

Mordialloc Bypass

Preliminary LVIA (Desktop assessment)

Prepared by Tract Consultants
for Client – WSP

0317 _ 0333 **Rev 5**

195 Lennox St, RICHMOND 3121
Phone: (03) 9429 6133
www.tract.com.au

Quality Assurance - Report Record

Project Name	Mordialloc LVIA – Preliminary LVIA
Document Number	0317-0333 R1_Rev 5
Revision (see below)	5
Prepared By	Mark Reilly
Reviewed By	Deiter Lim
Approved By	Deiter Lim
Date of Issue	20 th July 2017
Status	Final

Revision Status- all revisions must be identified by the following information

Revision Number	05
Description of Revision	Response to VicRoads comments to Version 2
Prepared By	MR
Reviewed By	DL
Pages Revised	All

Contents

1	Introduction	3
1.1	Overview	3
1.2	Limitations	3
1.3	Report Structure	3
1.4	Proposed Road Alignment – Description	3
1.5	Proposed Road Design	5
2	Planning Context	7
2.1	Overview	7
2.1.1	Limitations of the data	7
2.2	Key Findings	7
2.3	Local Planning Policy Framework	7
2.3.1	Clause 21.09 – Environment, Wetlands and Waterways	7
2.3.2	Clause 21.10 – Green Wedge	9
2.3.3	Clause 22.04 – South East Non-Urban Area Policy	9
2.4	Zones	11
2.4.1	32.08 – General Residential Zone (Schedule 3) (GRZ3)	11
2.4.2	33.01 – Industrial 1 Zone IN1Z)	11
2.4.3	35.04 – Green Wedge Zone (GWZ1 & GWZ2)	11
2.4.4	36.01 - Public Use Zone (PUZ1)	11
2.4.5	36.02 – Public Park and Recreation Zone (PPRZ)	11
2.4.6	36.04 – Road Zone (RZ1)	11
2.4.7	37.03 – Urban Floodway Way (UFZ)	11
2.5	Overlays	13
2.5.1	43.01 – Heritage Overlay (Schedule 104) (HO104)	13
2.5.2	43.02 – Design and Development Overlay (Schedule 5) (DDO5 - Aviation Obstacle Referral Height Area No 2)	13
2.5.3	43.02 – Design and Development Overlay (Schedule 6) (DDO6 – Kingston Lodge Site)	13
2.5.4	43.03 - Incorporated Plan Overlay (Schedule 2)	13
2.5.5	44.04 - Land Subject to Inundation Overlay	13
2.5.6	44.05 - Special Building Overlay	13
2.5.7	45.02 - Airport Environs Overlay	13
2.6	Local and Regional Plans and Strategies	15
2.6.1	Green Wedge Plan 2012	15
2.6.2	Sand Belt Open Space Development Plan 1994	15
3	Landscape & Visual Quality	26
3.1	Overview	26
3.1.1	Limitations of the data	26
3.2	Planning Framework Implications	26
3.2.1	LVIA implications	26
3.3	Landscape & Visual Quality Issues	27

3.3.1	General landscape issues	27
3.3.2	General visual issues	28
3.3.3	LVIA implications	28
3.4	Landscape Precincts	29
3.4.1	Dingley Precinct	30
3.4.2	Braeside Park Precinct	31
3.4.3	Waterways Precinct	32
4	Conclusion	33
4.1.1	Planning framework values	33
4.1.2	Designated landscape & visual values	33
4.1.3	Potential environmental effects	33
4.1.4	Mitigation potential	34
5	Appendix – A -	35

1 INTRODUCTION

1.1 Overview

This report provides a desktop assessment of existing information relating to the landscape character and scenic values of the proposed Mordialloc Bypass road alignment (Figure 1) and provides preliminary advice on possible issues and impacts associated with the proposed design of the Mordialloc Bypass.

1.2 Limitations

This report is a preliminary desktop study only and does not take into account the full range of data inputs, including field assessments, modelling and other baseline studies that would typically form the basis of an LVIA Technical Study.

1.3 Report Structure

The report is structured in two sections:

1. **Planning Context** – an overview of the existing state and local government policy framework relating to landscape and visual quality management within the area surrounding the Bypass alignment. These policies and controls describe community values and aspirations, and provide a reference for the assessment of likely effects.
2. **Landscape and Visual Quality Issues** – provides a preliminary assessment of likely changes to the landscape and scenic quality of the road alignment setting and the possible effects of those changes.

1.4 Proposed Road Alignment – Description

The Mordialloc Bypass is a proposed new arterial road within Melbourne's south-eastern suburbs, located within an existing road reservation. The reservation was conceived in the 1950's and formalised in the 1970's to accommodate a six lane road to cater for future urban growth.

The proposed Bypass will comprise a four lane road with two lanes in each direction and divided median. This can be upgraded to a six lane arterial road in the future by adding two lanes in the centre median.

The objectives of the project are to provide a response to the following needs and issues:

Improved transport efficiency: improve east-west and north-south connectivity and capacity, reducing delays at existing intersections and providing a high level of service for all vehicles using the road network.

- Improved amenity and attractiveness of the area as places to live and work: more efficient links along the southern movement corridor will reduce the reliance on local and arterial roads as key movement routes. This will boost amenity of the middle south-eastern suburbs by reducing the number of vehicles moving through residential areas.
- Increased economic development: improving east-west and north-south connectivity and addressing the capacity constraints in the corridor will improve accessibility between existing and establishing employment clusters, industrial areas and residential areas in the south- east.

The road alignment passes through a range of established land uses settings including:

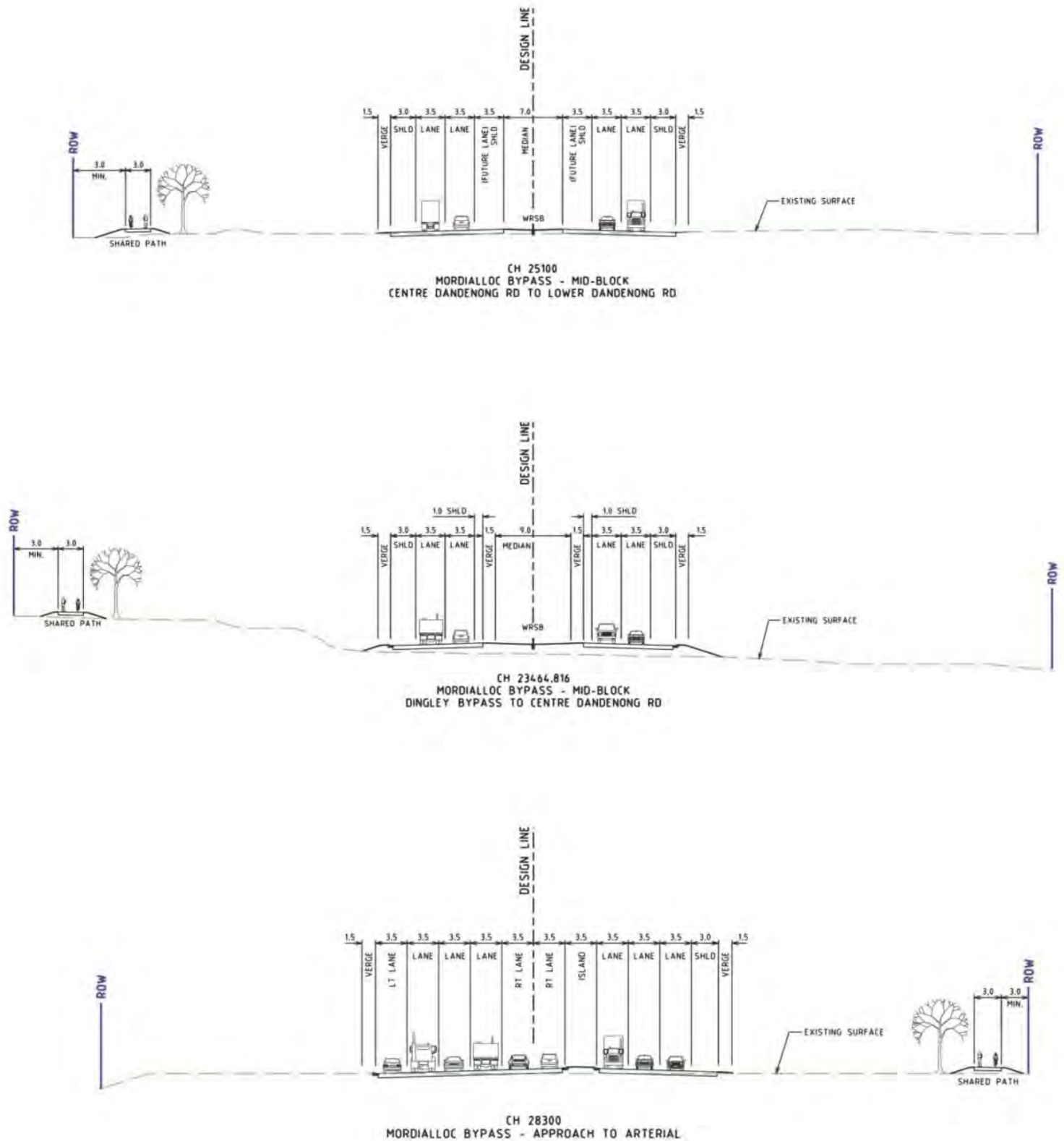
- Suburban residential
- Industrial / warehouse uses
- Parkland / conservation / wetland reserve
- Agricultural / market garden uses



Figure 1 – Mordialloc Bypass alignment

1.5 Proposed Road Design

Based on the Preliminary Concept Design plans (Issue A) provided 25th May 2017, the road alignment is likely to have the following typical design features (Figure 2).



