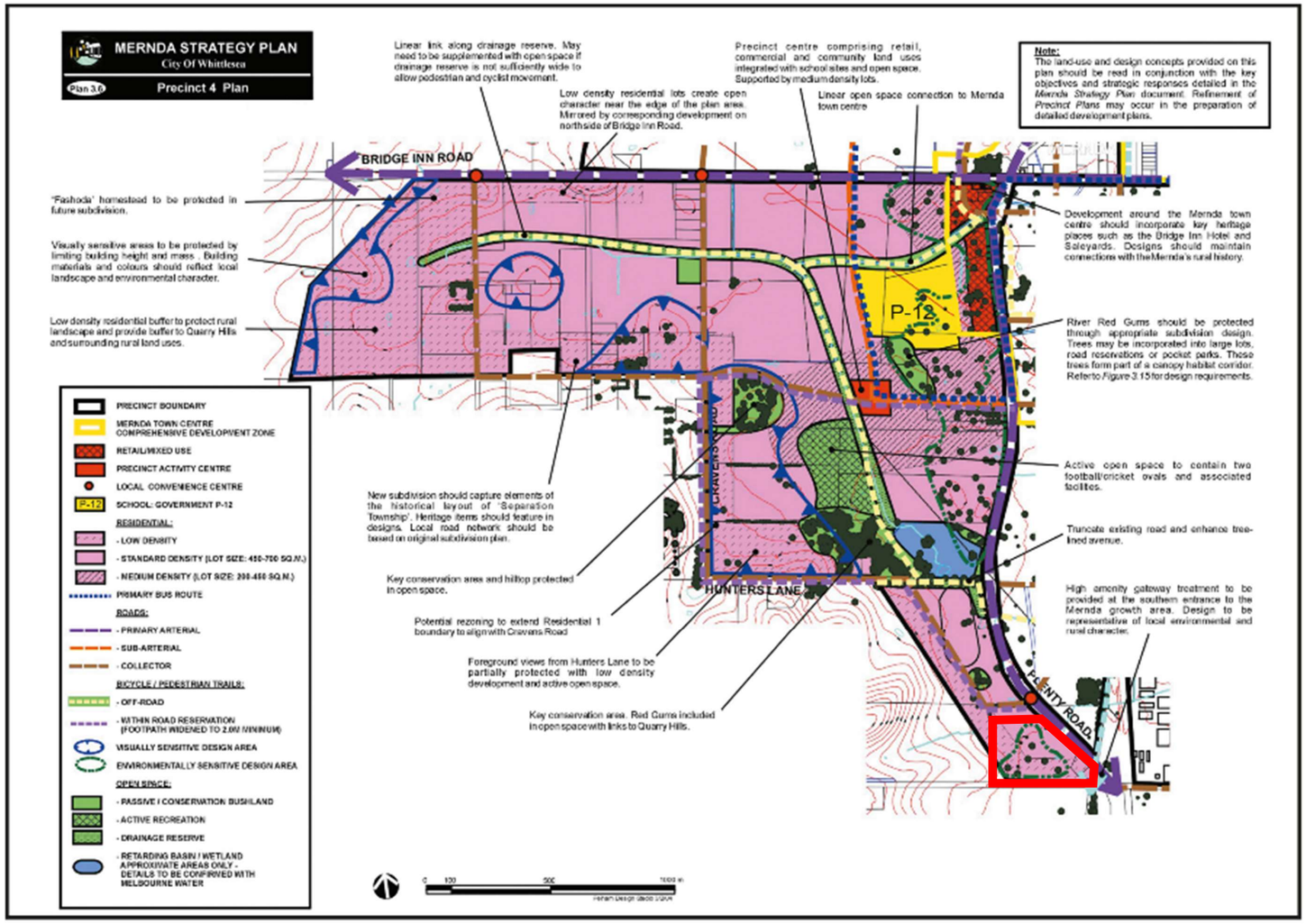
- Rail has been extended to Hawkstowe and the original sewer capacity constraints that restricted housing densities have been removed.
- The urban footprint has been expanded to facilitate the establishment of the Bunjil nganga Parkland. This removed the relevance of a low-density transition on the western edge of Precinct 4.

The land is now an in-fill site suitable for well-designed housing.

2.2.1 MSP Key Objectives and Design Principles

This section describes how the Development Plan responds to the MSP Key objectives and design principles as relevant.

Figure 4: Mernda Strategy Plan Precinct 4 Plan



Planning and Design Key Objective: To create an interconnected set of neighbourhoods that each has a distinctive character. They should enable community participation, economic development and adaptation to change over time.

***Development Plan Response**: The Development Plan implements the planning key objective as it provides for well-designed residential development that enables residents to participate in economic and community life with an ability to walk or cycle to the rail station, a PPTN bus and parks, schools and shops. The Development Plan requires a neighboruhood character response and is well connected which encourages community and economic participation.*

Transport System Key Objective: To put in place an efficient, equitable and environmentally sustainable transportation system that reduces car dependence, encourages walking and cycling for local trips, and supports local economic activity.

***Development Plan Response**: The Development Plan implements the transport system key objective as it provides for a bus route along McArthurs Road and through the connector street traversing the site, direct shared path links towards the rail station, a walkable and safe street structure and increased housing density opportunity to encourage greater use of the rail station. Higher density housing is encouraged within the walkable catchment of the station which supports reduced car dependance of future residents.*

Environmental Conservation Key Objective: To protect and enhance environmental values by applying the principles of ecologically sustainable design to the designation of open space and the construction of urban areas. Plan 3.10 – Areas Requiring Environmental Protection identifies land that have environmental significance. These have been categorised as Key Conservation, Link, Conservation or Vegetation Protection areas. Within these areas consideration must be given to the recommendations of the report prepared by TBLD (2000). The MSP includes Figure 5 which identifies areas of environmental significance. The areas of environmental significance plan show:

- A vegetation protection area to protect the existing trees.
- A link conservation area linking from the rail station to the urban area to the south generally along the Pipe Track.

***Development Plan Response**: The Development Plan has been informed by a detailed Native Vegetation and Arboricultural Assessment by EHP and Tree Logic. The design team have met Council staff on site to determine which of the indigenous trees should be retained, how they should be retained generally and other design considerations which are included in the Development Plan as performance measures. The urban design response allows the environmentally sensitive design areas to be linked to the open space system through an expanded tree canopy.*

***Development Plan Response to Thompson Birrell Landscape Design (TBLD) Report, 2000:** The MSP identifies a portion of the land within a 'Vegetation Protection Area'. Section 3.2.2 of the MSP states that where a Development Plan affects this area, consideration must be given to the recommendations of the TBLD report, 2000. The most relevant parts of the TBLD Report include:*

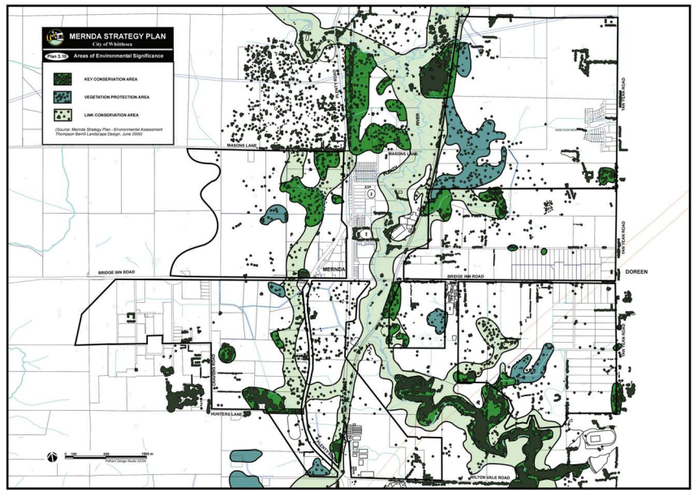
- *The vision statement and key objectives.*
- *Use of plants in urban and landscape design.*
- *Vegetation protection area directions.*
- *Link conservation area directions.*

Key conservation areas are not relevant to this Development Plan. The following are the Development Plan's response to the relevant TBLD design elements.

<u>The vision statement and key objectives:</u> The Development Plan protects the environmental character and ecological integrity of the area by preserving healthy existing River Red Gums. These trees will contribute to the sense of place in the wider Mernda Area.

<u>Use of plants in urban and landscape design:</u> The Development Plan proposes to predominately use indigenous trees and plants in future landscape design. These will be approved by Council before any works can commence on site.

Figure 5: Areas Requiring Environmental Protection



<u>Vegetation protection area directions:</u> The vegetation protection areas include scattered trees which do not form a strategic link. More detailed assessment has occurred on the land to explore whether it is appropriate to retain the trees and the general form of protection. The Development Plan protects the key trees from development in future conservation areas. The details of how these areas will be protected with be resolved by future planning permit applications. The TBLD document supports low impact passive use as well as unsealed paths through areas where trees are protected. The Development Plan includes performance measures to assess planning permits against which require tree protection, and which encourage housing to overlook the conservation areas as well as other design measures.

<u>Link conservation area directions:</u> The link conservation area is not relevant as the link follows the Pipe Track which is outside of the Development plan area and not impacted by the proposed development. The Pipe Track is protected from impact.

Social Infrastructure and Community Development. Key Objective: To facilitate the timely provision of a range of community and recreation facilities to meet the needs of residents and promote community health and cohesion.

***Development Plan Response:** The Development Plan is consistent with the MSP direction for the location of social infrastructure. The land will pay development contributions towards the provision of offsite infrastructure in nearby neighborhoods.*

Housing: Key Objective: To provide a mix of lot sizes and housing forms to cater for a broad range of household types. The design of dwellings should be site-responsive, energy efficient, and contribute to local identity.

***Development Plan Response:** The Development Plan implements the housing key objective through the housing objectives contained in the housing statement. The housing performance measures, and the Development Plan plans combine to encourage a broad range of household types. The Development Plan includes comprehensive housing, public realm and ESD objectives and performance measures which will ensure dwellings will be site responsive, energy efficient and contribute to local identity.*

Open Space Network Key Objective: To establish an integrated open space network that maintains ecological integrity and landscape character as well as offering a wide range of passive and active recreation opportunities for all user-groups.

***Development Plan Response:** The Development Plan vision, objectives and performance measures will ensure the site contributes to the wider MSP integrated open space network. The performance measures to be implemented through planning permits will ensure ecological integrity and provide a range of experiences for all user groups. An active transport network allows residents access to the Bunjil nganga Parkland, the Plenty River Valley Parklands and nearby active sport opportunities.*

Heritage and Culture Key Objective: To protect Aboriginal and European heritage sites and to increase community understanding and awareness of this heritage through site-responsive urban design.

***Development Plan Response:** A Preliminary Aboriginal Heritage Test (PHAT) has determined that here are no areas of Aboriginal cultural sensitivity on the land. The Development Plan acknowledges the heritage significance of Moorilla and ensures any development within the Heritage Overlay is consistent with the objectives of the Overlay and planning scheme policies designed to protect heritage values.*

Servicing and Drainage Key Objective: To effectively and efficiently implement the servicing and drainage strategies that have been prepared by Yarra Valley Water and Melbourne Water respectively. The principles of Water Sensitive Urban Design (WSUD) should be applied in a coordinated manner across all precincts in the MSP area. This should occur in collaboration with Melbourne Water with the aim of limiting the quantity, and improving the quality, of stormwater entering waterways by limiting impervious surface areas, capturing run-off, and allowing biofiltration to occur.

***Development Plan Response:** The Development Plan includes an Integrated Water Management Plan section that specifically addresses the MSP drainage objective, which embraces WSUD and seeks to reduce stormwater quantity leaving the land.*

2.3 Local Context Statement

The land is near major transport, social and recreation infrastructure which provides the context for the development to support a quality, affordable lifestyle for future residents.

Figure 6 illustrates the key infrastructure and context, including that the site is:

- Close to Hawkstowe Rail Station.
- Adjacent to the Plenty Road transport corridor.
- Adjacent to the Yen Yean Pipe Track.
- Adjacent to the Principal Public Transport Network (PPTN).
- Close to Mernda Park Primary School.
- Within walking distance of both the Bunjil nganga Parkland and Plenty Gorge Parklands.

Hawkstowe Rail Station

The eastern boundary of the land is within 150 metres of the Hawkstowe Rail Station. More than half the land is within the 400m walkable catchment of the station with direct access via a signalised pedestrian and cycle crossing on Plenty Road at the McArthurs Road intersection.

Plenty Road Transport Corridor

Plenty Road is a 6-lane primary arterial road that provides road-based transport access to the Ring Road and the region. Plenty Road is a PPTN bus route and has dedicated on road bike lanes.

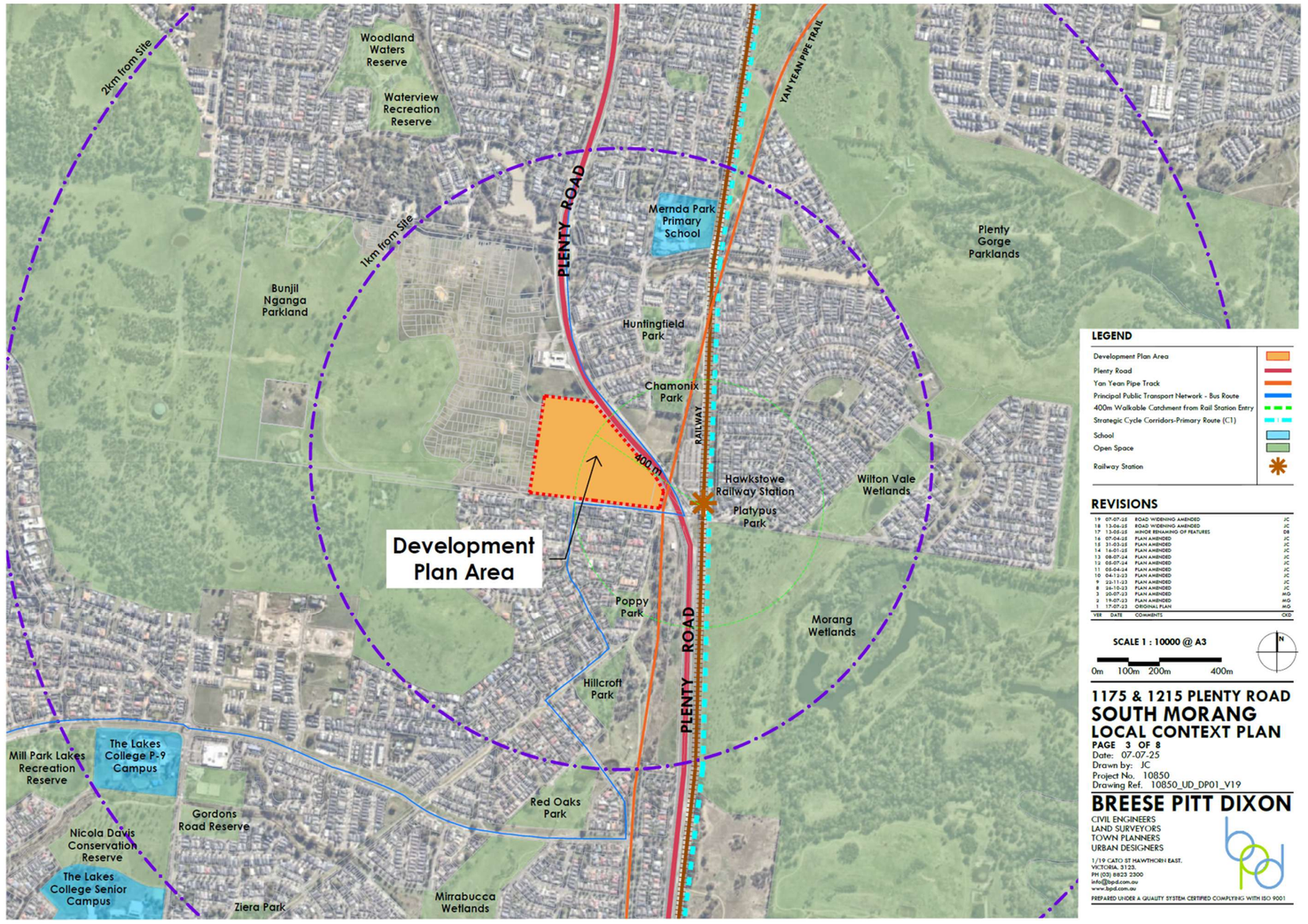
Bunjil nganga Parkland

The Bunjil nganga Parkland is located to the west and provides open space on hilltops and ridgelines which overlooks the northern area of South Morang with elevated 360 degree views. The parklands support a network of trails, passive open space use, flora and fauna biodiversity, cultural heritage values and is a locally and regionally significant landscape. An area to the west of the subject land is identified to be acquired by Council for expansion of the Bunjil nganga Parkland.

Plenty Gorge Parkland

The Plenty Gorge parklands are an important environment protection zone and provide managed opportunities for passive recreation including cycling and walking trails.

Figure 6: Local Context Plan



Yan Yean Pipe Track

The Yan Yean Pipe Track is a key heritage asset and supports a shared path and canopy trees and other environmental qualities. Some heritage dry stone walls are located abutting the site.

Surrounding Established Urban Areas

The surrounding residential areas supports conventional residential development typically with single dwellings on lots generally in the range of 400-700 square metres.

These adjacent residential areas include medium density residential development near public open space and the retention of River Red Gums within open space.

The Mernda Park primary school is within walking distance of the land, and a P-12 college is located to the south of the land.

2.4 Adjacent Development Plan

Figure 7 is an extract from the adjacent approved Development Plan.

