

Western Outer Ring Main (WORM)  
Desktop Land Use and Planning Assessment

FINAL REPORT

Prepared for APA

6 August 2019

## Biosis offices

### NEW SOUTH WALES

#### Newcastle

Phone: (02) 4911 4040  
Email: [newcastle@biosis.com.au](mailto:newcastle@biosis.com.au)

#### Sydney

Phone: (02) 9101 8700  
Email: [sydney@biosis.com.au](mailto:sydney@biosis.com.au)

#### Wollongong

Phone: (02) 4201 1090  
Email: [wollongong@biosis.com.au](mailto:wollongong@biosis.com.au)

#### Albury

Phone: (02) 6069 9200  
Email: [albury@biosis.com.au](mailto:albury@biosis.com.au)

### VICTORIA

#### Melbourne

Phone: (03) 8686 4800  
Email: [melbourne@biosis.com.au](mailto:melbourne@biosis.com.au)

#### Ballarat

Phone: (03) 5304 4250  
Email: [ballarat@biosis.com.au](mailto:ballarat@biosis.com.au)

#### Wangaratta

Phone: (03) 5718 6900  
Email: [wangaratta@biosis.com.au](mailto:wangaratta@biosis.com.au)

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**Report to:** APA

**Prepared by:** Mitchell Deaves

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# Contents

<b>1</b>	<b>Introduction .....</b>	<b>4</b>
1.1	Background .....	4
1.2	Purpose .....	4
1.3	Limitations and assumptions.....	4
<b>2</b>	<b>Project Description.....</b>	<b>5</b>
2.1	Study Area .....	5
2.2	Preliminary pipeline alignment.....	5
<b>3</b>	<b>Study Area conditions .....</b>	<b>6</b>
3.1	Existing land use conditions .....	6
3.2	Expected future land use conditions.....	7
<b>4</b>	<b>Key planning legislation, policies and strategies.....</b>	<b>8</b>
4.1	Planning Policy Framework (PPF) .....	8
4.2	Plan Melbourne 2017 – 2050: Metropolitan Planning Strategy.....	10
4.2.1	Green wedges .....	10
4.3	Planning Schemes.....	11
4.3.1	Zones .....	11
4.3.2	Overlays.....	13
4.4	Other relevant strategies .....	14
4.4.1	Protecting Melbourne’s strategic agricultural land (Draft for consultation) .....	14
4.4.2	Extractive resources .....	14
4.4.3	Outer metropolitan ring / E6 transport corridor.....	14
<b>5</b>	<b>Consistency with policy and potential impacts.....</b>	<b>15</b>
5.1	Overview .....	15
5.2	Consistency with relevant planning policy .....	15
5.3	Land use and social environments impact assessment .....	16
5.3.1	Potential construction impacts .....	16
5.3.2	Mitigation measures for construction impacts .....	18
5.3.3	Potential operational impacts .....	20
5.3.4	Mitigation measures for operational impacts .....	20
5.4	Landscape and visual amenity impact assessment.....	20
5.4.1	Potential construction impacts .....	20
5.4.2	Mitigation measures for construction impacts .....	21
5.4.3	Potential operational impacts .....	21
5.4.4	Mitigation measures for operational impacts .....	21
<b>6</b>	<b>Residual impacts and conclusions .....</b>	<b>22</b>
	<b>References.....</b>	<b>23</b>

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## List of Figures

Figure 1	WORM Study Area and PPA.....	24
Figure 2	Zones .....	31
Figure 3	PSP Land Uses .....	38
Figure 4	Overlays.....	45

## List of Tables

Table 1	Study Area existing conditions .....	6
Table 2	Planning Policy Framework overview .....	8
Table 3	Overview of Plan Melbourne directions and policies .....	10
Table 4	Planning scheme zones within or adjacent to the Study Area.....	11
Table 5	PSP land uses within or adjacent to the Study Area.....	12
Table 6	Relevant planning scheme overlays within the Study Area.....	13

# 1 Introduction

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## 1.1 Background

Biosis Pty Ltd (Biosis) was commissioned by APA (Client) to coordinate environmental services to support the assessment and approvals process for the Western Outer Ring Main (WORM) project (Project). Stage 1 of the services includes the preparation of desktop assessment reports to support referrals under the *Environment Effects Act 1978* (Vic) (EE Act) and the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act). This report comprises a desktop assessment of planning considerations, particularly the aspects of land use, social environments and landscape values.

## 1.2 Purpose

The purpose of this document is to:

- Provide an overview of relevant land use and planning legislation, policies and strategies relevant to the Project.
- Provide an overview of the existing and likely future environment within the Study Area.
- Describe the potential impacts of the Project to land use, social environments and landscape.
- Identify mitigation measures and potential residual impacts.
- Provide recommendations for the Project.

## 1.3 Limitations and assumptions

The information contained in this report is primarily based on desktop sources and analysis only. Conclusions are reliant upon external data sources and information managed by third parties.

APA identified a broader Study Area and supplied digital mapping files for the Preliminary Pipeline Alignment (PPA).

For the purposes of this assessment (and assessing likely future land use conditions), Biosis has used the PPA as a reference project and it has been assumed that:

- Construction works (including site preparation) would commence late 2020.
- WORM pipeline operational by mid-2021.
- That APA will comply with requirements under the *Pipelines Act 2005* (Vic) (Pipelines Act), including the preparation of an environmental management plan.
- That pipeline construction will comply with all relevant codes and standards, including Australian Standard AS 2885 Pipelines – Gas and Liquid Petroleum, which prescribes the standards for the design, construction, testing, operation and maintenance of pipelines.
- That APA will adopt the recommendations from other specialists in relation to the mitigation of noise, air quality and vibrations.

The Project is described in more detail in the Project Description (Biosis, July 2019).

## 2 Project Description

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This report should be read in conjunction with the Project Description, Biosis, July 2019. The Project Description report outlines the Project rationale, location (including the broader Study Area and the preliminary pipeline alignment), construction and operational components of the Project and decommissioning activities. The below sections summarise key project description items relevant to this desktop assessment.

### 2.1 Study Area

A Study Area has been identified (Figure 1), which is where the Project will occur. The Study Area is wider than the final disturbance footprint that will be required to construct and operate the pipeline, as flexibility in the determination of the final pipeline alignment is required. Desktop assessments have documented the environmental features and key values within and surrounding the Study Area to ensure that the final disturbance footprint can either avoid, where possible, or minimise impacts. The Study Area is generally described as follows:

- The Study Area commences at the current termination of the Truganina to Plumpton pipeline located just to the north of Taylors Rd, Plumpton, near the Plumpton Pressure Regulating Station.
- The Study Area then follows the existing Sunbury Pipeline easement north to the Calder Freeway.
- The Study Area then generally follows the Outer Metropolitan Ring (OMR) Public Acquisition Overlay (PAO) through Diggers Rest, before deviating to the north and crossing Jacksons Creek, Sunbury Road and Deep Creek.
- The Study Area then re-joins the OMR PAO in Oaklands Junction before following it north east through Mickleham, Merrifield and Kalkallo.
- The Study Area crosses the Hume Highway at the existing intersection with Gunns Gully Road before again following the OMR PAO east to the existing Victorian Northern Interconnect (VNI) easement.
- The Study Area then follows the VNI easement south to the Wollert compressor station.

### 2.2 Preliminary pipeline alignment

A preliminary pipeline alignment (PPA) has been selected and used for the purpose of conducting impact assessment (Figure 1). The PPA sits wholly within the Study Area and includes the Wollert compressor site. The PPA comprises the alignment of the pipeline itself as well as the construction and operational footprints. The PPA is based on landowner consultation and desktop environmental studies completed to date.

## 3 Study Area conditions

### 3.1 Existing land use conditions

The Study Area traverses rural and rural residential land (approximately 22 kilometres), urban growth zone land (approximately 25 kilometres) and existing urban areas (approximately 3 kilometres).

The Study Area intersects seven Precinct Structure Plan (PSP) areas and is adjacent to two PSP areas designated within Melbourne's Urban Growth Boundary (UGB). In several locations the Study Area crosses existing railway and road infrastructure as well as natural features such as creeks and secondary watercourses. The Study Area also intersects the planned Outer Metropolitan Ring / E6 transport corridor (OMR). There is a significant amount of construction activity occurring in the Study Area, primarily in the designated urban growth areas.

A detailed description of the existing land use conditions is provided in Table 1 below. Reference to existing conditions is based on an analysis of Nearmap AU vertical imagery dated 10 July 2019.

**Table 1 Study Area existing conditions**

KP	Description
<b>KP 0 – 3.2</b>	The Study Area follows APA's existing Sunbury pipeline easement and is wholly located within the Plumpton PSP. This PSP was completed and gazetted in February 2019. Much of the land use within this section remains grazing or cropping, however civil works for residential subdivision have begun in parts. Two existing roads are crossed, including Beattys Road (KP 2.4) and Melton Highway (KP 3.2).
<b>KP 3.2 – 9</b>	The Study Area continues along the Sunbury pipeline easement until Calder Freeway (KP 9). The land is not within a designated PSP and is currently used for cropping and grazing. Three roads and one railway is crossed, including Holden Road (KP 6.5), Sunbury railway line (KP 8.3), Calder Freeway (KP 8.6) and Dillon Court (KP 8.8). The Study Area intersects with the OMR at KP 7.5 and KP 9.
<b>KP 9 – 15</b>	The Study area traverses the suburb of Diggers Rest, which is characterised by detached dwellings on rural residential lots. Jacksons Creek is crossed (KP 13.7). Four roads are crossed, including Duncans Lane (KP 9.7), Morefield Court (KP 10.8), Bulla-Diggers Rest Road (KP 11.2) and Sunbury Road (KP 14.9). The Study Area runs alongside the western edge of the OMR between KP 9.8 and KP 12. Several dwellings / outbuildings are located within the Study Area at KP 9.7, 11.2 and 14.8.
<b>KP 15 – 28</b>	The Study Area traverses rural and rural residential areas within Oaklands Junction, Yuroke and Mickleham. No land within this section is designated within a PSP. Deep Creek is crossed at KP 17.1. Six roads are crossed, including Wildwood Road (KP 17.4), St Johns Road (KP 19.3), Oaklands Road (KP 22.2), Craigieburn Road (KP 22.6), Mt Ridley Road (KP 26.3), and Mickleham Road (KP 27.9). The centre of Parkland Crescent is traversed between (KP 26.3 and 26.9). The Study Area runs alongside the western edge of the OMR from KP 19.5 to KP 20.6 before crossing the OMR at KP 20.6 and continuing alongside the eastern edge until KP 28. Two dwellings are located within the Study Area at KP 19.4 and KP 26.7.
<b>KP 28 – 28.2</b>	The Study Area traverses through the Lindum Vale (Mt Ridley West) PSP. The PSP was approved in July 2019 and the land remains rural with scattered detached dwellings present. The Study Area continues alongside the eastern edge of the OMR. One dwelling is located within the Study Area at

	KP 28.1.
<b>KP 28.2 – 32.9</b>	The Study Area traverses in between the eastern edge of the OMR and the western edge of the Merrifield West PSP. The PSP was approved in June 2012 and majority of residential development within the PSP is either constructed or currently under construction. Dwellings currently exist directly adjacent to the Study Area. Donnybrook Road is crossed at KP 30.1.
<b>KP 32.9 – 36.8</b>	The Study Area enters the Merrifield North Employment PSP, continuing alongside the eastern edge of the OMR before diverting towards Gunns Gully Road. The Study Area follows the southern side of Gunns Gully Road between KP 34 – 36.8. The Merrifield North Employment PSP has not yet been prepared and the land remains undeveloped. Several smaller rural parcels with dwellings exist at the eastern end of Gunns Gully Road.
<b>KP 36.8 – 40.8</b>	The Study Area crosses the Hume Freeway and OMR at KP 36.8 before joining the western edge of the Lockerbie PSP. This PSP was completed and approved in June 2012, however no urban development has commenced within proximity to the Study Area. The Study Area runs alongside the southern edge of the OMR before crossing the Shepparton railway line at KP 40.8. One dwelling is located within the Study Area at KP 38.
<b>KP 40.8 – 41.7</b>	The Study Area continues in between the southern edge of the OMR and northern edge of the Donnybrook-Woodstock PSP. The PSP was completed and gazetted in November 2017. No urban development has commenced within proximity to the Study Area and the land remains farmland.
<b>KP 41.7 – 50.7</b>	The Study Area diverts south from the OMR and enters APA's existing VNI pipeline easement. The Study Area follows the easement until the Wollert compressor station site and traverses between the Donnybrook, Woodstock, Shenstone Park and Northern Quarries PSPs. Land adjacent to the Study Area remains largely undeveloped, however a small stage of urban development is occurring at KP 46. Two roads are crossed, including Donnybrook Road (KP 46.6) and Summerhill Road (KP 49.8). The Study Area enters the Wollert compressor site at KP 50.7.
<b>Wollert compressor station</b>	The Study Area comprises the entire Wollert compressor site, which is characterised by hardstand and operating equipment. The surrounding area is vacant land.

### 3.2 Expected future land use conditions

The conditions within and surrounding the Study Area are rapidly changing due to urban development and its associated requirements.

Significant construction activities associated with urban development will continue to occur within at least half of the Study Area for the life of the construction phase (e.g. until mid-2021) and during the operational phase of the Project (e.g. from mid-2021). An assessment of relevant land use policy and strategies within Section 4 provides an indication of the future form of land use and development that is likely occur within the Study Area.



## 4 Key planning legislation, policies and strategies

The *Planning and Environment Act 1987* (Vic) (PE Act) establishes a framework for planning the use, development and protection of land in Victoria, including the Victoria Planning Provisions (VPPs).

The Study Area traverses the municipalities of Melton, Hume, Mitchell and Whittlesea. The policies and provisions contained within these planning schemes would typically control land use and development. However, Section 85 of the Pipelines Act provides an exemption from the need for a pipeline licensee to secure permits pursuant to the PE Act. Therefore, planning permits are not required under the PE Act if a pipeline license has been issued.

This desktop assessment is being undertaken to support a referral of the Project under the EE Act, which considers, amongst other criteria, the potential impacts to land use, social environments and landscape. Policies and strategies, which would otherwise apply, are useful in providing baseline criteria for impact assessment. The following sections provide an overview of relevant State, regional and local policies and strategies.

### 4.1 Planning Policy Framework (PPF)

The PPF includes State and regional planning policies. Table 2 provides an overview of land use, social environments and landscape policies relevant to the Project.

**Table 2 Planning Policy Framework overview**

Relevance	Clause	Policy objective
Land use	Clause 11.01-1S Settlement	To promote the sustainable growth and development of Victoria and deliver choice and opportunity for all Victorians through a network of settlements. Strategies supporting this objective include the convenient access of settlements to infrastructure.  <i>Plan Melbourne 2017-2050: Metropolitan Planning Strategy</i> (DELWP, 2017) is referenced as a key policy document (discussed in section 4.2 below).
	Clause 11.01-1R Green wedges – Metropolitan Melbourne	To protect the green wedges of Metropolitan Melbourne from inappropriate development. Strategies supporting this objective include protecting important productive agricultural areas and areas of environmental, landscape and scenic value. (Refer to section 4.2.1 for further information regarding relevant Green Wedge Management Plans).
	Clause 11.02-1S Supply of urban land	To ensure a sufficient supply of land for residential, commercial, retail, industrial, recreational, institutional and other community uses. Strategies supporting this objective include the ongoing provision of supporting infrastructure to support sustainable urban development.
	Clause 11.02-3 Sequencing of development	To manage the sequence of development in areas of growth so that services are available from early in the life of new communities.

		Strategies supporting this objective include improving the coordination and timing of infrastructure in areas of growth and supporting opportunities to co-locate facilities.
	Clause 14.01-1S Protection of agricultural land	To protect the state's agricultural base by preserving productive farmland. Strategies supporting this objective include balancing the potential off-site effects of a use or development proposal against the benefits of the proposal.
	Clause 14.01-1R Protection of agricultural land - Metropolitan Melbourne	The standalone strategy is to protect agricultural land in Metropolitan Melbourne's green wedges and peri-urban areas to avoid the permanent loss of agricultural land in those locations.
<b>Landscape</b>	Clause 12.03-1S River corridors, waterways, lakes and wetlands	To protect and enhance river corridors, waterways, lakes and wetlands. Strategies supporting this objective include protecting the landscape values of water bodies, ensuring development responds to and respects the assets of water bodies and wetlands and ensuring development is sensitively designed to maintain significant views and landscapes.
	Clause 12.05-1S Environmentally sensitive areas	This policy specifically relates to Merri Creek, which is recognised as an environmentally sensitive area. The objective is to protect and conserve environmentally sensitive areas. Strategies supporting this objective include the protection of these areas from development that would diminish their environmental conservation or recreational values.
	Clause 12.05-2S Landscapes	To protect and enhance significant landscapes and open spaces that contribute to character, identity and sustainable environments. Strategies supporting this objective include ensuring development does not detract from the natural qualities of significant landscape areas.
<b>Social environments</b>	Clause 13.05-1S Noise abatement	To assist the control of noise effects on sensitive land uses. Strategies supporting this objective include ensuring that community amenity is not reduced by noise emissions through land use separation, as appropriate.
	Clause 13.06-1S Air quality management	To assist the protection and improvement of air quality. Strategies supporting this objective include ensuring, wherever possible, that there is suitable separation between land uses that reduce air amenity and sensitive land uses.
	Clause 13.07-1S Land use compatibility	To safeguard community amenity while facilitating appropriate commercial, industrial or other uses with potential off-site effects. Strategies supporting this objective include directing land uses to appropriate locations.
	Clause 13.07-2S Major hazard facilities	To minimise the potential for human and property exposure to risk from incidents that may occur at a major hazard facility. Strategies supporting this objective include ensuring major hazard facilities are sited and designed to minimise risk and applying appropriate threshold distances from sensitive land uses.

<b>Energy</b>	Clause 19.01-1S Energy supply	The objective is to facilitate appropriate development of energy supply infrastructure. Strategies supporting this objective include supporting the development of energy facilities in appropriate locations where they take advantage of existing infrastructure and provide benefits to industry and the community.
	Clause 19.01-3S Pipeline infrastructure	To ensure that gas, oil and other substances are safely delivered to users and to and from port terminals at minimal risk to people, other critical infrastructure and the environment. Strategies supporting this objective include planning for the development of pipeline infrastructure subject to the Pipelines Act and planning for new pipelines along routes with adequate buffers to residences, zoned residential land and other sensitive land uses and with minimal impacts on waterways, wetlands, flora and fauna, erosion prone areas and other environmentally sensitive sites.

## 4.2 Plan Melbourne 2017 – 2050: Metropolitan Planning Strategy

Plan Melbourne (DELWP 2017) is a long-term plan that sets out visions, directions and policies to accommodate the future land use, infrastructure and transport planning of Melbourne. Table 3 provides an overview of Plan Melbourne directions and policies relevant to the Project.

**Table 3 Overview of Plan Melbourne directions and policies**

Direction	Policy	Policy objective
<b>2.1 - Manage the supply of new housing in the right locations to meet population growth and create a sustainable city</b>	2.1.3 - Plan for and define expected housing needs across Melbourne's regions	To support long-term housing growth, choice and diversity of household types across Melbourne's regions. To encourage new development to be directed to areas with appropriate infrastructure.
<b>4.5 - Plan for Melbourne's green wedges and peri-urban areas</b>	4.5.2 - Protect and enhance valued attributes of distinctive areas and landscapes	To protect the landscapes that have significant geographic and physical features within green wedges and peri-urban areas. The desired outcomes for green wedges and peri-urban areas are to protect and enhance, among others, environmental and biodiversity assets, significant views, agricultural land and sites of Aboriginal and post-European settlement.

### 4.2.1 Green wedges

Green wedges are the non-urban areas of metropolitan Melbourne that lie outside the UGB. The Study Area traverses two green wedges, including the Western Plains North Green Wedge and the Sunbury Green Wedge.

Councils must prepare Green Wedge Management Plans (GWMP's) for land within the green wedge. Relevantly for the Project, the GWMP's include high level objectives about landscape values and preferred land uses within the green wedges.

### Western Plains North Green Wedge

The Study Area intersects the Western Plains North Green Wedge between approximately KP 3 – 9. The green wedge is within the Melton LGA and a Green Wedge Management Plan (GWMP) has been developed. The GWMP (Melton 2014) identifies a number of important viewpoints which are visible from the public realm. Of relevance to the Study Area are the following:

- Views of Mount Kororoit from the surrounding roads.
- Views from the south of Diggers Rest and along Holden Road to Mount Kororoit.

The GWMP recognises agricultural uses play an important role within the City of Melton. The land in this region is of reasonably high agricultural value as it is suited to a wide variety of commodities and therefore provides the greatest versatility to sustain multiple agricultural uses. However, the soil and the availability of water, as well as urban related pressures counter this, making traditional agricultural pursuits such as broadacre cropping and grazing difficult.

### Sunbury Green Wedge

The Study Area intersects the Sunbury Green Wedge between approximately KP 11.5 – 28. The green wedge is within the Hume and Brimbank LGA's, however the Study Area only intersects the portion within the Hume LGA. Hume City Council has completed Phase 1 of the GWMP covering their portion, however no details are publically available.

## 4.3 Planning Schemes

The Study Area traverses the municipalities of Melton (approx. KP 0 – 9), Hume (approx. KP 9 – 36.8), Mitchell (approx. KP 36.8 – 42.4) and Whittlesea (approx. KP 42.4 – 50.7). The following sections identify each municipality's planning scheme zones and overlays.

### 4.3.1 Zones

Zones provide an indication of the existing and future form of land use and development that may occur within the Study Area (Figure 2). Likewise, structure plans which apply in many of the Urban Growth Zones provide even more detail in relation to the future form of development (Figure 3). The zoning controls have been reviewed to identify land uses that may be impacted during the construction of the pipeline. Consideration has also been given to both current and reasonably foreseeable sensitive land uses within proximity of the pipeline that may influence the location classification and therefore design of the pipeline in accordance with AS2885.

Table 4 and Table 5 provide an overview of zones and structure plan land uses within the Study Area.