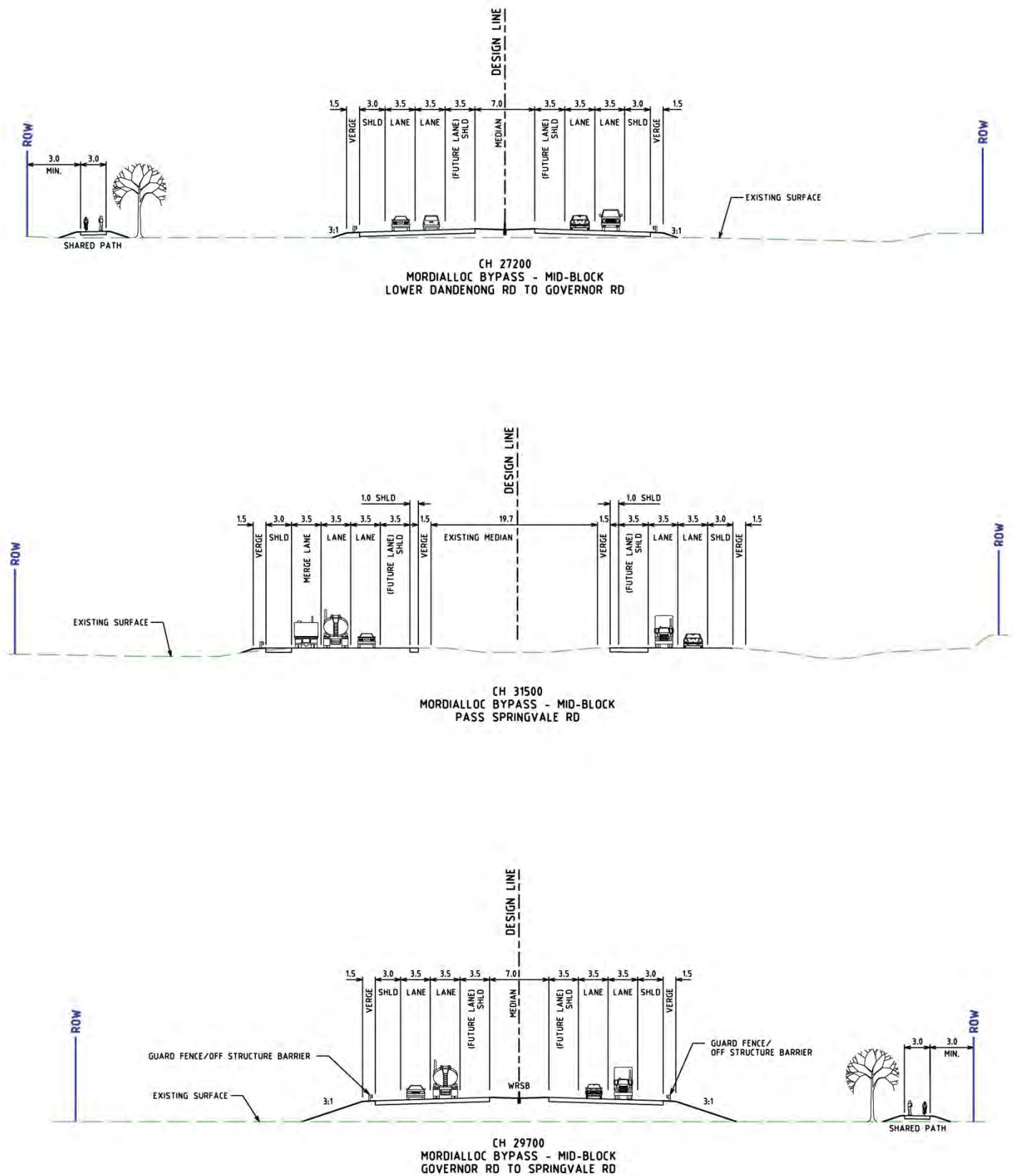


Figure 2 – Mordialloc Bypass – typical cross section design (WSP preliminary concept)

2 PLANNING CONTEXT

2.1 Overview

The proposed route of the Mordialloc Bypass is located in the City of Kingston and is subject to a number of zones and overlays as well as to the objectives and policies specified within the Local Planning Policy Framework. The City of Kingston has a number of related plans and strategies in place to guide activity and development in the municipality.

This section of the report provides preliminary advice on relevant provisions and policy relating to existing landscape features and values, sensitive interfaces and Council objectives and standards.

2.1.1 Limitations of the data

The Kingston Planning Scheme and associated local strategies provide only limited direction as to the landscape and scenic values of the affected area, with standards and objectives lacking clear definition. The interpretation of this planning data in the following section must be considered in that context.

2.2 Key Findings

The key findings of this report revolve around considering and maintaining aspects of the landscape with a focus on Kingston's designated Green Wedge areas.

In terms of the natural environment, there is a desire to maintain and develop key habitat linkages, particularly through Braeside Park. Key characteristics of the area to be maintained are those that are rural and semi-rural, as well as features typical of the parkland and wetland area.

There is a visual preference for native planting and muted colour palettes to similarly maintain the rural character along the proposed route of the Bypass. Low-visual impact development is also desired so that visual impacts on Braeside Park are limited.

Overall there is minimal specific guidance from the Kingston planning scheme and limited sites of landscape significance.

2.3 Local Planning Policy Framework

The Local Planning Policy Framework (LPPF) sets out the local policy context and strategic objectives for the planning scheme. The planning policies contained within outline how the Council will implement its strategic objectives. Within the LPPF, three policies are considered relevant to the proposal:

2.3.1 Clause 21.09 – Environment, Wetlands and Waterways

Clause 21.09 outlines the City of Kingston's objectives and strategies relating to the protection and enhancement of their natural environment. The strategies supporting Objective 1 – *"To protect and improve the flood storage and water quality treatment functions of existing floodplains and waterways, and to consolidate their habitat and recreation importance."* – can be seen to be relevant to the proposal at its interface with the Mordialloc Creek:

- *"Improve the aesthetic, cultural and conservation value of the Mordialloc Creek and its surrounding natural landscape to add value to its primary drainage and flood management function."*
- *Ensure that all development within and adjacent to existing floodplains is consistent with floodplain management objectives and maximises the potential for creation of public open space, wetlands and recreational and cultural activities."*

The Scheme does not provide further direction as to how to improve the aesthetic value of the Mordialloc Creek. Refer Figure 3 for the "Environment, Wetlands and Waterways Framework Plan".

KINGSTON PLANNING SCHEME

City of Kingston Environment, Wetlands and Waterways Framework Plan

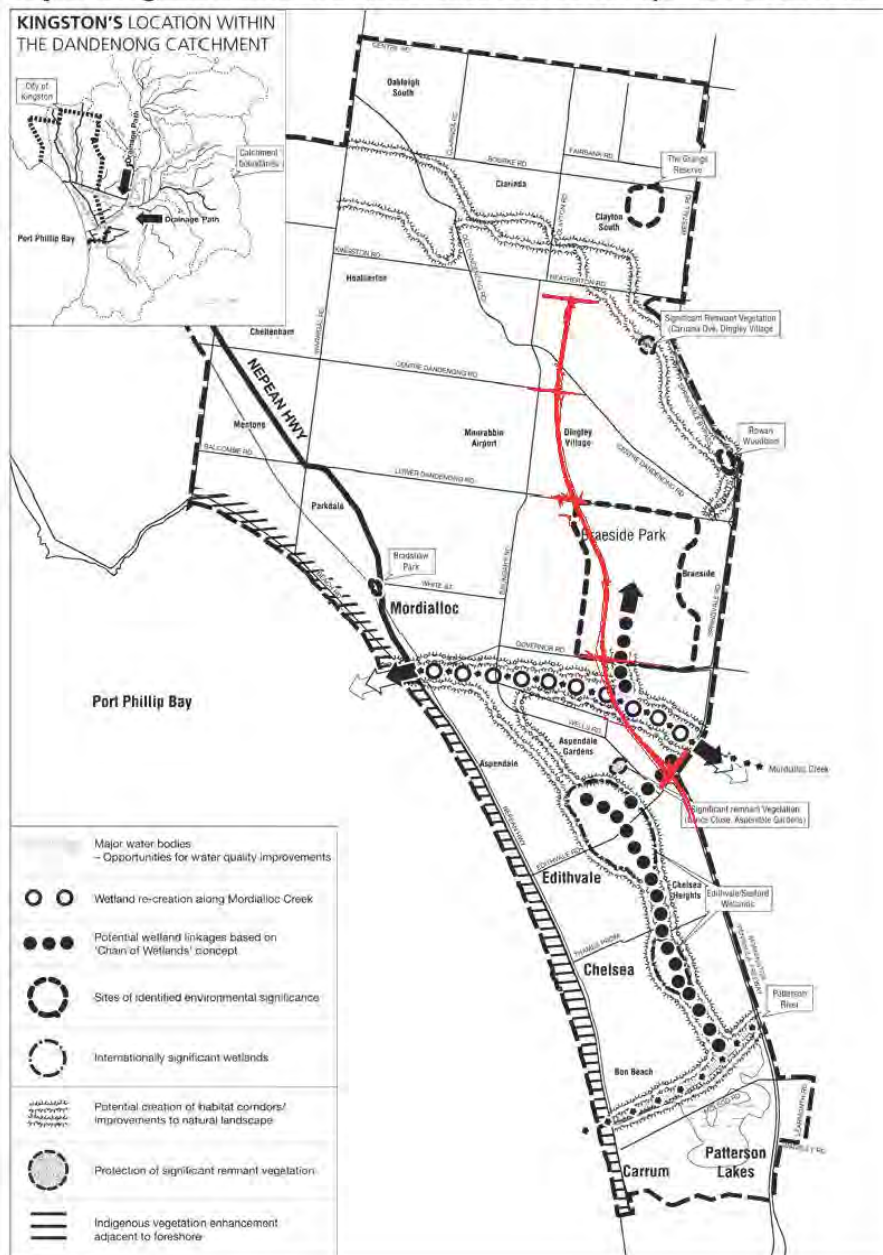


Figure 3 – Environment, Wetlands and Waterways Framework Plan – City of Kingston

2.3.2 Clause 21.10 – Green Wedge

Clause 21.10 outlines the City of Kingston's objectives and strategies relating to the management of land that falls outside the Urban Growth Boundary, inclusive of agricultural land, extraction, nature conservation and open space networks, and other uses. Objective 5 and Objective 9 can be considered relevant to the proposed route of the Mordialloc Bypass.

Objective 5 aims to *"protect and enhance environmental values including wetlands, flora and fauna habitats, and drainage functions"*. Among the strategies supporting this objective, the following can be considered relevant:

- *"Promote the further development of a Green Wedge landscape character, and encourage the use of indigenous plant species in all landscaping through the Green Wedge."*

The City of Kingston provides limited guidance as to what the Green Wedge landscape character constitutes. In the *Green Wedge Plan 2012* (mentioned below) it is noted that the Kingston Green Wedge will have a "semi-rural feel and appearance" (p. 9).

Objective 9 seek *"to protect and further develop the scenic and landscape values of the Green Wedge"*. Among the strategies supporting this objective, the following can be considered relevant:

- *"Ensure that all major developments within Kingston's Green Wedge (particularly in the Braeside area) contributes to the enhancement and re-creation of pre-settlement landscapes including wetlands and open woodlands."*

The Scheme does not provide specific specifics of what the "pre-settlement landscapes" entail. In the *Kingston Biodiversity Strategy 2007-2012*, the landscape prior to European settlement is described as wetland swamp.

2.3.3 Clause 22.04 – South East Non-Urban Area Policy

The South East Non-Urban Area Policy sets out strategic objectives for the management of non-urban land in the City of Kingston. Its objectives include to:

- *"Protect and further develop the scenic and landscape values of the non-urban area."*

Clause 22.04-3 sets out Council policy that all planning outcomes must:

- *"Protect and create a high quality rural landscape.*
- *Result in an urban form which is of a high design standard and low visual impact"*

While this clause is primarily relating to urban uses and development, the desired outcome of a low visual impact can still be seen to apply.

Policy relating to the Keysborough/Wetlands framework plan (refer to Figure 4) is also relevant to the proposed Bypass and its interface with Braeside Park. The policy states that the use and development of land ought to:

- *"Protect and further develop a 'green space' character for the Keysborough/Wetlands area. This 'green space' vision comprises both the ecological and landscape values of the area.*
- *Contribute to achievement of a high quality landscaped environment which enhances the area's non urban appearance.*
- *Contribute to the creation of public open space and ecological habitat linkage*
- *Protect the park from visual intrusion and incompatible activities on adjoining land.*
- *Ensure that landscaping and urban design along the freeway reserve and main roads contribute to the rural character."*

This policy supports the primary objective of maintaining the rural character of the proposed route and limiting visual impacts on the Braeside Park area. Landscaping and design are mentioned as the methods in achieving this outcome. Habitat corridors are also noted as being necessary to achieve the desired linkages between areas of environmental significance.