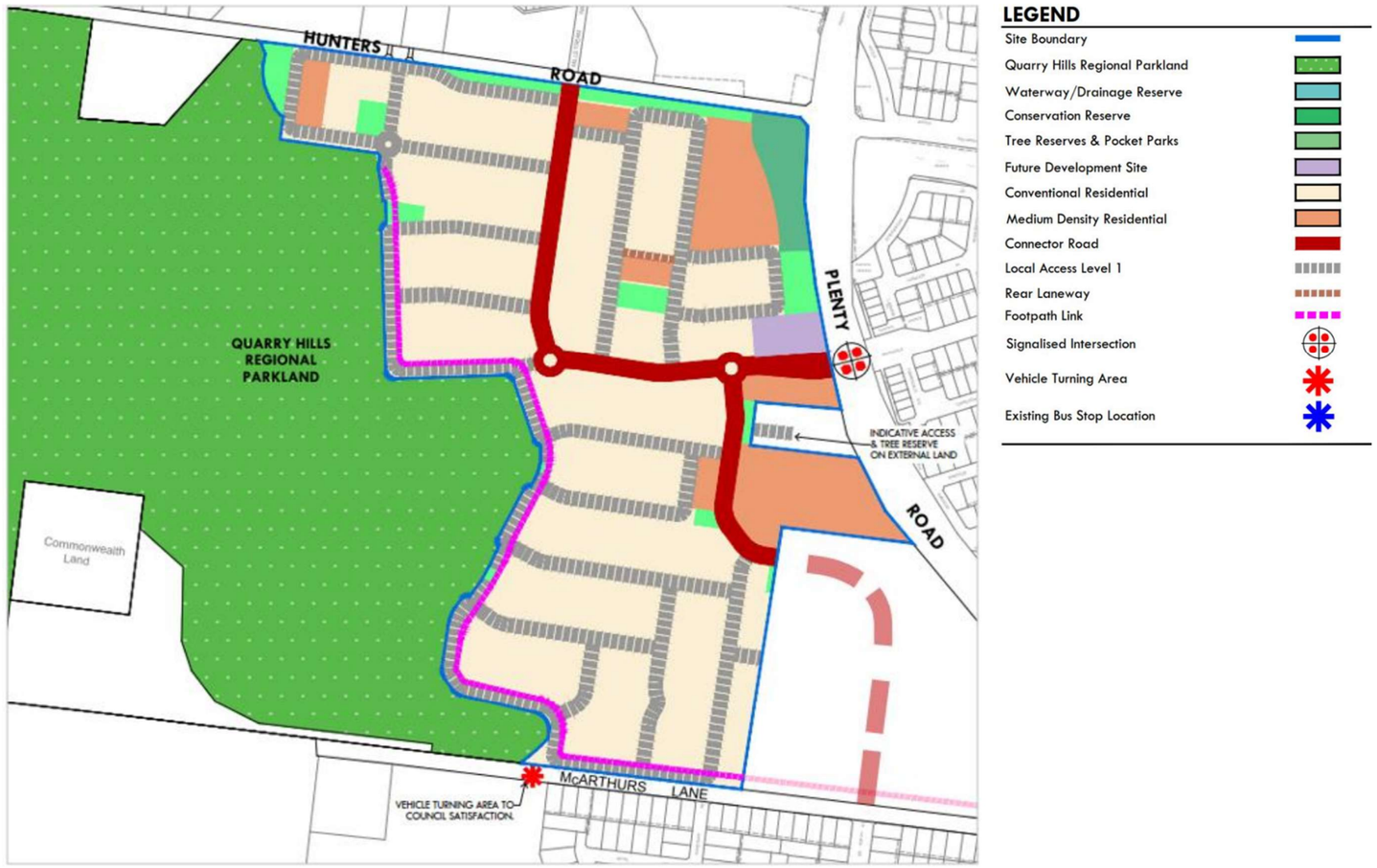
The most relevant features of the plan that need to be considered or integrated into this Development Plan are:

- A new connector street is proposed to extend from Hunters Road to McArthurs Road via a new intersection on the subject land at Poppy Drive. This would require a roundabout to manage traffic movements at McArthurs Road.
- A now complete signalised intersection on Plenty Road at Riverdale Boulevard. This provides alternative traffic access to Plenty Road, which may be attractive for north bound movement.
- Bunjil nganga Parklandis proposed to the west to extend to within several hundred metres of the land. This provides attractive walking and recreation opportunities.
- A footpath is proposed to extend from the Bunjil nganga Parkland along the north side of McArthurs Road to the Rail Station. This would be widened to a shared path from Poppy Drive.
- Medium density housing is proposed along the Plenty Road transport corridor.
- Existing River Red Gums and other indigenous trees are proposed to be protected on the land, including straddling the western boundary interface with this Development Plan. The Planning Scheme generally requires protection of River Red Gums on the land.
- The balance of the land is proposed for residential development.

A shared path is not shown along the Plenty Road frontage of the land. However, it is understood that Council has requested that a path be provided along the Plenty Road frontage to connect south into the Development Plan area.

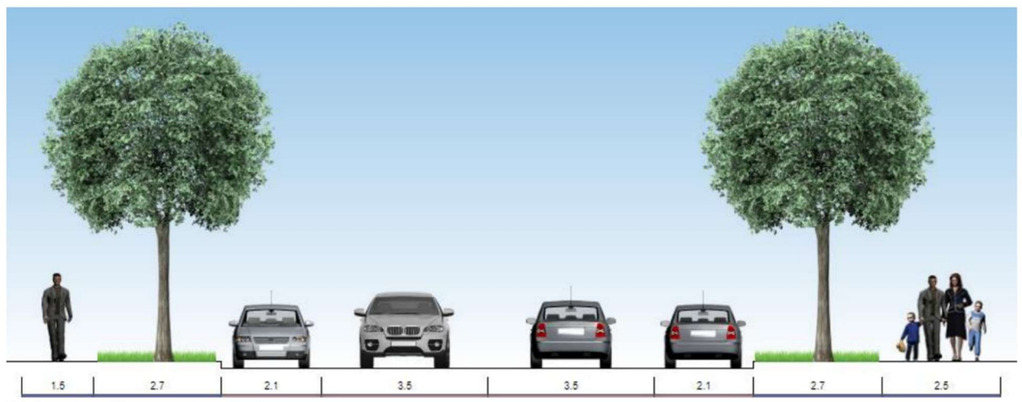
Figure 8 is the connector street profile in the adjacent Development Plan that is proposed to be extended into the site to meet McArthurs Road at Poppy Drive. A shared path is included on one side of the street.

Figure 7: Adjacent Approved Development Plan



Source: City of Whittlesea

Figure 8: Connector Street Profile in Adjacent Development Plan



20.6 metre wide connector street

2.5 Planning Scheme Requirements

The Whittlesea Planning Scheme includes a range of policies and requirements which must be addressed in this Development Plan or in future permit applications. The most relevant policies and requirements are summarised here.

The key planning scheme elements include:

- Development Plan Overlays.
- Planning policy framework.
- Other planning scheme requirements.
- Open Space requirements.
- Infrastructure contributions.

2.5.1 Development Plan Overlay

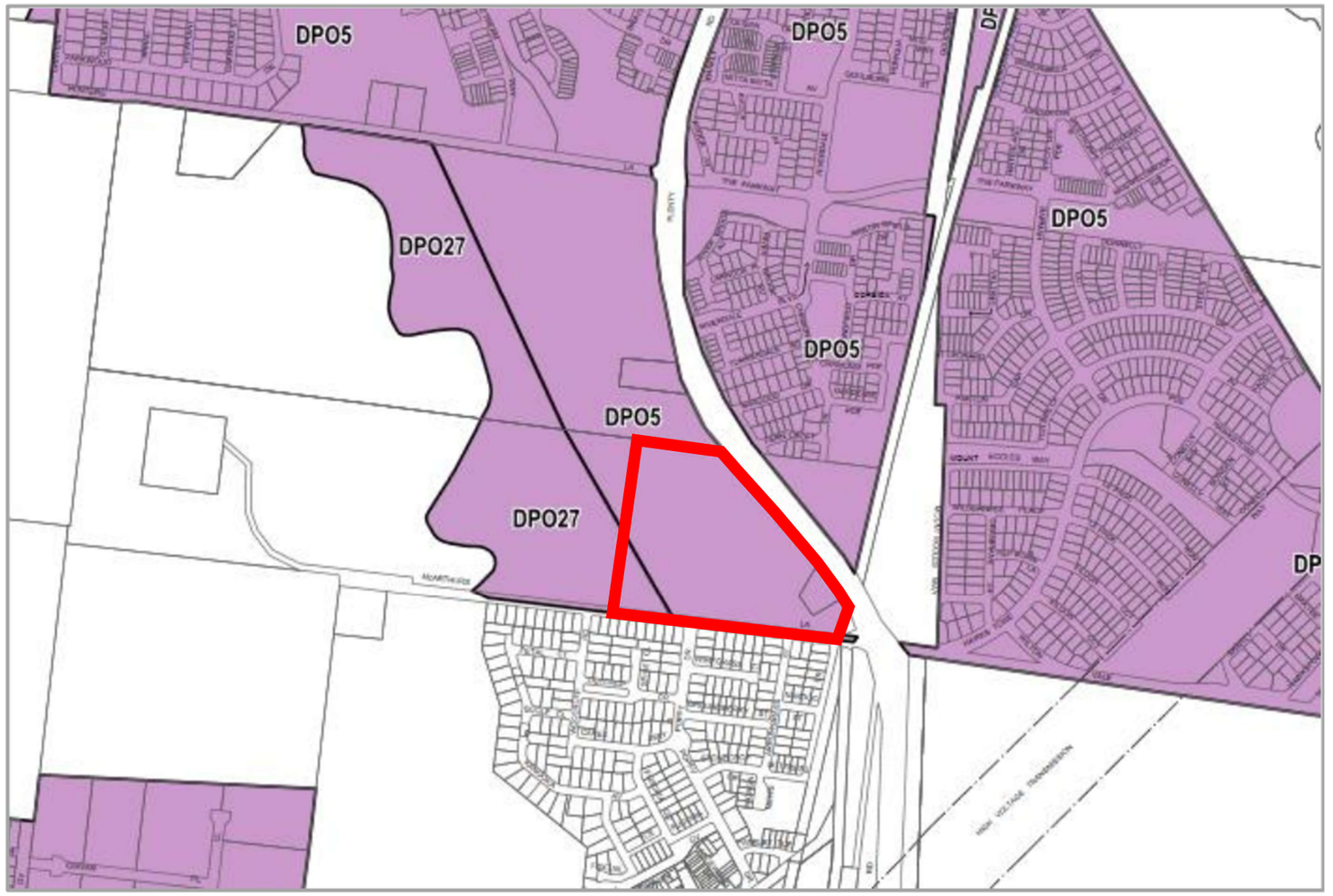
Figure 9 shows most of the land is covered by DPO Schedule 5 and a smaller part in the southwest corner is covered by DPO Schedule 27. This section of the Development Plan explains how it addresses the requirements of the two overlays.

DPO Schedule 5 requires that the Development Plan must be generally in accordance with the Mernda Strategy Plan and that it must include:

- A strategic context statement (this is in Section 2.1).
- A detailed site analysis plan (this is Figure 11).
- A land contamination assessment (the Preliminary Risk Screen Assessment outcome is shown in Figure 11).
- A flora and fauna and net gain assessment and River Red Gum and arboriculture assessment, including WSUD treatments to support River Red Gum heath and linkages between green spaces (this is addressed in various parts of Section 3 and in the implementation sections of the Development Plan).
- A housing diversity outcomes statement (this is in Section 5.2).
- An active transport plan (refer Figure 23).
- An open space plan, landscape concept plan (including a concept for the Plenty Road interface), street tree concept plan (refer Figure 24).
- Functional road layout plan with street sections, intersection treatments, road widening and bus networks (refer cross sections and functional designs in Figure 28).
- A drainage, telecommunications and staging strategy (refer BPD Servicing Report and Staging Plan in Figure 27).

Section 1.3 lists the technical reports prepared in conjunction with this Development Plan. These provide additional information.

Figure 9: Development Plan Overlay Map



Additional requirements in DPO Schedule 27 beyond those in Schedule 5 are also addressed in the Development Plan as follows:

- Transport strategy, including road hierarchy and cross sections (this is addressed in Figure 22).
- A plan that shows integration and transition with surrounding properties (this is addressed in Figure 23).
- Appropriate parkland interface treatments (refer Figure 24).
- A diverse range of allotment densities and dwelling types (refer Figure 18 and Figure 21).
- Innovative, site-specific urban design (refer Figure 24 and the need for permits to respond to the objectives and performance measures of the Development Plan).
- A detailed heritage response (refer Section 5.8).

Planning policy framework

The Development Plans implements the relevant planning policy framework policies which include:

- Housing.
- Urban Design.
- Environmental and Landscape Values.
- River Red Gums.
- Built Environment and Heritage Conservation.

The Development Plan objectives and performance measures are designed to implement these policies which are summarised on the next page.

Housing. The most relevant parts of Clause 02.03-6 are:
- Development in established areas close to public transport should include medium and higher density housing.
- Encourage greater housing choice in terms of type and style.
- Encourage housing that contributes positively to local character and sense of place.

Urban Design. The most relevant parts of Clause 15.01-1L are:
- Discourage the use of rear or side fences on major roads to encourage activation and passive surveillance.
- Encourage the use of built and natural shade in new developments.
- Encourage the planting of large canopy trees in developments and in urban streetscapes.
- Plant trees along walking and cycling corridors to enhance shade provision.

Environmental and Landscape Values. The most relevant parts of Clause 02.03-2 include:
- Protect River Red Gum trees for their intrinsic value in establishing a character and identity, especially for newly developing areas but also in existing areas.

River Red Gum Protection. The objective of Clause 12.01-1L is to retain and provide for the long-term viability of River Red Gums. Key strategies include:
- Maximise retention, protection and incorporation of mature River Red Gums and juvenile trees (to support regeneration) into the design of any development or subdivision.
- Site River Red Gum trees proposed for retention in public open space reserves and/or road reserves.
- Set aside parts of open space areas containing River Red Gums as regeneration and establish understory.
- Limit removal of mature River Red Gum trees to only those that present a danger to people and property.

Heritage Conservation. The relevant parts of Clause 15.03-1L which apply to land within a Heritage Overlay include:
- Secure heritage sites early in the development process.
- Secure long term protection with a s173 Agreement.
- Integrate the heritage place into public space or open space.
- Support adaptive reuse of the building.
- Protect views, vistas and silhouettes where these are part of the heritage significance.
- Discourage alterations visible from the public realm.
- Hide ancillary services from the public realm.
- Protect mature canopy trees adjacent to the heritage place.
- Retain fencing or create new fencing to reflect the style.

Built Environment. The relevant parts of Clause 02.03-4 Include:
- Create a preferred urban character in housing change areas identified for more intensive infill development, such as in activity centres and along public transport routes.

Sustainability and Stormwater Management: The relevant parts of the planning policy framework are:
- Cl. 15.01-2L Environmentally Sustainable Development.
- Cl. 15.01-3S - Subdivision Design.
- Cl. 19.-03-3S Integrated Water Management.
- Cl. 19.03-3L Water Sensitive Urban Design.
- Cl 53.18 Stormwater Management in Urban Development.

Other Planning Scheme Requirements

The most relevant policies include:
- Environmental Significance Overlay.
- Heritage Overlay.
- Clause 54, 55 and 56 of the schemes (known as ResCode).
- Provision of Public Open Space.
- Development Contributions.

Environmental Significance Overlay. The land is within Vegetation Protection Overlay Schedule 1. The purpose of this overlay is to protect and maintain River Red Gums. Permit applications must provide a site analysis plan that identifies River Red Gums, and which responds to an arborist assessment report.

Heritage Overlay. A Heritage Overlay applies to part of the land shown in Figure 11. This Overlay seeks to protect heritage values and requires a planning permit for use or development within the Heritage Overlay area.

ResCode. ResCode refers to clause 54, 55 and 56 of the Planning Scheme which relate to residential development design objectives and standards. The Development Plan allows for these objectives and standards to be met at the permit stage.

Provision of Public Open Space

The Mernda Strategy Plan Development Contributions Plan explains how open space is to be provided to the land within DPO 5, as follows and as shown in Figure 10.

> *"All Development Plans must provide open space in accordance with the Plan 4. This plan shows the area of open space on each land parcel in the MSP area. If the designated open space on a given land parcel is less than the "adjusted" percentage open space figure for the subject precinct, then a cash contribution will also be required. The cash contribution will be equal to difference between the amount of open space provided on the Development Plan (as a % of GDA) and the "adjusted" percentage figure for the subject precinct."*

Figure 10: Mernda Strategy Open Space Plan Extract

No unencumbered open space is required by the MSP within the Development Plan area. A cash contribution to open space is required to be made to Council as set out in the MSP Development Contributions Plan.

Infrastructure Contributions

The Mernda Development Contributions Plan Overlay applies to the land and requires a contribution to be made when subdivision occurs. As no DCP projects are located on the land, a cash contribution will be paid to Council when the land is subdivided in accordance with the relevant DPO Schedule. DPO 27 also requires a contribution to local infrastructure. These will be documented in a s173 Agreement between the owner and Council prior to development occurring.

3 Site Analysis

3.1 Introduction

This section addresses site attributes including:

- Existing land titles, agreements, and easements.
- A detailed site analysis plan.
- Existing trees and hydrology.