**Table 4 Planning scheme zones within or adjacent to the Study Area**

LGA	Zone	Location (approx. KP)
<b>Melton</b>	Urban Growth Zone - Schedule 11 (UGZ11)	Plumpton PSP (KP 0 – 3)
	Road Zone Category 1 (RDZ1)	Melton Highway (KP 3.3) and Calder Freeway (KP 8.8)
	Green Wedge Zone (GWZ)	Most rural areas between Melton Highway and Calder Freeway (KP 3.3 – 8.8)
	Public Use Zone – Service and Utility (PUZ1)	City West Water (KP 4.2)

	Public Use Zone 4 – Transport (PUZ4)	Sunbury railway corridor (KP 8.3)
<b>Hume</b>	Green Wedge A Zone (GWAZ)	Diggers Rest rural residential area (KP 9 – 11.5)
	Green Wedge Zone (GWZ)	Rural and rural residential areas within Oaklands Junction, Yuroke and Mickleham (KP11.5 – 27.9)
	Road Zone – Category 1 (RDZ1)	Sunbury Road (KP 14.9), Mickleham Road (27.9) and Hume Freeway (KP36.8)
	Road Zone - Category 2 (RDZ2)	Oaklands Road (KP22.4)
	Farming Zone – Schedule 1 (FZ1)	Lindum Vale (Mt Ridley West) PSP (KP 28)
	Urban Growth Zone - Schedule 4 (UGZ4)	Merrifield West PSP (KP28 - 33.5)
	Public Use Zone - Service and Utility (PUZ1)	Western Water (KP33.5 - 35.2)
	Urban Growth Zone (UGZ)	Merrifield North Employment PSP (KP35.2 - 36.6)
<b>Mitchell</b>	Urban Growth Zone - Schedule 5 (UGZ5)	Lockerbie PSP (KP 36.7 – 37)
	Urban Growth Zone - Schedule 1 (UGZ1)	Lockerbie PSP (KP 37 – 40.7)
	Public Use Zone – Transport (PUZ4)	Shepparton railway corridor (KP 40.7)
	Urban Growth Zone - Schedule 4 (UGZ4)	Donnybrook-Woodstock PSP (KP40.7 - 42.2)
	Rural Conservation Zone (RCZ)	Merri Creek (KP42.2 - 42.8)
<b>Whittlesea</b>	Rural Conservation Zone (RCZ)	Merri Creek (KP42.2 - 42.8) and KP46
	Urban Growth Zone - Schedule 6 (UGZ6)	Donnybrook-Woodstock PSP (KP 42.8 – 46.6)
	Road Zone Category 1 (RDZ1)	Donnybrook Road (KP46.6)
	Urban Growth Zone (UGZ)	Shenstone Park PSP (KP 46.6 – 47.7)
	Rural Conservation Zone - Schedule 1 (RCZ1)	Shenstone Park PSP (KP47.7 - 49.1)
	Special Use Zone - Schedule 4 (SUZ4)	Northern Quarries PSP (KP 49.3 – 49.8)
	Farming Zone (FZ)	Northern Quarries PSP (KP 49.3 – 50.6)

**Table 5 PSP land uses within or adjacent to the Study Area**

KP	PSP	Land uses
<b>0 – 3.3</b>	Plumpton	Residential and Local Open Space. Education site (KP 0.5) approx. 125 metres from Study Area. Education site (KP 1.7) approx. 270 metres from Study Area. Community facility (KP 2) approx. 195 metres from Study Area. Education site (KP 2.4) approx. 427 metres from Study Area.
<b>28</b>	Lindum Vale (Mt Ridley West)	Residential.
<b>28 – 32.8</b>	Merrifield West	Residential, Local Open Space and Drainage. Education site (KP 29.1) approx. 360 metres from Study Area. Education site (KP 31) approx. 290 metres from Study Area.
<b>32.8 – 36.8</b>	Merrifield North Employment	Not yet planned.

<b>36.8 – 40.8</b>	Lockerbie	Residential and Local Open Space.
<b>40.8 – 46.7</b>	Donnybrook-Woodstock (note: the two areas have been considered under the same PSP)	Residential, Local Open Space, Drainage and Municipal. Education site (KP 45.6) approx. 320 metres from Study Area.
<b>46.7 – 48.5</b>	Shenstone Park	Not yet planned.
<b>48.5 – 50.7</b>	Northern Quarries	Not yet planned.

### 4.3.2 Overlays

Overlays control the form of development which can occur. Overlays can be indicative of particular characteristics or environmental values of an area. In this assessment relevant overlay controls have been identified, such as Environmental Significance Overlays (ESO) and Significant Landscape Overlays (SLO). These are indicators of particular environmental or landscape values that are relevant for the assessment of the Project.

Table 6 and Figure 4 provide an overview of relevant planning scheme overlays within the Study Area.

**Table 6 Relevant planning scheme overlays within the Study Area**

LGA	Overlay	Location (approx. KP)
<b>Melton</b>	Environmental Significance Overlay Schedule 1 (ESO1) - Remnant woodlands, open forests and grasslands	KP 8.3 (Sunbury railway corridor).
<b>Hume</b>	Environmental Significance Overlay Schedule 1 (ESO1) - Rural waterways and environs	KP 13.5 - 15 (Jacksons Creek) and KP 16.3 - 18.1 (Deep Creek).
<b>Mitchell</b>	Environmental Significance Overlay Schedule 6 (ESO6) - Urban conservation area	KP 42.2 - KP 42.4 (Merri Creek).
<b>Whittlesea</b>	Environmental Significance Overlay Schedule 7 (ESO7) <sup>1</sup> - Urban conservation area	KP 42.4 - KP 43.2 (Merri Creek) and KP 46.
	Environmental Significance Overlay Schedule 4 (ESO4) <sup>2</sup> - Rural conservation area	KP 46 and KP 48 – 49.

<sup>1</sup> It is noted that following Amendment GC28 to the Whittlesea Planning Scheme, ESO6 applies to the RCZ area. However, ESO6 has mistakenly been referenced as ESO7 in the current maps of the Whittlesea Planning Scheme.

<sup>2</sup> Following Amendment CG28 to the Whittlesea Planning Scheme, ESO4 has been removed from the Amendment area including some portions of the Study Area. However, this amendment has not been reflected in the current maps of the Planning Scheme as yet.

## 4.4 Other relevant strategies

### 4.4.1 Protecting Melbourne's strategic agricultural land (Draft for consultation)

DELWP has been working with Agriculture Victoria and Deakin University's Centre for Rural and Regional Futures to better understand the suitability and capability of land in Victoria. This document was released for public comment on 12 March 2019 and is still at the consultation stage. Draft criteria has been developed to identify strategic agricultural land and it is noted not all agricultural land will be identified as strategic agricultural land. Determination will depend on the nature, extent and significance of the land as assessed against a common set of criteria (DELWP 2019).

As part of this research, an assessment of agricultural land capability in Melbourne's green wedge and peri-urban areas has been undertaken. The assessment indicates that the land within the Study Area is not considered strategic agricultural land as it has mainly low to moderate agricultural land capability.

### 4.4.2 Extractive resources

Extractive resources are recognised in Plan Melbourne and Clause 52.09 – Stone Extraction and Extractive Industry Interest Areas, of the PPF. The Victorian Government has also developed the strategy 'Helping Victoria Grow – Extractive Resources Strategy' to ensure that high quality extractive resources continue to be available at a competitive price to support Victoria's growth (DEDJTR 2018).

Extractive Industry Interest Areas (EIAs) are identified across Victoria and policy recognises the need to protect the areas from incompatible development. The Study Area intersects with an EIA between KP 37 – 50.7. Further, the municipalities of Mitchell and Whittlesea are both identified within the top 20 strategic resource local government areas.

In addition to the above, the Study Area intersects an existing extractive industry tenement at KP 14, just south of Sunbury Road.

### 4.4.3 Outer metropolitan ring / E6 transport corridor

The OMR is intended to create a 100 kilometre long high-speed transport link across Melbourne's north and west. Following an amendment to the relevant planning schemes in August 2010 (VC68), a Public Acquisition Overlay (PAO) reserves the right for construction of the future OMR. APA has established a working group with VicRoads to appropriately co-locate the Project within and alongside the corridor.

As identified within Section 3, approximately half of the Study Area is interacts with the OMR. It is important to note the PPA crosses the corridor in two locations (KP 7.5 and KP 20.7) and is within the PAO from KP 28.2 – 33.2. The PPA remains outside the PAO in all other instances.

## 5 Consistency with policy and potential impacts

---

### 5.1 Overview

This section considers the following:

- An assessment of the Project against relevant planning policy.
- An assessment of the impacts of the Project on:
  - Land use and social environments.
  - Landscape and visual amenity.
- Available mitigation measures.

### 5.2 Consistency with relevant planning policy

Section 4 identifies key land use legislation, policies and strategies, which affect existing and future land uses within the Study Area.

The PPF and key strategies emphasise key themes, such as the protection and management of metropolitan Melbourne's green wedges, protection of environmentally sensitive areas and landscapes, protection of agricultural land, maintaining land use compatibility, supply of urban land and the sequencing of supporting infrastructure.

The following sections assess the consistency of the Project with the abovementioned policy.

#### Land use and infrastructure planning

Land use and infrastructure policy supports the ongoing provision of infrastructure to support sustainable urban development. The rationale behind the Project, amongst other strategic outcomes, will deliver timely gas supply to the western and northern growth areas. The Project provides an opportunity for future offtakes to supply gas to residential, employment and other land uses within urban growth areas at Sunbury South, Lindum Vale, Merrifield/Merrifield North and Kalkallo.

Land use policy also seeks to direct urban development into the growth areas and encourages infrastructure to be co-located with other infrastructure, where practicable. Policy also seeks to minimise adverse amenity impacts on sensitive land uses (e.g. residential areas and community facilities such as schools and hospitals). The PPA has been designed to align with existing infrastructure corridors to the extent practicable. The alignment has been designed to avoid unreasonable amenity impacts on existing uses. Much of the construction activity associated with the Project is programmed to occur concurrently with the construction activities required for surrounding urban development, thereby minimising adverse amenity impacts. Under AS2885, APA is required to design the pipeline in response to the reasonably foreseeable sensitive land uses within proximity of the pipeline to ensure that the risk of impacts to such uses during operations is appropriately mitigated. Through the adoption of suitable design and procedural measures the proposed pipeline will not introduce any new constraints to land uses that have been identified through existing PSPs or that are otherwise reasonably foreseeable.



## Green wedges

Policies and strategies at all levels seek to protect agricultural land in Metropolitan Melbourne's green wedges and peri-urban areas to avoid permanent loss. This is particularly relevant to the Project as approximately half of the Study Area traverses green wedge / agricultural land. The balance of the Study Area is located in areas which have already been identified for urban growth and are therefore assumed to be no longer suitable for agriculture in the longer term.

Section 4.4.1 specifically discusses a strategy currently being developed to protect Victoria's strategic agricultural land. The Study Area is not considered strategic agricultural land as it has mainly low to moderate agricultural land capability. This is evident as majority of agricultural land within the Study Area would be identified as hobby farming already facing the pressures attributed to the interface with the UGB. APA's route selection and ongoing route refinement process has also considered impacts to agricultural production based on feedback from landowners and other stakeholders. Efforts have been made to utilise existing easements, where possible, and to follow property boundaries or preferred landowner alignments. Following construction agricultural activities, including grazing and cultivation, can continue to occur within the easement. Potential impacts to agricultural land have been minimised so far as practicable, and where identified, will be short term and temporary.

This assessment does not identify significant impacts caused by inconsistency between the Project and land use policy regarding the protection of green wedges and agricultural land.

## Landscape and visual

The Study Area does not traverse any areas featuring significant landscape or visual characteristics, mainly due to the route selection process, where areas of significance were avoided. This assessment does not identify any overarching inconsistency with policy and is supported by the below mentioned mitigation measures proposed to occur throughout the construction and operational phases.

## Extractive resources

Policy identifies the need to protect EIAs from incompatible development, particularly urban development. The PPA traverses one identified EIA between KP 37 – 50.7, as well as the strategic resource areas of Mitchell and Whittlesea. The co-location of the PPA within the existing VNIE pipeline easement (KP 42 – 50.7) will ensure substantial additional potential extractive resource land will not be sterilised.

Regarding the existing extractive industry tenement at the parcel located at KP 14, APA has undertaken substantial consultation with the landowners to align the PPA outside of planned quarry and stockpile areas and away from access roads.

This assessment does not identify significant impacts caused by inconsistency between the Project and policy regarding the protection of extractive industry areas.

## 5.3 Land use and social environments impact assessment

### 5.3.1 Potential construction impacts

As identified within section 3, the Study Area traverses the urban fringe of metropolitan Melbourne where rural, peri-urban and urban land uses merge.

Rapid urbanisation is occurring across the PSP areas adjoining or intersected by the PPA, which will continue to occur for the life of the construction phase and during the operational phase of the Project.

Potential impacts to land use and social environments are primarily attributed to the construction phase of the Project and are expected to be intermittent and temporary in nature. Potential impacts include temporary land and access severance, increased traffic activity, increased noise and dust emissions, vibrations, damage to existing infrastructure and displacement of existing non-residential uses.

This section should be read in conjunction with the *Noise and Air Quality assessment* prepared by Golder Associates Pty Ltd (Golder 2019) and *the APA Wollert Compression Station Noise Assessment* prepared by Wood (Wood 2019).

### **Air Quality**

Potential air quality impacts have been addressed within the Golder report. A summary is as follows:

- Potential air quality impacts include dust caused by surface materials being pulverised and abraded, mainly due to vehicles, earthwork machinery, blasting and mulching.
- Locations with the highest risk for potential impact include existing dwellings and urban areas as well as the assumed urban areas within close proximity to the construction ROW.

### **Noise / Vibrations**

Potential noise and vibration impacts have been addressed within the Golder and Wood reports. A summary is as follows:

- Potential noise/vibration impacts have been identified primarily from mobile plant engines, vehicle movements, extraction and clearing and blasting.
- Locations with the highest risk for potential impact include existing dwellings and urban areas as well as the assumed urban areas within close proximity to the construction ROW.

### **Land use and property access**

Potential impacts to land use and property access include:

- Temporary impeded movement and access.
- Temporary loss of residential private open space.
- Temporary loss of grazing pasture and cropping land.

### **Traffic**

Potential traffic impacts include:

- Temporary delay to road users due to increase in vehicle numbers.
- Temporary impeded movement and access.
- Damage to existing road networks and infrastructure due to construction movements.
- Poor quality road surface after reinstatement.

### **Infrastructure**

Potential impacts to infrastructure include:

- Unexpected disruption to existing buried infrastructure including communications, sewer, water, gas and electricity assets.

- Contact between construction equipment and overhead electrical transmission and distribution lines.
- Temporary damage to unsealed and sealed roads and general wear and tear on roads through the project area.
- Unexpected disruption to above ground infrastructure on private property.
- Unexpected disruption to drains and farm dams.

### 5.3.2 Mitigation measures for construction impacts

#### Air Quality

Mitigation measures have been outlined within the Golder report. A summary is as follows:

- Preparation and implementation of a dust and air quality management plan by APA to minimise air quality impacts during construction.

#### Noise / Vibrations

Mitigation measures have been outline within the Golder report. A summary is as follows:

- Preparation and implementation of a noise and vibration management plan by APA to minimise impacts during construction.

#### Land use and property access

Typical mitigation measures to address potential impacts to land use and property access include:

- Each landowner's specific requirements and requests will be identified as part of a land access register, individual conditions will be agreed to and contact will be maintained with the landholder during construction activities.
- Consultation with relevant landholders and regulatory authorities regarding the utilisation of existing roads or tracks and the selection of designated access routes.
- All personnel will ensure that property entry and exit gates are closed to prevent livestock escaping or mixing with other herds. Temporary gateways installed for construction within properties should also be closed.
- Temporary gateways will be installed in existing property fences across the ROW and maintained during construction. Following completion of construction fences will be reinstated and permanent easement access gates will be installed to a standard agreed with the landowner. All gates will be daisy chained to allow for ongoing landowner and APA access.
- Landholders will be kept advised of construction activities to minimise disruption to existing activities and, where necessary, allow for temporary movement of livestock from the construction area.
- Stock and vehicle crossings shall be maintained at locations arranged with the land holder to ensure stock can access water and feed and land holders can access other parts of their property.
- All vehicle and machinery movement will be confined to the designated construction ROW, designated access tracks and roads.
- Parking under trees shall be prohibited to prevent root zone soil compaction or damage.

## Traffic

Typical mitigation measures to address potential traffic impacts include:

- Preparation of Traffic Management Plans in consultation with the relevant Council/s and VicRoads.
- Careful planning of routes and accesses to the construction ROW from public roads.
- Use of designated access tracks and a one-way traffic system within the construction ROW, to reduce traffic flow on the local road network as much as possible.
- Pipe segment delivery and equipment movement to be staggered throughout the day.
- All sealed road and rail crossings will be crossed using trenchless construction techniques in consultation with the relevant authority.
- Identification of mitigation measures required at road crossing point to accommodate construction activities and public road users, such as temporary traffic controls, signage and road cleaning.
- Ensuring that all loads are covered and secured, preventing soil and other contaminants being released to the road.
- Ongoing negotiation with landowners regarding traffic movements and access requirements on internal property tracks.
- Vehicle parking shall be restricted to the pipeline construction area and other designated areas.
- Appropriate measures shall be employed to prevent surface damage to public roads (e.g. limiting dirt track access during wet weather and protecting bitumen surfaces where tracked machinery is required to cross roads).

## Infrastructure

Typical mitigation measures to address potential impacts to infrastructure include:

- The location of known buried third-party assets and overhead electrical lines will be marked on the construction alignment sheets.
- The construction contractor will complete 'Dial Before You Dig' information and hand prove all third-party assets prior to trench excavation.
- The construction contractor will be required to complete a traffic management plan for each road crossing to be submitted to the relevant authority (being either VicRoads or the appropriate council).
- All traffic management plans will comply with the relevant standards.
- Buried water lines encountered during trenching will be reconnected so that their purpose (e.g. stock watering or irrigation) is not impinged upon.
- Damaged fences / gates will be repaired or replaced and all farm tracks through which an open trench is dug will be reinstated to their previous condition.

## Non-residential land use activities

Typical mitigation measures to address potential impacts to non-residential land use activities include:

- Land that will be disturbed by the construction activities will be rehabilitated within a reasonable time after construction to a condition that will allow continuation of the existing land use.

- Land rehabilitation will be discussed with each landholder that specifies standard measures for weed and pathogen control. The entire disturbed area will be subject to a weed monitoring and control program.
- Property fences and gates shall be installed, maintained and reinstated to a condition at least equal to the pre-existing condition.
- Topsoil and subsoil will be removed and stored separately to prevent the possibility of soil inversion, care shall be taken to ensure topsoil and subsoil is not mixed.
- Compensation paid by APA to directly affected landholders as required under the Pipelines Act and the *Land Acquisition and Compensation Act 1986* (Vic).

### 5.3.3 Potential operational impacts

Limited direct impacts to social environments are expected during the operation phase as the pipeline will be located below ground with limited and low intensity maintenance to occur. Traffic movements during operation will be minimal, expected to include periodic easement inspections with up to two light vehicles. Physical visits to surface facilities, such as the mainline valves and cathodic protection test points, may be more frequent, also requiring the use of light vehicles. Any other maintenance or easement access will be carried out on an ad-hoc basis to respond to specific tasks.

Under AS2885, APA is required to design the pipeline in response to the reasonably foreseeable sensitive land uses within proximity of the pipeline to ensure that the risk of impacts to such uses during operations is appropriately mitigated. APA will adopt suitable design and procedural measures such that the proposed pipeline will not constrain land uses that have been already approved through existing PSPs or that are otherwise reasonably foreseeable within proximity of the pipeline.

### 5.3.4 Mitigation measures for operational impacts

- Compensation paid by APA to directly affected landholders as required under the Pipelines Act and the *Land Acquisition and Compensation Act 1986*.
- Pipeline to be design and operated in response to all existing and reasonably foreseeable sensitive land uses in accordance with the requirements of AS2885.
- Upgrade of the Wollert compressor site in accordance with the air quality and noise recommendations contained within the Golder report.

## 5.4 Landscape and visual amenity impact assessment

### 5.4.1 Potential construction impacts

Construction activities will include clearing, grading and trenching within the construction ROW. As identified within the existing conditions, approximately half of the Study Area traverses urban growth zone land, whilst the other half traverses rural / rural residential land. Limited impacts to landscape values are identified within these areas, largely due to the extensive cropping/grazing and urban development activities that have occurred and will continue to occur. Areas of higher landscape and visual value include the three creeks (Jacksons, Deep and Merri). This is evidenced by Environmental Significance Overlays being contained mainly to these areas. Merri Creek is also identified as an environmentally sensitive area. Potential impacts to these areas and proposed mitigation measures are identified below. This section should also be read in conjunction with the *Geological and Soils Desktop Study*, prepared by Golder Associates (Golder 2019).

Visual impacts will be most prevalent during the construction period, however they will be temporary and short-term. Mitigation measures are also addressed below.

A summary of potential construction impacts includes:

- Vegetation clearing, grading and trenching within the construction ROW.
- Temporary views of bare soil areas and soil mounds along the ROW.
- Temporary views of work crew and machinery from residential properties and public areas (e.g. roads and railway corridors) as they move along the alignment and install the pipeline.

#### **5.4.2 Mitigation measures for construction impacts**

A key design measure to reduce potential landscape and visual impacts has been the utilisation of APA's existing easements (KP 0 – 8 and KP 42 – 50). The easements have been subject to past disturbance and as a result there will be no new impact for these section of the alignment outside of the construction period.

Topsoil and vegetation cleared from the construction ROW will be stockpiled separately from the clear and grade and excavated trench material to ensure successful reinstatement of the construction ROW following construction. Reinstatement of the construction ROW will aim to restore all areas as close as possible to the pre-existing condition. However, it is noted pipeline easements are required to be predominantly clear of tall vegetation both to minimise adverse impacts on pipeline integrity from excessive root growth and to ensure the pipeline remains clearly locatable to prevent accidental damage. Removal of trees will be minimised as much as possible through alignment refinement, short sections of reduced construction ROW width and retention / protection within the construction ROW, where feasible.

Topsoil removed during clearing and grading will be respread over the construction ROW. Rehabilitation of the ROW will aim to reinstate contours, minimise the potential for erosion, minimise any impact on drainage patterns, minimise weed establishment, minimise the visual impact of the pipeline installation and minimise adverse impacts of the pipeline on existing land uses.

In response to potential visual impacts, temporary screening may be used, where applicable, close to residential land uses and in consultation with landowners.

#### **5.4.3 Potential operational impacts**

Following construction and reinstatement there will be little above ground presence of the pipeline other than ancillary structures required for safety and maintenance purposes. Pipeline marker posts, mainline valves and cathodic protection points will be visible intermittently along the PPA, all of which will not create significant landscape or visual impacts.

The addition of one compressor at the Wollert site will not create impacts to the landscape as it is identified as existing hardstand. Visually, the Wollert compressor station will increase only marginally in size and the expanded facility will be of similar visual scale and impact to the existing development.