FRAMEWORK PLAN - KEYSBOROUGH/WETLANDS POLICY AREA

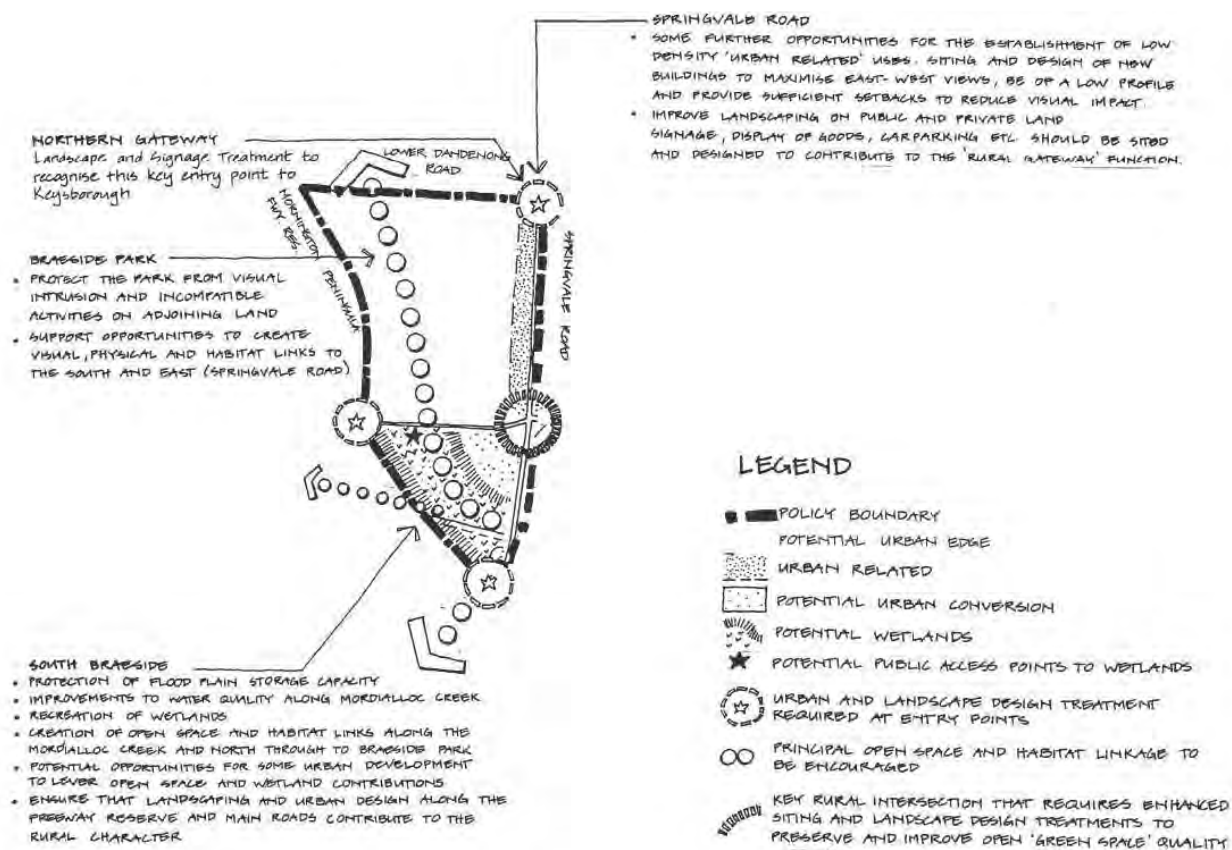


Figure 4 – Framework Plan – Keysborough/Wetlands Policy Area – City of Kingston

2.4 Zones

Zones show what land can be used for, and contain information relating to the control of building, works and subdivision. Refer Figure 5. The proposed route is subject to the following zones:

2.4.1 32.08 – General Residential Zone (Schedule 3) (GRZ3)

This zone does not contain any relevant provisions.

2.4.2 33.01 – Industrial 1 Zone IN1Z)

This zone does not contain any relevant provisions.

2.4.3 35.04 – Green Wedge Zone (GWZ1 & GWZ2)

The Green Wedge Zone is designed to:

- *“recognise, protect and conserve green wedge land for its agricultural, environmental, historic, landscape, recreational and tourism opportunities, and mineral and stone resources.”*
- *protect, conserve and enhance the cultural heritage significance and the character of open rural and scenic non-urban landscapes.”*

The Decision Guidelines in Clause 35.04-6 set out key concerns for Council relating to specific applications:

- *“The need to minimise adverse impacts on the character and appearance of the area or features of architectural, scientific or cultural heritage significance, or of natural scenic beauty.”*
- *“The need to minimise any adverse impacts of siting, design, height, bulk, and colours and materials to be used, on landscape features, major roads and vistas.*
- *The location and design of existing and proposed infrastructure services which minimises the visual impact on the landscape.*
- *The need to minimise adverse impacts on the character and appearance of the area or features of archaeological, historic or scientific significance or of natural scenic beauty or importance.”*

The Kingston Planning Scheme identifies Braeside Park as an area of environmental significance.

2.4.4 36.01 - Public Use Zone (PUZ1)

This zone does not contain any relevant provisions.

2.4.5 36.02 – Public Park and Recreation Zone (PPRZ)

This zone does not contain any relevant provisions.

2.4.6 36.04 – Road Zone (RZ1)

This zone does not contain any relevant provisions,

2.4.7 37.03 – Urban Floodway Way (UFZ)

This zone does not contain any relevant provisions

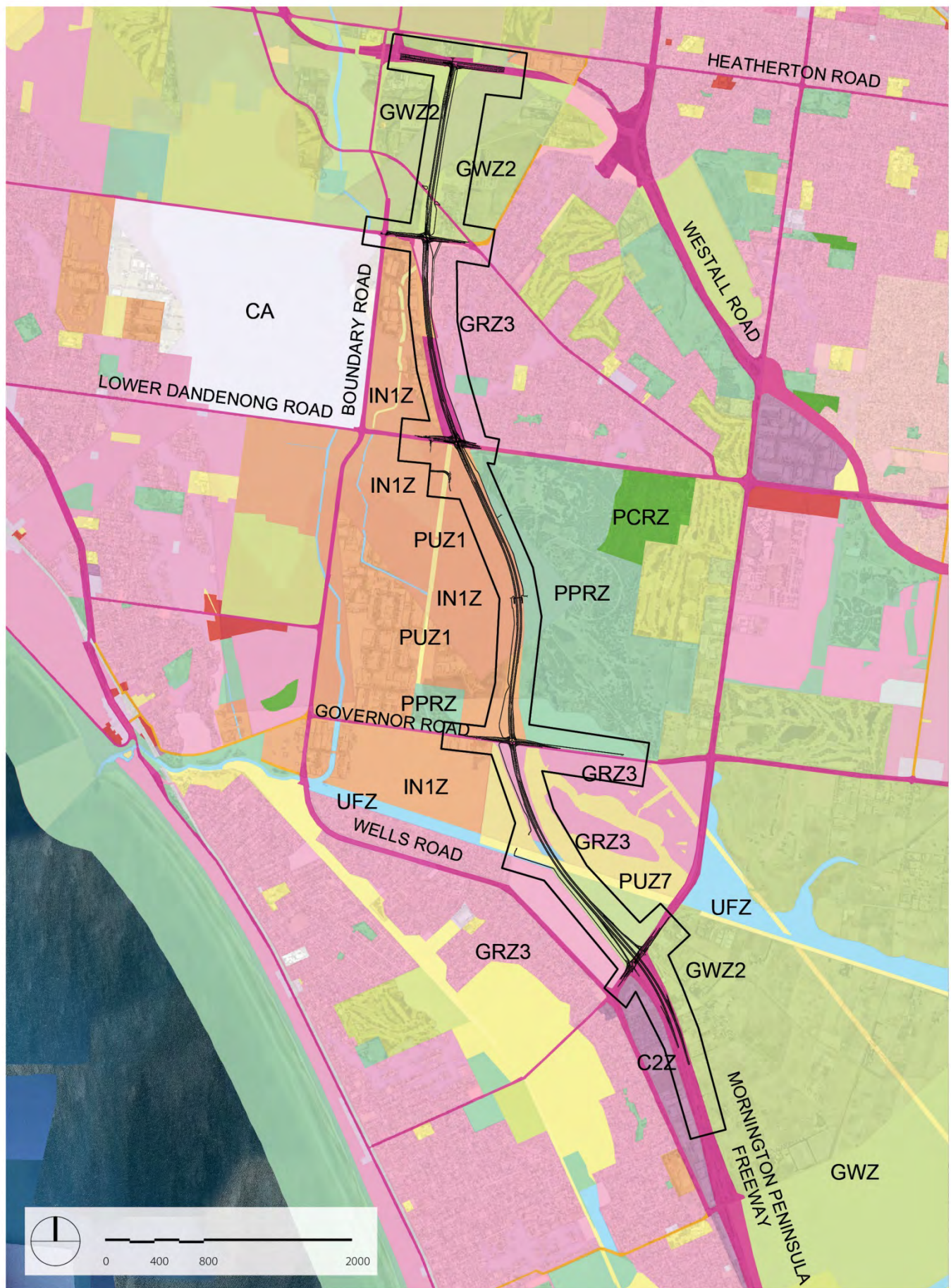


Figure 5- Zone Plan

2.5 Overlays

Overlays provide additional requirements and guidance as to the use and development of land, and are most often related to specific issues. Refer Figure 6. The proposed route is subject to the following overlays:

2.5.1 43.01 – Heritage Overlay (Schedule 104) (HO104)

This overlay does not contain any relevant provisions.

2.5.2 43.02 – Design and Development Overlay (Schedule 5) (DDO5 - Aviation Obstacle Referral Height Area No 2)

This overlay does not contain any relevant provisions.

2.5.3 43.02 – Design and Development Overlay (Schedule 6) (DDO6 – Kingston Lodge Site)

This overlay relates to the Kingston Lodge development site, now referred to as Waterways. As such, design objectives should be considered primarily in relation to the now-complete residential development, but they can still be considered relevant in regards to the protection and enhancement of landscape values.

The Design objectives in the Schedule to the overlay include:

- *“To conserve and enhance landscape character supportive of the development and maintenance of indigenous flora and fauna habitats, and consistent with the purposes of each reserve and the amenity of nearby urban residential precincts.”*

The Scheme does not provide further definition of landscape character.

2.5.4 43.03 - Incorporated Plan Overlay (Schedule 2)

This overlay does not contain any relevant provisions.

2.5.5 44.04 - Land Subject to Inundation Overlay

This overlay does not contain any relevant provisions.

2.5.6 44.05 - Special Building Overlay

This overlay does not contain any relevant provisions.

2.5.7 45.02 - Airport Environs Overlay

This overlay does not contain any relevant provisions.