3.2 Site Title and s173 Agreement

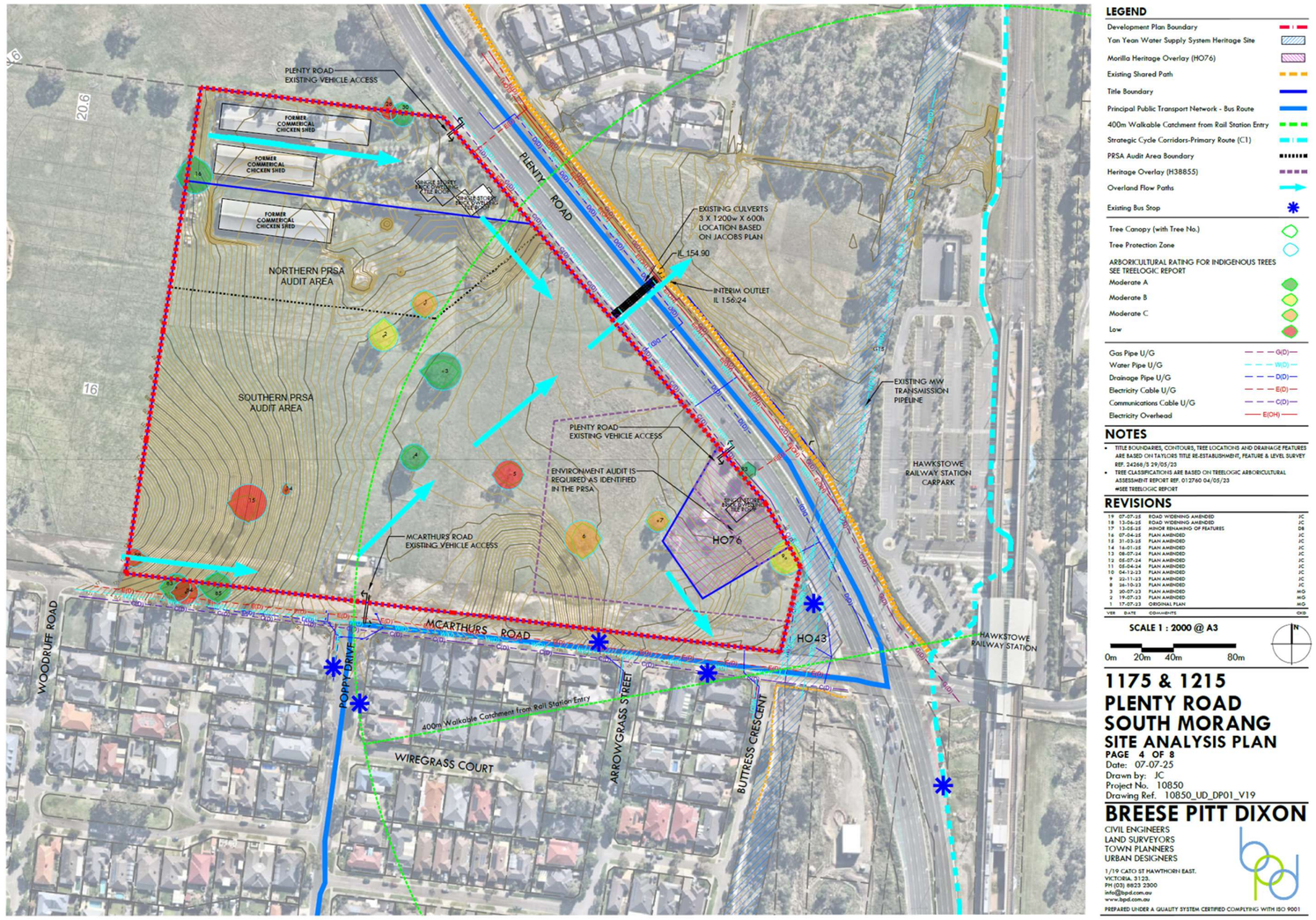
The Development Plan area contains 3 separate land titles comprising 10.04 hectares as shown in the Table below.

Title Identifiers:	• Lot 1 on Title Plan 396110S (formerly known as part of Section 14 Parish of Morang) which is 1.2 hectares. • Lot 1 on Title Plan 160051Y (formerly known as part of Portion 14 Parish of Morang) which is 8.43 hectares. • Lot 1 on Title Plan 129782J (formerly known as part of Section 14 Parish of Morang) which is 0.41ha.
Restrictions/Covenants:	• There are no existing agreements under s173 of the Planning and Environment Act that apply to the land. • There are no restrictive covenants that apply to the land.
Easements:	• There are no existing easements that apply to the land.

3.3 Detailed Site Analysis

The land is currently used for low intensity agricultural purposes, including cropping and grazing. The land is within walking distance of the Hawkstowe Rail Station. The main site features are summarised in Figure 11 and described in more detail in Section 2 and in the technical reports accompanying the Development Plan.

Figure 11: Site Analysis Plan



The key features evident in the site analysis plan include:

- **Poultry farm**. There are 3 former commercial chicken sheds on the land.
- **Existing dwellings**. There are two existing dwellings on the land. The southern dwelling is within a Heritage Overlay.
- **Slope**. The land falls from west to east with several steeper sections which require design consideration.
- **Existing services**. Urban services exist abutting the site and these can be readily extended to the land.
- **Bus Stops**. Bus stops exist in Poppy Drive, McArthurs Road and on Plenty Road.
- **Indigenous trees**. A number of River Red Gums exist on site.
- **Plenty Road access**. An existing vehicle access exists from Plenty Road for the existing dwelling in the Heritage Overlay.
- **McArthurs Road**. The main access to the land is from McArthurs Road, which allows direct property access.
- **Adjacent development**. Development to the south is single-story dwellings on lots between 500 and 600 square metres.
- **Heritage Overlay**. A Heritage Overlay applies to Morilla, an existing house and to the Yan Yean Pipe Track.
- **PRSA Audit Areas**. The PRSA defines areas which will require an Environmental Audit.
- **Former Daniel's Residence and Manufactory site.** Heritage Victoria recognizes H7922-0535 triggering a consent to disturb.

3.4 Existing Trees

A comprehensive assessment was undertaken of existing trees. The assessment process included:

- Survey of canopy and trunk diameter (Taylors).
- Arboriculture assessment (Tree Logic).
- Determine Tree Protection Zone (TPZ) requirements (Taylors and Tree Logic).
- Ecological assessment (Ecology and Heritage Partners).
- An integrated landscape assessment based on the above with recommendations for tree retention and removal (Urban Edge Landscape Architects in conjunction with Council officers).

3.4.1 Arboriculture Assessment

Figure 12 is an extract from the Tree Logic Arborist Report. The plan illustrates the arboricultural rating for each tree, the survey of tree canopy and the computed TPZ using the diameter at breast heights. Figure 13 is the assessment for indigenous trees.

Figure 12: Assessment of All Existing Trees

The design team has considered:

- The need for any cut and fill through the urban design process that could impact trees proposed for retention.
- Potential civil engineering, hydrology and landscape treatment around retained trees.
- Potential urban design response to highlight key trees.
- Potential WSUD and passive street tree watering to support tree water requirements.

Figure 13: Assessment of All Existing Indigenous Trees

The detailed design response to these issues will be addressed at the planning permit stage in response to the objectives and performance measures set out in the Development Plan.

Tree Logic specifically considered: tree species, tree condition, tree height, width (at breast height and base width), tree health., tree structure, tree age class, life expectancy and arboricultural rating. The design team met Council staff on site to determine which of the indigenous trees should be retained, how they should be retained generally or other requirements. The design team have taken the recommendations into the project vision, design response, objectives and performance measures.

The EHP Report provided an environmental assessment of the flora, fauna and habitat significance of the land and provided recommended actions for management, revegetation and restoration of conservation and vegetation protection areas and the links between such areas. These recommended actions have been included in the Development Plan through the objectives and performance measures which will be addressed in detail at the planning permit stage.

3.5 Existing Hydrology Analysis

A Stowmwater Management Strategy (SWMS) has been prepared to address the MSP and to support the Development Plan by Alluvium. The SWMS includes detailed analysis of the existing hyrdology which is summarised in Figures 14 and 15.

The land is within the Wiltonvale Development Servcies Scheme (DSS) managed by Melbourne Water and shown in Figure 14. BPD have shown in Figure15 that there are external flows from the west that will be conveyed through the site.

Figure 14: Extract from Wiltonvale DSS

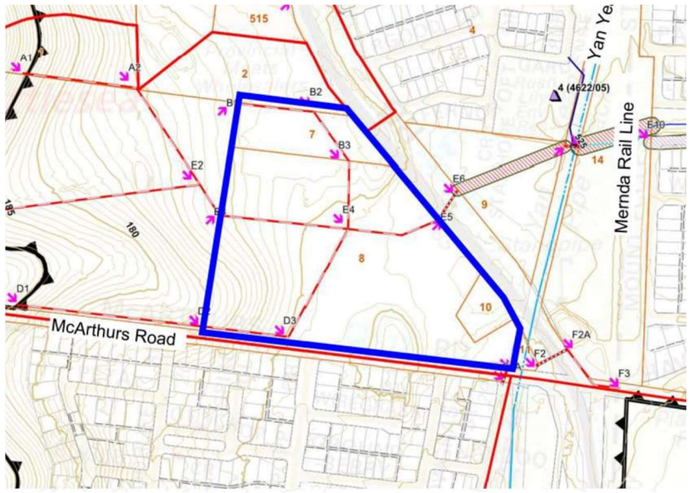


Figure 15: BPD Internal Drainage Path Diagram

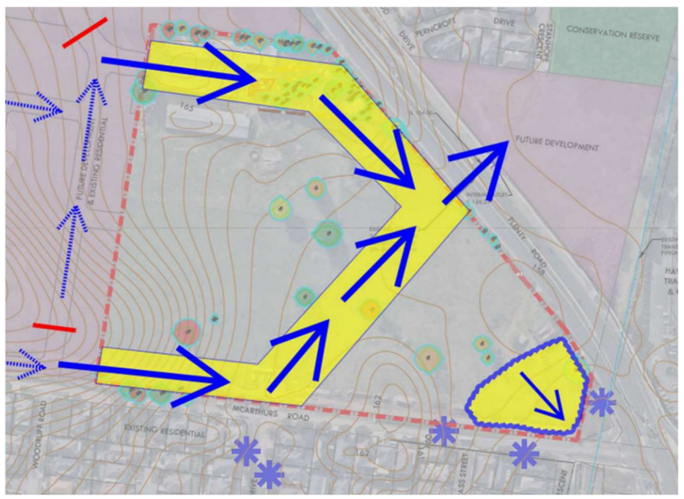


Figure 16: Alluvium MWC DSS Summary Plan

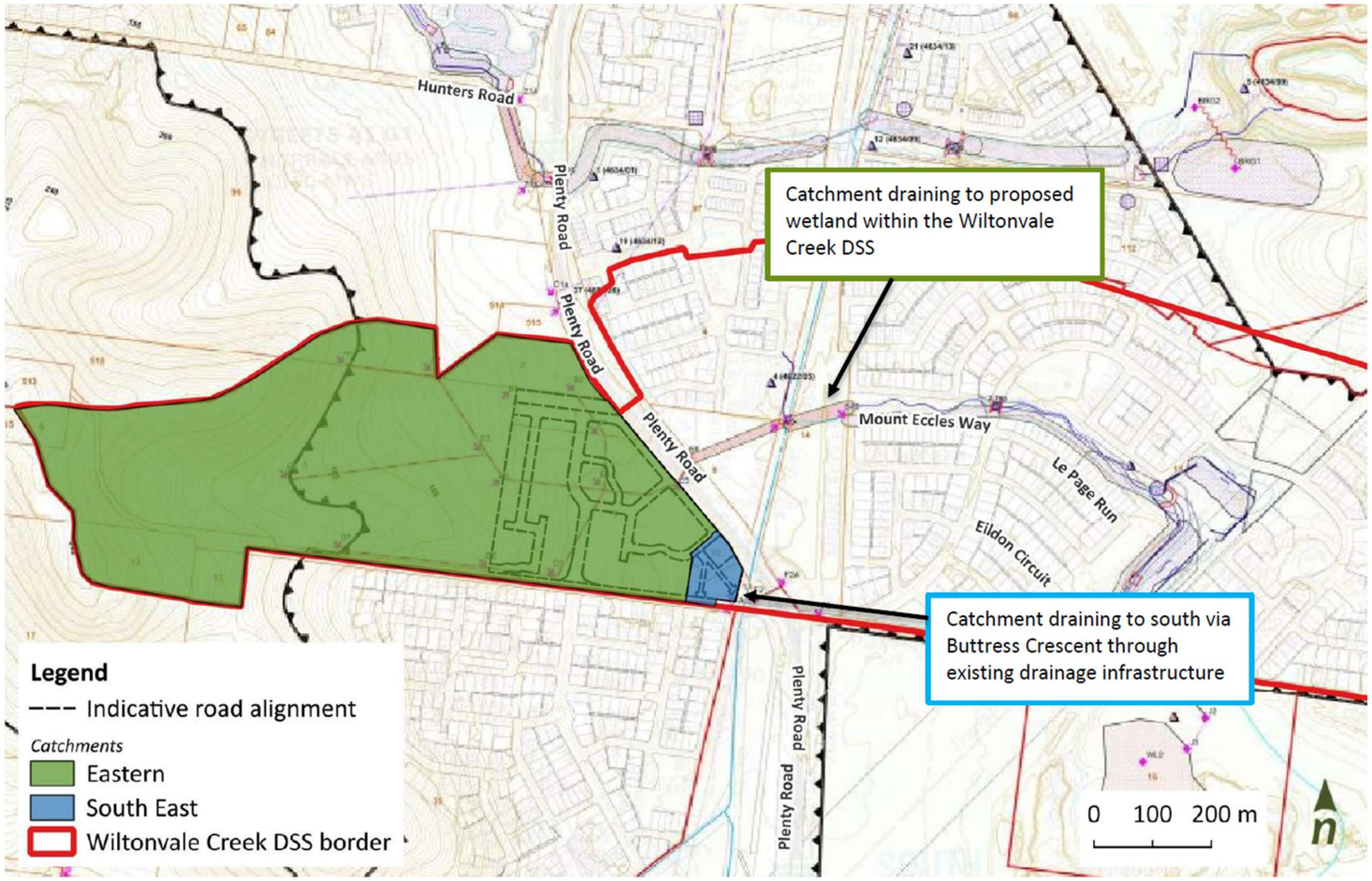


Figure 16 provides a summary of the MWC DSS strategy for the site and its upstream and downstream catchment.

The Alluvium SWMS Report applies WSUD principles as set out in the MSP and in Councils IWM Urban Design Manual. Future permits will provide a more detailed SWMS in response to the IWM objectives and performance measures set out in Section 5.7

The SWMS provides for the protection of natural systems, integration of stormwater treatment into the landscape, protection of water quality (particularly in relation to the Plenty River and its tributaries), and reduction of run off and peak flows. The SWMS has had regard to the particular WSUD principles set out in the MSP.

This SWMS identifies objectives and strategies for stormwater quantity, stormwater quality and interim development. By meeting objectives and the performance measures permit applications will provide a comprehesnive IWM design response.

The SWMS is an important component of the development servicing strategy and ensures storm water is managed in accordance with the MSP, Melbourne Water and Council requirements.

The Alluvium SWMS has considered both the interim and ultimate infrastructure requirements associated with the development of 1215 Plenty Road site. The strategy has demonstrated that the proposed interim arrangements will be consistent with ultimate drainage system.

4 Vision

"Hawkstowe Station West: An attractive, green, treed, walkable community offering a quality, affordable lifestyle.

The Hawkstowe Station West Development Plan prioritises the sustainable movement of people and facilitates active and public transport use. A walkable grid of shady streets will create a compact and pedestrian oriented neighbourhood that encourages residents to safely walk or cycle to the rail station, Bunjil nganga Parkland, shops, schools, recreation areas and parks.

The development protects and celebrates healthy existing indigenous trees and provides space for their conservation as a place-making gesture. Civil and landscape design provides water to support River Red Gum health. A unique landscape character is created by implementation of IWM principles and maximising street tree canopy with performance measures to support long term tree health.

Shady streets and shared paths provide efficient and direct links across for residents to the strategic cycling corridor and to the rail station. Along these journeys, protected beautiful River Red Gums connect both people to nature and wildlife and create a positive sense of place.

The precinct provides for an affordable, quality lifestyle. At the cornerstone is compact, affordable housing designed to integrate into the existing urban fabric adding to local social and economic diversity and building a more complete community. Denser housing is encouraged in the core of the rail station's walkable catchment.

The design celebrates the role Plenty Road played in the region's development as a transport arterial and Moorilla is protected. Its location fronting Plenty Road allows for informal public enjoyment at its frontage, new planting in the rear garden will soften the adjacent development, creating a green background for the house.

McArthurs Road will be completed as an attractive, shady, east-west active transport and green spine with development complementing existing southern side homes.

Master planning provides urban and landscape design guidelines that incorporate contemporary building techniques and tree canopy to ensure an attractive outcome."

4.1 Design Principles

The vision is supported by the diagram in Figure 17 and the following design principles based on the following themes:

- Housing.
- Movement and access.
- Public realm.
- Built form.

Housing forms and urban density principles include:

- Increase housing density with smaller housing forms within the walkable catchment of the rail station supported by permeable walking paths.
- Provide increased housing density near the rail station to support households to reduce car dependence and the cost of living.
- Provide a diverse range of housing and lifestyle opportunities.

Movement and access principles include:

- Provide direct walking and cycling links to the rail station and to the Bunjil nganga Parkland.
- Design for safe, shady walking and cycling.
- Create a safer, calm neighbourhood by designing in slow points into the western connector street and link at Poppy Drive.