#### **5.4.4 Mitigation measures for operational impacts**

Although limited operational impacts have been identified to landscape and visual environments, the following mitigation measures are available:

- Main line valves will be located to reduce potential visual impact and, where necessary, landscaping may be used to reduce visibility from adjacent public thoroughfares and residences.
- Rehabilitation of the ROW will be completed in a timely fashion following construction.
- The new compressor unit at the Wollert compressor station will be located to be visually contiguous with the existing facility and such that clearing of existing mature vegetation at the site is not required.

## 6 Residual impacts and conclusions

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Sections 1, 2, 3 and 4 of this desktop assessment provided an overview of the existing and expected future conditions of the Study Area and identified key planning legislation, policies and strategies relevant to the Project. Section 5 assesses the impacts of the Project at a policy level and across its construction and operational phases.

The Project remains generally consistent with policy primarily due to the comprehensive route selection process that APA has undertaken. Co-location with existing infrastructure corridors and along the edge of urban development, where possible, has ensured future land use, including agricultural land and urban land uses, are not impacted by way of severing existing uses or sterilising future production/development potential. No significant landscape or visual amenity policy inconsistency has been identified, as key landscapes have been avoided throughout the route selection processes. No further recommendations are made to realign the PPA with regard to land use or landscape policy.

Potential impacts to land use, social environments and landscape have been identified primarily for the construction phase of the Project. The potential impacts are expected to be intermittent and temporary in nature with no significant ongoing consequences. These impacts have also been considered alongside the rapid urban development that is occurring across majority of the PPA. Much of the construction activity associated with the Project is programmed to occur concurrently with the construction activities required for surrounding urban development, thereby minimising adverse impacts.

Implementation of the mitigation measures identified within section 5 will reduce the potential construction impacts so far as practicable although it is recognised low residual impacts may remain, particularly regarding air quality and noise/vibrations. Specific mitigation recommendations have been made within the Golder report, which are furthered within the environmental management framework prepared by Biosis.

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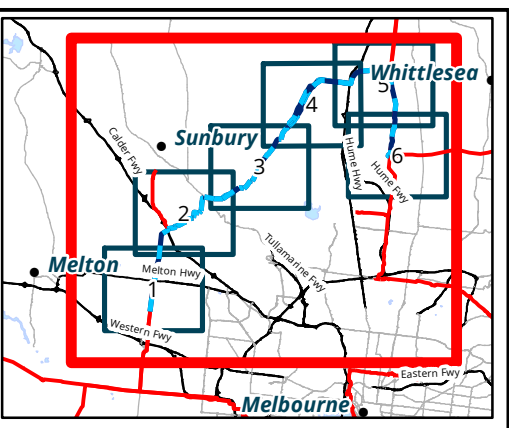
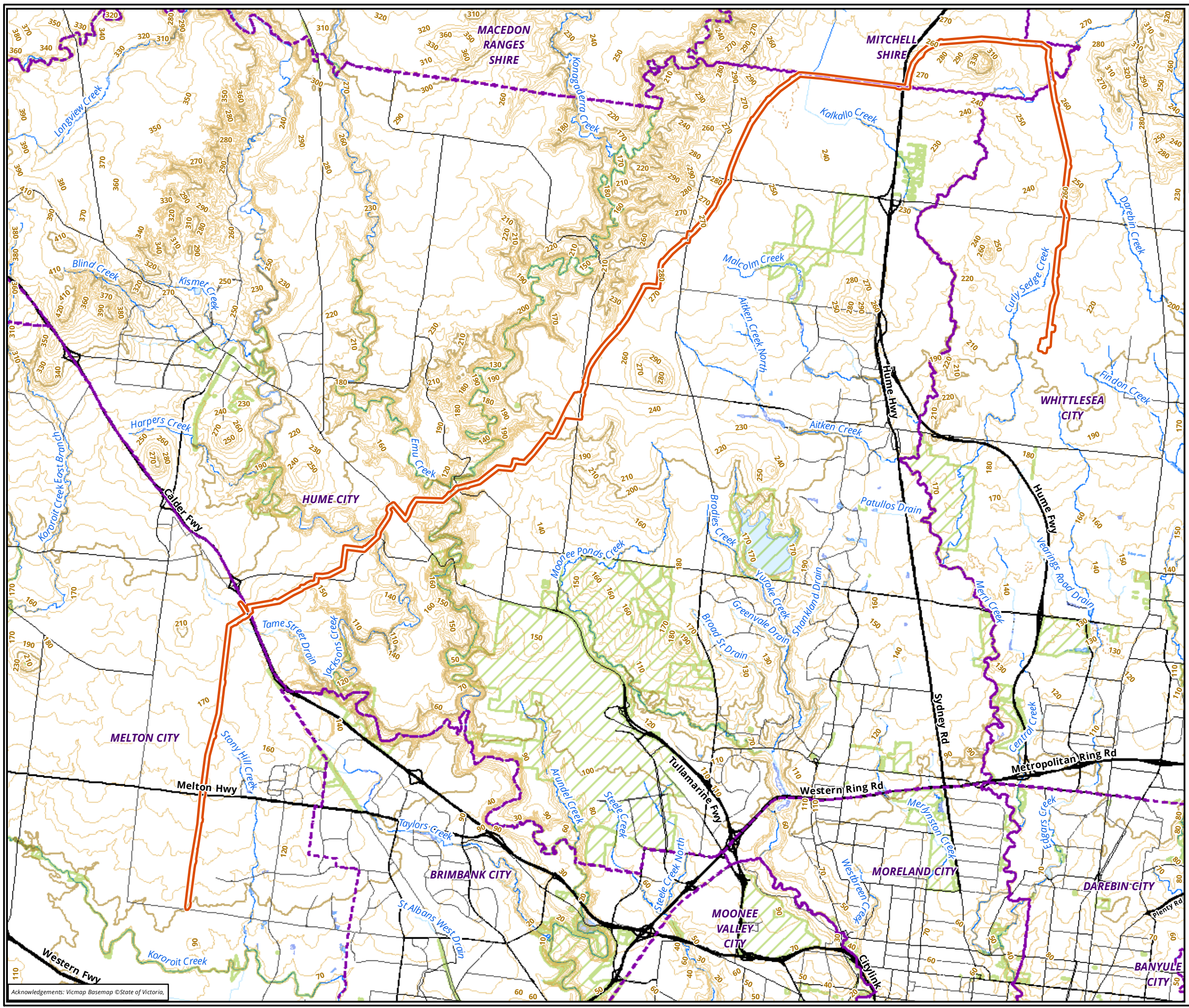
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Melton 2014. *Western Plains North Green Wedge Management Plan*, City of Melton.

Wood 2019. *APA Wollert Compression Station Noise Assessment*, Wood.





- Legend**
- Study area
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  - Local government area
- Contour**
- Major
  - Minor
  - contour\_dep

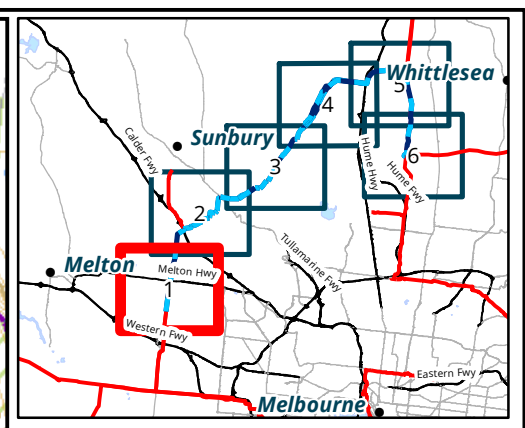
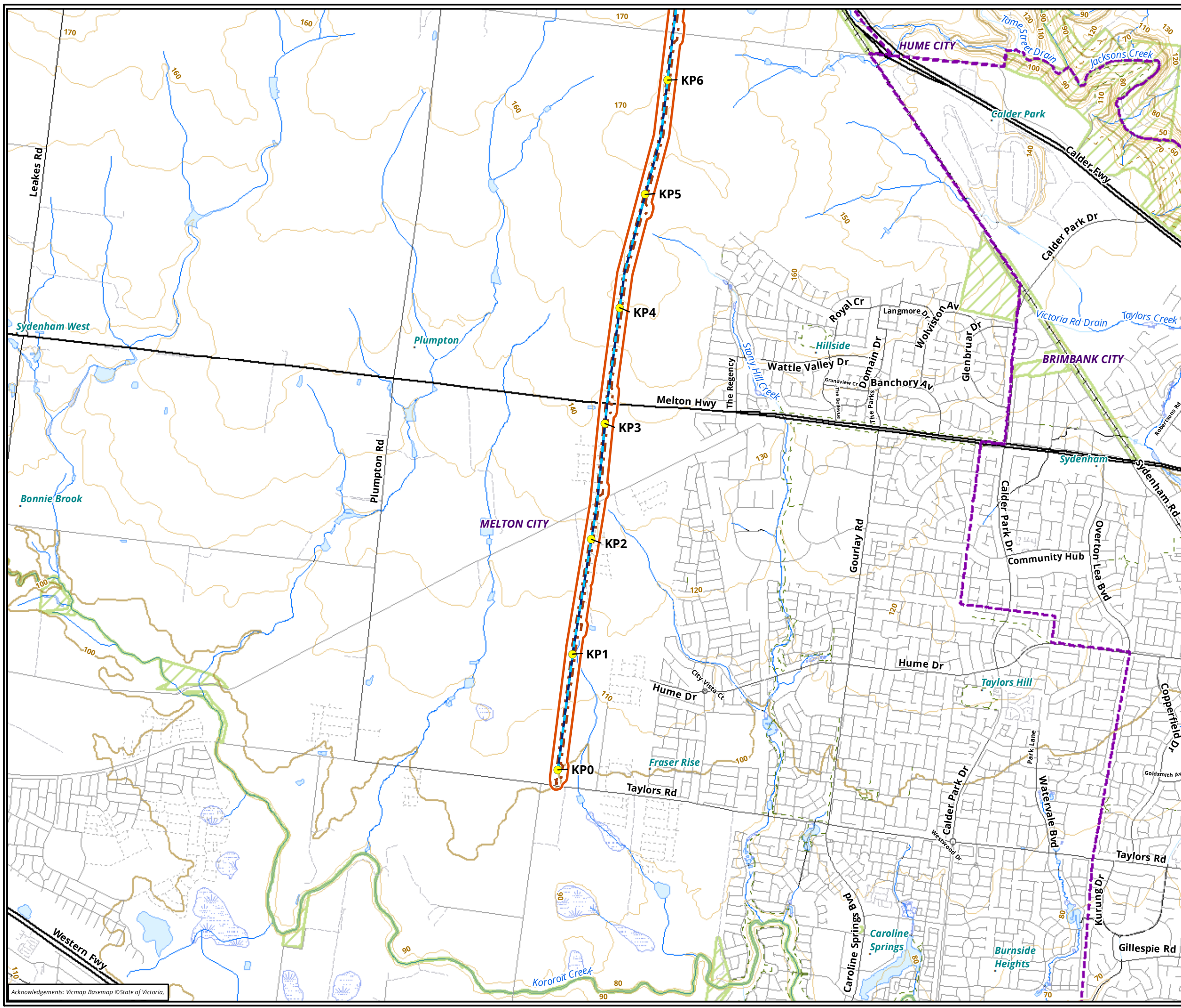
**Figure 1. Overview Study area, Western Outer Ring Main - Preliminary alignment**

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 Scale: 1:100,000 @ A3  
 Coordinate System: GDA 1994 MGA Zone 55



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 Date: 06 June 2019,  
 Checked by: MD, Drawn by: DK, Last edited by: dkazemi  
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**Legend**

- Study area
- Kilometre Point
- Preliminary Pipeline Alignment
- Construction footprint
- Crownland
- Local government area

**Contour**

- Major
- Minor

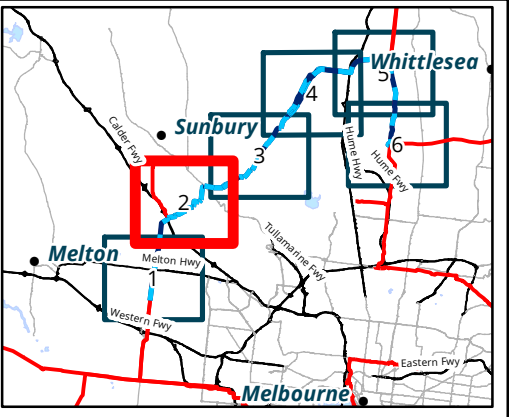
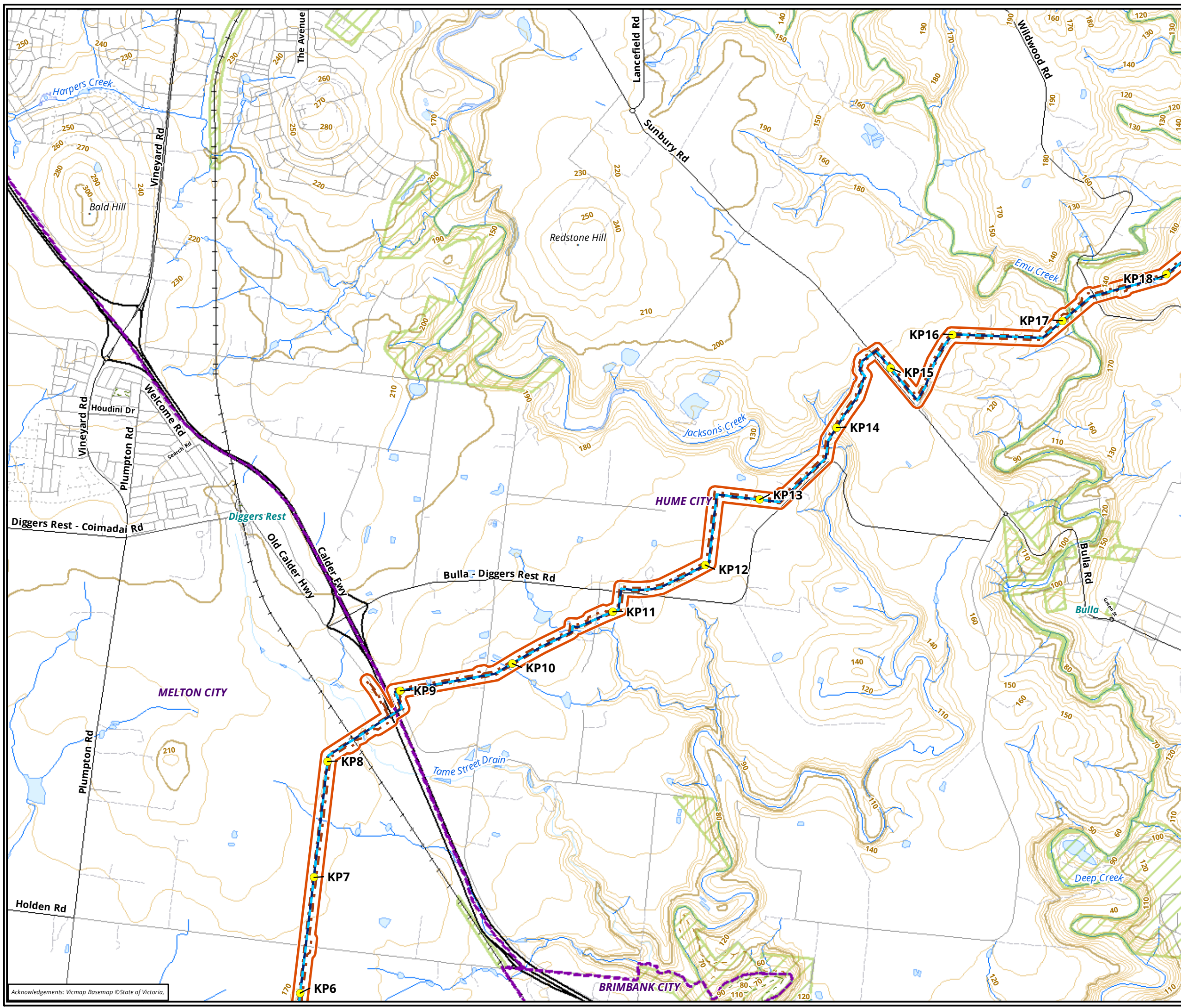
**Figure 1.1 Study area, Western Outer Ring Main - Preliminary alignment**

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 Coordinate System: GDA 1994 MGA Zone 55

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- Legend**
- Study area
  - Kilometre Point
  - Preliminary Pipeline Alignment
  - Construction footprint
  - Crownland
  - Local government area
- Contour**
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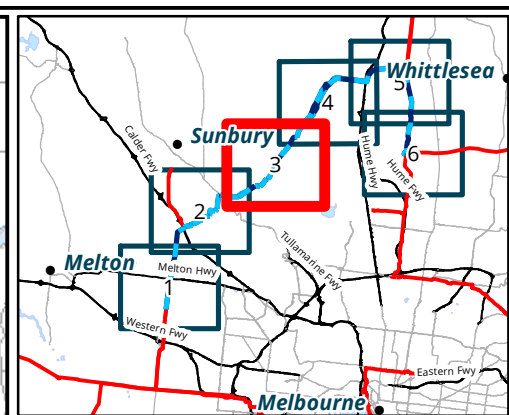
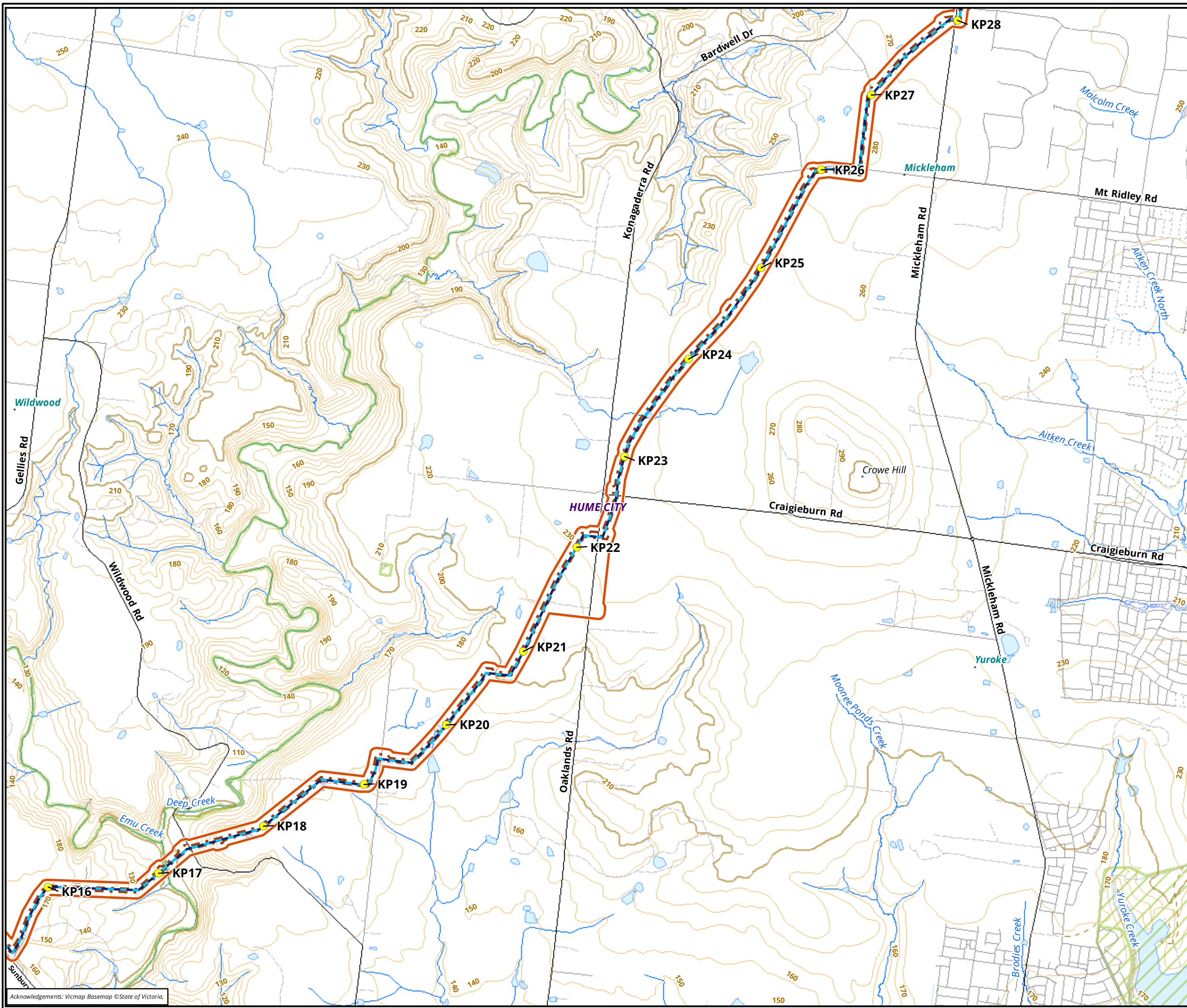
**Figure 1.2 Study area, Western Outer Ring Main - Preliminary alignment**

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 Coordinate System: GDA 1994 MGA Zone 55