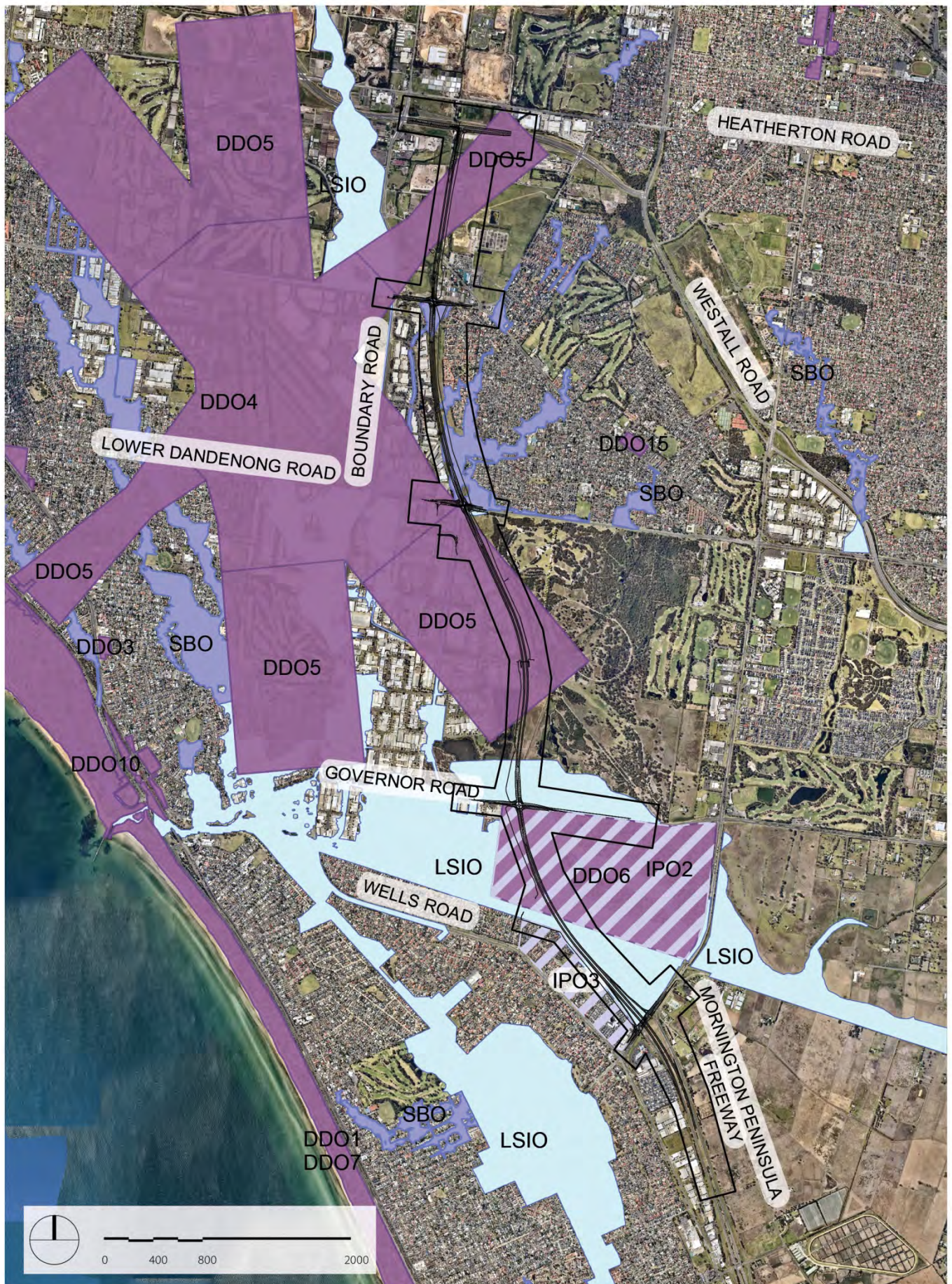


Figure 6 – Overlay Plan

2.6 Local and Regional Plans and Strategies

Council plans and strategies provide additional and specific guidance for activity within the municipality. These strategies provide a further level of detail beyond the planning scheme, and are often used as reference documents for the development of statutory provisions.

The *Green Wedge Plan 2012* and the *Sand Belt Open Space Development Plan 1994* are of particular relevance to the proposed route.

The *Kingston Biodiversity Strategy 2007-2012* provides guidance as to the existing environmental and ecological context of the municipality, but is limited in its directions as to the preservation of scenic landscape and vistas, or designations as to which are of primary significance.

Further plans – Coastal Management Plan 2014; Integrated Water Cycle Strategy 2012; Kingston Foreshore and Waterway Guidelines 2002 – did not provide any relevant directions.

2.6.1 Green Wedge Plan 2012

This strategy can be seen as supporting the Clause 21.10 of the Kingston Planning Scheme, as well as providing explicit guidance as to the nature of works and development, including landscaping. Refer Figures 7 – 11.

The Vision (p. 9) states that the Green Wedge will:

- *“Have a semi-rural feel and appearance; and*
- *Contain activities that interface well with one another”*

Whether the proposed Mordialloc Bypass can be seen as an activity is unclear, however the need to manage interfaces with existing uses is clearly stated. This can be considered most necessary in the land adjacent to Braeside Park, the Dingley Village residential precinct, and the Waterways residential development.

The Plan describes the desired outcomes for buildings in the subject area as including (p. 13):

- *“Open views and vistas from roads and public spaces;*
- *Buildings that do not dominate the landscape*
- *Materials, colours and finishes that best immerse buildings within the landscape;*
- *The use of indigenous vegetation and substantial trees that blend with the roadside treatment.”*

While these outcomes are not directly relevant to the Mordialloc Bypass, they do indicate a preference towards low-visual impact development, the use of indigenous vegetation in landscaping, and a muted colour palette.

The Private (road-based) transport section of the implementation plan also states the desire for habitat crossings and pedestrian cycle crossings at regular intervals (p. 114):

- *“Ensure that the design of the Dingley Bypass and Mornington Peninsula Freeway includes frequent habitat links and pedestrian/cycle crossing points that meet safety standards and guidelines.”*

2.6.2 Sand Belt Open Space Development Plan 1994

The *Sand Belt Open Space Development Plan 1994* outlines Council strategy for the transition away from extraction industries in the Heatherton, Clayton South and Dingley areas, with the desired intent of developing a series of linked open spaces.

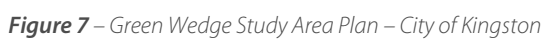
In its Visual Analysis, the plan notes the existing sand extraction areas as providing the most interesting visual features of the area, indicating a lack of significant landscape vistas (p. 17).

The Recommended Themes section notes *Conservation Parkland* as the designated theme with an established focus for Braeside Park:

- *“Braeside Park covers an area of 295 ha and contains areas of remnant native bushland, native grasslands and extensive seasonal wetlands.*
- *Two remnant woodlands in the area reinforce the conservation theme”*

The materials and colour guidelines provide direction relating to the preferred colour palette. While this is not explicitly relating to the entirety of the preferred route, it may be considered to present useful guidelines as to Council preferences. It should be noted that as the plan is over twenty years old, this may have been updated.

- *“The variety of materials and colour should be flexible within an appropriate recommended palette. Roofing should be corrugated metal of either a natural galvanized finish or “Colour Bond”. Timber and rendered or un-rendered brick and the favoured main cladding materials.*
- *Colours should be from a wide range which avoids primaries and pastels. (Although primary colours are considered appropriate in play structures due to the purposes they serve).*
- *A typical colour range would include but not be limited to: Olive, Grey, Sandstone, Grey/Blue, Earthy Reds, Sage Cream and Dark Greens as these reflect the predominant colours of the proposed landscape framework.” (p. 39)*