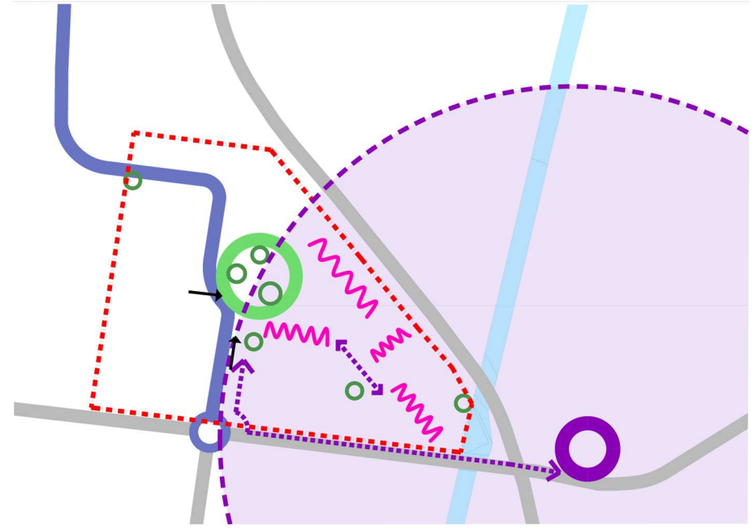
Tree canopy and public realm principles include:

- Protect and enhance existing healthy River Red Gums.
- Achieve an expanded tree canopy in new streets.
- Encourage passive street tree watering to boost tree growth and to make the canopy more climate resilient.
- Relate retained trees to street vistas as a place-making gesture.
- Incorporate WSUD principles and techniques into the development to help reduce site runoff.

Built form principles include:

- Manage built form with design guidelines for the site entry, adjacent to existing residents and adjacent to reserves.
- Implement integrated housing and engineering design and construction to support a more compact development.
- Provide for consistent treatment of street setbacks, with smaller setbacks where development is more compact.
- Integrate Moorilla into the urban design response.
- Encourage housing designs consistent with the Small Lot Housing Code to support affordable housing delivery.

Figure 17: Vision Concept

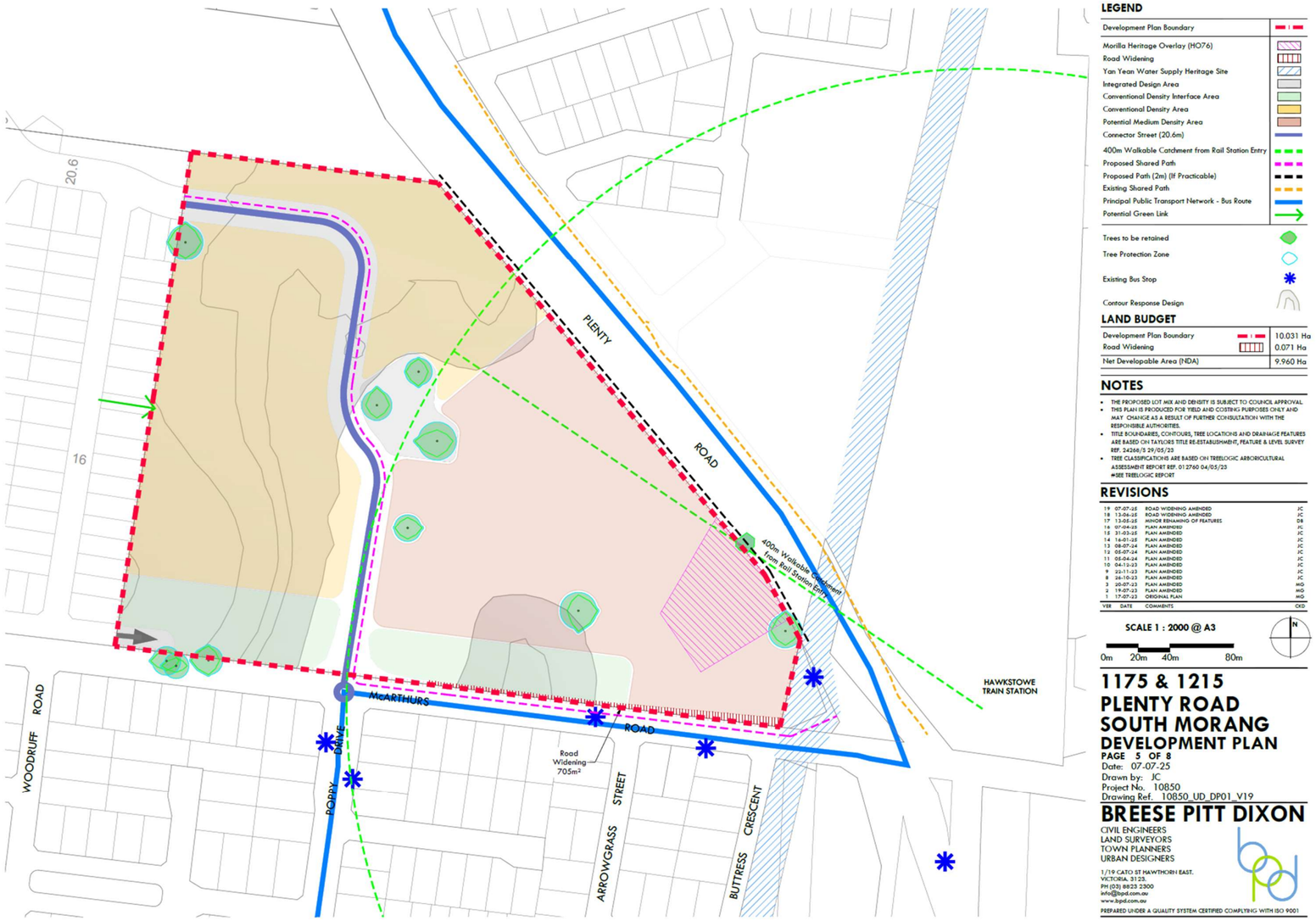


4.2 Development Plan

The Development Plan is shown in Figure 18 and provides for the following outcomes:

- **Walkable Structure**. Street and path design provides permeability to the central River Red Gum conservation area, Plenty Road, McArthurs Road and to Hawkstowe Rail Station.
- **Maximise Density.** Increased housing density with a variety of compact homes within the walkable catchment of the rail station.
- **Affordable Housing**. Encourage smaller affordable homes closer to the rail station, to support a quality, affordable lifestyle.
- **River Red Gum Focused Entry.** Terminate the entry road from McArthurs Road at the retained River Red Gums as a key placemaking move.
- **River Red Gum Protection**. Protect and enhance existing healthy River Red Gums in conservation areas.
- **Plenty Road Access.** New lots do not have direct access to Plenty Road.
- **Southern Conventional Density Interface**. Provide conventional lots along most of the frontage to McArthurs Road to help the new neighbourhood fit within the existing context.
- **Plenty Road Landscape Response.** Create an attractive interface by providing a row of indigenous trees and a path within the edge of the existing Plenty Road reservation – if practicable.
- **Local Traffic Management.** Create a safe neighbourhood feel by designing in bends as slow points into the new connector street. Calm local traffic on McArthurs Road with a roundabout at Poppy Drive.
- **East-West Connection**. Provide for a connection between the land to the west into the site as shown mid-way along the western boundary of the land.
- **Shared Path.** Provide a key shared path along the new connector street and linking the central River Red Gum reserve, along McArthurs Road to join the strategic cycling corridor and to link to the rail station.
- **Safe Cycling**. Design for safe, shady walking and cycling, including use of local streets for cycling.
- **Moorilla**. Ensure use and development within the Moorilla Heritage Overlay is consistent with the overlay and relevant planning scheme policy.

Figure 18: Development Plan



4.3 Population and Lot Yield Targets

Figure 19 provides the Development Plan land budget. The target yield is between 200 and 250 dwellings. The Development Plan housing yield would generate a population of between 600 and 750 people.

A higher housing yield is encouraged by developing the areas suitable for medium density housing generally as shown in Figure 18. It may be possible for the yield to be increased further through integrated design to support Government policy for urban consolidation.

Figure 19: Land Budget Table

	Total ha
	10.031
Heritage Site	0.161
Road Widening	0.071
Net Developable Area (NDAHa)	9.960
Indicative Number of Lots (Total)	230
Central River Red Gum Integrated Design Area	0.364
Tree Reserve	0.263
Landscape Reserve	0.293

There is potential for higher density housing and appropriate non-residential use at ground level with apartments at upper levels which would increase the housing yield beyond those in Figure 19.

Figure 20: Hawkstowe Rail Station Entry

5 Design Response

5.1 Introduction

The design response includes objectives and performance measures under the following headings:

- Housing.
- Movement and Access.
- Public Realm.
- Environmentally Sustainable Design.
- Integrated Water Management.
- Built Form.
- Heritage.

5.2 Housing Response

5.2.1 Housing Outcomes Statement

The housing objectives form the Housing Outcomes Statement which is a requirement of DPO Schedule 27:

- Encourage greater housing choice in terms of size, type and style.
- Use residential land efficiently to increase housing yield.
- Increase housing density, particularly within the walkable catchment of the rail station.
- Provide opportunities for smaller, affordable housing opportunities near the rail station to reduce car dependence.
- Provide an appropriate dwelling diversity to suit varied accommodation needs including conventional and medium density dwellings.
- Consider different housing outcomes responding to the site development opportunities and constraints.
- Encourage housing that contributes positively to local character and sense of place.
- Provide appropriate dwelling diversity to suit varied accommodation needs.

5.2.2 Housing Performance Measures

Planning permit applications must address the performance measures to the satisfaction of the responsible authority. Approaches that vary from the performance measures may be considered provided the objectives are met.

- **PM1 Density between 20 and 25 Dwellings per NDHa**. Permits should achieve an overall housing density of between 20 and 25 dwellings per net developable hectare.
- **PM 2 Modern Housing Designs**. Housing should consist of modern and contemporary design.
- **PM 3 Diverse Lot Types**. Conventional residential subdivision should ensure that a suitable diversity of lot types is provided to support variation in dwelling types and frontage treatments.
- **PM 4 Attractive Interface to McArthurs and Plenty Roads**. Urban design should ensure that housing makes a positive visual contribution to the visual amenity along McArthurs Road and Plenty Road.
- **PM 5 Housing to Front Open Space**. Housing should front onto areas of public open space to enhance the safety, presentation, and function of these areas. Side boundary presentation to public open space should be limited to where design constraints require that outcome.
- **PM6 Rear Loaded Lots to Provide Paper Road**. Where rear loaded medium density housing directly adjoins an open space reserve or Plenty Road, a 4-metre wide 'paper road' reserve should be provided including path access to dwelling entries.
- **PM 7 Housing Diversity.** Permit applications should demonstrate how the overall design response will deliver housing diversity, including one, two, or three-bedroom dwellings.
- **PM 8 Complement Open Space**. Housing design should complement and enhance the presentation and function of open space areas.
- **PM 9 Landscape Responsive Materials**. Housing should adopt the use of materials and finishes which complement the natural landscape within and surrounding the site.
- **PM 10 Consistent Front Setbacks**. Dwellings should provide a consistent front setback character. Reduced front setbacks should be considered for medium density sites within an urban design and streetscape response. Consideration should be given to enabling the provision of landscaping within the property frontage to complement street planting and the open space network.
- **PM11 Passive Surveillance to Open Space**. Applications proposing medium density housing in locations adjacent to public open space areas should ensure that dwellings provide passive surveillance to open space from ground and upper floors, pedestrian connections and deliver an integrated landscape response which complements the reserve.
- **PM12 Avoid Front Fencing Forward of the Dwelling**. Fencing forward of the dwelling frontage should be avoided.
- **PM 13 Slope Management Plan**. Where relevant, a slope management plan should be submitted at the Functional Design Stage to ensure a positive streetscape through integrated urban, landscape and civil design is achieved.
- **PM 14 Minimise Cut and Fill**. Subdivision, engineering, landscape design and buildings and works should provide an appropriate response to topography and reduce unnecessary excavation and cut and fill works.
- **PM 15 Manage Retaining Walls and Site Cut**. Works that are undertaken in response to steeper topography such as retaining walls and site cutting should not overwhelm or dominate the presentation of residential lots from the street.
- **PM 16 Rear Retaining Walls Should not Impact Access to Daylight**. Earthworks and retaining walls along rear lot boundaries should ensure that the works will maintain satisfactory levels of sunlight to secluded private open space.
- **PM 17 Housing Character**. Establish a unique residential character that achieves successful integration into the broader residential areas of the surrounding local area.
- **PM 18 Potential Higher Density Housing**. There is potential for appropriate, higher density housing, such as apartments, near the rail station to promote urban consolidation and transit orientated development.
- **PM 19 Non-Residential Use**. There is potential for appropriate non-residential use at the ground floor closer to the rail station with higher density residential above to promote increased activity and safety. Any significant intensity of development should ensure there is appropriate road access, and that the existing street system capacity is not exceeded.
- **PM 20 Small Lot Housing Code**. Housing on lots less than 300 square meters in size are encouraged to be consistent with the Small Lot Housing Code.

5.2.3 Residential Typologies

Figure 21: Residential Typologies

Example Conventional Lot

Example Small Lot Home

Front and Rear Loaded Townhouse Examples

Example Townhouses

Example Integrated Apartment Design

5.3 Movement and Access Response

5.3.1 Transport Outcomes Statement

The Development Plan has the following transport objectives:

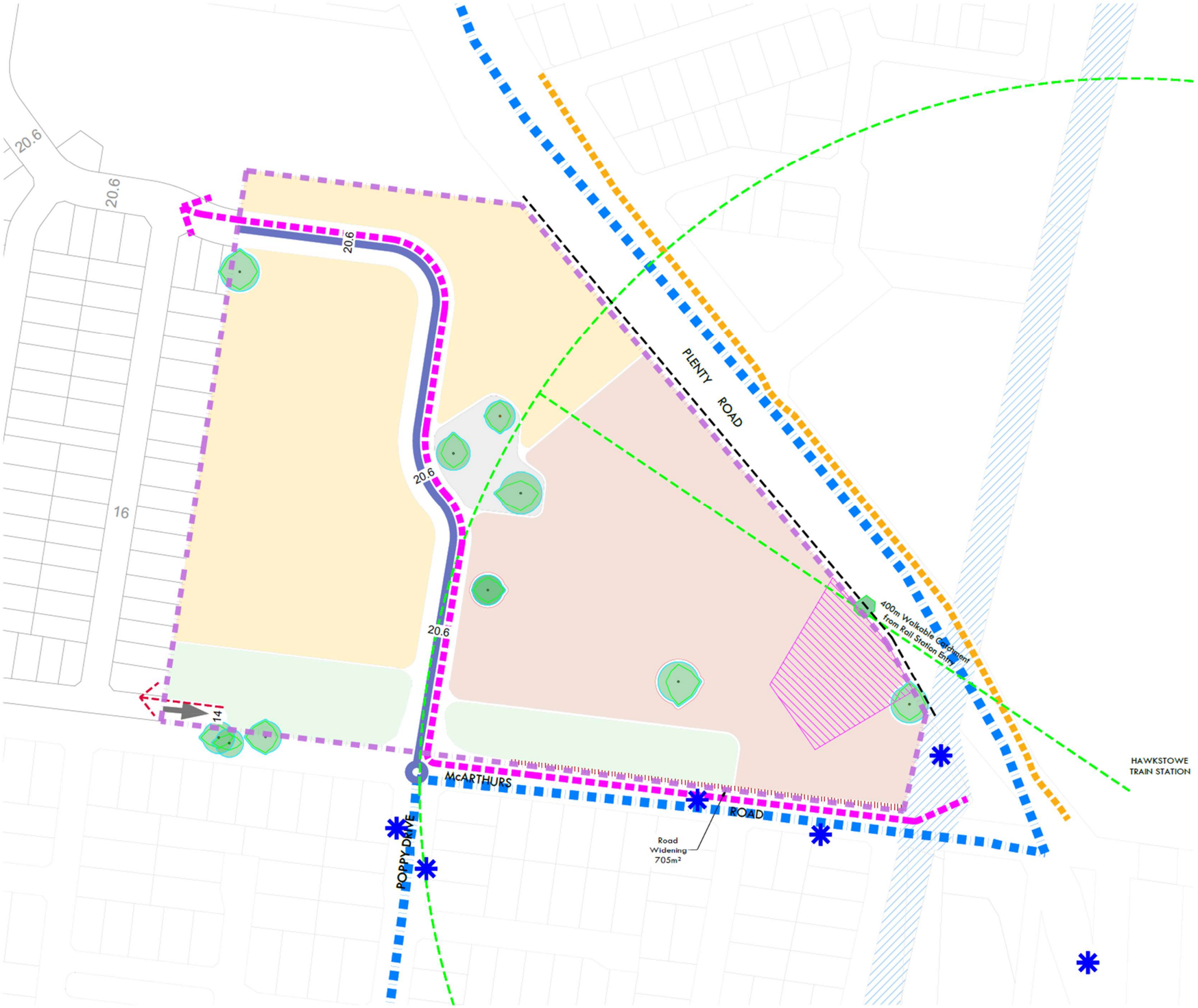
- Deliver a street environment which emphasises an intimate local network rather than characterised by higher order streets.
- Support a low-speed street network encouraging shared use of local streets to encourage walking, community interaction and safe cycling.
- Provide a legible and permeable mobility network.
- Encourage the use of non-vehicular modes of travel.
- Achieve street network design and landscaping which complement and enhance the natural values of the site.
- Provide efficient access to all residential lots.
- Provide appropriate connections to the rail station and existing and surrounding road, walking, and cycling networks.

5.3.2 Transport Performance Measures

Planning permit applications must address the performance measures to the satisfaction of the responsible authority. Approaches that vary from the performance measures may be considered provided the objectives are met.