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- Legend**
- Study area
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  - Preliminary Pipeline Alignment
  - Construction footprint
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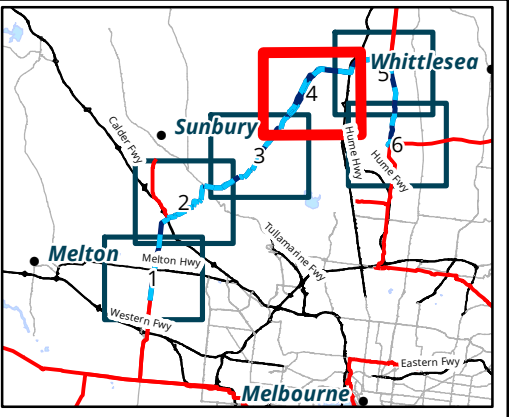
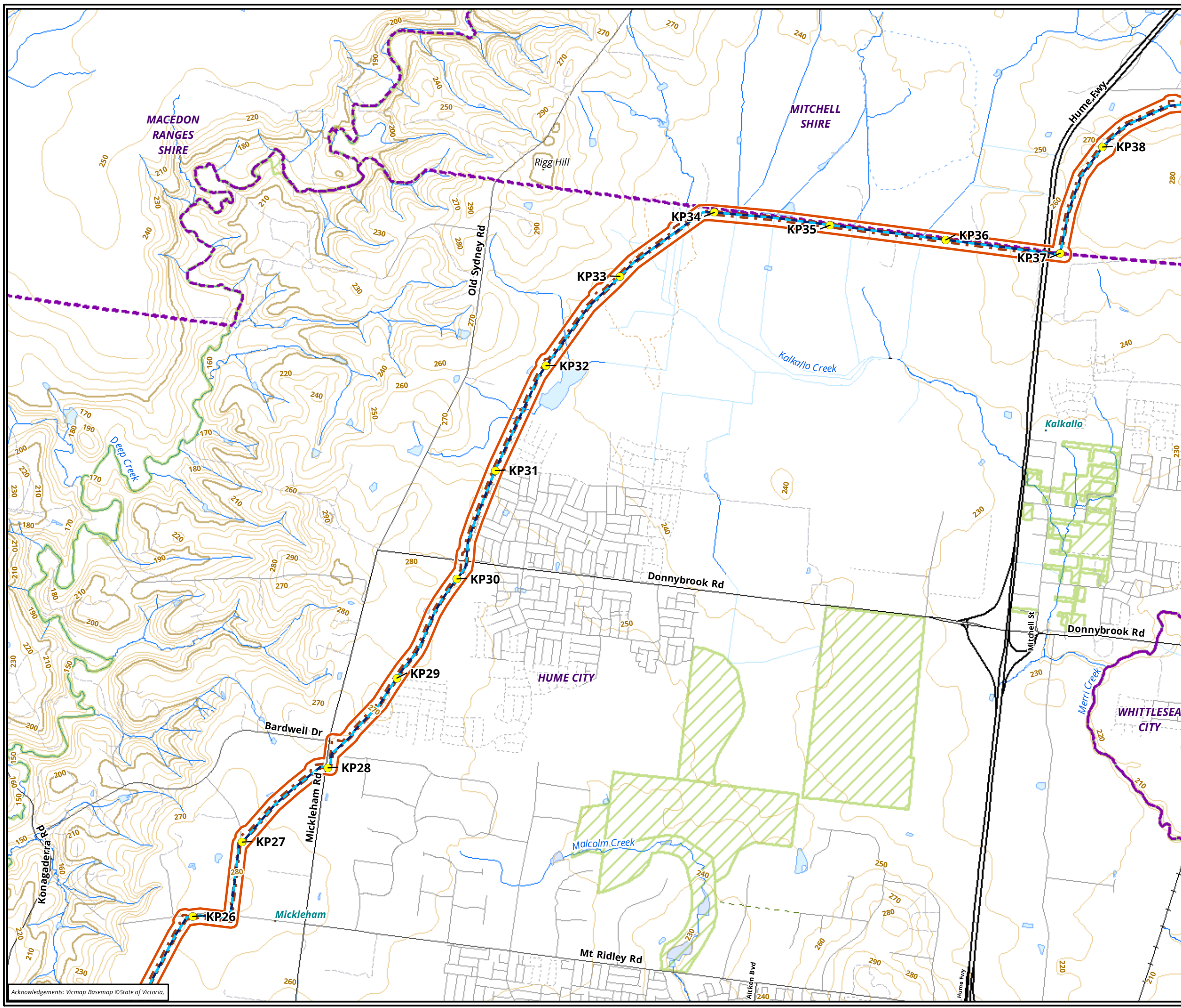
**Figure 1.3 Study area, Western Outer Ring Main - Preliminary alignment**

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- Legend**
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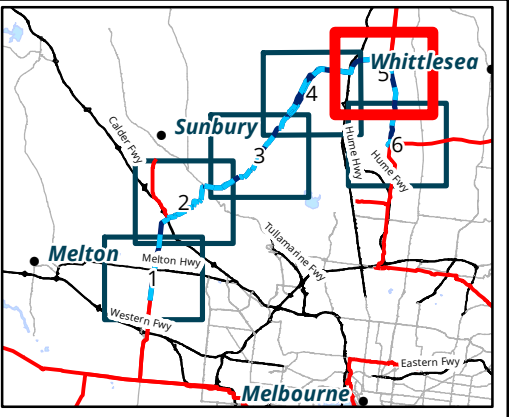
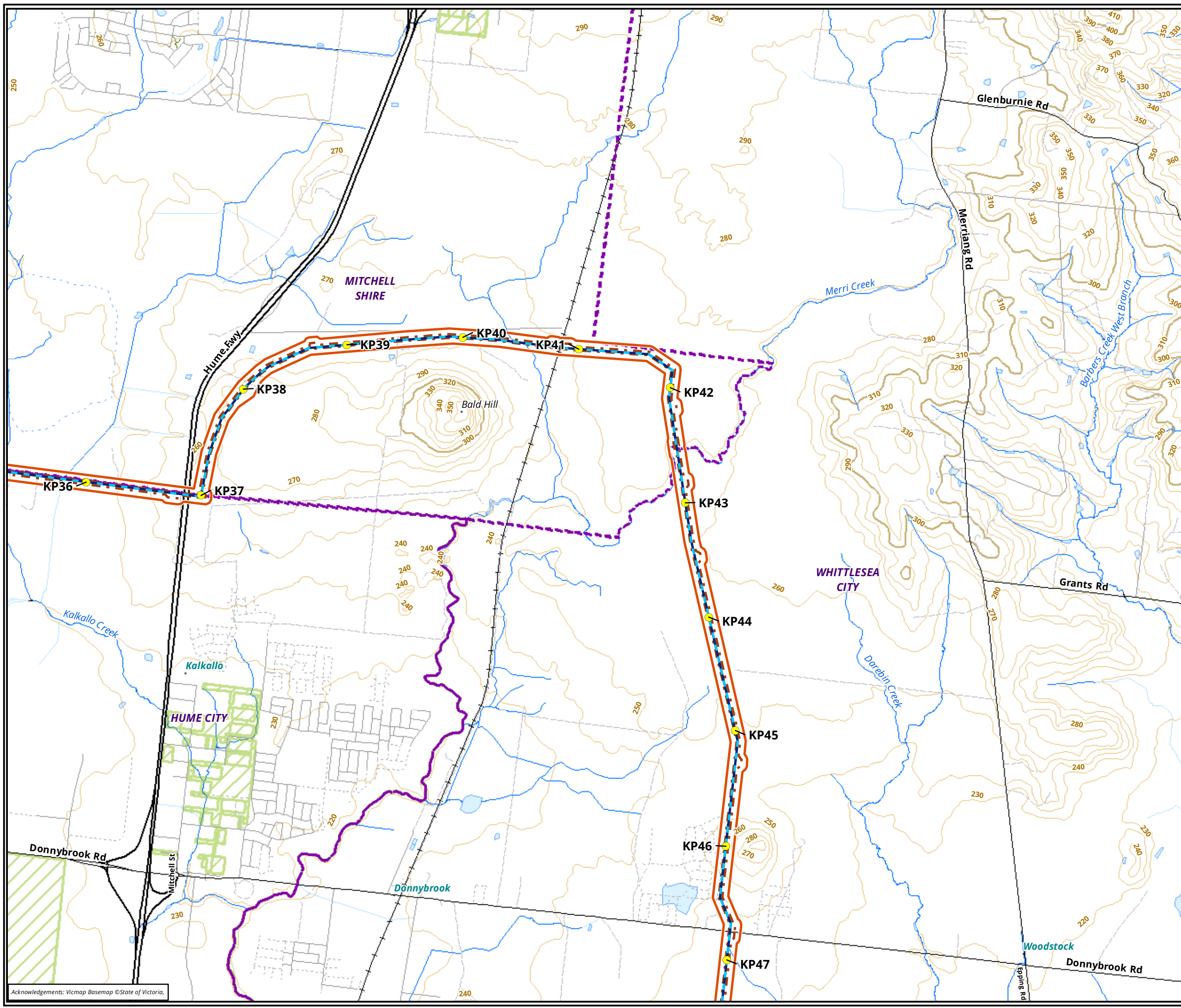
**Figure 1.4 Study area, Western Outer Ring Main - Preliminary alignment**

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**Legend**

- Study area
- Kilometre Point
- Preliminary Pipeline Alignment
- Construction footprint
- Crownland
- Local government area

**Contour**

- Major
- Minor

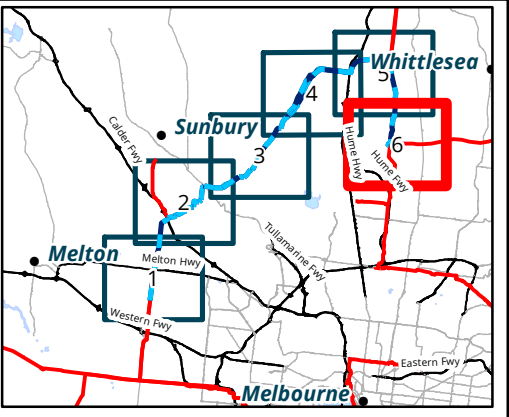
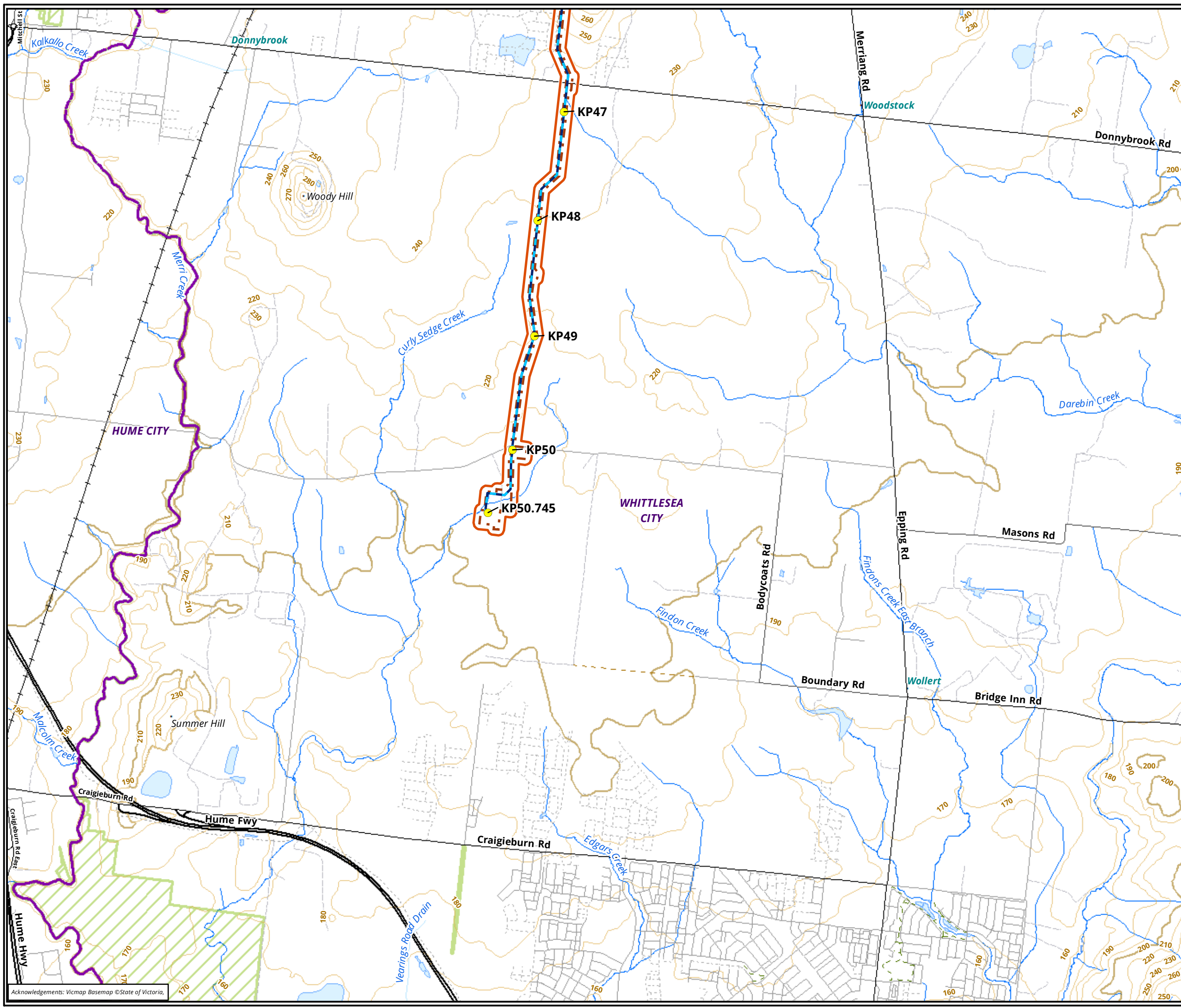
**Figure 1.5 Study area, Western Outer Ring Main - Preliminary alignment**

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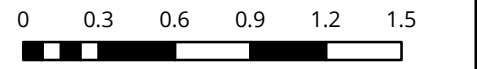
**Legend**

- Study area
- Kilometre Point
- Preliminary Pipeline Alignment
- Construction footprint
- Crownland
- Local government area

**Contour**

- Major
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**Figure 1.6 Study area, Western Outer Ring Main - Preliminary alignment**



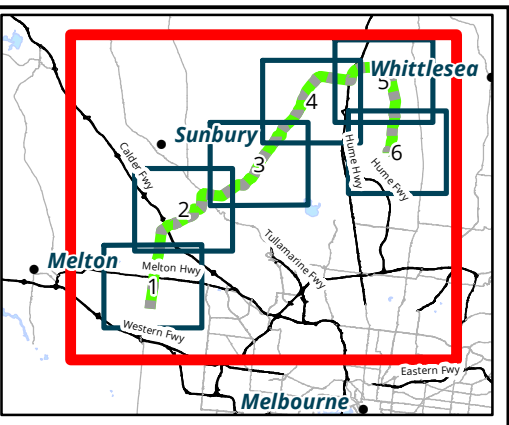
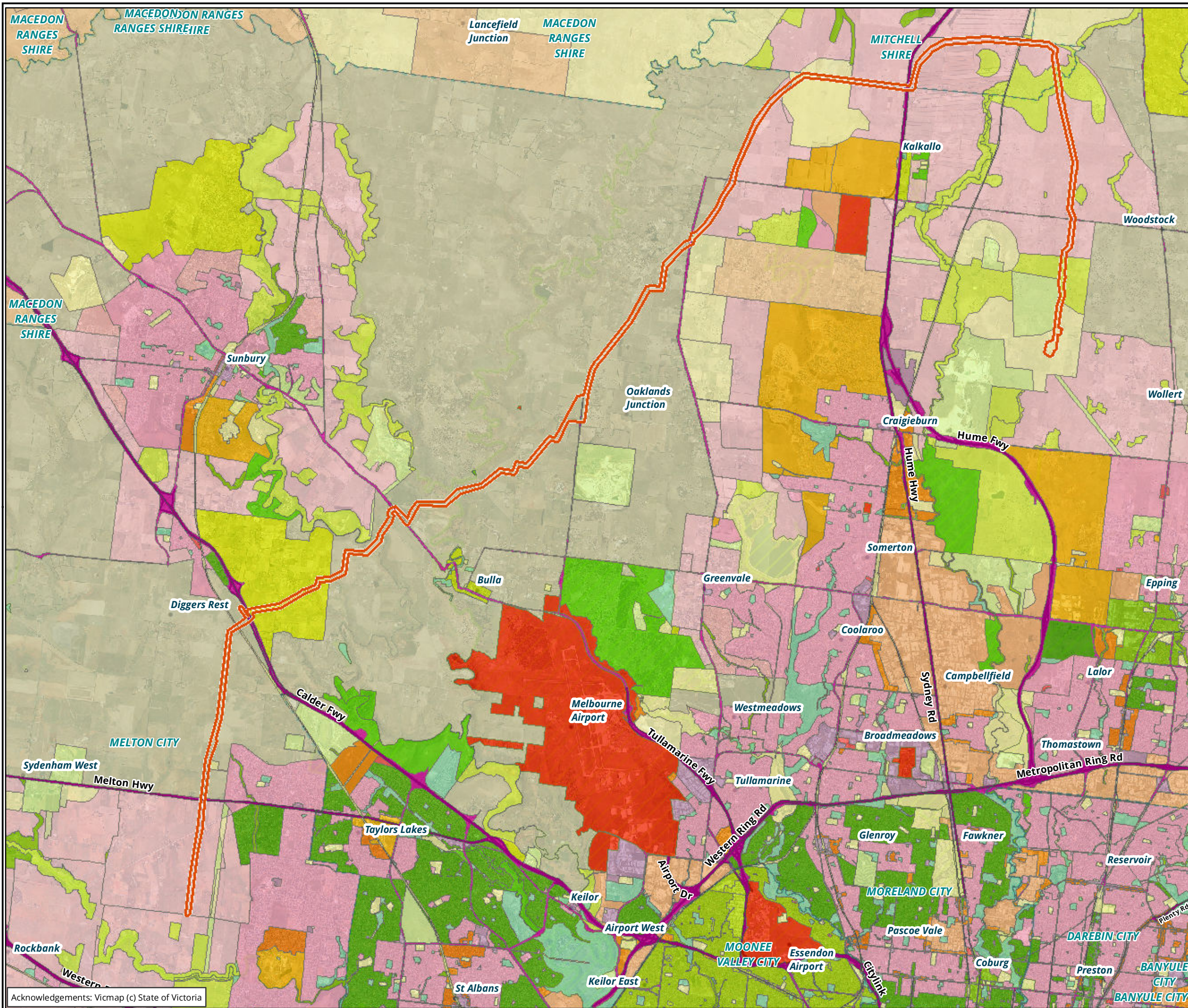
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- Legend**
- Study area
  - Local government area
- Planning Zone**
- ACZ Activity Centre
  - BZ Commercial Zone (B1Z, B2Z, B3Z, B4Z, B5Z)
  - CZ Commercial 1 or 2 Zone (C1Z, C2Z)
  - CA Commonwealth Land Not Controlled
  - CDZ Comprehensive Development Zone
  - FZ Farming Zone
  - GRZ General Residential
  - GWAZ Green Wedge A Zone
  - GWZ Green Wedge Zone
  - IN1Z Industrial 1 Zone
  - IN3Z Industrial 3 Zone
  - LDRZ Low Density Residential Zone
  - MUZ Mixed Use Zone
  - NRZ Neighbourhood Residential Zone
  - PCRZ Public Conservation and Resource Zone
  - PDZ Priority Development Zone
  - PPRZ Public Park and Recreation Zone
  - PUZ Public Use Zone
  - R1Z General Residential
  - RCZ Rural Conservation
  - RDZ Road
  - RGZ Residential Growth
  - RLZ Rural Living Zone
  - SUZ Special Use Zone
  - TZ Township
  - UFZ Urban Floodway
  - UGZ Urban Growth

**Figure 2. Overview Planning zones**



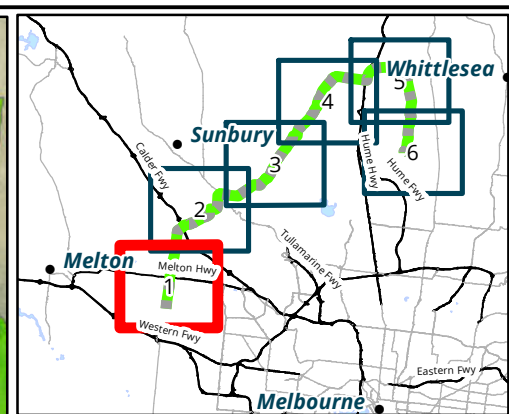
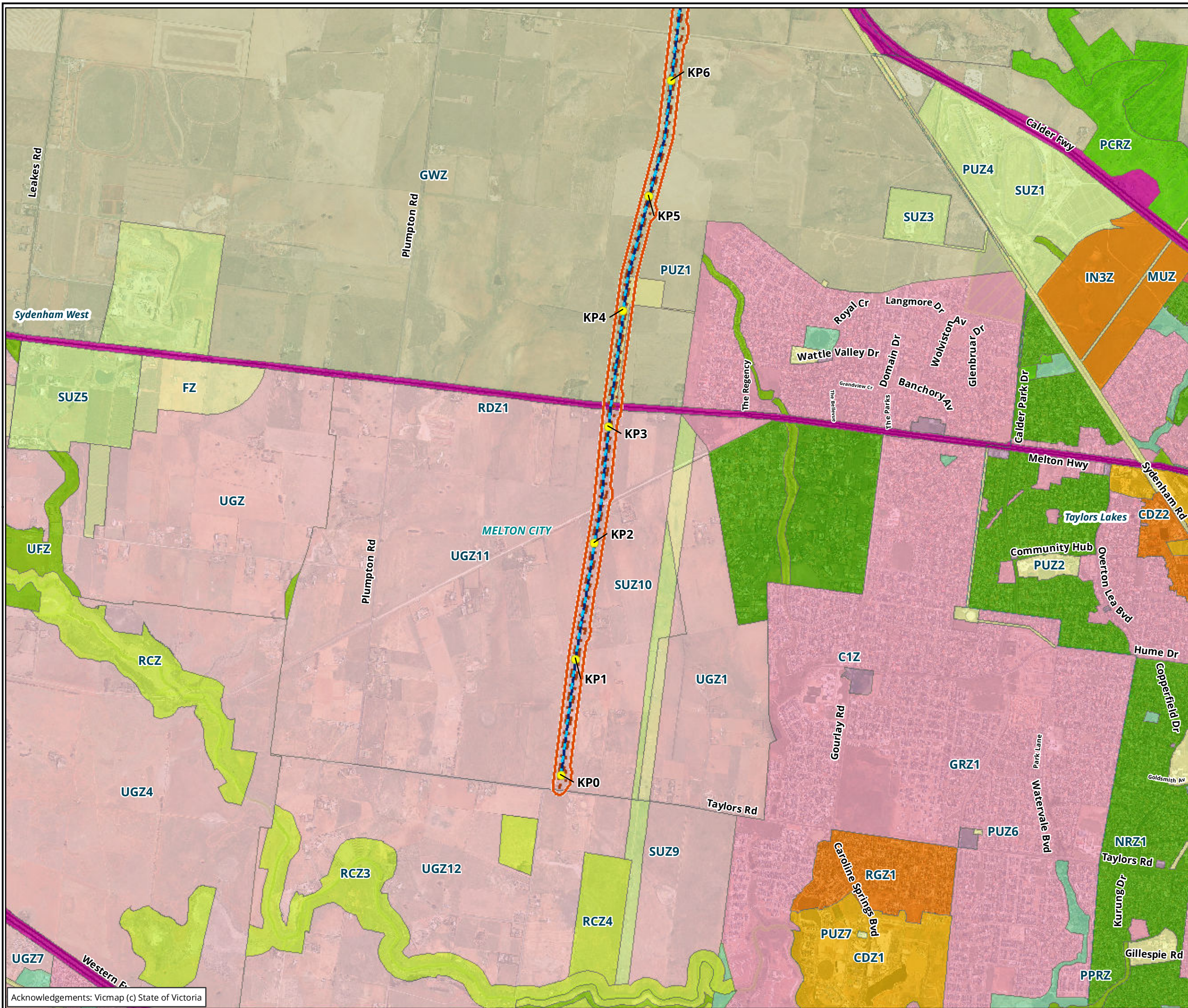
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Scale: 1:100,000 @ A3  
Coordinate System: GDA 1994 MGA Zone 55