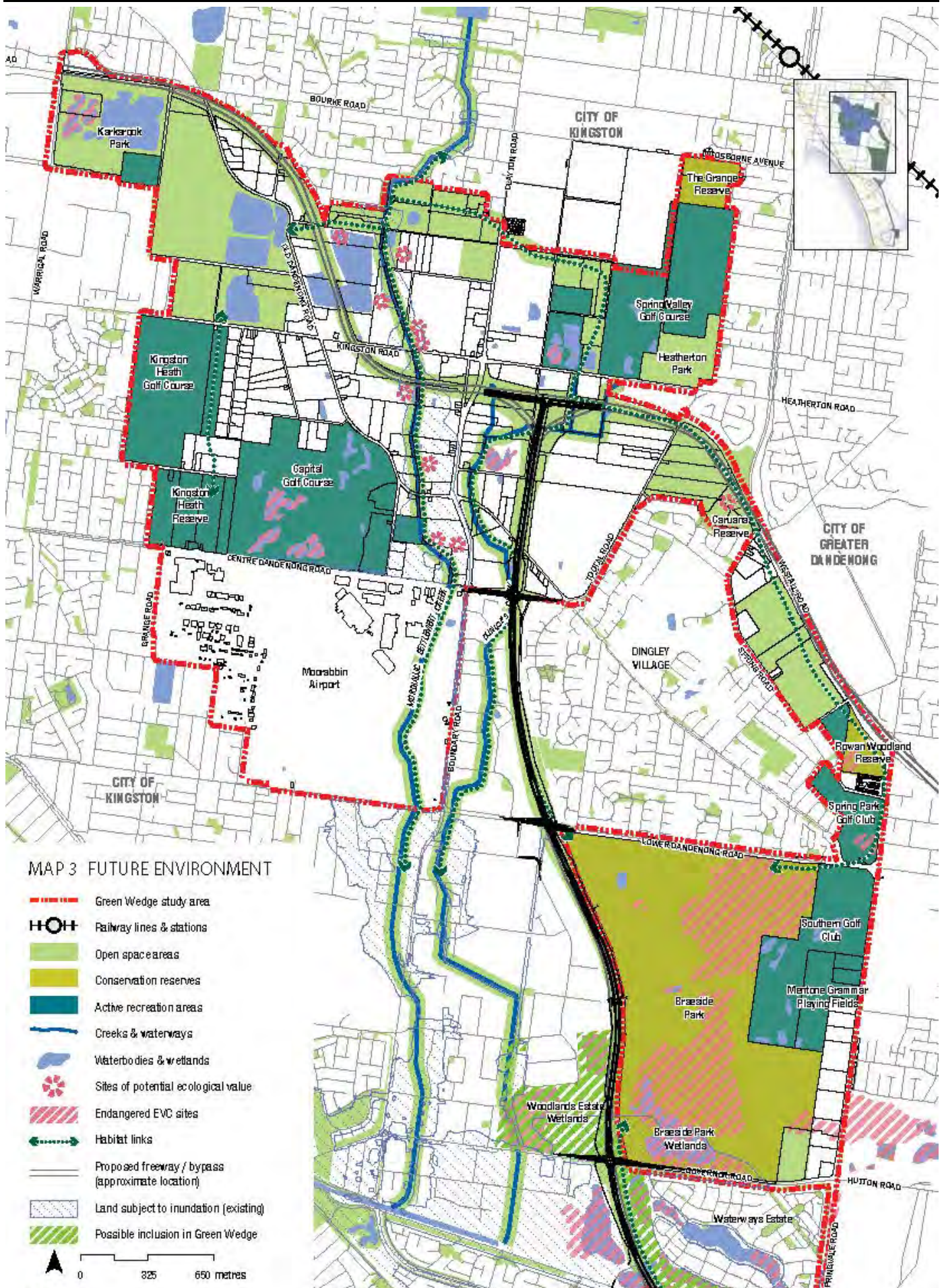


Figure 8 – Future Environment – Green Wedge Plan - City of Kingston

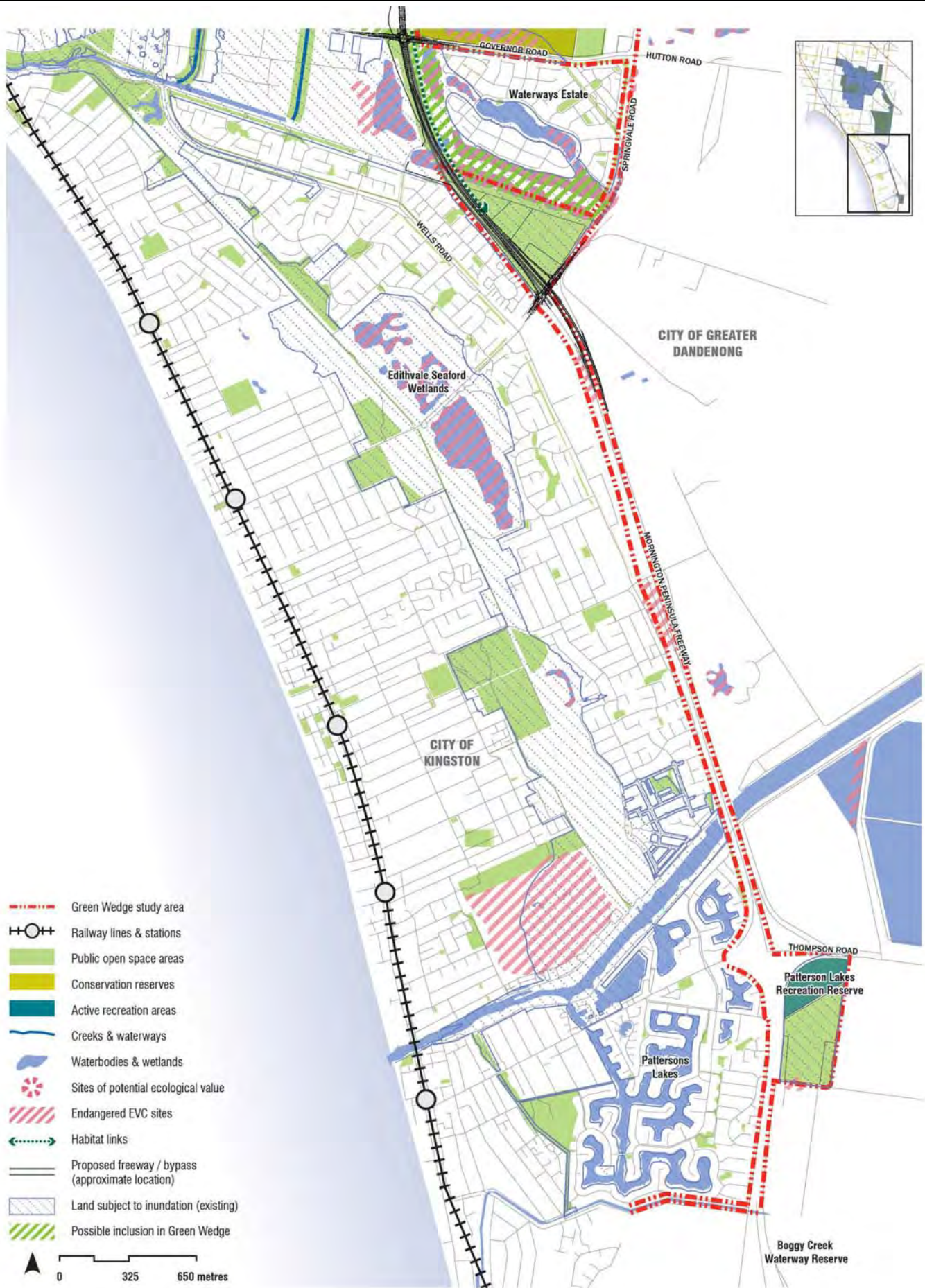


Figure8 – Future Environment – Green Wedge Plan – City of Kingston

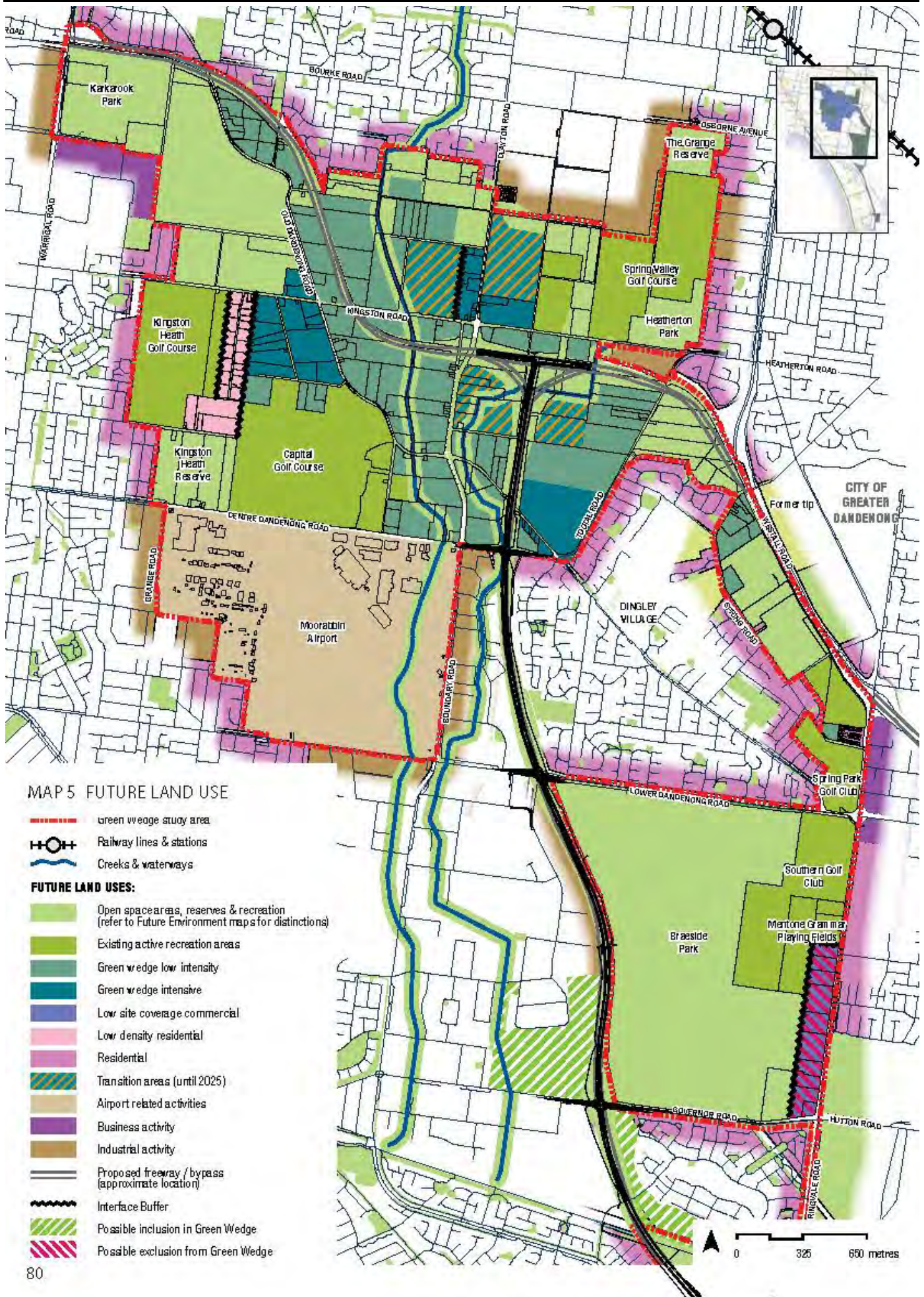


Figure 9 – Future Land Use – Green Wedge Plan - City of Kingston

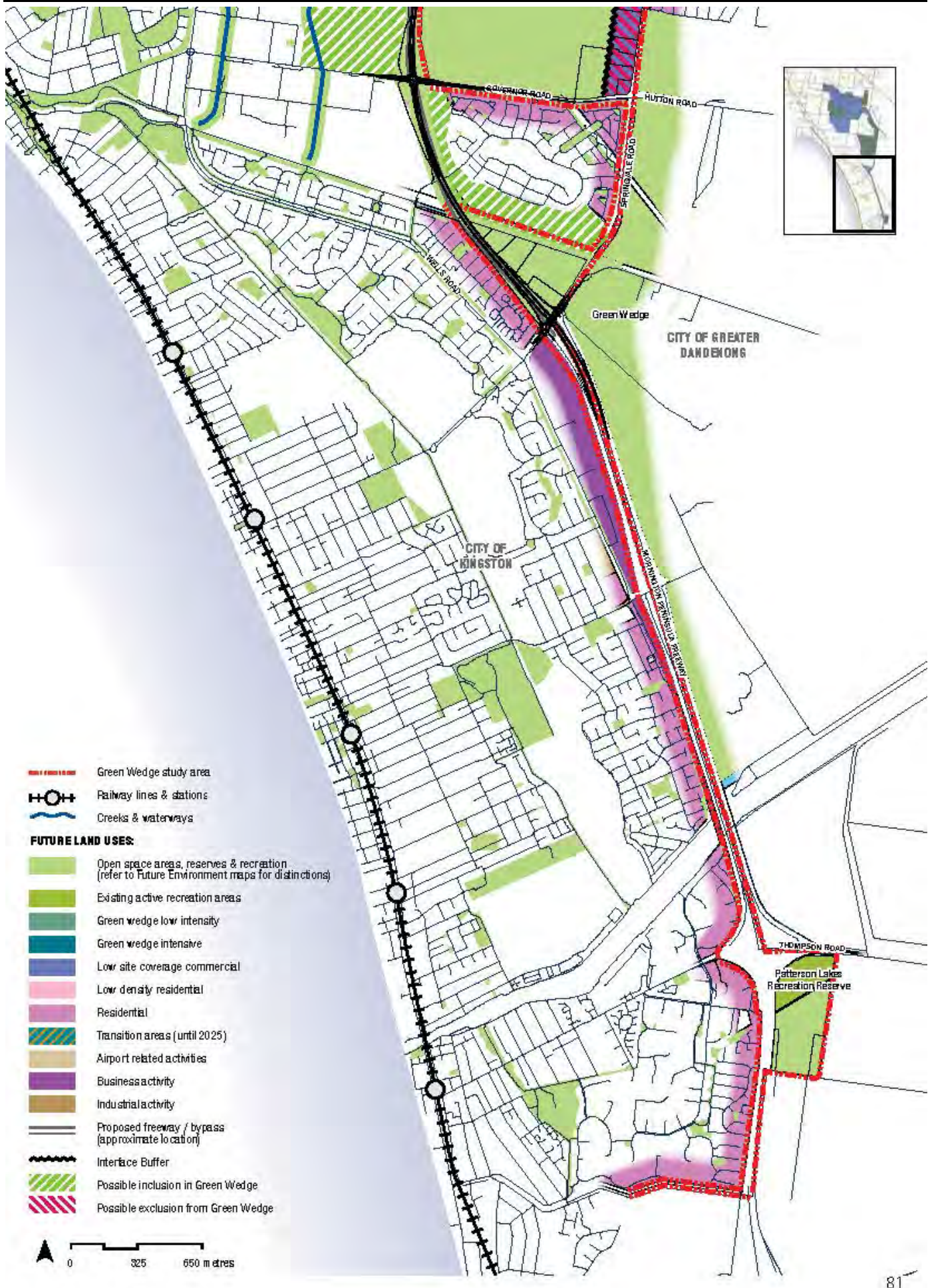


Figure 9 – Future Land Use – Green Wedge Plan – City of Kingston

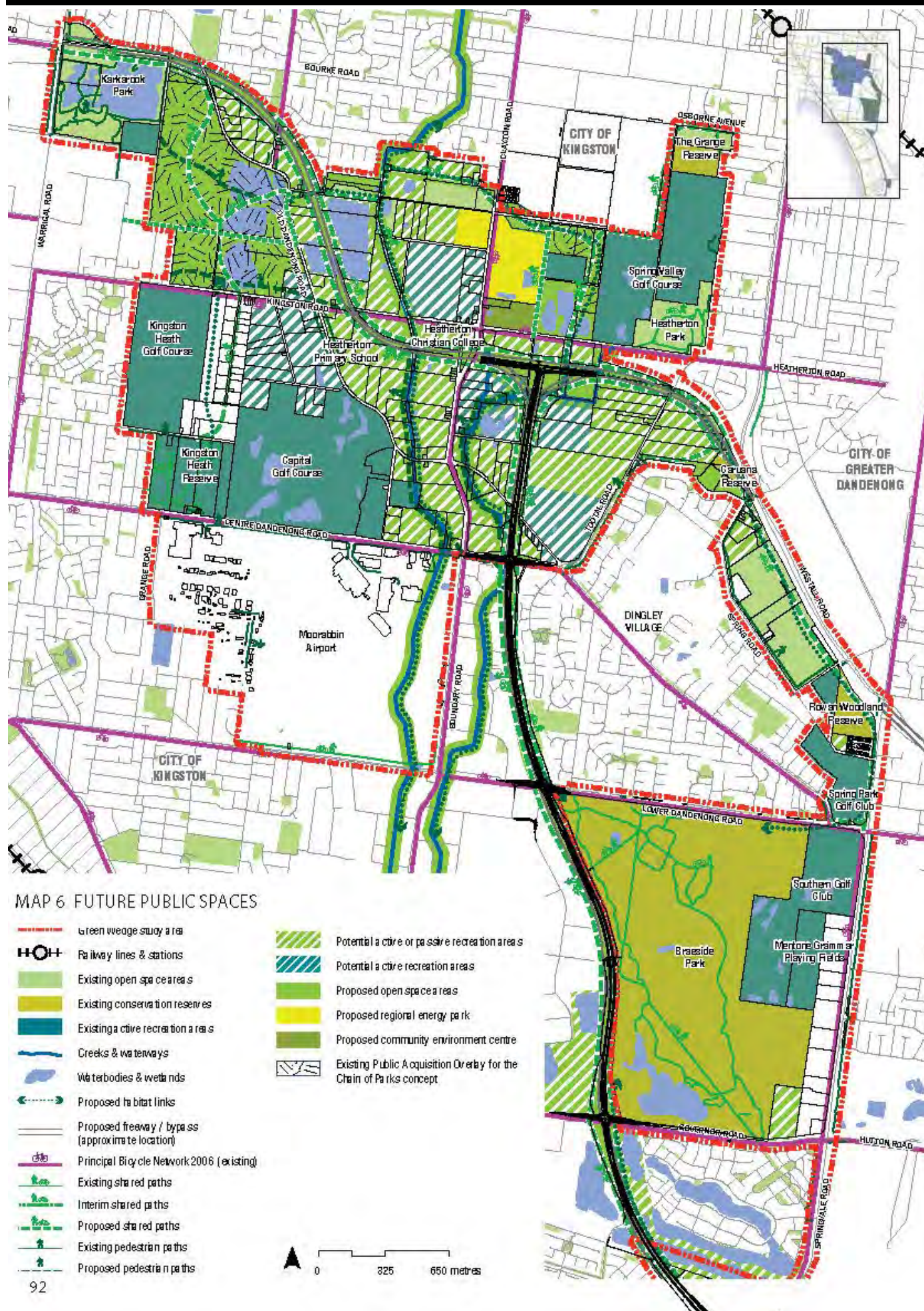


Figure 10 – Future Public Places – Green Wedge Plan – City of Kingston



Figure 10 –Future Public Places – Green Wedge Plan – City of Kingston

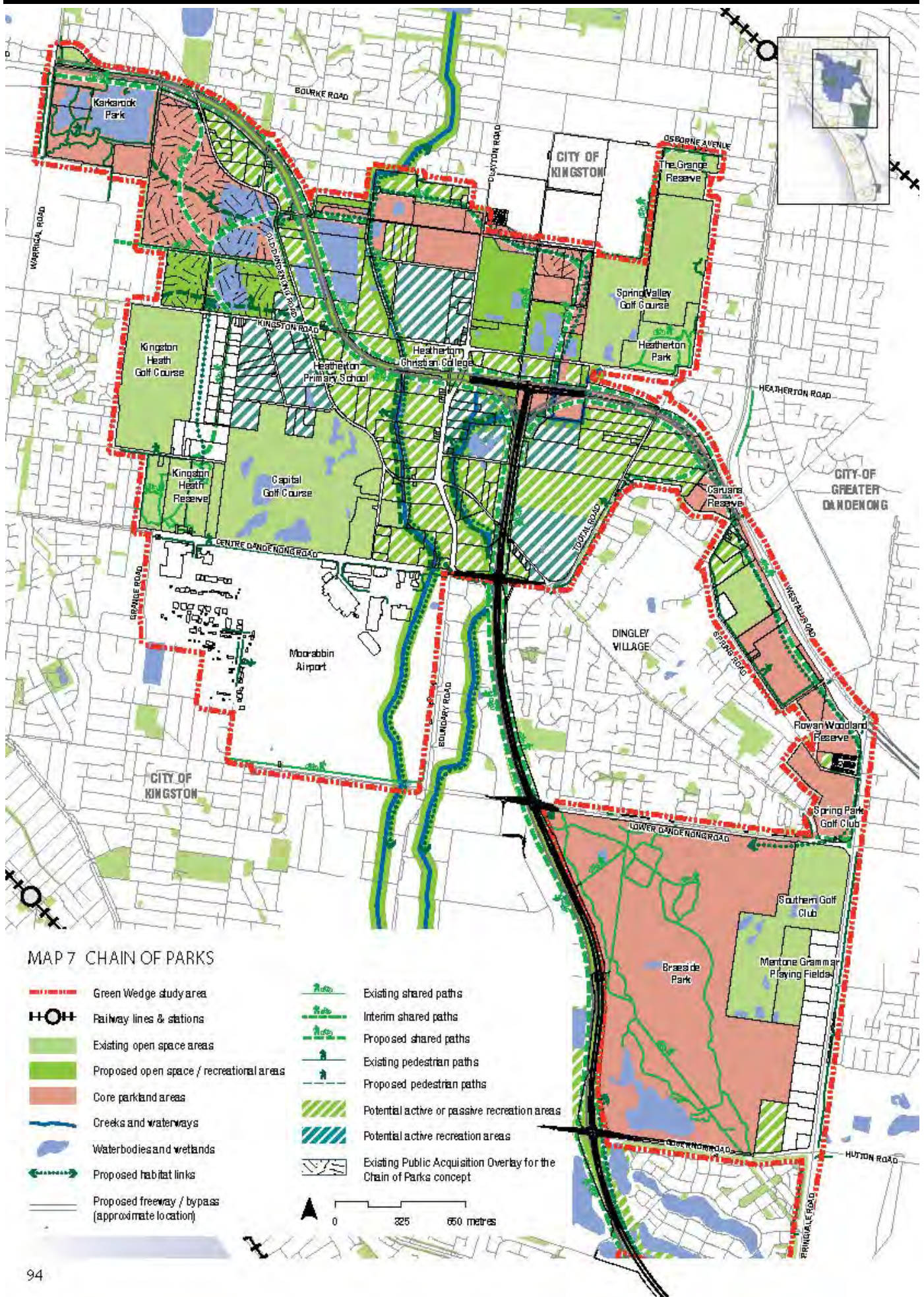


Figure 11 – Chain of Parks – Green Wedge Plan – City of Kingston

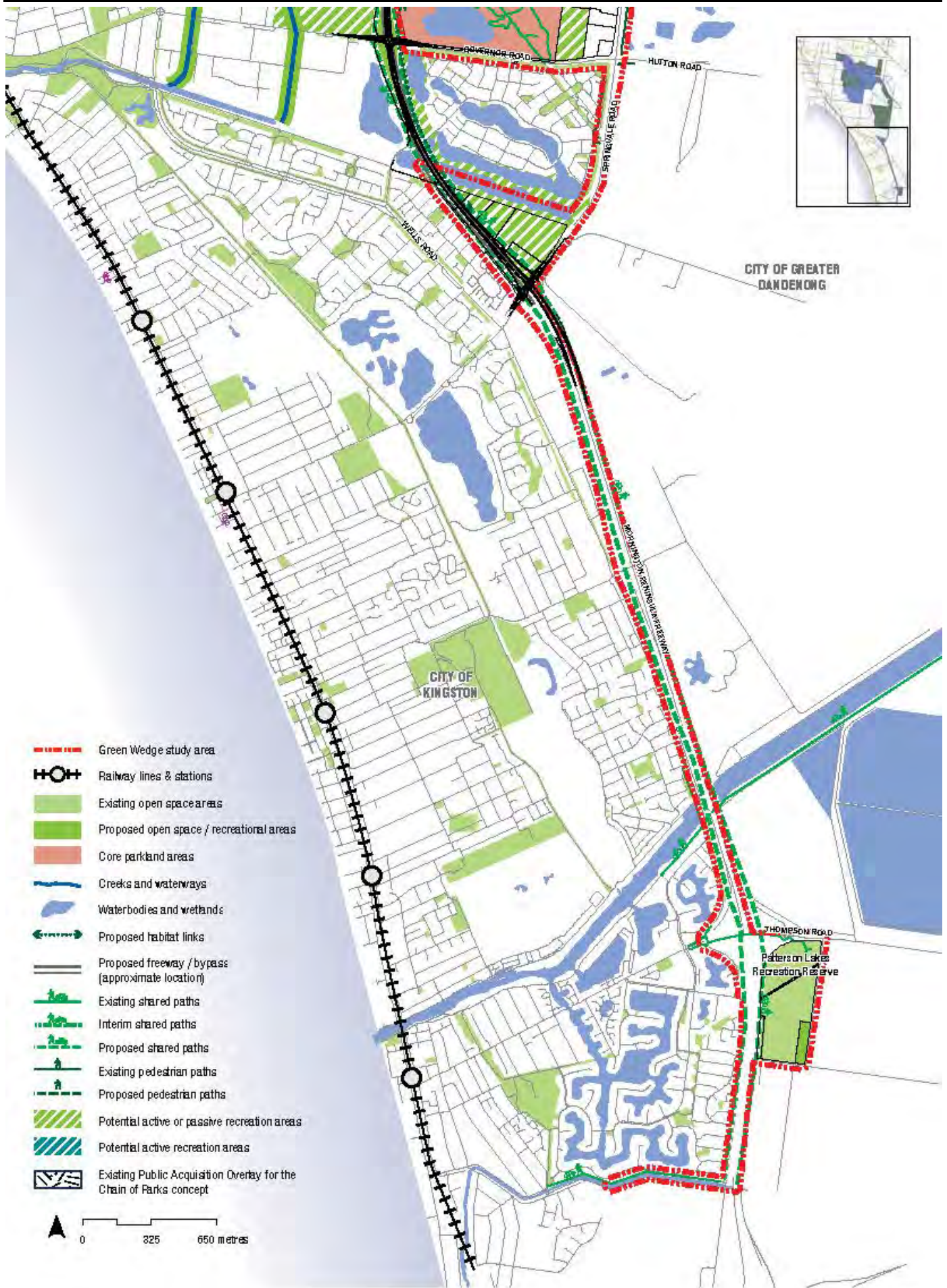


Figure 11 – Chain of Parks – Green Wedge Plan – City of Kingston

3 LANDSCAPE & VISUAL QUALITY

3.1 Overview

This section provides a preliminary assessment of likely changes to the landscape and scenic quality of the road alignment setting and the possible effect of those changes on receptor locations.

3.1.1 Limitations of the data

The Kingston Planning Scheme and associated local strategies provide only limited direction as to the landscape and scenic values of the affected area, with standards and objectives lacking clear definition. The interpretation of this planning data in the following section must be considered in that context.

Landscape and visual quality assessments are based on a desk top study and general site inspection only. Findings are not based on computer generated modelling, a baseline study of existing values or detailed field assessments.

3.2 Planning Framework Implications