- **PM 1 Avoid New Traffic Access to Plenty Road**. New traffic access to Plenty Road should be avoided.
- **PM 2 Lots to Front Plenty Road**. Rear loaded residential development located along Plenty Road should be provided with access via an internal street or via rear lot access with a paper road.
- **PM 3 Path Along Plenty Road**. Development should provide a path along Plenty Road within the Plenty Road reserve if practicable. This is like the existing path on the east side of Plenty Road.
- **PM 4 Provide Efficient Road Access to McArthurs Road**. The local street network should support efficient access to McArthurs Road.
- **PM 5 River Red Gum at Entry Road Vista**. The main entry street into the estate from McArthurs Road from Poppy Drive should be designed to provide direct view lines towards retained River Red Gums.
- **PM 6 Adjacent Road Connections.** A planning permit application should demonstrate agreement between property owners regarding alignment of connecting roads, paths or other critical infrastructure.
- **PM 7 Road Sections.** Permit applications should implement the concept designs in Figure 22 and Figure 23 and the transport cross sections and concept plans in section 6.6 to the satisfaction of the responsible authority.
- **PM 8 Local Streets to Conservation Area**. Where appropriate, provide local streets or paper roads around the periphery of conservation reserves to provide opportunities for passive surveillance and access. Rear accessed dwellings may abut a conservation reserve provided the dwellings front the reserve.
- **PM 9 Streets to Respond to Topography**. The alignment of the street network should respond to site topography where practicable and reduce the use of excessive earthworks and retaining walls.
- **PM 10 Integration with Adjoining Land.** Urban design responses should respond to land use distribution, local traffic and non-vehicular movement and provide appropriate cross-parcel movement
- **PM 11 Whittlesea Neighbourhood Design Manual**. Permits should address the Whittlesea Neighbourhood Design Manual to the satisfaction of the responsible authority.
- **PM 11 Street Block Design**. The street network and street block lengths should have regard to the Whittlesea Neighbourhood Design Guidelines to the satisfaction of the responsible authority.
- **PM 13 Low Speed Streets**. The street network should support a low-speed environment for pedestrians, cyclists and vehicles and encourage shared use with speed control devices to be applied to the satisfaction of the responsible authority.
- **PM 14 Integrated Pedestrian and Cycle Network**. The pedestrian and cycle network should respond to the Movement and Access Plan in Figure 23 and provide for movement throughout the site and connection to surrounding networks.
- **PM 15 Civil Engineering Design to Demonstrate that Trees are Protected**. Where trees are shown to be retained in, or near a road, detailed design works as part of engineering or landscape design should ensure the health of vegetation is maintained.
- **PM 16 Integrated Landscape Treatment to Protect River Red Gums**. Local streets adjoining the central River Red Gum cluster are to support an integrated landscape design treatment to provide a positive level of public amenity along this interface.
- **PM 17 Street Design to Prioritise Pedestrians and Cyclists**. The design of all streets should give priority to pedestrians and cyclists through:
  - Providing footpaths of at least 1.5 metres wide, or shared zones to the satisfaction of the responsible authority to support pedestrian permeability.
  - Providing a connected footpath network throughout the Development Plan area.
  - Providing safe and convenient crossing points to all intersections and at key networks.
  - Providing pedestrian and cycle priority where feasible.
  - Ensure all streets support the planting of canopy trees to the satisfaction of the responsible authority and consist of a native or indigenous species theme.
- **PM 18 Pedestrians and Bicycle Links to Surrounding Areas**. The design of all streets should ensure that pedestrian and bike paths provide the links to the surrounding areas shown on the bicycle and pedestrian network plan in Figure 23.

Figure 22: Movement and Access Plan



LEGEND

Development Plan Boundary	
Road Widening	
Yan Yean Water Supply Heritage Site	
Integrated Design Area	
Conventional Density Interface Area	
Conventional Density Area	
Potential Medium Density Area	
Connector Street (20.6m)	
Local Access Level 1 (14-16m)	
Principal Public Transport Network - Bus Route	
400m Walkable Catchment from Rail Station Entry	
Proposed Shared Path	
Proposed Footpath	
Proposed Path (2m) (If Practicable)	
Existing Shared Path	
Trees to be retained	
Tree Protection Zone	
Existing Bus Stop	

NOTES

- THE PROPOSED LOT MIX AND DENSITY IS SUBJECT TO COUNCIL APPROVAL.
- THIS PLAN IS PRODUCED FOR YIELD AND COSTING PURPOSES ONLY AND MAY CHANGE AS A RESULT OF FURTHER CONSULTATION WITH THE RESPONSIBLE AUTHORITIES.
- TITLE BOUNDARIES, CONTOURS, TREE LOCATIONS AND DRAINAGE FEATURES ARE BASED ON TAYLORS TITLE RE-ESTABLISHMENT, FEATURE & LEVEL SURVEY REF. 24268/S 29/05/23
- TREE CLASSIFICATIONS ARE BASED ON TREELOGIC ARBORICULTURAL ASSESSMENT REPORT REF. 012760 04/05/23 #SEE TREELOGIC REPORT

REVISIONS

VER	DATE	COMMENTS	CKD
13	07-07-25	PLAN AMENDED TO ACCORD WITH DP01 V19	JC
12	13-06-25	PLAN AMENDED TO ACCORD WITH DP01 V18	JC
11	07-04-25	PLAN AMENDED TO ACCORD WITH DP01 V16	JC
10	22-01-25	PLAN AMENDED TO ACCORD WITH DP01 V14	DB
9	05-07-24	PLAN AMENDED	JC
8	05-04-24	PLAN AMENDED	JC
7	12-12-23	PLAN AMENDED	JC
6	22-11-23	PLAN AMENDED	JC
5	25-10-23	PLAN AMENDED & PAGE 2 ADDED	JC
4	23-10-23	PLAN AMENDED	JC
3	20-07-23	PLAN AMENDED	MG
2	19-07-23	PLAN AMENDED	MG
1	18-07-23	ORIGINAL PLAN	MG

SCALE 1 : 2000 @ A3

0m 20m 40m 80m

N

1175 & 1215 PLENTY ROAD SOUTH MORANG

TRANSPORT PLAN

PAGE 1 OF 2
Project No. 10850
Drawing Ref. 10850_UD_TP01_V13

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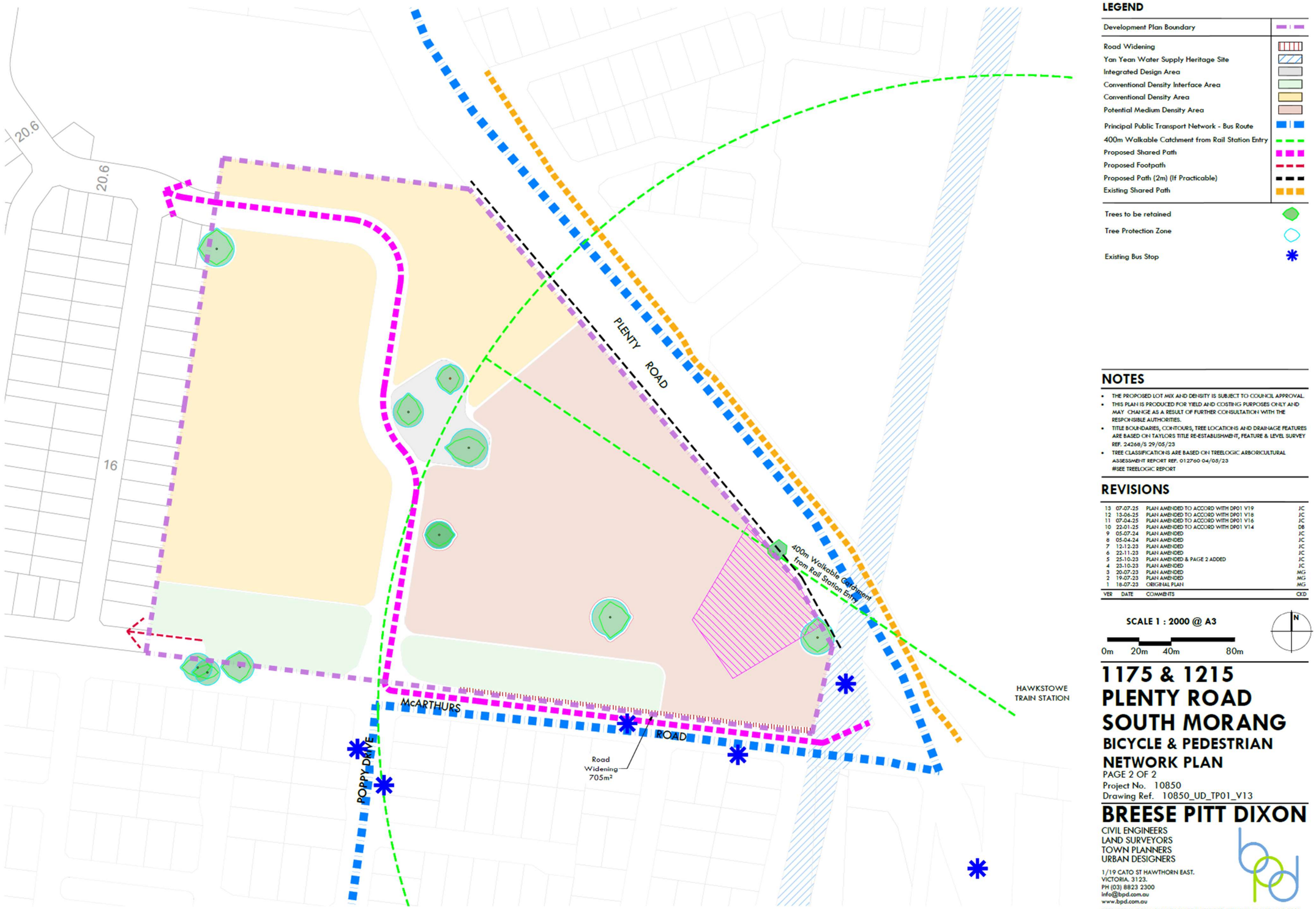
PREPARED UNDER A QUALITY SYSTEM CERTIFIED COMPLYING WITH ISO 9001

Figure 23: Bicycle and Pedestrian Network Plan



5.4 Public Realm

5.4.1 Public Realm Outcomes Statement

The Development Plan has the following public realm objectives:

- Create an urban environment that is safe, healthy, functional, and enjoyable and that contribute to a sense of place and cultural identity.
- Create a subdivision design that achieves attractive, safe, accessible, diverse and sustainable neighbourhoods.
- Create a neighbourhood that seeks to foster healthy and active living and community wellbeing.
- Protect healthy River Red Gum trees for their intrinsic value in establishing a character and identify.
- Ensure the conservation of suitable River Red Gums and other existing indigenous trees.
- Ensure the conservation of places of heritage significance.
- Recognise, support and protect neighbourhood character, cultural identity, and sense of place.
- Achieve building design outcomes that contribute positively to the local context and enhance the public realm.

5.4.2 Public Realm Performance Measures

Planning permit applications must address the performance measures to the satisfaction of the responsible authority. Approaches that vary from the performance measures may be considered provided the objectives are met.

- **PM 1 Protect Specified River Red Gums**. Unless with the consent of the responsible authority, all trees shown as retained on the Development Plan should be retained.
- **PM 2 Indigenous Landscaping**. The landscaping strategy should adopt native and indigenous species and new canopy tree planting should extend tree canopy. Planting should enhance the amenity associated with existing mature River Red Gums.
- **PM 3 Dry Stone Walls to be Protected**. Functional and detailed design plans should demonstrate that the existing dry-stone wall on the Melbourne Water Heritage Pipe Track is protected.
- **PM 4 Works to Protect River Red Gums**. Conservation areas designed for River Red Gum protection should provide satisfactory protection of River Red Gums from works external and internal to the reserve including road and service installation works. Roads, paths and other infrastructure should not be proposed within the TPZs of retained trees unless of a special design to the satisfaction of the responsible authority.
- **PM 5 Implement Public Realm Diagrams**. Permit applications should implement the public realm diagrams in Figure 24 and the cross sections and concept plans in section 6.to the satisfaction of the responsible authority.
- **PM 6 Strong Landscape Response**. Landscape design should provide a balancing of the built environment and make a positive contribution to local neighbourhood character.
- **PM 7 Post Permit Landscape Masterplan to Determine Open Space Facilities**: The level of embellishment to open space reserves, such as play equipment, structures and other facilities should be determined at the post permit landscape masterplan approval stage.
- **PM 8 Interface Treatments to be Provided**. Conservation areas supporting passive recreation use should be provided with a street frontage interface. Where a street frontage is not possible, a paper road along medium density developments with rear vehicle access (in accordance with Council's engineering and landscape standards) should be provided. Side fences should only be provided where alternatives are not feasible and should be managed to ensure passive surveillance and high public realm quality. Complementary street landscaping (in combination with Integrated Water Management strategies) should be provided to create attractive, green, sustainable, safe and high-quality streetscapes.
- **PM 9 Landscaping to Ensure an Attractive Outcome**. The level of landscaping provided within reserves should positively contribute to landscape amenity and character.
- **PM 10 Reserve Landscaping to Complement Retained Trees**. Public space should support the planting of canopy trees to complement those which are retained provide shading, landscape interest and ultimately a sense of enclosure within the reserve.
- **PM 11 Pocket Parks to Integrate with Street Design to Ensure Their Prominence**. Where small pocket parks are provided, they should make a positive contribution to the streetscape or public realm through appropriate visual exposure.
- **PM 12 Manage Pedestrian Access to Reserves**. Pedestrian access to and throughout any reserves should be provided to the satisfaction of the responsible authority and be commensurate with the purpose of the reserve.
- **PM 13 Seating to be Carefully Located**. Seating provided within public land should be provided in logical locations associated with active areas rather than providing seating in areas unlikely to support activity to the satisfaction of the responsible authority.
- **PM 14 Provide for Vehicle Exclusion to Reserves**. Vehicle exclusion bollards should be placed along the boundary of conservation areas to the satisfaction of the responsible authority.
- **PM 15 Retained River Red Gums to be Enhanced**. Ensure River Red Gum retention enhance their landscape and amenity value by ensuring trees are effectively retained in the subdivision design response.
- **PM 16 Road Design to Ensure Tree Health**. Where vegetation is to be retained within a new road reserve information is to be provided to Council demonstrating how the tree is to be integrated within the road design to ensure its health is preserved. Retention may require local widening of public land, setting back of lot access and varied location of infrastructure assets to limit works around a tree.
- **PM 17 Arborist Advice Required for Works near Protected Trees**. Where works within the tree protection zone of a tree to be retained are proposed, information prepared by a suitably qualified arboriculture expert is to be provided to satisfactorily demonstrate the extent of works will not have a detrimental impact on the health of the tree.
- **PM 18 Vegetation Protected in Medium Density Sites**. Vegetation to be retained within areas identified to support medium density housing should be integrated with the design of proposed development. Design of medium density housing sites is to enhance the landscape amenity contribution provided by retained vegetation through suitably responsive design.
- **PM 19 Consider Views to Key Trees**. Views to existing trees within the site should be enhanced through placing such vegetation within local reserves with surrounding residential land to support active frontages to these areas.
- **PM 20 Green Links**. Green links, where provided as public land, should be a minimum of 10m wide. Mews treatments are preferred and should be considered where relevant.
- **PM 21 Traditional Owner Consultation**. Landscape plans are encouraged to include Aboriginal cultural heritage interpretation elements designed in conjunction with the Wurundjeri Tribal Council and the Kulin National Heritage Organisation.
- **PM 22 McArthurs and Plenty Road Indigenous Trees**. Landscape plans for McArthurs and Penty Road should include indigenous tree planting to support the movement of avifauna.

- **PM 23 Batter Slope Treatment**. Batter slope treatments on public land should be treated with lawn or garden beds to Council's satisfaction.
- **PM 24 Ecological Links**. Where possible, maintain and introduce habitat through revegetation works, to aid dispersal of animals by incorporating habitat corridors, and facilitate natural ecological processes by protecting and enhancing pollinator habitat.
- **PM 25 Passive Watering of River Red Gums**. Subdivision design should ensure suitable provisions are made for the ongoing passive tree watering to support the health of retained River Red Gums.
- **PM 26 Moisture for Retained Trees**. Post development, the tree root zone soil moisture conditions of retained trees should be appropriate, both in terms of ensuring adequate soil moisture and ensuring that the trees are not inundated with excessive water from overland flows. The design response will need to demonstrate that the existing hydrological conditions as they relate to soil moisture are maintained to the extent reasonably practicable. The design response should include advice from a dendrologist as relevant. The design response should also respond to arborist advice to confirm that trees that are retained will retain or improve the pre-development health.

5.4.3 Body Corporate Development

- **PM 27 River Red Gum Protection**. Indigenous trees should be retained in public reserves. Where suitable arrangements are made to ensure long term protection within a body corporate development, this may be considered to the satisfaction of the responsible authority.
- **PM 28 Integrated Master Plan for Body Corporate Development to Active Public and Communal Spaces**. A permit application should be accompanied by an integrated urban design, built form and landscape master plan. The master plan should ensure each dwelling is provided with a pedestrian path along the dwelling frontage, appropriate interfaces, vehicle and pedestrian entries, appropriate space for canopy trees and landscaping and variable building typologies. Blank walls to pedestrian accessways and communal areas should be avoided and minimised.
- **PM 29 Integrated Street Sections**. The integrated master plan for any body corporate areas should include typical cross sections for access ways and communal space. Interface treatments that ensure articulation and which implement CPTED design principles should be provided.
- **PM 30 Canopy Trees and Urban Greening.** The design response should provide for integrated landscape design with suitable trees across private dwelling sites and in communal space and accessways. The density of trees and plans should be increased to create a cooler, greener area. Planting should be dominated by indigenous and native planting to support local ecology, birds, and insects.
- **PM 31 Building Typology**. A building typology response should be provided that considers reasonable variation to create visual interest and character.
- **PM 32 Integrated Laneway Spaces.** Laneway design should consider these as shared walking and cycling zones, with small canopy trees and gardens to soften and cool these areas. Consideration should be provided to plant fruit trees to encourage a more sustainable lifestyle. Building design should provide windows and other treatments to encourage laneways to feel safe and active.
- **PM 33 Communal Space.** Encourage attractive communal spaces and shared facilities and services in body corporate development. Encourage the provision of a community garden, edible plants including fruit and vegetables.
- **PM 34 Green Walls.** The use of green walls should be considered in key areas to cool and soften building forms and create a pleasant environment.

5.4.4 Bushfire Management Permit Conditions

The following condition should be applied as relevant and may be amended to the satisfaction of the responsible authority.