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Location: \\bio-data-01\matters\29800s\29801\mapping\29801\_F2\_Planning\_Zones

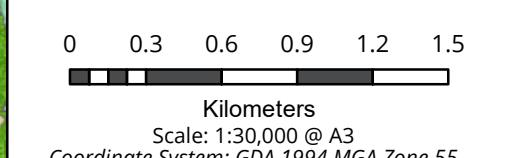
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- Legend**
- Study area
  - + Kilometre Point
  - Preliminary Pipeline Alignment
  - Construction footprint
  - Local government area
- Planning Zone**
- CZ Commercial 1 or 2 Zone (C1Z, C2Z)
  - CDZ Comprehensive Development Zone
  - FZ Farming Zone
  - GRZ General Residential
  - GWZ Green Wedge Zone
  - IN3Z Industrial 3 Zone
  - MUZ Mixed Use Zone
  - NRZ Neighbourhood Residential Zone
  - PCRZ Public Conservation and Resource Zone
  - PPRZ Public Park and Recreation Zone
  - PUZ Public Use Zone
  - RCZ Rural Conservation
  - RDZ Road
  - RGZ Residential Growth
  - SUZ Special Use Zone
  - UFZ Urban Floodway
  - UGZ Urban Growth

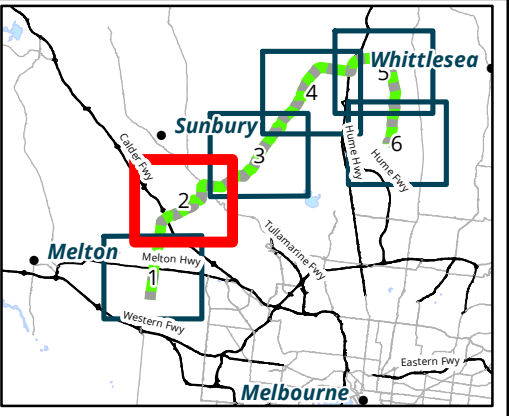
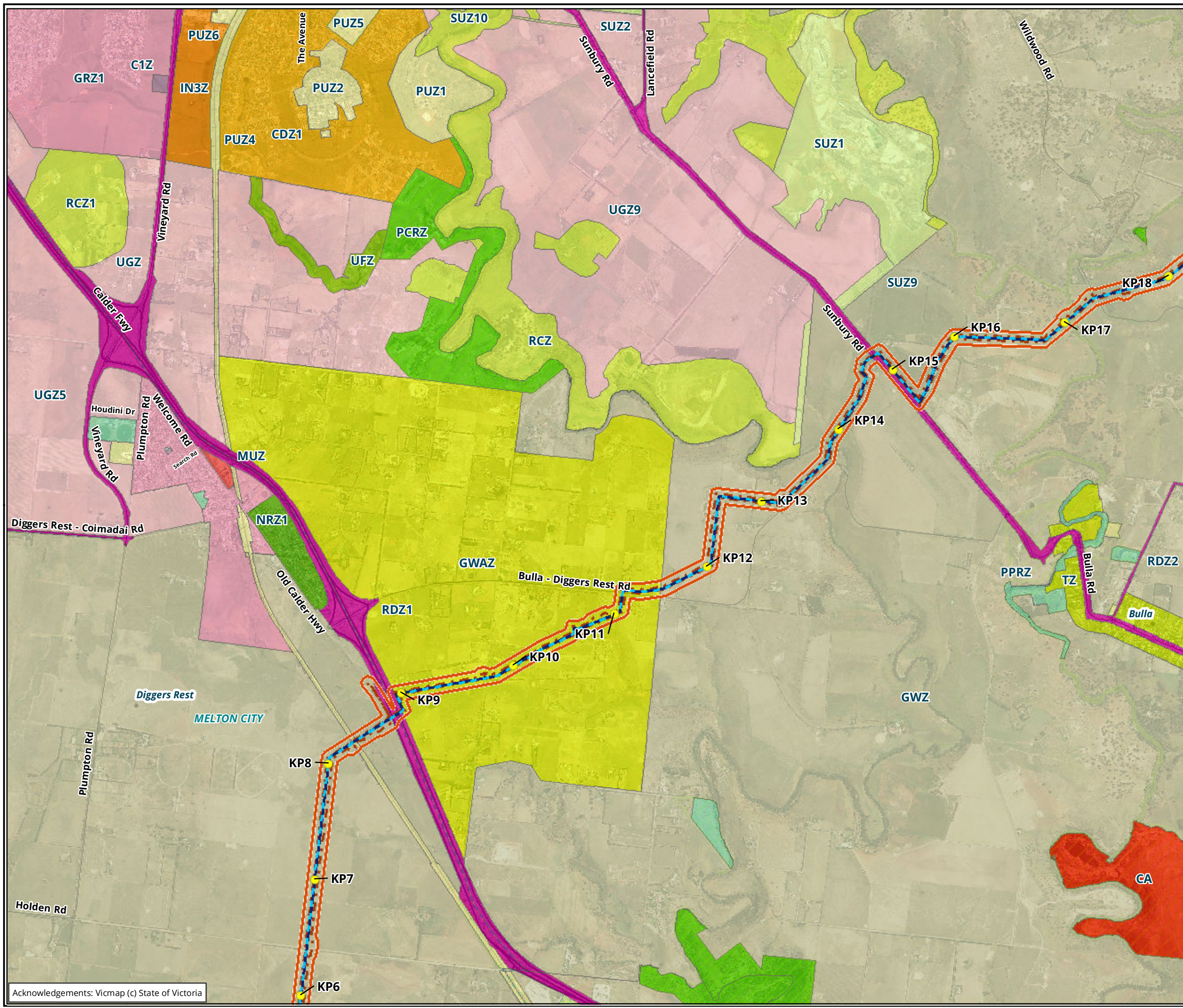
**Figure 2.1 Planning zones**



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- Legend**
- Study area
  - + Kilometre Point
  - Preliminary Pipeline Alignment
  - Construction footprint
  - Local government area
- Planning Zone**
- CZ Commercial 1 or 2 Zone (C1Z, C2Z)
  - CA Commonwealth Land Not Controlled
  - CDZ Comprehensive Development Zone
  - GRZ General Residential
  - GWAZ Green Wedge A Zone
  - GWZ Green Wedge Zone
  - IN3Z Industrial 3 Zone
  - MUZ Mixed Use Zone
  - NRZ Neighbourhood Residential Zone
  - PCRZ Public Conservation and Resource Zone
  - PPRZ Public Park and Recreation Zone
  - PUZ Public Use Zone
  - RCZ Rural Conservation
  - RDZ Road
  - SUZ Special Use Zone
  - TZ Township
  - UFZ Urban Floodway
  - UGZ Urban Growth

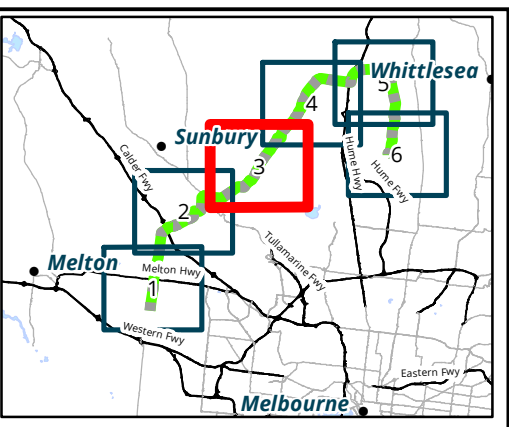
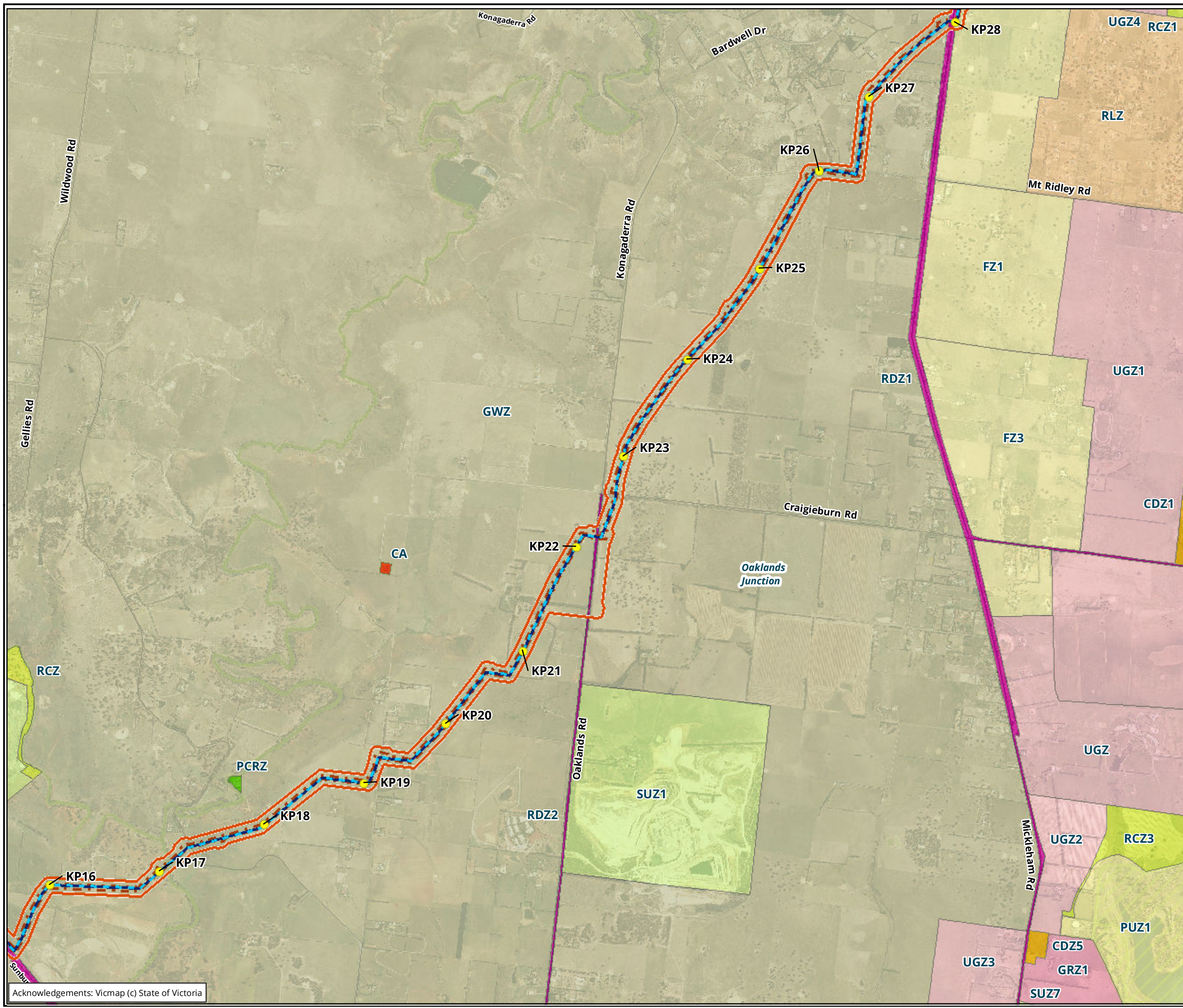
**Figure 2.2 Planning zones**

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 Kilometers  
 Scale: 1:30,000 @ A3  
 Coordinate System: GDA 1994 MGA Zone 55

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**Legend**

- Study area
- + Kilometre Point
- Preliminary Pipeline Alignment
- Construction footprint

**Planning Zone**

- CA Commonwealth Land Not Controlled
- CDZ Comprehensive Development Zone
- FZ Farming Zone
- GRZ General Residential
- GWZ Green Wedge Zone
- PCRZ Public Conservation and Resource Zone
- PUZ Public Use Zone
- RCZ Rural Conservation
- RDZ Road
- RLZ Rural Living Zone
- SUZ Special Use Zone
- UGZ Urban Growth

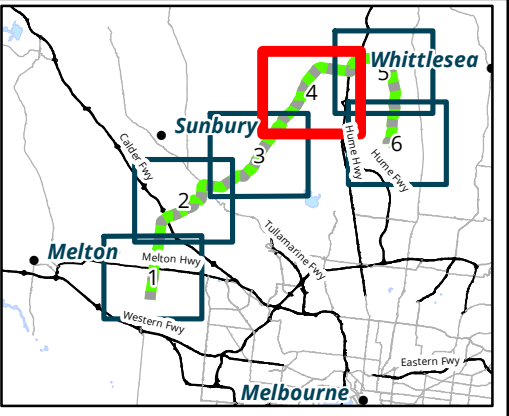
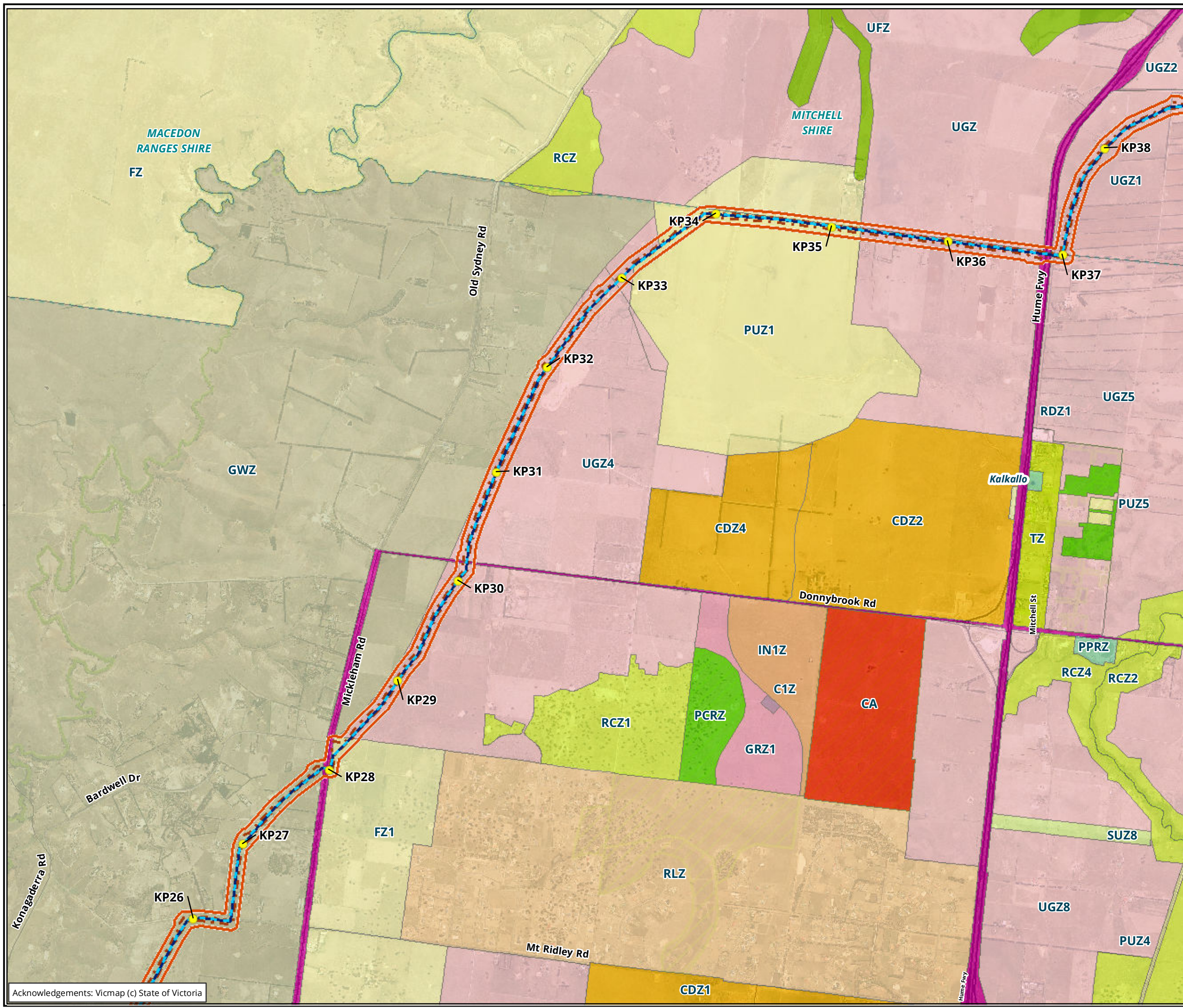
**Figure 2.3 Planning zones**

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Kilometers  
Scale: 1:30,000 @ A3  
Coordinate System: GDA 1994 MGA Zone 55

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Location: \\bio-data-01\matters\29800s\29801\mapping\29801\_F2\_Planning\_Zones



**Legend**

- Study area
- + Kilometre Point
- Preliminary Pipeline Alignment
- Construction footprint
- Local government area

**Planning Zone**

- CZ Commercial 1 or 2 Zone (C1Z, C2Z)
- CA Commonwealth Land Not Controlled
- CDZ Comprehensive Development Zone
- FZ Farming Zone
- GRZ General Residential
- GWZ Green Wedge Zone
- IN1Z Industrial 1 Zone
- PCRZ Public Conservation and Resource Zone
- PPRZ Public Park and Recreation Zone
- PUZ Public Use Zone
- RCZ Rural Conservation
- RDZ Road
- RLZ Rural Living Zone
- SUZ Special Use Zone
- TZ Township
- UFZ Urban Floodway
- UGZ Urban Growth

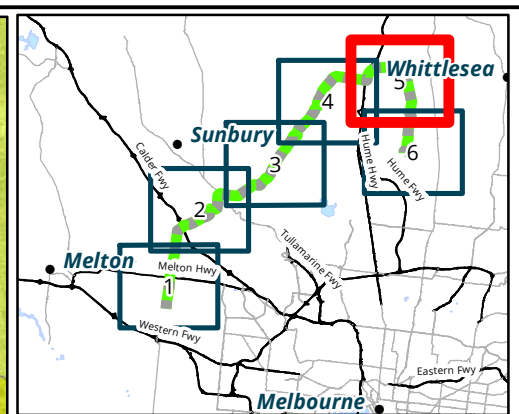
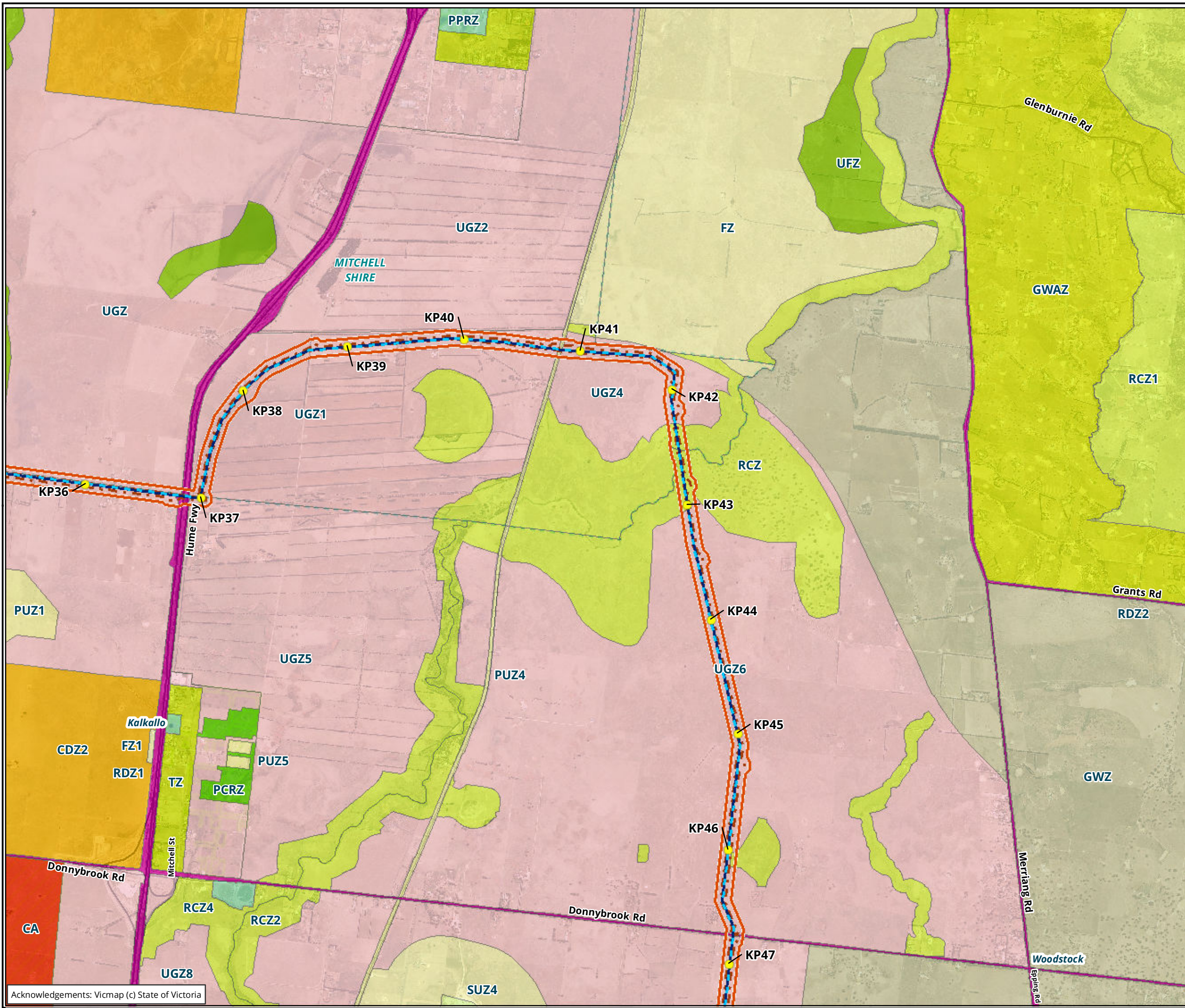
**Figure 2.4 Planning zones**

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 Kilometers  
 Scale: 1:30,000 @ A3  
 Coordinate System: GDA 1994 MGA Zone 55

