Waterways of the West

Urban Landscape Assessment

Maribyrnong River
Moonee Ponds Creek
Werribee River

TECHNICAL REPORT

VICTORIA State Government
Department of Transport and Planning

Accessibility

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Aknowledgement of Country

The Victorian Government proudly acknowledges the Bunurong, Wadawurrung and Wurundjeri Woi wurrung as the Traditional Owners of the Waterways of the West and pays respect to their Elders past and present. We acknowledge their ongoing connection to land, water and natural and built landscapes, and acknowledge the ongoing contribution this makes to the Waterways of the West region.

We support the need for genuine and lasting partnerships with Traditional Owners to support self-determination and the protection of Country. We are committed to working towards equity of outcomes and ensuring an equal voice for Traditional Owners.

We recognise the Waterways of the West as living and integrated natural entities: the rivers, creeks and wetlands and the landscapes through which they flow that form the Maribyrnong (Mirrangbamurn) River, Werribee River (Wirribi Yaluk) and Moonee Ponds (Moonee Moonee) Creek catchments. Their waters flow together from the uplands to the sea, supporting and bringing life to the region.

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The Victorian Government has put in place new landscape planning controls to protect the urban reaches of the Maribyrnong River, Moonee Ponds Creek and Werribee River as integrated landscape corridors

The significance of urban waterway landscapes

Waterways are at the centre of communities. They provide drinking water, places for leisure and recreation, landscapes and biodiversity. Waterways and their intrinsic qualities are also culturally significant to Traditional Owners.

Victoria is becoming warmer and drier and is now the fastest growing state in the nation. Climate change impacts are increasing and there is already less water available. Most water resources have reached their sustainable limits and the health of many waterways is declining or not significantly improving.

Communities expect healthy rivers, lakes and bays and they want to enjoy these places for recreation, particularly at priority sites, as do the many visitors to our state. The viability of many industries depends on water. Victorians want liveable cities and towns with trees and green spaces to cool the urban landscape, enhancing nature and biodiversity in the city. Given the significance of waterways to Traditional Owners, their values of water should be recognised and they must be involved in waterway planning and management.

These reasons underlie the significance of waterways to Victoria and all Victorians.

Purpose

This document provides the strategic and technical context behind the implementation of new Significant Landscape Overlay (SLO) controls, which aim to protect the amenity and environmental values of each waterway.

These controls apply across the following planning schemes

- Brimbank
- Hobsons Bay
- Hume
- Maribyrnong
- Melbourne
- Merri-bek
- Moonee Valley
- Wyndham.

These waterway corridors make a significant contribution to the liveability and ecology of Melbourne's west. Along with their associated parklands and many tributaries, they are places for community recreation and biodiversity conservation, and provide connection to nature. As Melbourne continues to grow and develop, it is critical that we safeguard these important values for the benefit of current and future generations.

Approach to new controls

In examining how best to protect urban waterway landscapes across Melbourne's west, a similar methodology to that used to protect the Yarra River corridor was employed, comprising a landscape and planning assessment. In summary, this comprised the following steps:

A landscape assessment was undertaken to understand the features, values and pressures on waterway corridor landscapes. This included:

- a literature review and assessment of existing approaches, in particular the Middle Yarra River and Lower Yarra River corridor studies (DELWP, 2016)
- nuanced viewshed* modelling to define functional waterway corridor study areas
- utilisation of a 3D digital terrain model to prepare viewshed assessment maps, including translated topographical (contour) data to show landscape exposure and sensitivity
- additional review against aerial photos and through field visits.

Together with the landscape assessment, an initial planning assessment was undertaken to understand existing planning policy and controls that apply to the study area. This included:

- review planning strategy and associated strategic documents
- review planning scheme provisions, including policies, zones and overlays

The planning assessment was subsequently compared with the landscape analysis and issues, gaps, threats and opportunities identified.

** A viewshed is a surface area visible from a given viewpoint (or series of viewpoints). The digital terrain model identifies maximum potential views using contour data, however it cannot factor in obstacles which may obstruct or reduce visibility, for examples trees and buildings. In areas of high visibility, aerial photographs and field visits were used to cross reference the analysis.*

Amendment VC201

The resulting SLO planning controls to protect the Maribyrnong River, Moonee Ponds Creek and Werribee River were implemented through Planning Scheme Amendment VC201.