Before the certification of a subdivision plan under the Subdivision Act 1988, a bushfire management plan that addresses bushfire risk in the subdivision construction and if relevant post construction should be prepared to the satisfaction of the responsible authority.

The plan should address the following:

- How adequate opportunities for access and egress will be provided for residents, construction workers and emergency vehicles.
- The staging of development and the likely bushfire risks at each stage.
- How the land between the development edge and non-urban areas can be managed to ensure the separation distances specified in AS3959-2009 are achieved.
- The measures to be undertaken by the developer to reduce the risk from fire within any surrounding rural or undeveloped land and protect residents and property from the threat of fire.

5.4.5 Permit Landscape Masterplan

The following condition should be applied as relevant and may be amended to the satisfaction of the responsible authority.

A landscape master plan for the permit area should be prepared by a qualified landscape architect to the satisfaction of the responsible authority.

The landscape master plan should include the following to the satisfaction of the responsible authority:

- The location, size, dimensions, and primary function of all land to be developed as reserves including, conservation reserves, road reserves and drainage reserves as relevant.
- A survey, including the location, size and botanical name, of all existing vegetation proposed to be retained on the land. Trees to be retained must be accompanied by a tree specific arboriculture assessment to determine if each tree can be safely retained on public land.
- Existing and proposed grades for all reserve areas.
- The ultimate 1% and 10% annual exceedance probability storm event extents.
- The location, concept design and size of any water sensitive urban design assets.
- A general indication of what recreation infrastructure is proposed and its location, including but not limited to: playgrounds, furniture, exercise equipment, paths, shelters, vehicle exclusion barriers and maintenance access points.
- An active transport plan, including shared path locations, creek crossings, widths, and surface treatments.
- A street tree master plan, including the estimated canopy of the mature trees (at 20 years) shown to scale and an estimate of the percentage of streets, parks and reserves that are included within projected tree canopy.
- Consideration of using indigenous trees and plants of local province.

5.4.6 Tree Protection Fencing Permit Condition

The following condition should be applied as relevant and may be amended to the satisfaction of the responsible authority.

- Before the commencement of buildings or works within or on or within 30m of land abutting a conservation area, the permit holder must erect a vegetation protection fence around any conservation area, patch of native vegetation or scattered tree identified for retention.
- The fence must be provided and maintained in accordance with the relevant City of Whittlesea standard.
- During the undertaking of buildings or works, all activities must be excluded from occurring within the protection fencing, unless otherwise agreed to by the responsible authority.
- Construction stockpiles, fill, machinery, vehicle parking, excavation and works or other activities associated with the buildings or works must be designed and constructed to ensure that the conservation area, scattered trees or patches of native vegetation identified for retention in the endorsed plan under this permit are protected from adverse impacts during construction.

5.4.7 Kangaroo Management Plan

The following condition should be applied as relevant and may be amended to the satisfaction of the responsible authority.

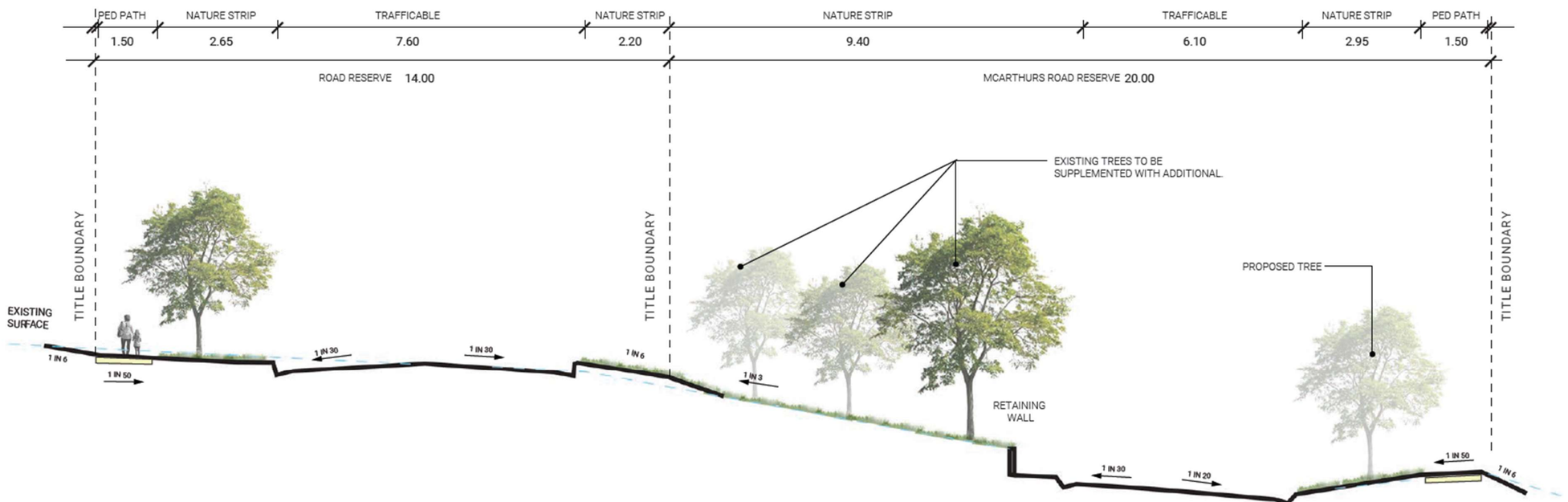
Before the certification of the plan of subdivision, a Kangaroo Management Plan should be approved by the Secretary to the Department of Environment, Energy and Climate Change. The submitted Kangaroo Management Plan should include:

- Strategies to avoid land locking kangaroos, including staging of subdivision.
- Strategies to minimise animal and human welfare risks.
- Management and monitoring actions to sustainably manage a population of kangaroos within a suitable location.
- Actions to address the containment of kangaroos and to ensure appropriate animal welfare.

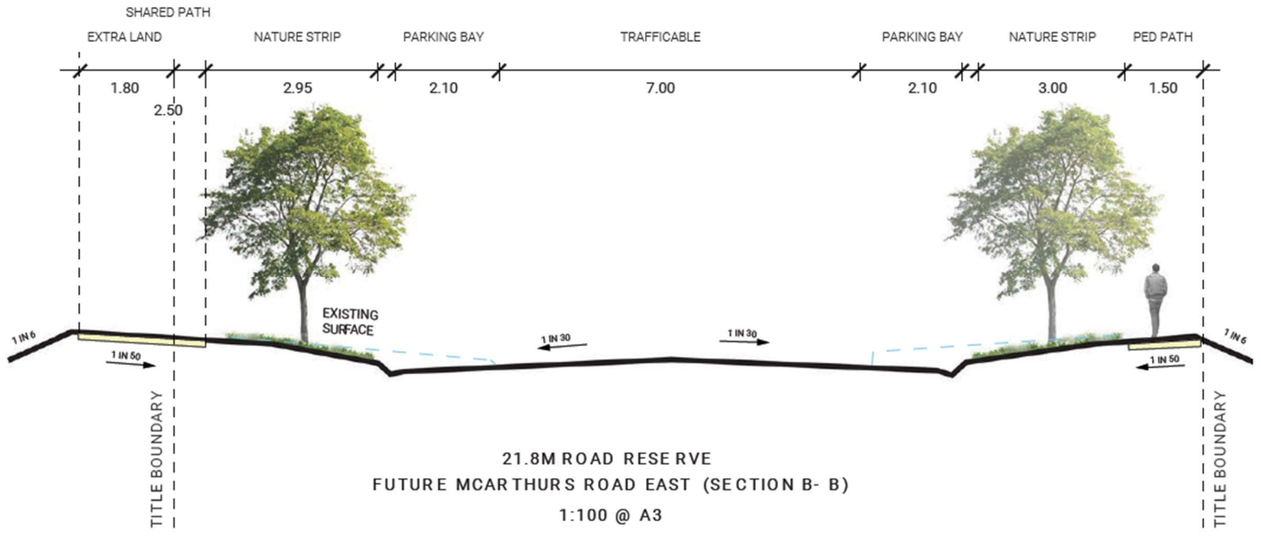
The approved Kangaroo Management must be implemented to the satisfaction of the responsible authority.

Figure 24: Landscape Strategy

SECTION 1



20.0M ROAD RESERVE
FUTURE MCARTHURS ROAD (SECTION A- A)
1:100 @ A3



21.8M ROAD RESERVE
FUTURE MCARTHURS ROAD EAST (SECTION B- B)
1:100 @ A3

URBAN EDGE
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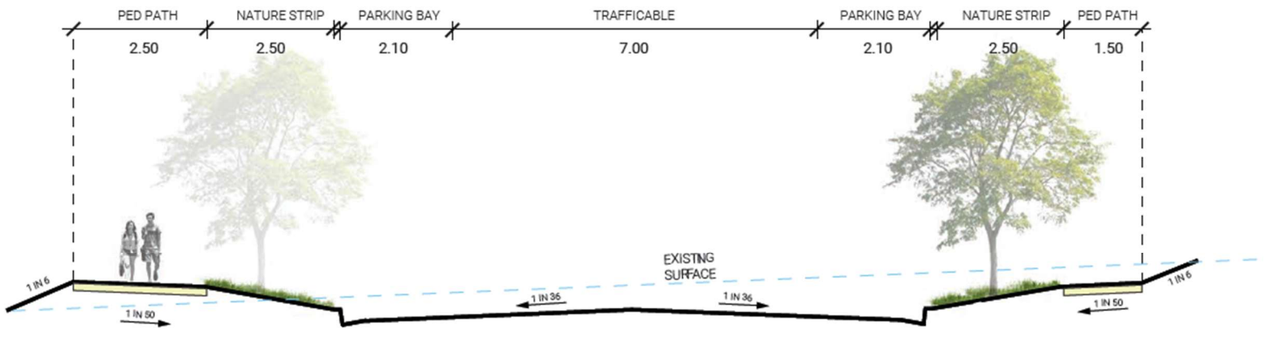
SECTION 2



20.60M ROAD RESERVE
(SECTION G - G)
1:100 @ A3

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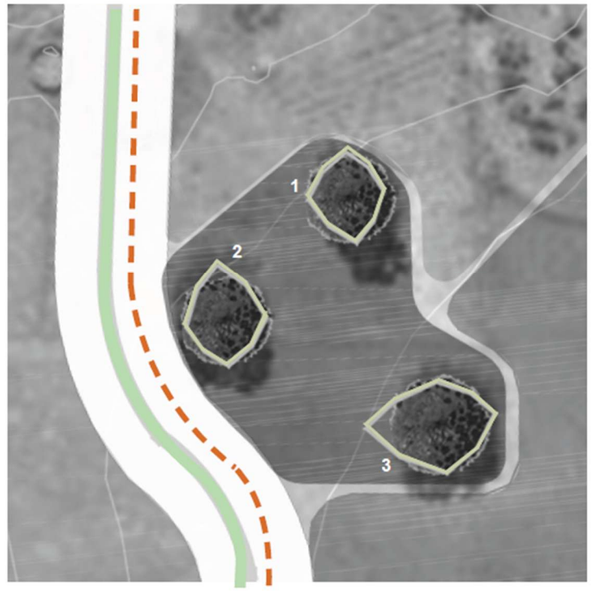
RED GUM CONSERVATION

(Indicative imagery only)



LEGEND

Proposed Shared Path — Connector Road

Existing *Eucalyptus camaldulensis* to be retained and protected as per City of Whittlesea Tree Protection Zone Detail SDL.1.01. To deter tree access, all trees must be mulched to TPZ extremities with a 1- meter planting buffer.

All trees are to be protected during development construction to the City of Whittlesea Tree Protection Zone Fence and Sign Detail SDL.1.02.

SUGGESTED PLANTING SCHEDULE

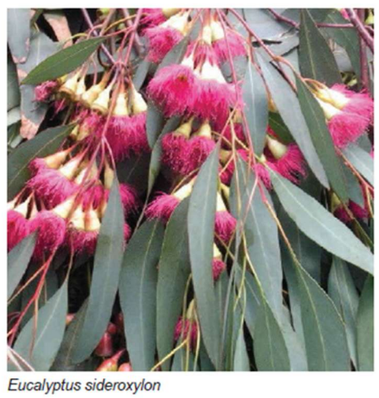
Angophora costata

Zelkova serrata 'Green Vase'

Brachychiton populneus x acerifolius

Eucalyptus polyanthemos

Ulmus parvifolia cv.



Eucalyptus sideroxylon

Eucalyptus viminalis

INDICATIVE PLANT SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME	SIZE H X W
TREES			
AC	ANGOPHORA COSTATA BORONIA	RUSTY GUM	8 X 8M
BR	BRACHYCHITON POPULNEUS X ACERIFOLIUS	KURRAJONG TREE	9 X 10M
EP	EUCALYPTUS POLYANTHEMOS	RED BOX	15 X 5M
EV	EUCALYPTUS VIMINALIS	MANNA GUM	15 X 5M
ES	EUCALYPTUS SIDEROXYLON	RED IRONBARK	15 x 5M
UP	ULMUS PARVIFOLIA 'TODD'S FORM'	CHINESE ELM TREE	10 X 11M
ZE	ZELKOVA SERRATA 'GREEN VASE'	JAPANESE ZELKOVA	10 X 6M
LARGE SHRUBS			
BY	BESHENORIA YUCCOIDES	MEXICAN LILY	1.5 X 1.0M
CY	CEANOTHUS GRISEUS VAR. HORIZONTALIS 'YANKEE POINT'	HORIZONTAL CALIFORNIAN LILAC	1.5 X 1.0M
EC	ECHIUM CANDICANS	PRIDE OF MADEIRA	1.8 X 0.8M
EN	EREMOPHILA NIVEA	EMU BUSH	1.2 X 1.0M
LE	LEUCADENDRON 'SAFARI SUNSET'	BURGUNDY LEUCADENDRON	2.2 X 1.5M
LC	LEUCADENDRON 'COPPER GLOW'	COPPER GLOW TEA TREE	3.0 X 1.8M
SMALL SHRUBS, GRASSES & GROUNDCOVERS			
AN	ANIGOZANTHOS HYBRID 'RUBY VELVET'	RED KANGAROO PAW	0.4 X 0.4M
BE	BERGENIA CORDATA	ELEPHANTS EARS	0.4 X 0.6M
BP	BANKSIA PETIOLARIS	PROSTRATE BANKSIA	0.3 X 1.0M
BG	BANKSIA SERRATA 'PYGMY POSSUM'	PYGMY POSSUM BANKSIA	0.3 X 0.6M
BS	BANKSIA SPINULOSA 'CHERRY CANDLES'	CHERRY CANDLES BANKSIA	0.6 X 0.6M
CT	CAREX TESTACEA	HAIR SEDGE	0.5 X 0.4M
CA	CHRYSOCEPHALUM APICULATUM 'DESERT FLAME'	YELLOW BUTTONS	0.5 X 0.5M
CI	CISTUS SALVIIFOLIUS 'PROSTRATUS'	PROSTATE ROCK ROSE	0.5 X 0.8M
CO	CORREA ALBA	WHITE CORREA	1.5 X 0.5M
CP	CORREA PULCHELLA	COFFIN BAY CORREA	0.8 X 0.8M
CE	CERATOSTIGMA PLUMBAGINOIDES	BLUE LEADWOOD	0.3 X 0.4M
CB	CRASSULA OVATA 'BLUEBIRD'	CRASSULA JADE PLANT	0.5 X 0.5M
CS	CONVOLULUS SABATIUS 'NEW BLUE MOON'	FIELD BINDWEED	-
DI	DIANELLA CAERULEA 'LITTLE JESS' DC MP01	BLUE FLAX LILY	0.5 X 0.5M
HH	HARDENBERGIA 'MINI HA HA'	DWARF PURPLE PEA FLOWER	0.6 X 1.0M
KN	KNIPHOFIA UVARIA ' ELLOW SPLENDER'	YELLOW HOT POKER	1.0 X 0.5M
LM	LEPIDOSPERMA SQUAMATUM	LEPIDOSPERMA	0.7 X 0.5M
LU	LEUCOPHYTA BROWNII 'SILVER NUGGET'	DWARF CUSHION BUSH	0.3 X 0.3M
LP	LIMONIUM PEREZII	PERENNIAL STATICE	0.4 X 0.5M
LT	LOMANDRA LONGIFOLIA 'TANIKA'	DWARF MAT RUSH	0.8 X 0.5M
LS	LOMANDRA LABILL LM600 'EVERGREEN BABY'	EVERGREEN BABY MAT RUSH	0.5 X 0.5M
PF	PHILOMIS FRUTICOSA	JERUSALEM SAGE	0.5 X 0.4M
PL	POA LABILLARDIERI 'ESKDALE'	COMMON TUSSOCK GRASS	0.6 X 0.5M
PO	POA POIFORMIS	TUSSOCK GRASS	0.8 X 0.4M
RB	ROSMARINUS 'BLUE LAGOON'	BLUE LAGOON ROSEMARY	0.6 X 1.0M
RP	ROSMARINUS PROSTRATUS	PROSTRATUS ROSEMARY	0.4 X 1.0M
RY	ROSA FLOWER CARPET YELLOW (ANTHONY TESSELAAR)	TESSELAAR CARPET ROSE	0.7 X 1.0M
RW	ROSA FLOWER CARPET WHITE (ANTHONY TESSELAAR)	TESSELAAR CARPET ROSE	0.7 X 1.0M
SB	STACHYS BYZANTINA 'BIG EARS'	MAUVE CLUSTERS	-
WE	WESTRINGIA GLABRA DEEP PURPLE	NATIVE ROSEMARY	0.9 X 0.5M

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5.5 Built Form

5.5.1 Built Form Outcomes Statement

The Development Plan has the following built form objectives:

- Support the creation of an attractive preferred future neighbourhood character, cultural identity, and sense of place that blends native vegetation with modern housing design.
- Create a preferred urban character supported through the permit design response and design guidelines.
- Ensure the form, scale, and appearance of development enhances the function and amenity of the public realm.
- Ensure buildings and their interface with the public realm support personal safety, perceptions of safety and property security.
- Ensure development is designed to protect and enhance valued landmarks, views, and vistas.
- Achieve higher standards of housing design guidelines adjacent to River Red Gum conservation reserves.
- Achieve building design outcomes that contribute positively to the local context and enhance the public realm.
- Manage site entries and corner sites for higher standards of urban design and housing design guidelines.
- Promote compact housing within the walkable catchment of the rail station.
- Create simple and well-proportioned built form with well-articulated facades, high quality and robust materials.
- Create environmentally sustainable developments through maximising tree canopies and landscaping, external shading devices and IWM solutions.