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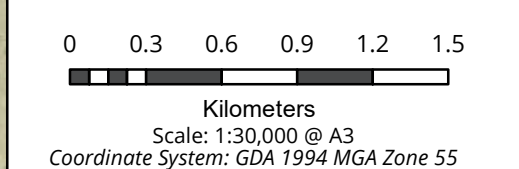
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 Location: \\bio-data-01\matters\29800s\29801\mapping\29801\_F2\_Planning\_Zones



- Legend**
- Study area
  - + Kilometre Point
  - Preliminary Pipeline Alignment
  - Construction footprint
  - Local government area
- Planning Zone**
- CA Commonwealth Land Not Controlled
  - CDZ Comprehensive Development Zone
  - FZ Farming Zone
  - GWAZ Green Wedge A Zone
  - GWZ Green Wedge Zone
  - PCRZ Public Conservation and Resource Zone
  - PPRZ Public Park and Recreation Zone
  - PUZ Public Use Zone
  - RCZ Rural Conservation
  - RDZ Road
  - SUZ Special Use Zone
  - TZ Township
  - UFZ Urban Floodway
  - UGZ Urban Growth

**Figure 2.5 Planning zones**



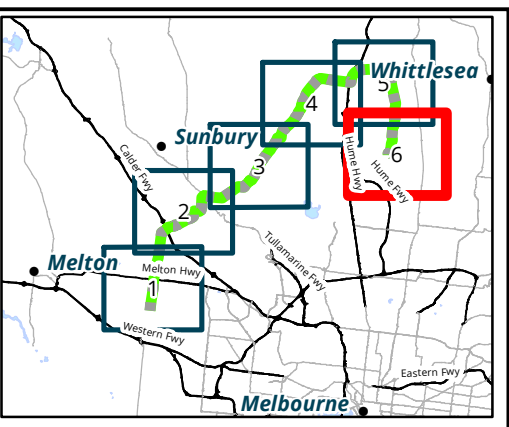
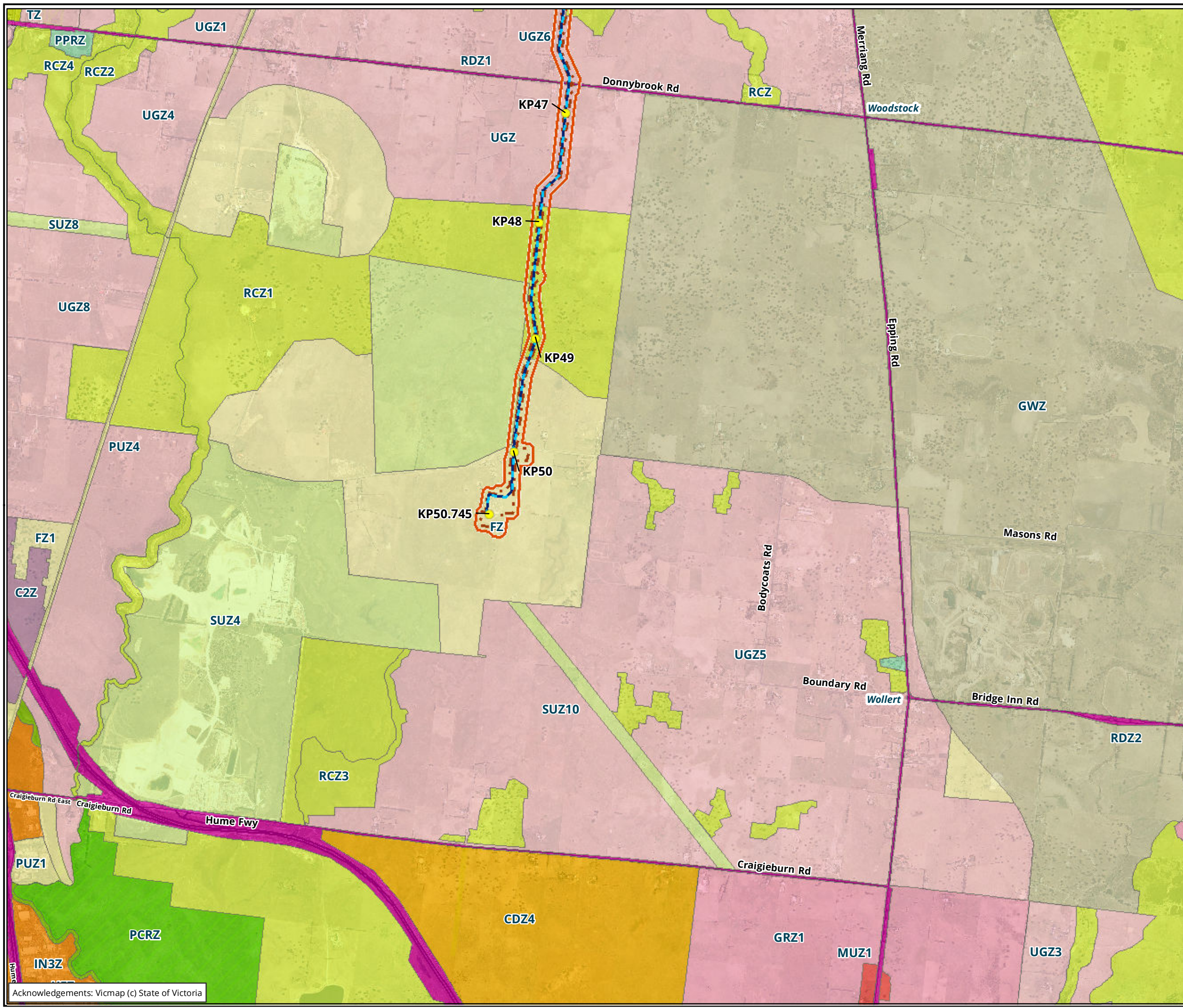
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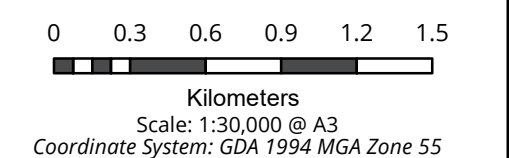
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- Legend**
- Study area
  - + Kilometre Point
  - Preliminary Pipeline Alignment
  - Construction footprint
- Planning Zone**
- CZ Commercial 1 or 2 Zone (C1Z, C2Z)
  - CDZ Comprehensive Development Zone
  - FZ Farming Zone
  - GRZ General Residential
  - GWZ Green Wedge Zone
  - IN3Z Industrial 3 Zone
  - MUZ Mixed Use Zone
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  - PPRZ Public Park and Recreation Zone
  - PUZ Public Use Zone
  - RCZ Rural Conservation
  - RDZ Road
  - SUZ Special Use Zone
  - TZ Township
  - UFZ Urban Floodway
  - UGZ Urban Growth

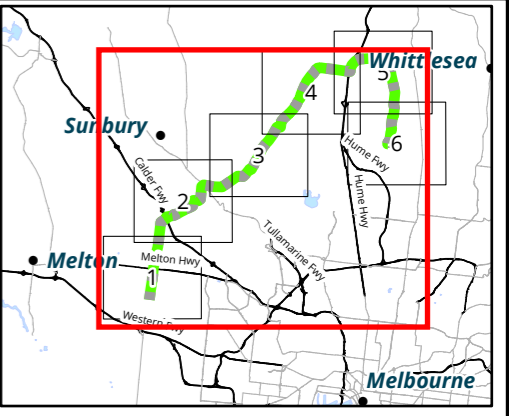
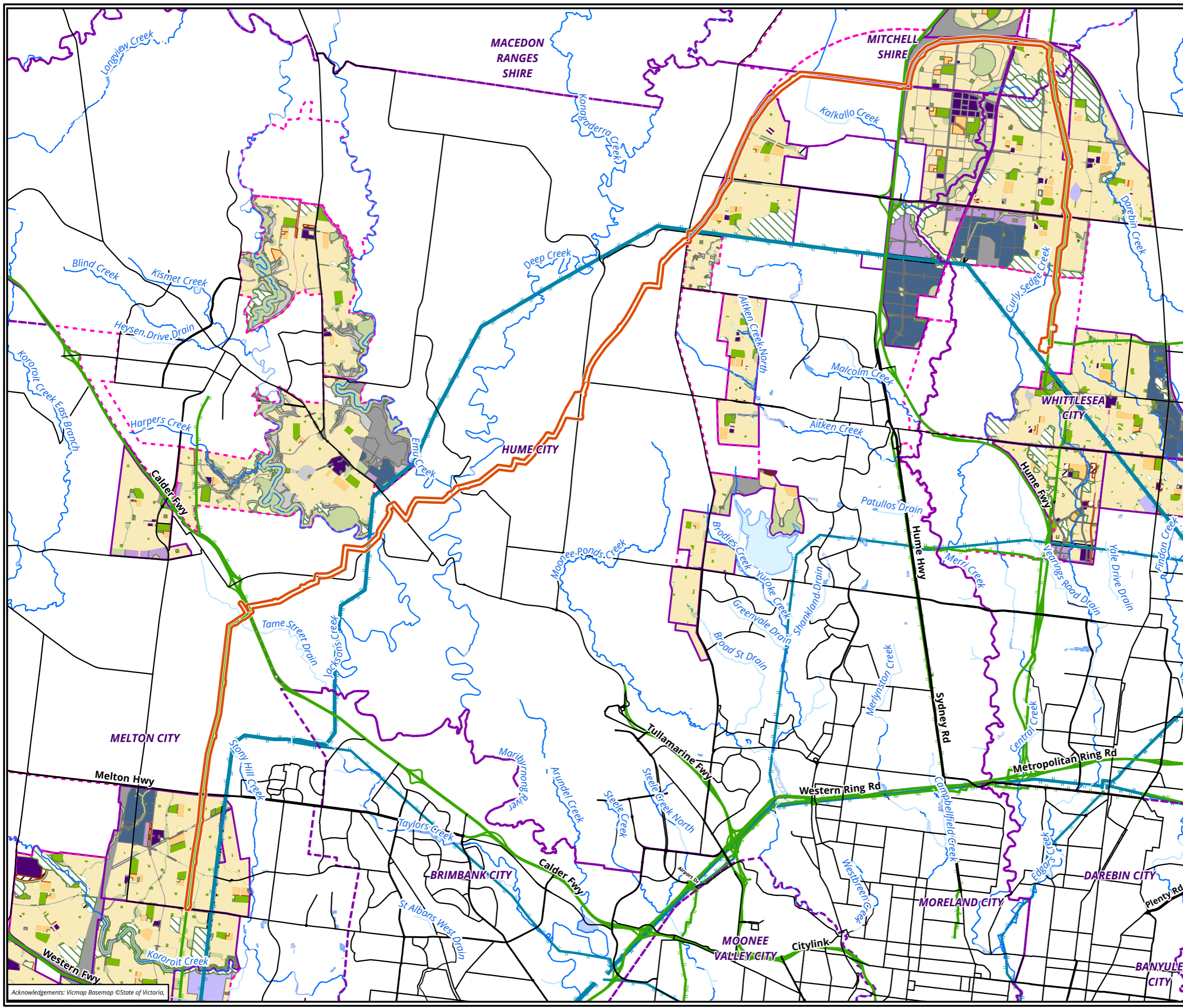
**Figure 2.6 Planning zones**



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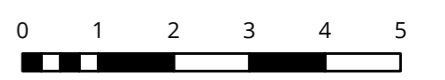
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 Checked by: MD, Drawn by: DK, Last edited by: dkazemi  
 Location: \\bio-data-01\matters\29800s\29801\mapping\29801\_F2\_Planning\_Zones



**Legend**

- Study area
- Precinct Structure Plan Boundary**
  - Complete & Approved
  - Yet to be Completed
- PSP Land Use**
  - Residential
  - Town Centre
  - Mixed Use
  - Commercial
  - Industrial
  - Education
  - Community Facilities
  - Local Open Space
  - Conservation
  - Heritage
  - Utility Easement/Corridor
  - Drainage
  - Existing Open Space
  - Rail
  - Government Services
  - Investigation Area
  - Municipal
  - Non-Arterial Road
  - Arterial Road; Existing Developed Land
  - Other
  - Utility Facility
  - Gas pipeline
  - Power transmission

**Figure 3. Overview Study area, and Precinct Structure Plan Land Uses Western Outer Ring Main - Preliminary alignment**

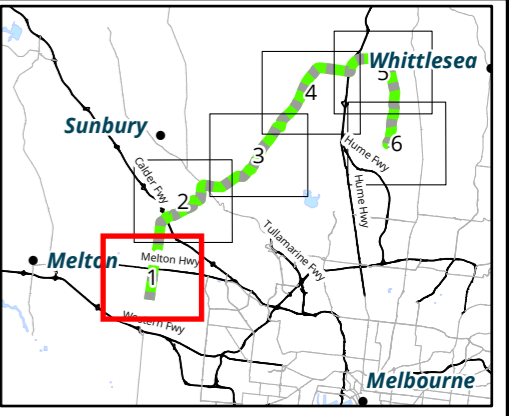
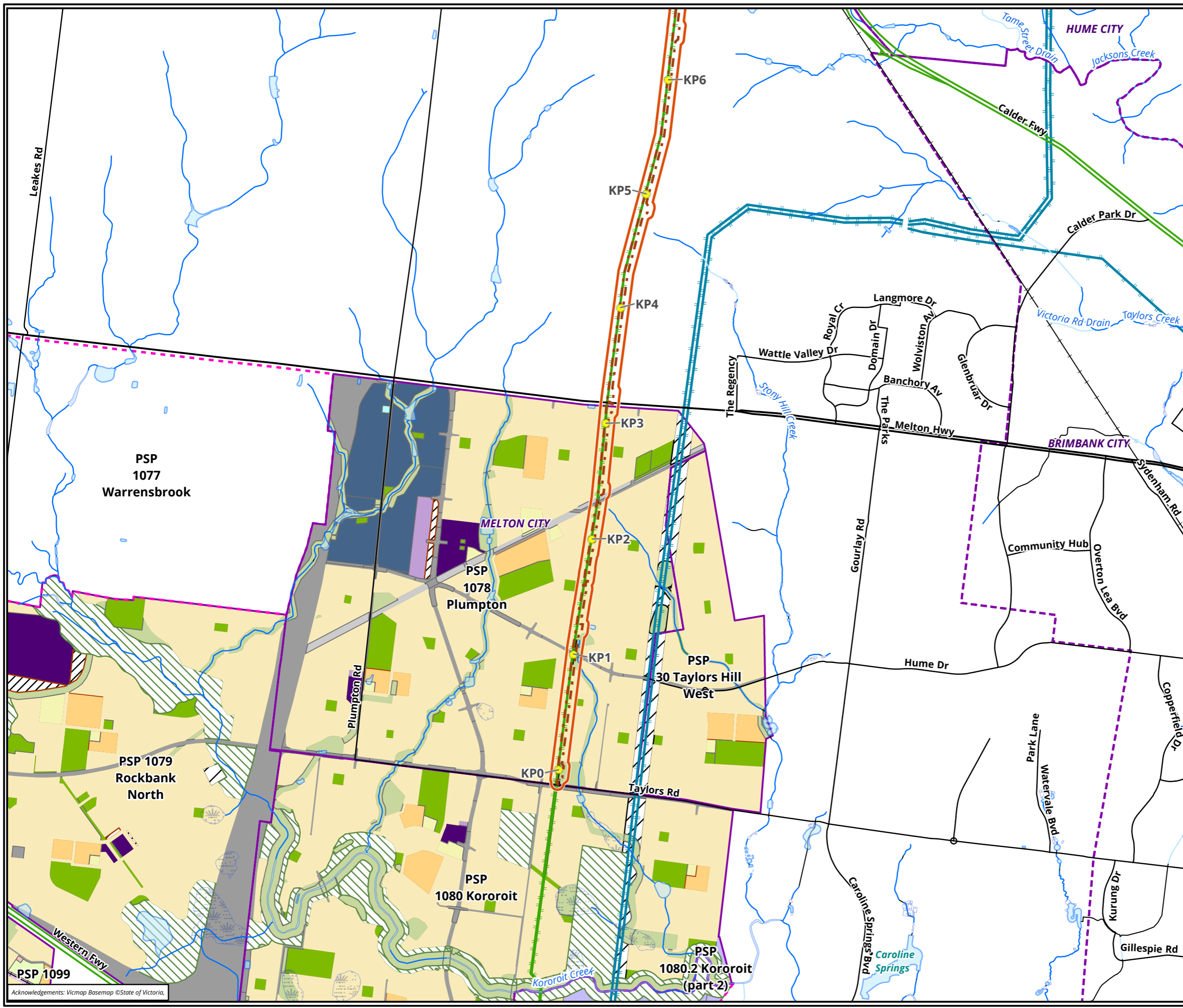


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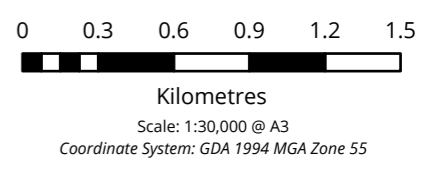
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Date: 06 June 2019,  
Checked by: ERN/WH, Drawn by: , Last edited by: dkazemi  
Location:\bio-data-01\matters5

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- Legend**
- Study area
  - Kilometre Point
  - Construction footprint
- Precinct Structure Plan Boundary**
- Complete & Approved
  - Yet to be Completed
- PSP Land Use**
- Residential
  - Town Centre
  - Mixed Use
  - Commercial
  - Industrial
  - Education
  - Community Facilities
  - Local Open Space
  - Conservation
  - Utility Easement/Corridor
  - Drainage
  - Existing Open Space
  - Rail
  - Government Services
  - Municipal
  - Non-Arterial Road
  - Arterial Road; Existing Developed Land
  - Other
  - Utility Facility
  - Gas pipeline
  - Power transmission

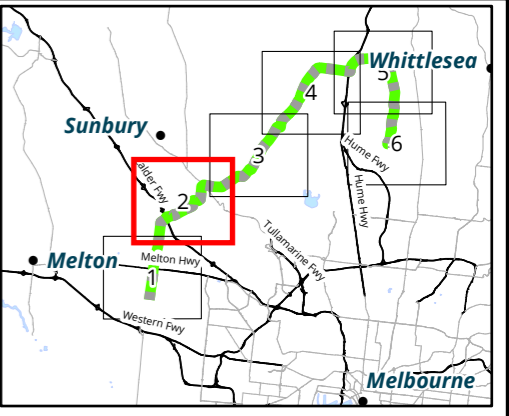
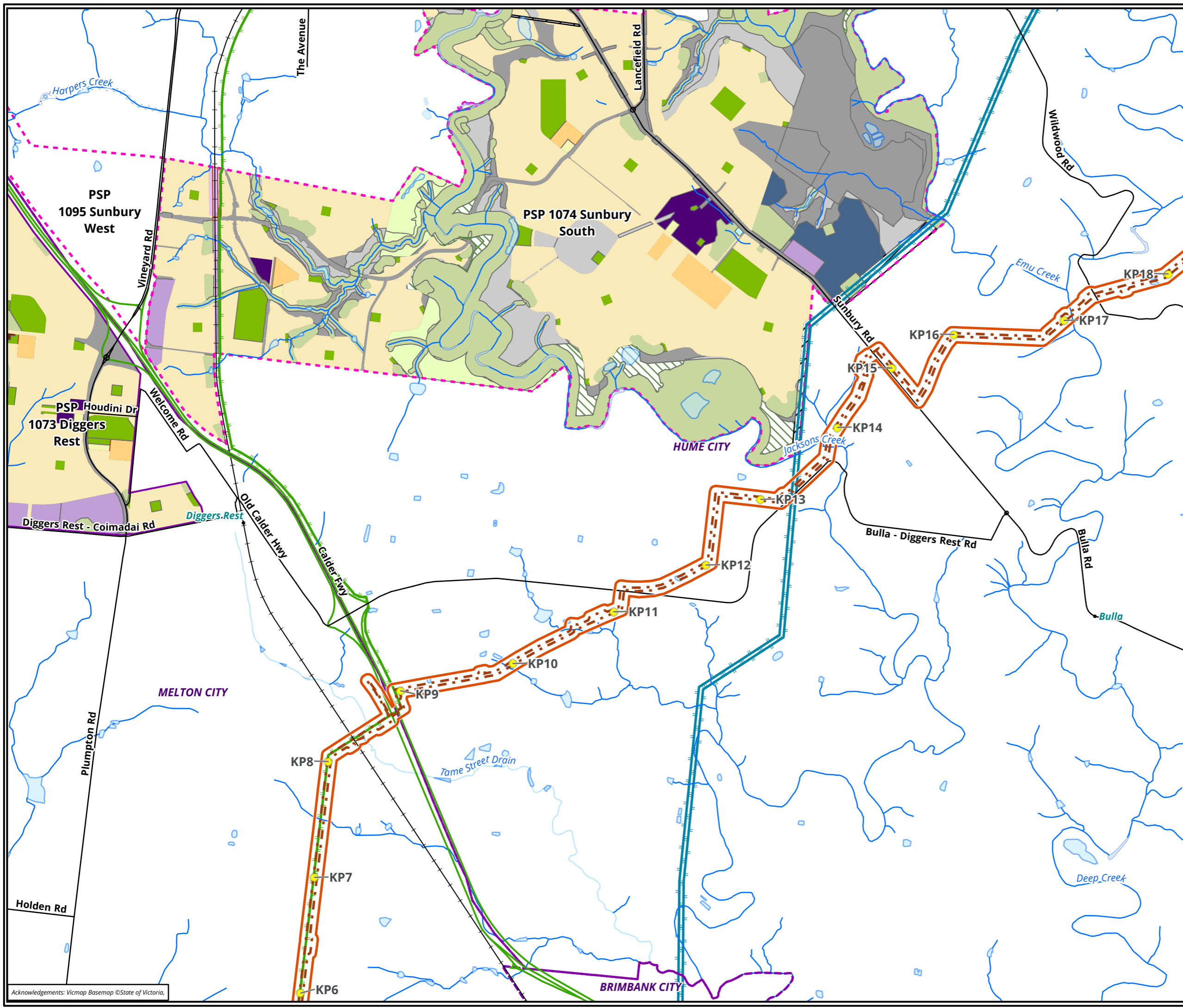
**Figure 3.1 Study area, and Precinct Structure Plan Land Uses**  
**Western Outer Ring Main - Preliminary alignment**



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 Date: 06 June 2019,  
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 Location: \\bio-data-01\matters\5