The Local Planning Policy Framework (LPPF) sets out the local policy context and strategic objectives for the planning scheme. The focus of Clause 21.09 (Environment, Wetlands and Waterways) is to:

- Enhance vegetation within the coastal edge
- Re-create wetlands along Mordialloc Creek
- Connect wetlands linked to the Mordialloc Creek catchment
- Preserve Braeside Park and link the park to the Mordialloc Creek system
- Protect remnant vegetation
- Develop habitat corridors that link fragmented remnant landscapes such as parks and golf course landscapes

The focus of Clause 21.10 (Green Wedge) is to:

- Protect and enhance environmental values
- Promote the further development of a Green Wedge landscape character and scenic values – a character that includes wetlands, open woodlands and a 'semi-rural' feel and appearance.

The focus of Clause 22.04 (South East Non-Urban Area Policy) is to:

- Protect and create a high quality rural character in non-urban areas
- Ensure that landscaping along freeway corridors and main roads contribute to the rural character

The focus of Zoning and Overlay controls is on:

- Protecting the rural / natural character of the Green Wedge Zone
- Achieving design qualities that match indigenous landscape themes

3.2.1 LVIA implications

1. The regional landscape is not known for its scenic quality and iconic views but views to existing green spaces are valued because of their scarcity and their 'framework' value.
2. The policy aspirations recognise that the current landscape is highly fragmented and degraded as a result of historical land use patterns and drainage changes. There is a focus on preservation and enhancement of what remains and in re-creating a pre-settlement landscape character where possible.