5.5.2 Public Realm Performance Measures

Planning permit applications must address the performance measures to the satisfaction of the responsible authority. Approaches that vary from the performance measures may be considered provided the objectives are met.

- **PM1 Preferred Future Neighbourhood Character**. Create a preferred future character response for the site. The character response should adopt design elements which contribute to City of Whittlesea's broader landscape and built form character.
- **PM 2 Enhance River Red Gums**. Built form should enhance retained River Red Gums and the natural landscape.
- **PM 3 Intimate Streetscapes**. Provide intimate and quality local streetscapes. Avoid excessive repetitive building elements.
- **PM 4 Housing to Respond to Slope**. Housing types should be distributed to respond to the development opportunities and constraints of the site, including to site topography.
- **PM 5 Safe Design**. Create a residential environment that makes residents feel safe. Housing (windows, balconies and habitable rooms) should front and address streets, public spaces, and communal areas.
- **PM 6 Green Cover and Tree Canopy**. Encourage the planting of green cover and canopy trees within integrated building design.
- **PM 7 Housing to address Key Roads**. Discourage the use of rear or side fences on major roads to encourage activation and passive surveillance.
- **PM 8 Maximum Wall Length**. Medium density wall form in public streets should not exceed 60m. Integrated body corporate development design can consider a range of treatments that break up excessive length and bulk of building forms.
- **PM 9 Maximum Rear Loaded Product Length**. Rear loaded product should not exceed 100m in length on public streets. Where larger rear loaded precincts are proposed, integrated responses that provide relief from building form should be included, for example a green link that provides for shade and walkability.
- **PM 10 Dual Fronted Lots Should be Avoided**. Where dual fronted lots are provided, the design should ensure streets are not dominated by garages, service equipment or ancillary building elements. Consideration should be given to incorporating balconies, windows, fencing design, and landscape treatments to provide a positive interface to public space.
- **PM 11 Housing Adjacent to Open Space**. Permit applications should provide a suitable design response or design guidelines requiring development abutting open space to provide passive surveillance of the open space through built from features, such as windows or balconies. Where a single storey dwelling is provided, fences should be visually permeable to allow for surveillance of the open space.
- **PM 12 Plenty Road and McArthurs Road Interfaces**. Blank walls facing the public realm should be avoided. Housing design should orientate windows, balconies and habitable rooms to front the public realm and provide low fences to facilitate passive surveillance and enhanced perception of safety. Housing design should also adopt contemporary architectural outcomes that respect local character, create simple and well-proportioned built forms, well-articulated facades with varied depth, textures, quality and robust materials and external shade devices.
- **PM 13 Driveway Design.** Minimise vehicle impact on the public realm through minimising the number of driveways and crossovers, ensuring driveways are at least 5.5m long (to prevent vehicles overhanging on the footpaths), designing driveways with textured materials and landscaping (as shared spaces with pedestrian priority) and setting back garages from the main building line.
- **PM 14 Integrated Dwelling Services**. Integrate mailbox, bin storage and site services into the overall built form and landscaping design to promote high quality public realm outcomes. Locate mailboxes in safe and accessible space and where possible, away from vehicular traffic. Enclose bin storage, gas maters, water meters and other services with quality materials.
- **PM 15 Robust Building Materials**. Use robust materials, such as corrugated metal sheets, bricks, lightweight metal cladding, textured bricks, cement sheets, aluminium cladding and Besser blocks. Choose materials that respect existing and preferred neighbourhood character to promote quality public realm outcomes.
- **PM 16 Building Colours.** Maximise the use of light-coloured and/or earth-tone materials on roofs, building facades, driveways and other outdoor surfaces to minimise urban heat and demand for the use of air conditioners.
- **PM 17 External Shading**. Provide external shading devices to maximise access to sunlight and minimise solar gain. Use fixed, external horizontal shading for north-facing doors, windows and balconies, and adjustable external shading such as tensioned zip-track, adjustable external louvres, vertical shading or sliding screens on east/west-facing doors, windows and balconies.
- **PM 18 Well Proportioned Built Form**. Create simple and well-proportioned built form with well-articulated facades, high quality and robust materials. Provide built form relief and articulation at suitable intervals to ensure visual bulk does not overwhelm the streetscape. Use vertical rhythms, façade and roof design variety, consistent material palette, depths, textures and details to achieve well-articulated facades.

5.5.3 Preferred Future Neighbourhood Character

Permit applications should include a neighbourhood character response that supports the need to increase housing densities while responding to and integrating with local neighbourhood character.

The design response should consider the following elements:

- Built form including architectural characteristics, height, setbacks, roof form, eaves, and materials.
- Variation of lot sizes, including a variety of lot widths and depths.
- Open space, including landscape design to enhance the character of retained River Red Gums.
- Vegetation and landscaping, including front gardens in key areas and entries.
- Interface with the street including fencing and driveways.

Permits should be consistent with the neighbourhood character response defined through endorsed Design Guidelines and consider the interplay between:

- Subdivision and streetscape design.
- Park design.
- Housing design guidelines.
- Any front garden treatments managed by the developer through an estate approval processes.
- Built form, architectural characteristics, height, setbacks, roof form and materiality.
- Street tree planting and canopy cover.
- Front and side garden tree planting and fencing.
- Interface with street including fencing and driveways.
- Street design and verge widths.

5.6 Environmentally Sustainable Design

5.6.1 Environmentally Sustainable Design Objectives

The Development Plan has the following Environmentall Sustainable Design (ESD) objectives drawn from Whittlesea Planning Scheme local policy.

<u>Energy performance objectives:</u>

- To improve the efficient use of energy by ensuring development demonstrates design potential for ESD initiatives at the planning stage.
- To reduce total operating greenhouse gas emissions.
- To reduce energy peak demand through design measures (e.g., appropriate building orientation, shading to glazed surfaces, optimise glazing to exposed surfaces, space allocation for solar panels and external heating and cooling systems).

<u>Water efficiency:</u>

- To improve water efficiency.
- To reduce total operating potable water use.
- To encourage the collection and reuse of rainwater.
- To encourage the appropriate use of alternative water sources (e.g. greywater).

<u>Integrated water management:</u>

- To reduce the impact of stormwater run-off.
- To reduce stormwater volumes leaving the land.
- To improve water quality of stormwater run-off.
- To achieve best practice stormwater quality outcomes.
- To incorporate the use of water sensitive urban design.
- To consider options for stormwater reuse.

<u>Indoor environment quality objectives:</u>

- To achieve a healthy indoor environment quality for the wellbeing of building occupants, including the provision of fresh air intake, cross ventilation, and natural daylight.
- To achieve thermal comfort levels with minimised need for mechanical heating, ventilation, and cooling.
- To reduce indoor air pollutants by encouraging use of materials with low toxicity chemicals.
- To reduce reliance on mechanical heating, ventilation, cooling and lighting systems.
- To minimise noise levels and noise transfer within and between buildings and associated external areas.

<u>Transport objectives:</u>

- To ensure that the built environment is designed to promote the use of walking, cycling and public transport, in that order.
- To minimise car dependency.
- To promote the use of low emissions vehicle technologies and supporting infrastructure.

<u>Waste management objectives:</u>

- To ensure waste avoidance, reuse and recycling during the design, construction, and operation stages of development.
- To ensure durability and long-term reusability of building materials.
- To ensure sufficient space is allocated for future change in waste management needs, including (where possible) composting and green waste facilities.

<u>Urban ecology objectives:</u>

- To protect and enhance biodiversity within the locality.
- To provide environmentally sustainable landscapes and natural habitats and minimise the urban heat island effect.
- To encourage the retention of significant native trees.
- To encourage the planting of indigenous vegetation.
- To encourage the provision of space for productive gardens, particularly in larger residential developments.

5.6.2 ESD Performance Measures

Planning permit applications must address the performance measures to the satisfaction of the responsible authority. Approaches that vary from the performance measures may be considered provided the objectives are met.

- **PM 1 Local Policy Implementation**. The Whittlesea Planning Scheme includes a local policy related to ESD at Clause 51.01-2L. A permit should respond to this local planning policy, as amended from time to time.
- **PM 2 ESD design response**. A permit should provide an ESD response to the satisfaction of the responsible authority. The ESD response should respond to the objectives and performance measures of the Development Plan. The assessment should also consider, as relevant, the Sustainable Subdivision Framework.

- **PM 3 Energy Performance**. Developments should: consider the feasibility of:
  - Performing above the NCC Section J minimum requirement.
  - Performing above the 7 star NatHERS standard.
  - Having energy efficient hot water, heating and cooling systems should that are within one energy star rating of the best available.
  - Having daylight/occupancy sensors for external lighting
  - Providing external clothes drying facility.
  - Selecting light-coloured roofing materials for dwellings to reduce the urban heat island effect (SRI value >50% or 0.5).
  - Providing appropriately orientated buildings and roof forms designed to accommodate Solar PV panels.
  - Provide for EV charging facilities.

- **PM 4 Water Efficiency**. Developments should:
  - Provide for rainwater capture and plumbing for reuse for toilet flushing and irrigation.
  - Provide WELS rated fittings within one star of the best available.

- **PM 5 Integrated Water Management (IWM)**. A Stormwater Management Strategy (SWMS) should consider the Development Plan IWM objectives and performance measures and WSUD principles at the concept masterplan and planning permit stage. Permits should consider the relevant provisions of the Neighbourhood Design Manual and address the objectives and performance measures in Section 5.7 of this Development Plan.

- **PM 6 Indoor Environment Quality**. Developments should:
  - Provide adequate daylight to all living areas, bedrooms and all other regularly occupied spaces (as defined in BESS).
  - Design for living rooms to have north facing windows.
  - Provide openable windows and skylights in habitable rooms.
  - Design appropriate shading to all windows receiving direct sunlight.

- **PM 7 Transport**. Developments should:
  - Provide residential bicycle parking - 1 per dwelling for residents and 1 per 5 dwellings for visitors.
  - Provide non-residential bicycle parking at 50% more than as required by Planning Clause 52.34 Bicycle Facilities and End of Trip facilities (1 shower per 10 bicycle spaces and 1 locker per bicycle space provided).
  - Provide infrastructure to support electric vehicles charging.

- **PM 8 Waste Management**. Developments should:
  - Ensure recycling facilities are as convenient as general waste facilities for future occupants to use.
  - Explore how at least 80% of all construction and demolition waste by mass can be recycled.

- **PM 9 Urban Ecology**. Developments should:
  - Protect existing on-site indigenous trees.
  - Incorporate indigenous and /or productive gardens.
  - Provide a tap for irrigation (connected to rainwater tank) and drainage on balconies, courtyards, and backyards.
  - Achieve at least 30% tree canopy cover in public streets and laneways, including provision for passive street tree watering.

- **PM 10 Miscellaneous**. Developments should also consider the feasibility of the following as relevant:
  - How building materials and recycled materials can minimise embodied carbon and minimise waste.
  - Substituting cement content of concrete with recycled content or using low carbon concrete.
  - Selecting low embodied energy materials such as limiting aluminium, zinc and other high embodied energy materials.
  - Sourcing all timber from sustainably managed sources that hold third party verification.
  - Selecting recycled or re-usable materials.
  - Avoiding materials which are toxic in manufacture and use.
  - Selecting low maintenance and highly durable materials.
  - Providing individual utility meters for all dwellings and non-residential areas/ tenancies.

5.6.3 ESD Examples

Light Coloured Roofing with Solar Panels

Example of Dense Street Planting

Underground Water Tanks within Green Space

5.7 Integrated Water Management

5.7.1 Integrated Water Management Objectives

The Development Plan has the following IWM objectives:

- To effectively manage water resources and promote sustainable water management practice.
- To minimise the impact of urban development on water resources and ecosystems.
- To safeguard the ecological integrity of urban waterways and ecosystems.
- To effectively manage stormwater runoff, reduce flooding risks, and protect water bodies from pollution.
- To optimise the overall management of water resources and ensure their long-term sustainability and benefit to the community.
- To enhance local amenity, reduce the urban heat island effect, increase local access to nature and support biodiversity.
- To optimise stormwater management across the site, to ensure stormwater is adequately used as a resource to support healthy urban micro-climate.
- To provide for the protection of natural systems, integration of stormwater treatment into the landscape and improvement of stormwater quality.
- To consider the application of reasonably practicable best practice IWM and WSUD principles and techniques which can be applied to the site.
- To consider the application of reasonably practicable WSUD principles from the MSP and the Neighbourhood Design Manual in the IWM response.
- To reduce stormwater volume run-off leaving the land to the extent reasonably practicable.

5.7.2 IWM Performance Measures

Planning permit applications must address the performance measures to the satisfaction of the responsible authority. Approaches that vary from the performance measures may be considered provided the objectives are met.

- **PM 1 IWM to Form Part of the SWMS**. To facilitate a streamlined approach, a permit must, as relevant, incorporate an IWM response within the framework of the SWMS. The IWM should consider opportunities at the whole of site and also at the lot scale.
- **PM 2 Scope of IWM Response**. The IWM response should include a description of the development's water balance, quantifying projected water demands and supply for the various uses within the subject land. The IWM should also include a completed IWM contributions form contained in Council's IWM Guidelines, for example to summarise the following:
    - Quantity of all alternative water sources that substitute potable mains water supply.
    - Percentage of total projected potable demand substituted by alternative water sources.
    - Projection of recycled water deliverable to end users.
    - Cross-consideration of IWM and flood mitigation opportunities as part of the development design.
    - Annual runoff volume reduction.
    - Annual total suspended solids prevented from discharging to receiving waters
    - Mean annual total nitrogen prevented from discharging to receiving waters.
    - Percentage of trees that are supported with permanent irrigation from an alternative water supply, relative to all trees planted on public land.
    - Percentage of passive public open space (parkland and gardens) supported by an alternative water source.

  The IWM should consider the costs and benefits and feasibility of using the following asset types:
    - Rainwater tanks for toilet and laundry reuse only.
    - Rainwater tanks for garden irrigation.
    - Permeable pavements (for example flexible bound porous pavements).
    - Permeable pavements (for example unbound interlocking pavers, grid pavers).
    - Irrigated green roofs/walls.
    - Passively irrigated street trees.
    - Irrigated buffer strips.
    - Soil moisture banking and wicking beds.
    - Bioretention systems.
    - Swales.

  The IWM should measure the IWM responses against a Business-as-Usual approach based on at least the following indicators:
    - Recycled water use.
    - Rainwater harvested and used.
    - Stormwater harvested and used.
    - Stormwater infiltrated.
    - Vegetated stormwater treatment assets.
    - Tree canopy percentage of public streets.
    - Understorey landscaped areas.
    - Public open space supported with alternative water.
    - Trees supported with alternative water.
    - Surfaces with retained permeability.
- **PM 3 IWM Policy**. The IWM should consider the following policies and others and as updated from time to time as relevant:
    - Sustainable Environment Strategy 2022-2032 (City of Whittlesea).
    - Yarra Catchment Integrated Water Management Plan 2022 (Yarra IWM Forum).
    - Greening Whittlesea City Forest Strategy 2020-2040 (City of Whittlesea).
    - Urban Stormwater Management Guidelines 2021 (EPA Victoria).
    - Whittlesea Water for All 2020-2030 (City of Whittlesea).
    - Designing for a Cool City 2020 (CRC for Water Sensitive Cities).
    - Healthy Waterways Strategy 2018-2028 (Melbourne Water).

5.8 Heritage

5.8.1 Heritage Outcomes Statement

The Development Plan has the following heritage objectives:

- Provide for the conservation and enhancement of Moorilla for its cultural and social heritage significance.
- Provide an appropriate garden setting and development context for Moorilla.
- Protect views to Moorilla from key locations along Plenty Road.
- Protect and respond to dry-stone walls within the adjacent Melbourne Water Pipe Track land.

5.8.2 Heritage Performance Objectives

Planning permit applications must address the performance measures to the satisfaction of the responsible authority. Approaches that vary from the performance measures may be considered provided the objectives are met.