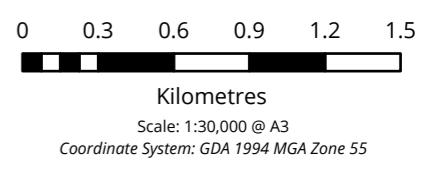
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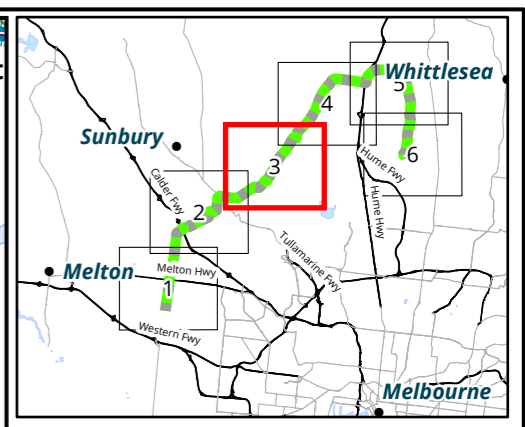
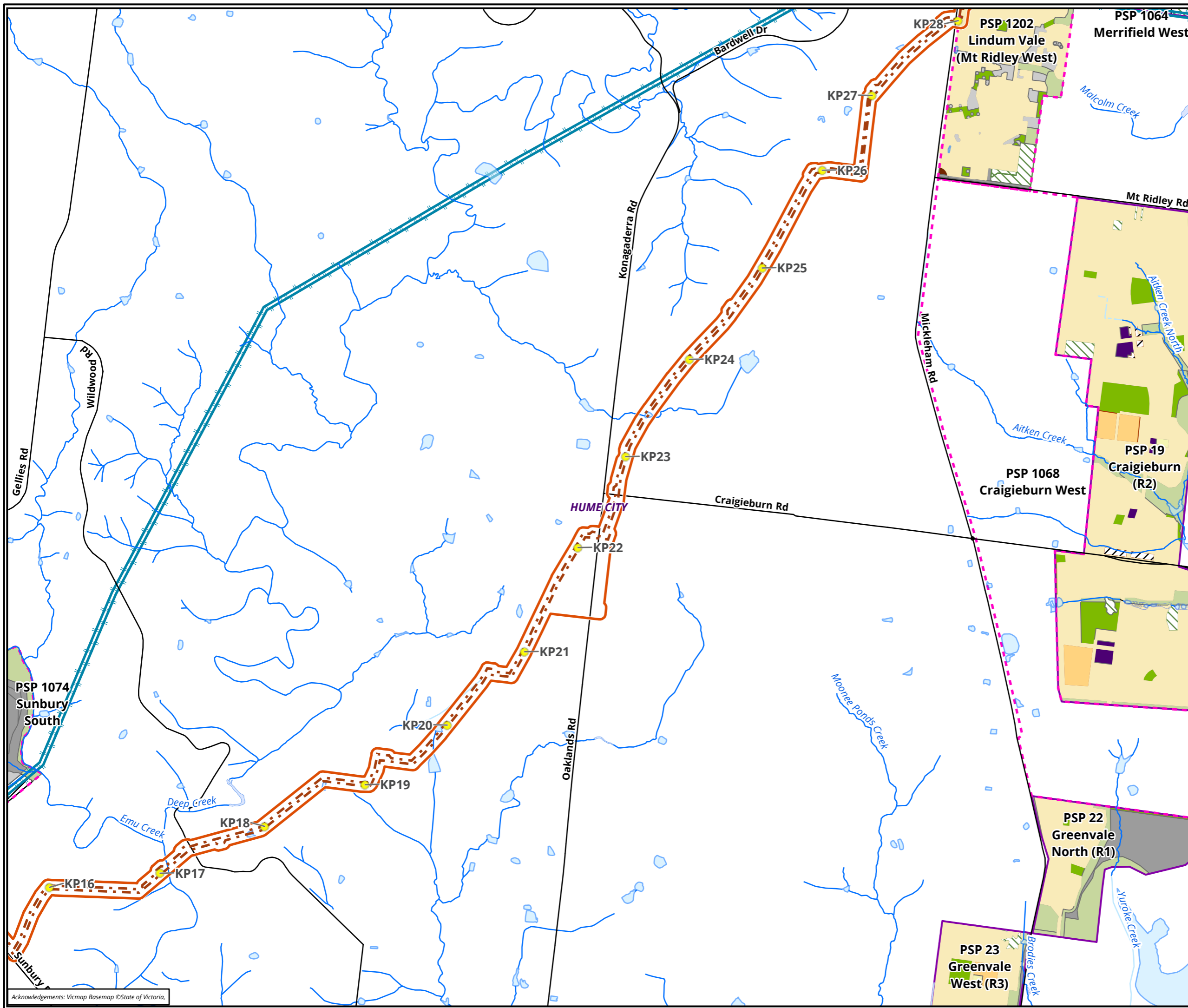
- Legend**
- Study area
  - Kilometre Point
  - Construction footprint
  - Precinct Structure Plan Boundary**
  - Complete & Approved
  - Yet to be Completed
  - PSP Land Use**
  - Residential
  - Town Centre
  - Commercial
  - Industrial
  - Education
  - Community Facilities
  - Local Open Space
  - Conservation
  - Heritage
  - Utility Easement/Corridor
  - Drainage
  - Existing Open Space
  - Rail
  - Investigation Area
  - Non-Arterial Road
  - Arterial Road; Existing Developed Land
  - Other
  - Utility Facility
  - Gas pipeline
  - Power transmission

**Figure 3.2 Study area, and Precinct Structure Plan Land Uses**  
**Western Outer Ring Main - Preliminary alignment**



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 Location: \\bio-data-01\matters\$

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**Legend**

- Study area
- Kilometre Point
- Construction footprint

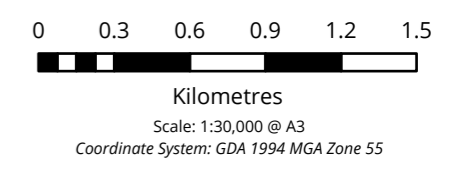
**Precinct Structure Plan Boundary**

- Complete & Approved
- Yet to be Completed

**PSP Land Use**

- Residential
- Town Centre
- Mixed Use
- Education
- Community Facilities
- Local Open Space
- Conservation
- Heritage
- Utility Easement/Corridor
- Drainage
- Investigation Area
- Arterial Road; Existing Developed Land
- Other
- Power transmission

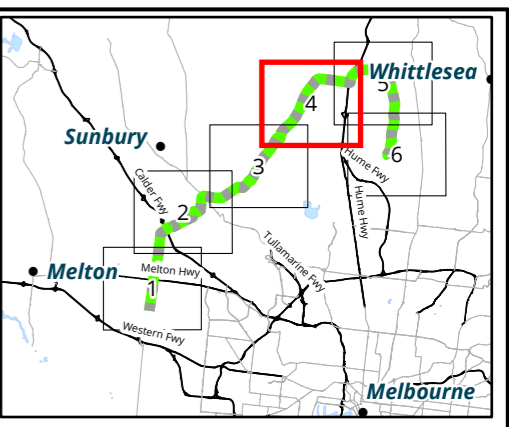
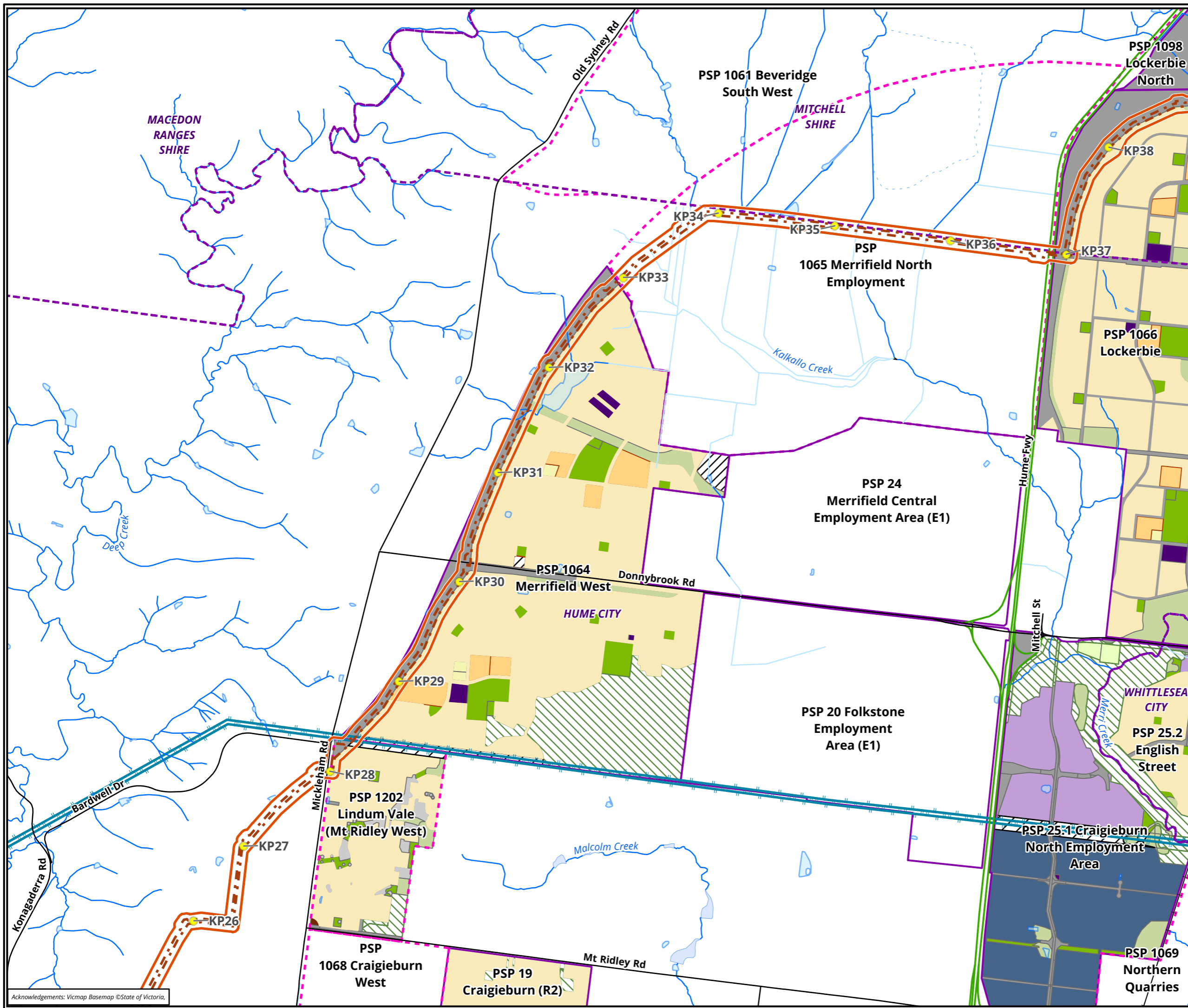
**Figure 3.3 Study area, and Precinct Structure Plan Land Uses**  
**Western Outer Ring Main - Preliminary alignment**



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 Location: \\bio-data-01\matters5

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**Legend**

- Study area
- Kilometre Point
- Construction footprint

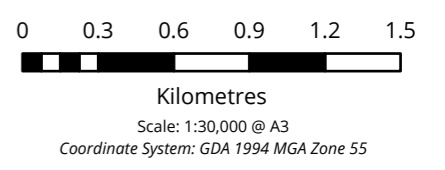
**Precinct Structure Plan Boundary**

- Complete & Approved
- Yet to be Completed

**PSP Land Use**

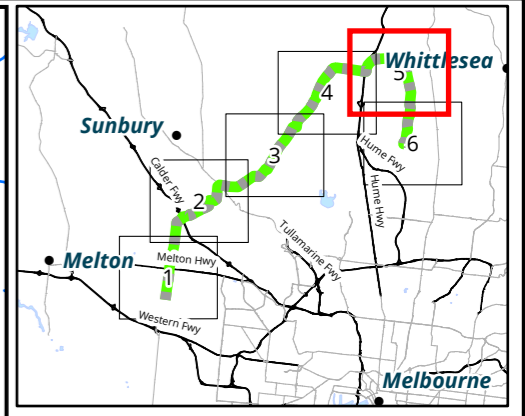
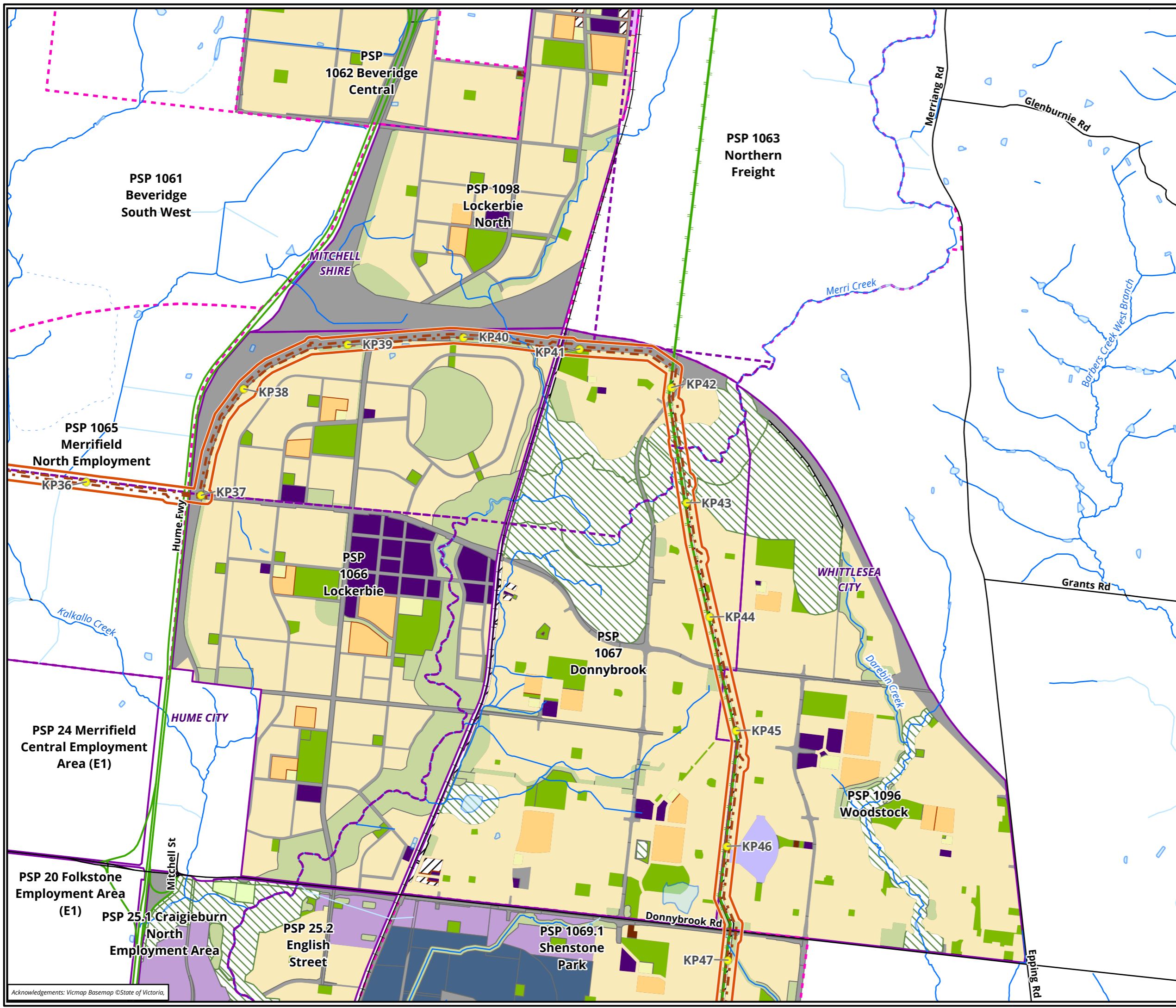
- Residential
- Town Centre
- Mixed Use
- Commercial
- Industrial
- Education
- Community Facilities
- Local Open Space
- Conservation
- Heritage
- Utility Easement/Corridor
- Drainage
- Existing Open Space
- Non-Arterial Road
- Arterial Road; Existing Developed Land
- Other
- Power transmission

**Figure 3.4 Study area, and Precinct Structure Plan Land Uses**  
**Western Outer Ring Main - Preliminary alignment**



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 Date: 06 June 2019,  
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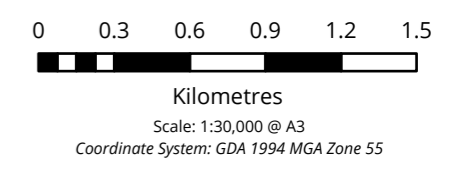
Acknowledgements: Vicmap Basemap ©State of Victoria,



**Legend**

- Study area
- Kilometre Point
- Construction footprint
- Precinct Structure Plan Boundary**
- Complete & Approved
- Yet to be Completed
- PSP Land Use**
- Residential
- Town Centre
- Mixed Use
- Commercial
- Industrial
- Education
- Community Facilities
- Local Open Space
- Conservation
- Heritage
- Utility Easement/Corridor
- Drainage
- Existing Open Space
- Rail
- Municipal
- Non-Arterial Road
- Arterial Road; Existing Developed Land
- Utility Facility
- Gas pipeline

**Figure 3.5 Study area, and Precinct Structure Plan Land Uses**  
**Western Outer Ring Main - Preliminary alignment**

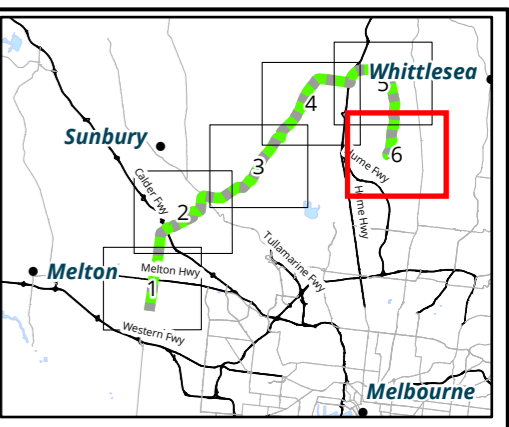
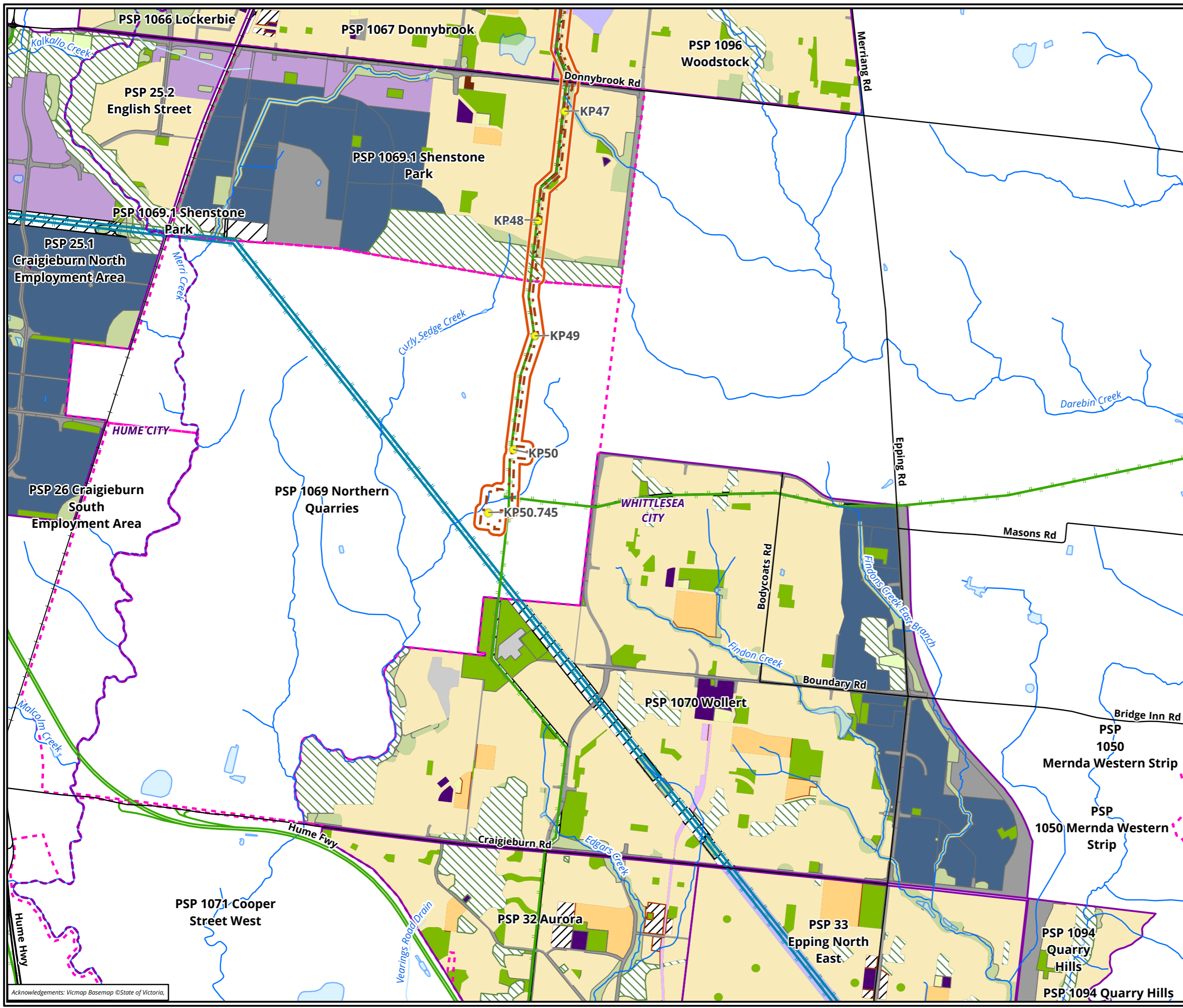