Any action which removes existing landscape features, such as wetlands and mature vegetation, or uses generic, non-site specific landscape treatments is likely to be seen as a negative, both in terms of the direct impact on the landscape character and visual quality of the setting and the related effect on the open space / environmental network.

3. There is likely to be an increasing open space and recreational land use focus in the northern section of the municipality (Heatherton Road / Boundary Road location). Road corridors will be seen as an integral part of that open space system and the basis of a regional trail network.
4. Braeside Park is seen as an iconic landscape. Its treatment should be carefully managed.
5. There are no landscapes of state level significance within the study area based on the desktop review of the relevant Planning scheme, Heritage, Cultural and Environmental studies.
6. The arterial road alignment does not impact Port Phillip Bay coastal values, due to the distance of the alignment from coast and the nominal height of the bridge elevations over Mordialloc Creek are blocked by the surrounding built form.

3.3 Landscape & Visual Quality Issues

Based on an assessment of the concept design and the broad site characteristics, the following issues are apparent.

3.3.1 General landscape issues

- The road alignment sits at a transition point between several broad Environmental Vegetation Classes (EVC) types.
 - North of Lower Dandenong Road the natural landscape is characterised by a mosaic of Heathy Woodland and Damp Sands Woodland communities. The mosaic patterning within the landscape is typically associated with changes in soil type and elevation.
 - South of Lower Dandenong Road the EVC type transitions to the Riparian Scrub and Plains Grassy Wetland communities that are associated with the wetlands and low lying terrain of that area.
- There is a subtle but discernible change from the undulating landforms in the northern part of the study area (Dingley and Heatherton), to the flatter and wetter landforms to the south (Mordialloc, Aspendale and Chelsea). This is also reflected in a mosaic of EVC types.
- The landscape of the study area has been significantly altered through post settlement development and changes to the natural drainage structure of the land. The fragmented pattern of land uses has produced a mosaic of built form and development density. The lack of a consistent landscape character is likely to increase the visual absorption capacity of the landscape for infrastructure related changes and create the potential for new landscape works to improve the character and quality of the regional landscape.
- The fragmented nature of the landscape makes remnant landscape features potentially more significant to local residents than the actual level of landscape significance would suggest. Connecting areas of remnant landscape is likely to be seen as a high priority by local government because it adds value to what they already have.
- The road reservation has minimal existing vegetation which minimises the landscape and visual effects of vegetation removal resulting from the road project. The extent of removal is yet to be confirmed. Impacts on the wetland landscapes of Mordialloc Creek, Waterways and Braeside Park (due to the elevated structures) are likely to be more substantial and less easily mitigated in those locations.
- Landscape condition is variable due to the varying surrounding land uses – such as market gardens, industrial use, environmental use (wetlands and waterways), residential and recreational use.
- The new road design (assuming the use of protective roadside barriers) appears to allow for substantial areas of new tree planting.

3.3.2 General visual issues

- The current pattern of viewing of the road corridor is based on road based views from at grade road crossing locations, views from existing residential settings or park based trail views.
- There does not appear to be any consistent way of seeing more than a small section of the road alignment from any single location. There are no elevated views at this time. There does not appear to be iconic viewing location(s) affected by the proposed road alignment.
- Residential areas and trails within Braeside Park are likely to be the most sensitive visual receptors.
- New elevated road sections will introduce a large scale elevated structure into a relatively flat landscape. Visual impacts are likely to be partly mitigated by existing land uses that restrict views.
- The Bowen Parkway / Waterways / Mordialloc Creek crossing point is likely to be clearly seen from a range of sensitive receptor locations such as residential settings. The elevated sections are:
 - Bowen Parkway / Mordialloc Creek
 - Springvale Road
 - Pedestrian bridge over at CH. 27,300
- In non-elevated areas, the road may potentially sit below the height of existing industrial uses and trees. New planting within the road corridor may mitigate existing industrial views.
- Planting close to the view source is likely to be the most effective visual mitigation for both existing light sources (factories etc), elevated carriageways and new light sources.

3.3.3 LVIA implications

1. The landscape through which the road will travel has been significantly altered by clearing for development and farming leading to significant changes to surface drainage, resulting in a highly modified landscape that is generally of relatively low quality but with pockets of higher quality landscape associated with Braeside Park and the new wetlands.
2. The landscape through which the road alignment travels is likely to have a relatively high Visual Absorption Capability (VAC factors including but not limited to land composition, landuse (residential, industrial etc), topography, vegetation cover and tree canopy) and therefore the effects of the road development are likely to be low to moderate. The exception to this is the southern area where the elevated carriageway and wetland landscape type will expose the road corridor to expansive views from relatively sensitive view locations (residential). In this setting, the effects of the visual change are likely to be high.
3. Open wetland landscapes will be more sensitive to change than treed landscape types. The southern end of the alignment will be the most sensitive to change and the most significantly affected.
4. Visual changes within treed landscapes can potentially be mitigated through replacement open woodland planting. The northern parts of the alignment and the undeveloped green wedge areas to the south may potentially be effectively mitigated by indigenous woodland planting.
5. There is potential for some positive landscape and visual effects related to the screening of existing industrial landscapes from residential and park settings.
6. WSUD can be integrated with existing wetland systems and networks.
7. Trail systems and landscape features within the road alignment will positively contribute to Council strategic planning for the development of connected open space networks and trail systems.

3.4 Landscape Precincts

The landscape of the study area has been significantly altered through post settlement development and changes to the natural drainage structure of the land. This has resulted in an often fragmented and low quality landscape with no designated significance. The fragmented nature of the landscape makes remnant features potentially more significant to local residents than the actual nature of the landscape would suggest.

Whilst the overall landscape is somewhat fragmented, the Mordialloc Bypass corridor itself can be defined into three distinct landscape precincts – Dingley Precinct in the north, Braeside Park Precinct in the middle and the Waterways Precinct in the south including the connection to the Mornington Peninsula Freeway.



Figure 12 – Mordialloc Bypass alignment – Landscape Precincts

3.4.1 Dingley Precinct

The Dingley Precinct landscape is characterised by undulating landforms in the northern part of the study area (Heatherton Road area) with minimal existing vegetation due to the fragmented nature of the previous market garden allotments. This landscape character then transforms into a narrow heavily cleared roadway corridor bordered on the west by industrial sites and factories and on the east side by the suburban residential development of Dingley Village.



Figure 13 – Mordialloc Bypass alignment – Dingley Precinct

3.4.2 Braeside Park Precinct

Braeside Park is seen as a significant landscape area within the region and is characterised by a well treed and vegetated indigenous and native landscape with significant walking and cycling trails. The trails within Braeside Park are likely to be the most sensitive visual receptors. Screening of industrial uses is likely to be an enhancement.



Figure 14 – Mordialloc Bypass alignment – Braeside Precinct

3.4.3 Waterways Precinct

The Waterways Precinct will be affected by the the elevated carriageway, including direct impacts on existing wetlands and changed views from residential edges. Planting at the view source is likely to be the most effective visual impact mitigation measure.

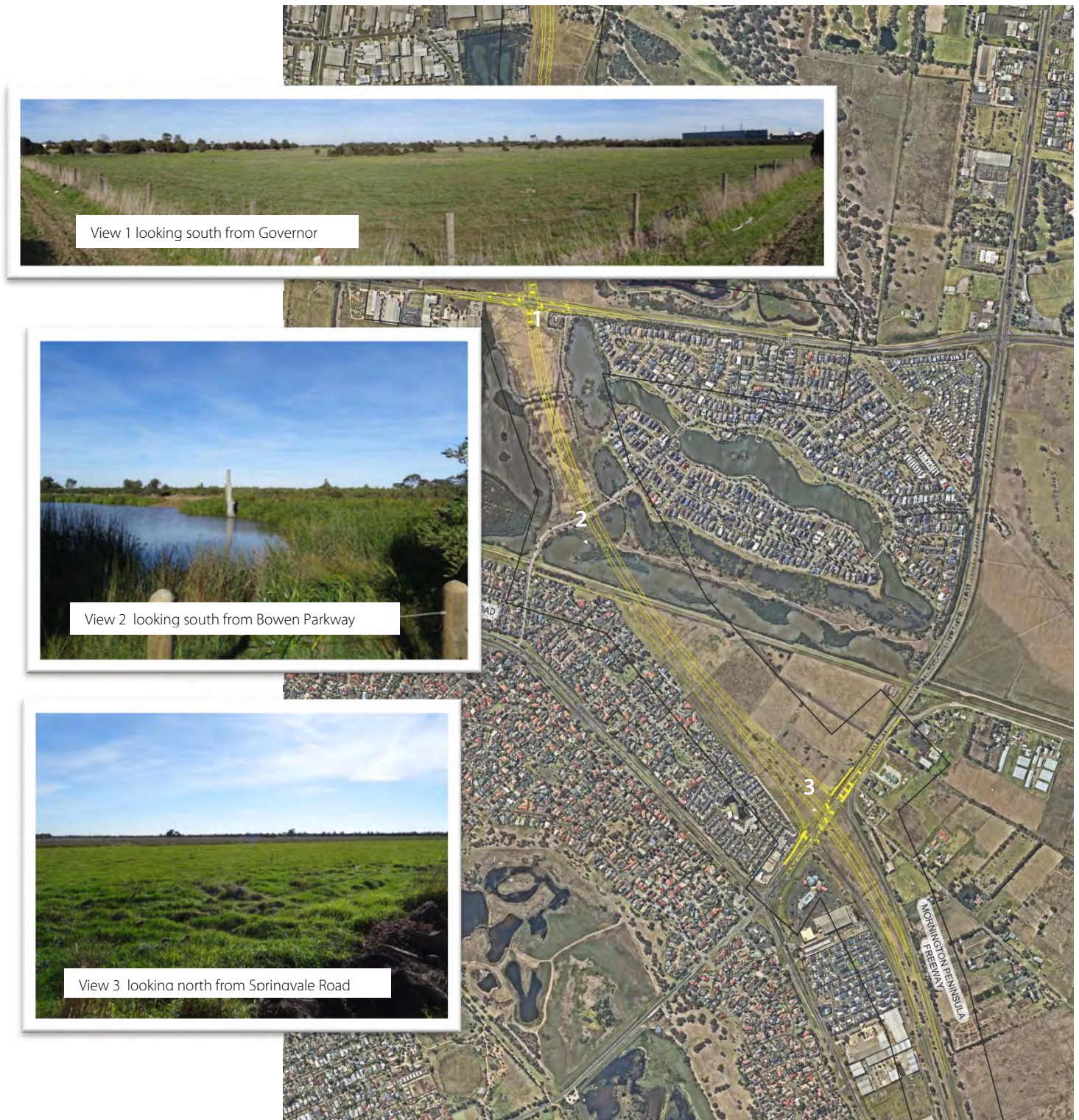


Figure 15 – Mordialloc Bypass alignment – Waterways Precinct

4 CONCLUSION

This desktop assessment (not a detailed technical assessment) highlights key values and issues that are likely to inform a consideration of landscape and visual quality values. There has been no comprehensive technical assessment of likely landscape and visual impacts and this will require further detailed analysis.