- **PM 1 Victorian Heritage Inventory**. Any development impacting a Victorian Heritage Inventory Site may be required to obtain a Heritage Act 2017 Consent to authorise any works that may affect historical archaeological remains at the place.
- **PM 2 Archaeology Documentation**. An archaeology assessment of H7922-0535 - Former Daniel's Residence and Manufactory Site should be undertaken to explore heritage artefacts and to add to the heritage database.
- **PM 3 Moorilla Heritage Response**. Permit applications should respond to the Moorilla Heritage Overlay objectives and relevant heritage management policies of the Whittlesea Planning Scheme to the satisfaction of the responsible authority.
- **PM 4 Moorilla Roof Restoration**. Encourage restoration of Moorilla's roof to its original condition and the install of roof insulation to improve energy performance.
- **PM 5 Moorilla Alterations**. Alterations To Moorilla should respect the external form, veranda, bulk, façade patterning, painting, finishes and materials of the heritage place. Encourage external materials, colours and finishes that are consistent with and complement the architectural style and period of the heritage place.
- **PM 6 Moorilla Ancillary Services**. Encourage any change to ancillary services and equipment (such as satellite dishes, aerials, shade canopies, or similar structures) to be concealed from view from the public realm.
- **PM 7 Moorilla ESD Improvement.** Consider ancillary services that improve the sustainable performance of Moorilla such as solar panels, rain water tanks and solar hot water services provided they are not visible from the public realm.
- **PM 8 Moorilla New Car Spaces**. Encourage new on-site car spaces to be located at the rear of the property or in a side setback area which are secluded from the public realm.
- **PM 9 Moorilla Garden Design**. Landscape works should ensure an appropriate planting and garden design in keeping with the heritage values of the land.
- **PM 10 Dry Stone Walls on the Yan Yean Pipe Track**. Permits, and functional and detailed design plans should demonstrate that the existing dry-stone wall on the adjacent Melbourne Water heritage pipe track is protected.
- **PM 11 Moorilla Urban Design Response**. Ensure new development near Moorilla:
  - Maintains view lines from Plenty Road to Moorilla so that the image of Moorilla contributes to the overall development.
  - Considers removal of the existing access to Plenty Road and provides alternative road access in a logical position.
  - Provides good integration between the development and Moorilla to protect the amenity of Moorilla and future adjacent lots

Images of Moorilla

6 Implementation

6.1 Introduction

Management of staging and infrastructure delivery and integration of co-ordination between the developer and the City of Whittlesea is central to achieving good outcomes.

The Development Plan has the following implementation objectives:

- Deliver required services and utilities to support the development of residential land in an orderly and logical manner.
- Provide infrastructure and services in a cost-effective manner.
- Provide satisfactory integration to the existing and future road, shared path, and footpath networks.
- Ensure drainage outfalls and requirements are addressed and available for each stage of the development.

6.2 Servicing

The table below summarises the servicing strategy. There are no servicing constraints to the development generally occurring in accordance with the Staging Plan in Figure 27.

Service	Strategy
Sewer Yarra Valley Water	Extend from south to north.
Potable Water Yarra Valley Water	Extend from south to north.
Recycled Water Yarra Valley Water	Extend from south to north.
Electricity	Extended into the site from McArthur Road.
Gas	In accordance with State Government policy, gas will not be provided for the development.
Telecommunications	Extend into the site from McArthur Road.

The subdivision of the Development Plan area requires services and drainage to be extended from adjacent areas.

6.3 Developer Funded Works

The MSP Development Contributions Plan (DCP) provides that the following infrastructure items and services are not included in the Mernda DCP but must be provided by developers as a matter of course:

- All internal local, collector and sub-arterial roads, and associated traffic management measures.
- Local drainage systems.
- Intersections connecting the development to the existing road network.
- Water, sewerage underground power, gas, telecommunications services.
- Pathways.
- Basic levelling, water tapping and landscaping of open space.
- Council's plan checking and supervision costs.
- Conduit for fibre optic cabling in accordance with Council's Telecommunications Conduit Policy.

The following should also be provided as developer works, as relevant:

- Local bus stop infrastructure (where locations have been agreed in writing by Head, Department of Transport and Planning).
- Landscaping, including canopy tree planting, of all existing and future roads and local streets.
- Council approved fencing and landscaping (where required) along road and reserves.
- Bicycle parking (if provided).
- Appropriately scaled lighting along all roads, major shared and pedestrian paths, and traversing public open space.

6.4 Staging Plan

A permit should include a staging strategy that responds to Figure 27 and which provides, as relevant:

- The stages in which the land is intended to be subdivided and developed.
- A lot mix and dwelling density calculation for each stage.
- The proposed servicing and infrastructure to be delivered in each stage that includes the following, as relevant:
  - Road and intersection work required to McArthurs Road to provide access to the development.
  - Progressive construction of the connector street, including a shared path.
  - Provision and treatment of encumbered open space required for tree protection.
  - Construction of any shared paths so that links can be provided to the rail station early.
  - How proposed physical services are to be provided to the land, including water, recycled water (if relevant), sewer, electricity, and telecommunications.

6.5 Street Sections, Functional and Landscape Design Concepts

Figure 28 provides street sections and functional designs for McArthurs Road. These sections show the estimated location of the existing Yarra Valley Water (YVW) water main. The exact location of the main along the road may vary. Permit applications should include the results of Non-Destructive Testing and confirm the location of the water main. The final street section may vary from Figure 23 to the satisfaction of the responsible authority.

Body corporate streets should address the requirements of Clause 55 of the Planning Scheme as appropriate to the satisfaction of the responsible authority.

6.6 Environmental Audit

This provision applies to the land identified as being subject to an Environmental Audit in the PRSA for the land, as shown in the Site Analysis in Figure 11.

Before a sensitive use (residential use, child care centre, kindergarten, pre-school centre, school, (even if ancillary to another use), or children's playground commences or before the construction or carrying out of buildings and works in association with these uses commences:

- An environmental audit statement under Part 8.3 of the Environment Protection Act 2017 must be issued stating that the land is suitable for the use or proposed use; or
- A certificate of environmental audit must be issued for the land in accordance with Part IXD of the Environment Protection Act 1970; or
- A statement of environmental audit must be issued for the land in accordance with Part IXD of the Environment Protection Act 1970 stating that the environmental conditions of the land are suitable for the use or proposed use.

6.7 Off Site Works

The development of the land will require the following works outside of the Development Plan area:

- Drainage outfalls on the east side of Plenty Road to the satisfaction of Council and Melbourne Water Corporation.
- A shared path connecting from the land, over the Yan Yean Pipe Track to the traffic signals at Plenty Road. A planning permit, Melbourne Water consent as landowner and Heritage Victoria consent is required for those works.

6.8 Temporary Drainage

If the development commences prior to the downstream property at 1180 Plenty Road, a temporary retarding basin will be required on 1215 Plenty Road until the downstream infrastructure is provided. Any temporary drainage will need to be installed and maintained to the satisfaction of the relevant drainage authority.

Figure 25: Staging Plan

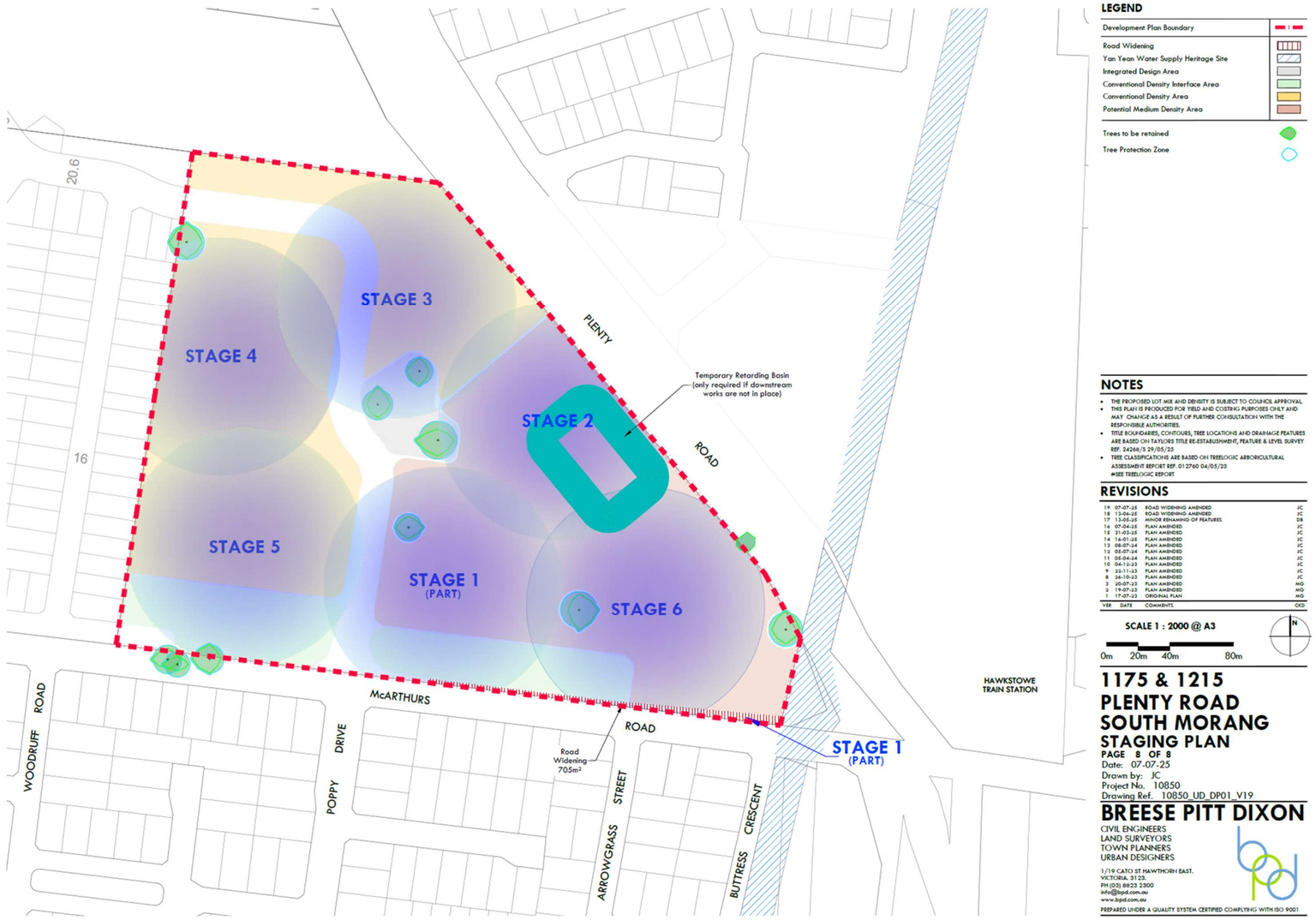
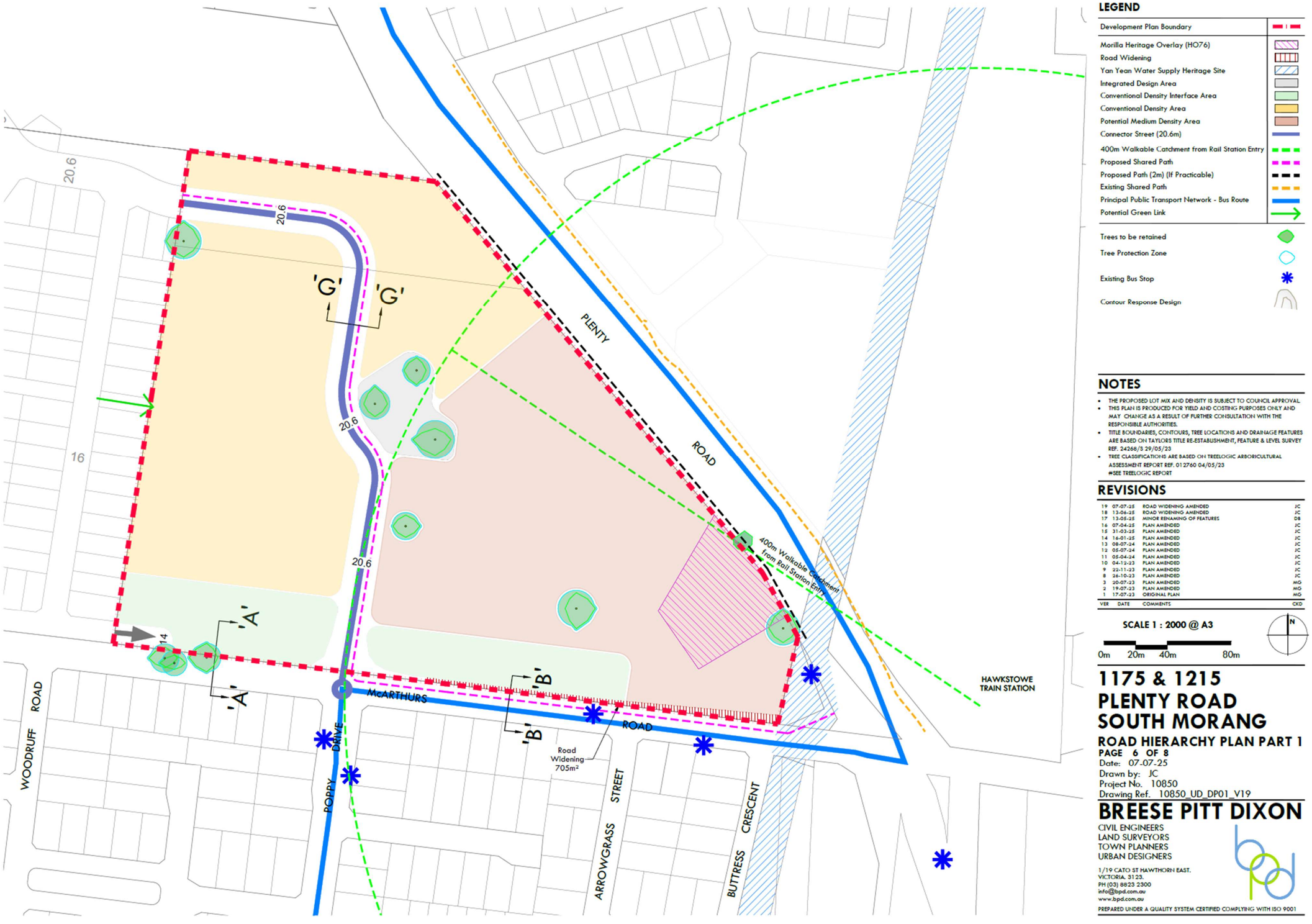
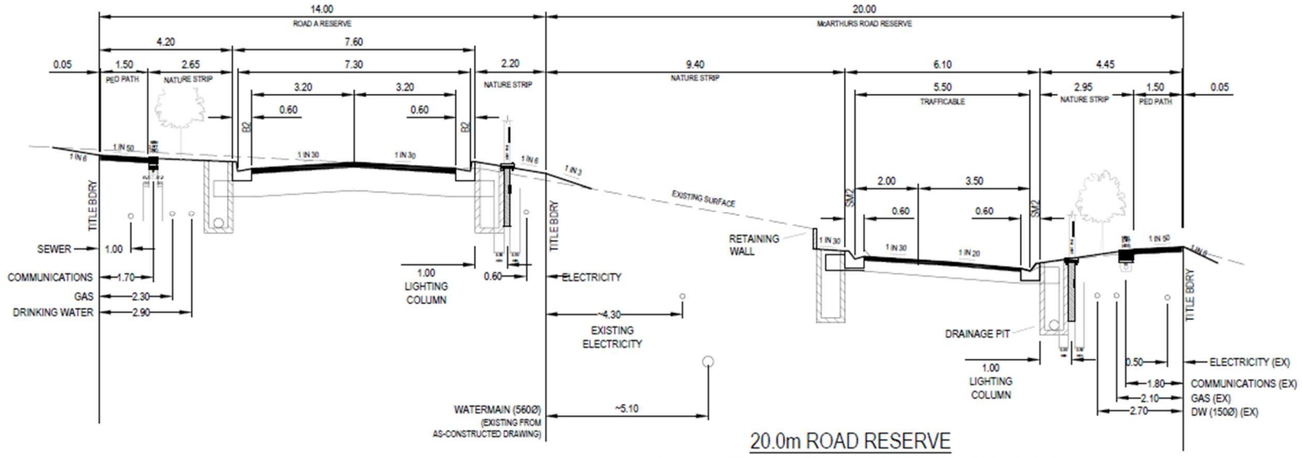


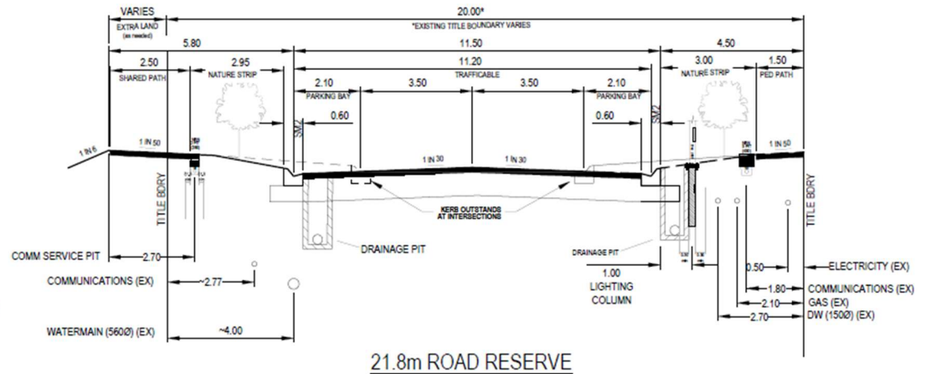
Figure 26: Road Hierarchy and Cross Sections





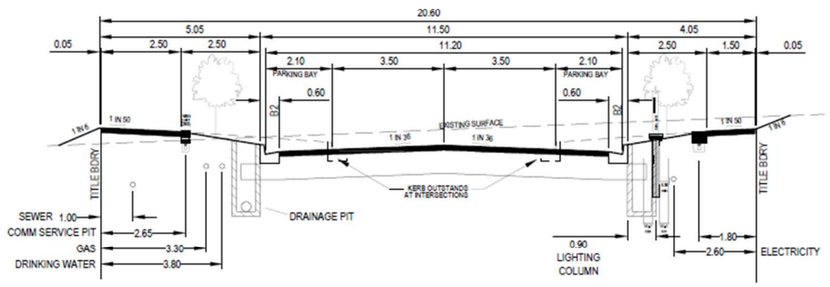
20.0m ROAD RESERVE
FUTURE MCARTHURS ROAD (SECTION 'A' - 'A')

ACCESS STREET TYPE 1



21.8m ROAD RESERVE
FUTURE MCARTHURS ROAD EAST (SECTION 'B' - 'B')

CONNECTOR ROAD



20.60m ROAD RESERVE (SECTION 'G' - 'G')

CONNECTOR ROAD

1175 & 1215
PLENTY ROAD
SOUTH MORANG

ROAD HIERARCHY PLAN PART 2

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Date: 07-07-25
Drawn by: JC
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