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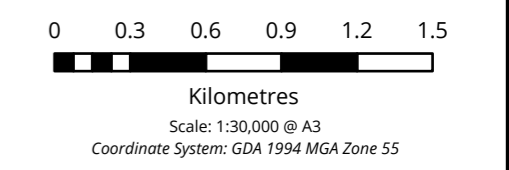
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 Date: 06 June 2019,  
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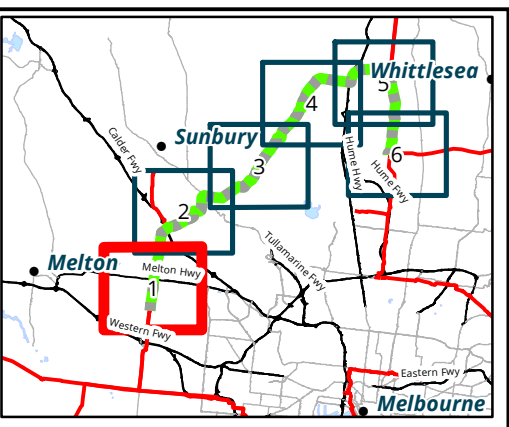
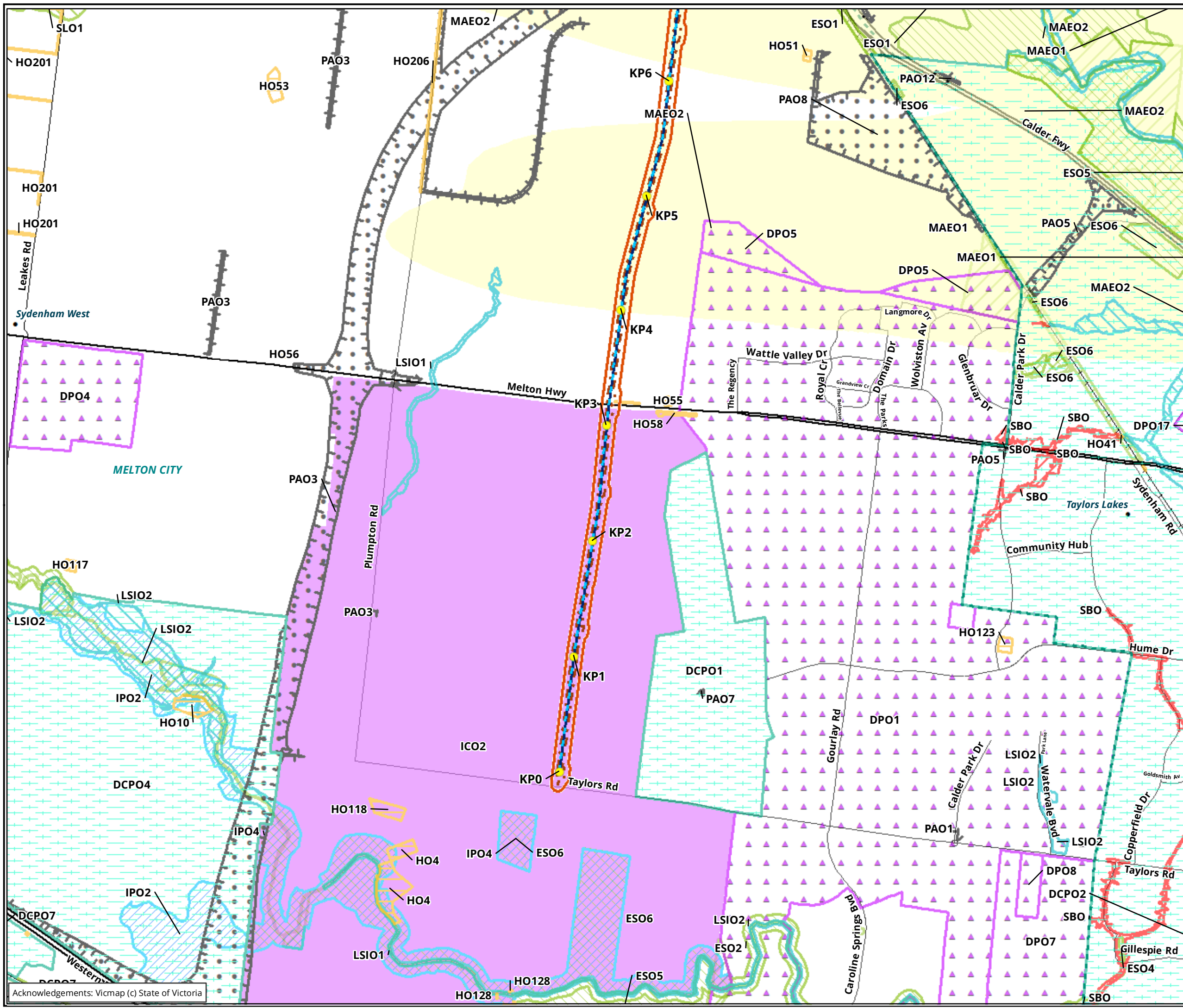
- Legend**
- Study area
  - Kilometre Point
  - Construction footprint
  - Precinct Structure Plan Boundary**
  - Complete & Approved
  - Yet to be Completed
  - PSP Land Use**
  - Residential
  - Town Centre
  - Mixed Use
  - Commercial
  - Industrial
  - Education
  - Community Facilities
  - Local Open Space
  - Conservation
  - Heritage
  - Utility Easement/Corridor
  - Drainage
  - Existing Open Space
  - Rail
  - Municipal
  - Non-Arterial Road
  - Arterial Road; Existing Developed Land
  - Other
  - Utility Facility
  - Gas pipeline
  - Power transmission

**Figure 3.6 Study area, and Precinct Structure Plan Land Uses**  
**Western Outer Ring Main - Preliminary alignment**



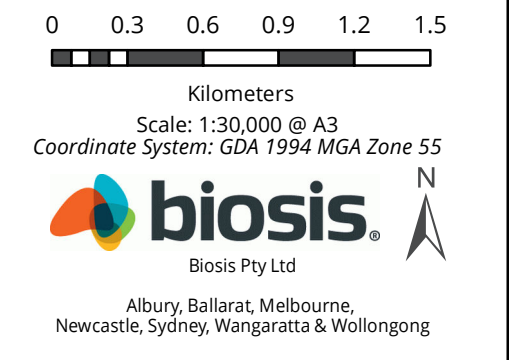
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 Location: \\biosis-data-01\matters\5

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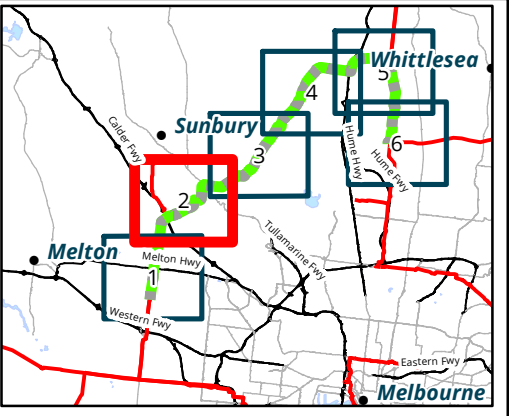
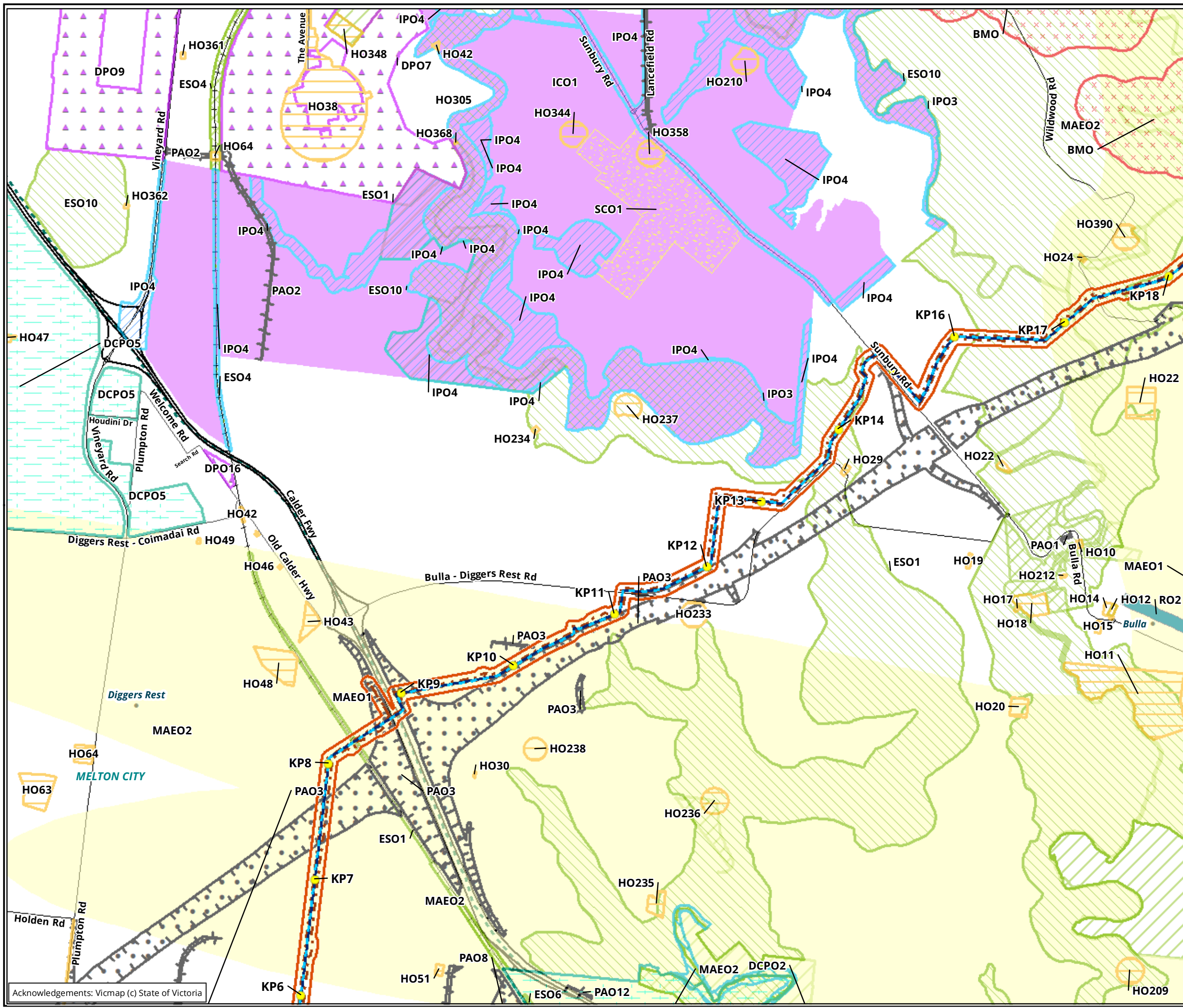
- Legend**
- Study area
  - + Kilometre Point
  - Preliminary Pipeline Alignment
  - Construction footprint
  - Local government area
- Planning Overlay**
- Development Contributions Plan Overlay (DCPO)
  - Development Plan Overlay (DPO)
  - Environmental Significance Overlay (ESO)
  - Heritage Overlay (HO)
  - Infrastructure Contributions Overlay (ICO)
  - Incorporated Plan Overlay (IPO)
  - Land Subject to Inundation Overlay (LSIO)
  - Melbourne Airport Environs Overlay (MAEO)
  - Public Acquisition Overlay (PAO)
  - Special Building Overlay (SBO)
  - Significant Landscape Overlay (SLO)

**Figure 4.1 Planning Overlays**



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 Date: 11 April 2019  
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**Legend**

- Study area
- + Kilometre Point
- Preliminary Pipeline Alignment
- Construction footprint
- Local government area

**Planning Overlay**

- Bushfire Management Overlay (BMO)
- Development Contributions Plan Overlay (DCPO)
- Development Plan Overlay (DPO)
- Environmental Significance Overlay (ESO)
- Heritage Overlay (HO)
- Infrastructure Contributions Overlay (ICO)
- Incorporated Plan Overlay (IPO)
- Land Subject to Inundation Overlay (LSIO)
- Melbourne Airport Environs Overlay (MAEO)
- Public Acquisition Overlay (PAO)
- Restructure Overlay (RO)
- Specific Controls Overlay (SCO)

**Figure 4.2 Planning Overlays**

0 0.3 0.6 0.9 1.2 1.5  
Kilometers

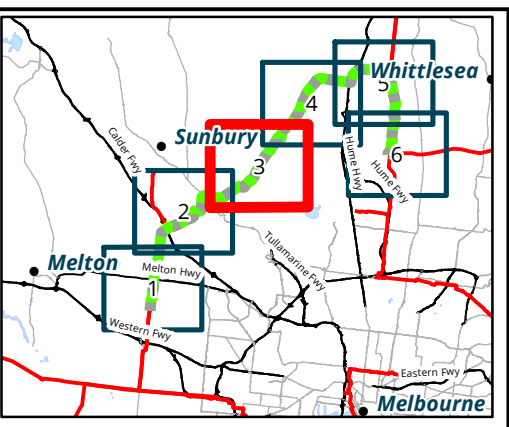
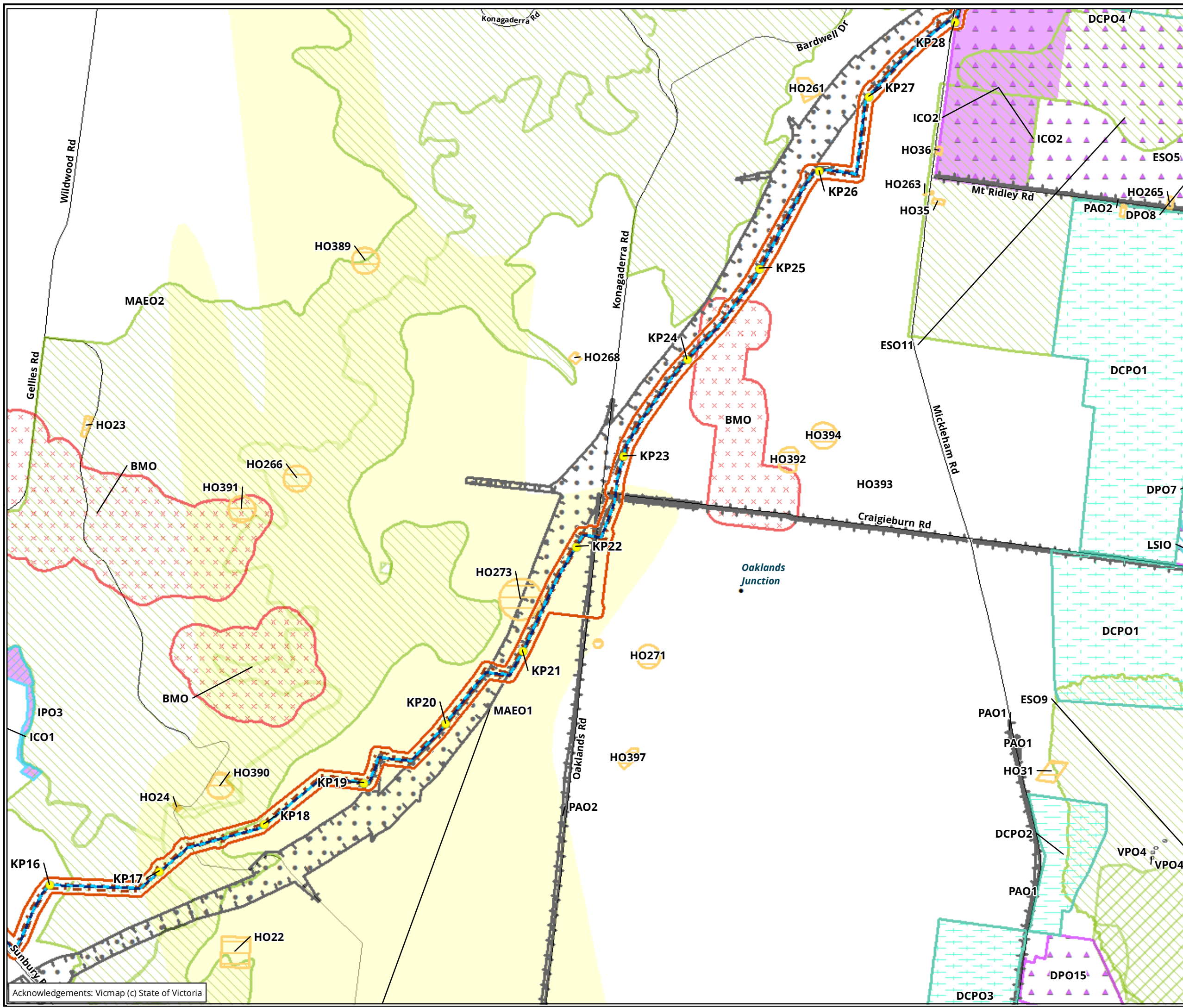
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Coordinate System: GDA 1994 MGA Zone 55

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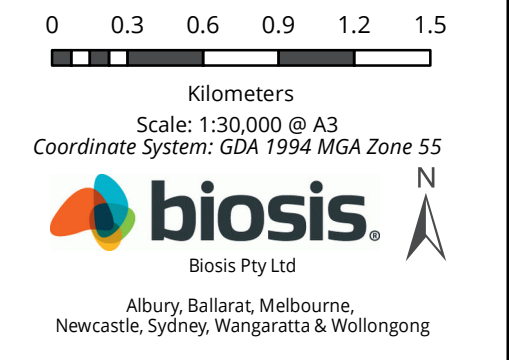
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Location: \\bio-data-01\matters\29800s\29801\mapping\29801\_F4\_Planning\_Overlay



- Legend**
- Study area
  - Kilometre Point
  - Preliminary Pipeline Alignment
  - Construction footprint
- Planning Overlay**
- Bushfire Management Overlay (BMO)
  - Development Contributions Plan Overlay (DCPO)
  - Development Plan Overlay (DPO)
  - Environmental Significance Overlay (ESO)
  - Heritage Overlay (HO)
  - Infrastructure Contributions Overlay (ICO)
  - Incorporated Plan Overlay (IPO)
  - Land Subject to Inundation Overlay (LSIO)
  - Melbourne Airport Environs Overlay (MAEO)
  - Public Acquisition Overlay (PAO)
  - Vegetation Protection Overlay (VPO)

**Figure 4.3 Planning Overlays**

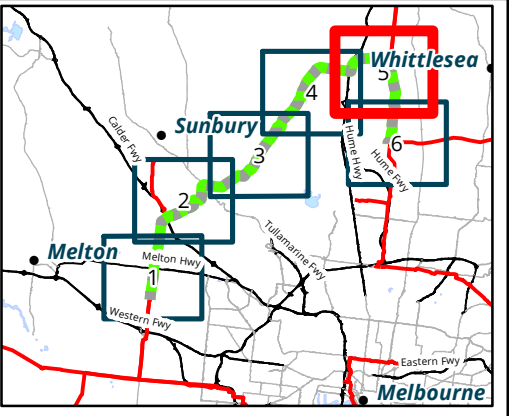
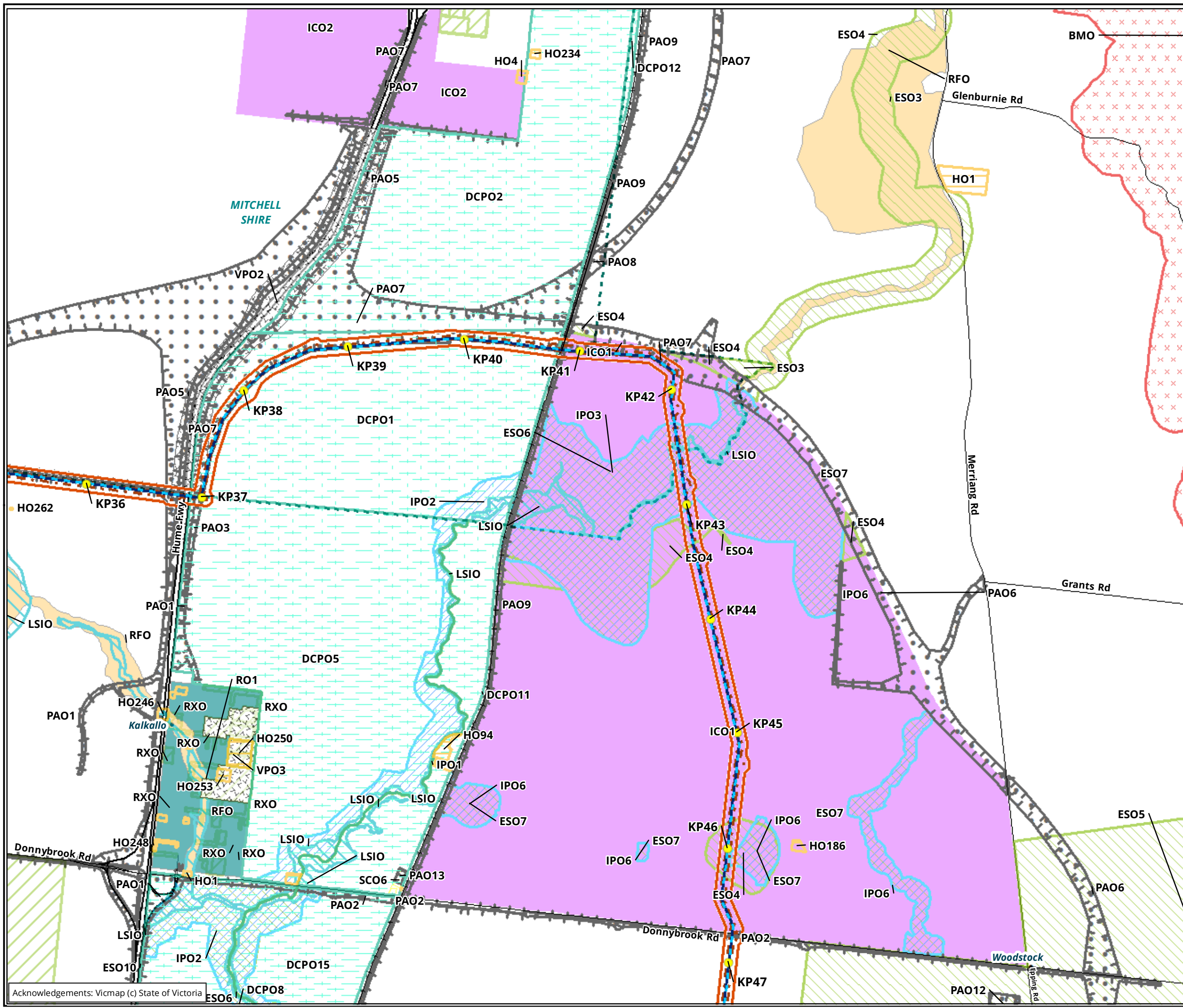


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- Legend**
- Study area
  - + Kilometre Point
  - Preliminary Pipeline Alignment
  - Construction footprint
  - Local government area
- Planning Overlay**
- Bushfire Management Overlay (BMO)
  - Development Contributions Plan Overlay (DCPO)
  - Environmental Significance Overlay (ESO)
  - Heritage Overlay (HO)
  - Infrastructure Contributions Overlay (ICO)
  - Incorporated Plan Overlay (IPO)
  - Land Subject to Inundation Overlay (LSIO)
  - Public Acquisition Overlay (PAO)
  - Rural Floodway Overlay (RFO)
  - Restructure Overlay (RO)
  - Road Closure Overlay (RXO)
  - Specific Controls Overlay (SCO)
  - Vegetation Protection Overlay (VPO)

**Figure 4.5 Planning Overlays**

0 0.3 0.6 0.9 1.2 1.5  
Kilometers

Scale: 1:30,000 @ A3  
Coordinate System: GDA 1994 MGA Zone 55

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