4.1.1 Planning framework values

1. The regional landscape is not known for its scenic quality and iconic views but views to existing green spaces are valued because of their scarcity and their 'framework' value.
2. Planning policy aspirations recognise that the current landscape is highly fragmented and degraded as a result of historical land use patterns and drainage changes. There is a focus on preservation and enhancement of what remains and in re-creating a pre-settlement landscape character where possible. This does not preclude more formal treatments in specific settings.
3. Any action which removes existing landscape features, such as wetlands and mature vegetation, or uses generic, non-site specific landscape treatments is likely to be seen as a negative, both in terms of the direct impact on the landscape character and visual quality of the setting and the related effect on the open space.
4. There is likely to be an increasing open space and recreational land use focus in the northern section of the municipality (Heatherton Road / Boundary Road location). Road corridors will be seen as an integral part of that open space system and the basis of a regional trail network.
5. Braeside Park is seen as an iconic landscape. Its treatment should be carefully managed.

4.1.2 Designated landscape & visual values

1. There are no Significant Landscape Overlays or similar areas of designated significance within the study area and existing landscape features appear to be of local significance only.
2. Based on the desktop review there are no landscapes of state level significance within the study area.
3. The arterial road alignment does not impact Port Phillip Bay coastal values, due to the distance of the alignment from coast and the nominal height of the bridge elevations over Mordialloc Creek are blocked by the surrounding built form.

4.1.3 Potential environmental effects

1. The landscape through which the road will travel has been significantly altered by clearing for development and farming leading to significant changes to surface drainage, resulting in a highly modified landscape that is likely to be of relatively low quality but with pockets of good landscape associated with Braeside Park and the wetlands associated with the Waterways estate.
2. The review of the reference design and alignment indicates that existing vegetation and wetlands will be cleared as a result of the construction but that landforms will only be minimally affected as the road is built on fill or structure.
3. There will be changes to the existing pattern of viewing and the quality of many residential and ground level views resulting from the road construction. This will adversely affect the level of amenity for residents and park users in particular.
4. The landscape of the northern and central sections of road alignment is likely to have a higher Visual Absorption Capability (VAC). The southern section of the road alignment where the elevated carriageway and wetland landscape type are present will have a lower VAC as the road

design characteristics will expose the road corridor to expansive views from relatively sensitive viewing locations (residential). In this setting, the effects of the visual change are likely to be high.

5. Open wetland landscapes will be more sensitive to change than treed landscape types. The southern end of the alignment will be the most sensitive to change and the most significantly affected. Within the Waterways precinct, where wetlands are removed or elevated structures are used, construction is likely to result in more significant impacts to the landscape and scenic quality values than areas affected by tree clearance alone.
6. Changes resulting from the road construction may affect landscape values in both a negative and positive sense – negative in terms of direct impacts (tree and wetland clearances) and potential changes to drainage patterns that may support nearby ecological systems (off site impacts). Positive changes may relate to the visual screening of existing land uses by roadside planting, new wetlands, linked park systems and new trail connections and ways of seeing the landscape.
7. WSUD can be integrated with existing wetland systems and networks across the study area.
8. Braeside Park is an iconic landscape feature that is likely to be adversely affected in terms of direct landscape effects (vegetation removal) and by changes to views and visual quality for park users.

4.1.4 Mitigation potential

1. The mitigation strategy could include direct mitigation of the effects of the alignment where they occur (planting and wetland replacement), as well as landscape and environmental rehabilitation works that offset effects by upgrading other places that benefit the open space network as a whole.
2. Tree removals and visual changes within treed landscapes are likely to be relatively effectively mitigated through open woodland planting. The northern parts of the alignment and the undeveloped green wedge areas to the south have the potential to be effectively mitigated by indigenous woodland planting.
3. The areas within the middle (Braeside Park) section of the corridor are likely to be substantially mitigated with planting. Implementation of the proposed Shared Use Path (SUP) connections and grade separated bridge will further enhance the recreational opportunities for the community.
4. The areas to the south (Waterways Wetlands) where the carriageway is elevated over the wetlands may require a combination of screen planting close to the view source and offset wetland planting for the areas affected. The elevated roadway structure allows for the development of additional connectivity with the trails and recreational opportunities to Braeside Park and Dingley village to the north.

5 APPENDIX – A -

Enlarged plans

- Figure 1
- Figure 12

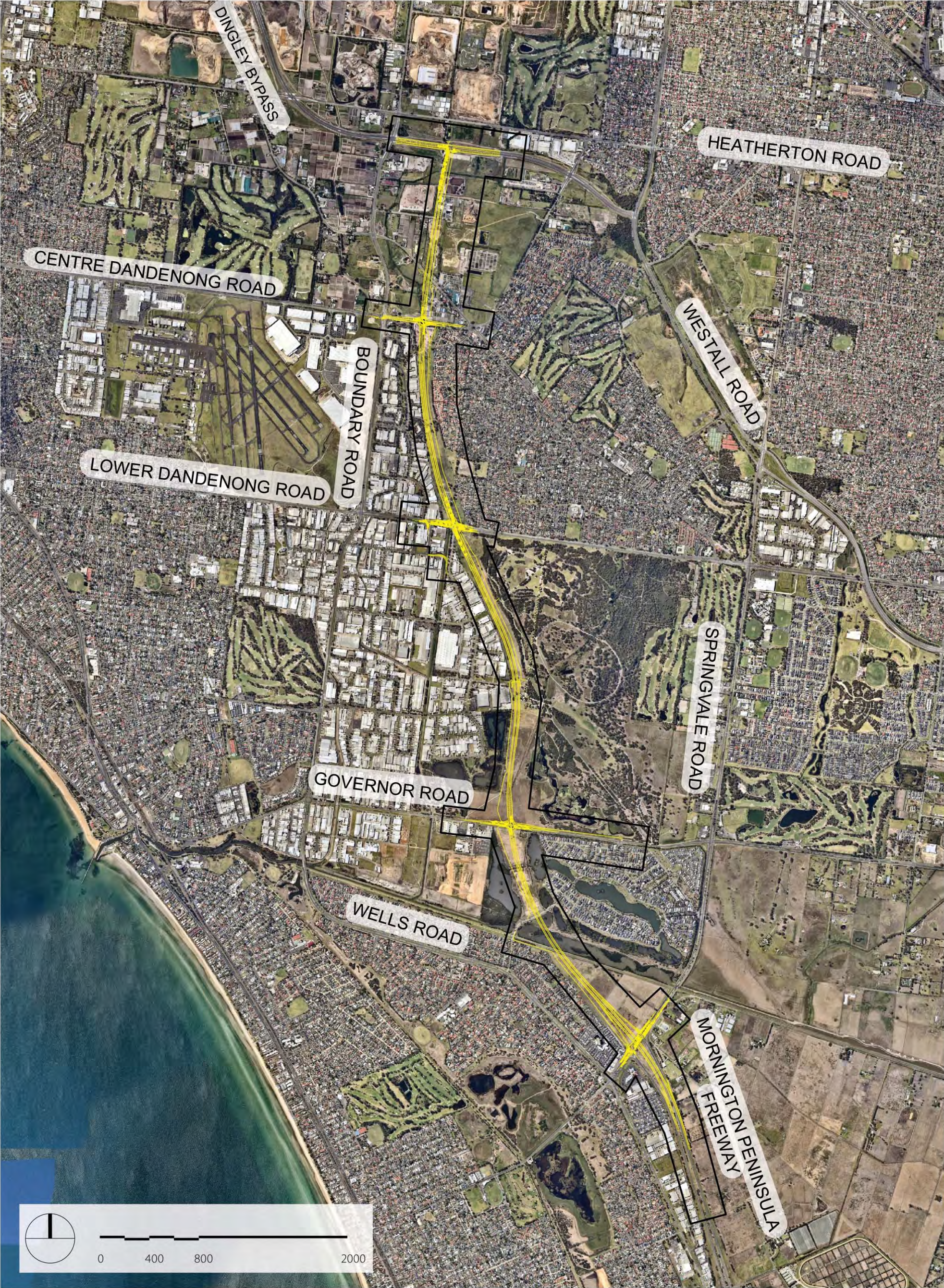


Figure 1 – Mordialloc Bypass alignment

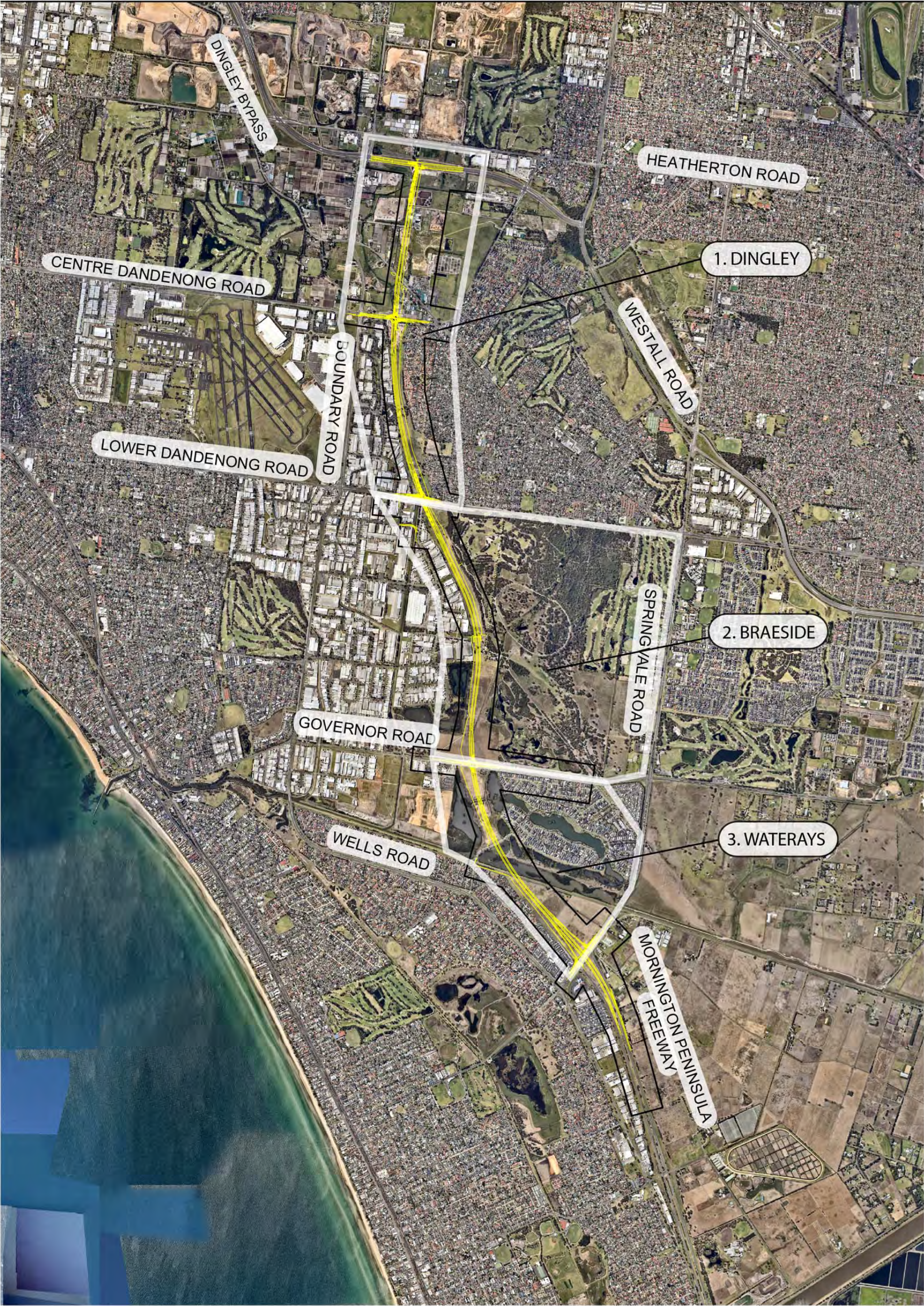


Figure 12 – Mordialloc Bypass alignment – Landscape Precincts