Through the amendment, the overlays are supported by new regional planning policies in the Victoria Planning Provisions which recognise the significance and interconnectedness of all waterways in Melbourne's west. Further, to elevate the importance of Victoria's waterways, lakes and wetlands, state planning policy has also been updated to provide a stronger, clearer and more consistent policy framework for protection across the state.

As an action delivered as part of the broader Waterways of the West program, the SLO controls align with a community-developed vision for the region and respond to the importance of these riparian landscapes to their Traditional Owners. The controls will work together with changes to planning policies, as well as on-the-ground actions across the Water and Environment and Climate Action portfolios, so that we plan for and manage these waterways as integrated, living entities.

The focus of this document is the urban reaches of the Maribyrnong River, Moonee Ponds Creek and Werribee River, delivering a short-term action from the *Waterways of the West Action Plan* (DELWP, 2021). Similar controls have been developed for the Barwon (Parwan), Leigh (Waywatcurtan), Moorabool (Mooroobull) and Yarrowee (Yarowee) rivers as part of the *Rivers of the Barwon Action Plan* (DELWP, 2021).

Background

Stronger protection of waterways

These landscape planning controls respond to complementary actions in *Plan Melbourne* (2017)and the *Yarra River Action Plan* (2017). Relevant actions in Plan Melbourne include:

- Action 62: Planning provisions for the Yarra and Maribyrnong Rivers and other major waterways: Protect the natural landscape settings of Melbourne's major waterways by finalising stronger planning controls along the Yarra River corridor and consider expanding them to other major waterways including the Maribyrnong River.
- Action 63: Waterway corridor master plans: Prepare waterway corridor master plans for priority waterways to ensure that Traditional Owner and community values of waterways, such as access, amenity and connection to nature, are protected and improved.

The Yarra River Action Plan (2017) contains 30 actions to ensure the long-term protection of the Yarra River and its parklands, but also pointed to the need to protect other urban waterways. Key actions from the Yarra River Action Plan relevant to this project are:

- Action 28: Protect other urban rivers and their parklands, such as the Maribyrnong and Werribee rivers.
- Action 29: Identify the preferred open space footprint of Melbourne's key waterway corridors and in particular those under sustained growth pressure (e.g. Maribyrnong, Werribee and Barwon Rivers) and develop a plan to secure this.

Waterways of the West Ministerial Advisory Committee

Over an 18-month period, the committee worked with the community, Traditional Owners and industry in its examination of policy, planning, institutional, legislative and regulatory arrangements. It oversaw the development of the Waterways of the West Community Vision and presented its recommendations report to government in 2020. These included:

- state-led planning controls to protect environment, landscape and amenity
- improved strategic planning for waterways and parks.

Waterways of the West Action Plan

The Waterways of the West is a 50 year vision and plan aimed at ensuring Melbourne's western waterways are healthy and thriving for generations to come.

In response to community engagement and the recommendations of the Waterways of the West Ministerial Advisory Committee, the action plan is a transformational, five-year plan that will bring to life the 50-year vision developed by the community, with guidance from the Bunurong, Wadawurrung and Wurundjeri Woi wurrung Traditional Owners. It includes immediate actions to improve the health, amenity and sustainability of the waterways of Melbourne's west.

In delivering reforms and new protections, the action plan builds on the community's connections to their waterways, establishes the institutional arrangements needed to ensure an enduring legacy of waterway protection, and instil a new way of working with Traditional Owners and the community to walk together to heal Waterways of the West Country.

The action plan identifies land use planning actions to be delivered over a five-year period, including:

SHORTER-TERM ACTIONS

- **3.1** Protect waterways statewide through a strengthened planning policy framework, processes and supporting guidance
- **3.2** Protect and elevate the significance of the Maribyrnong (Mirrangbamurn) River, Moonee Ponds (Moonee Moonee) Creek and the Werribee River (Wirribi Yaluk) urban corridors through stronger landscape and environment planning controls and new regional policies.

LONGER-TERM ACTIONS

- **3.3** Protect the Maribyrnong (Mirrangbamurn) River, Moonee Ponds (Moonee Moonee) Creek and the Werribee River (Wirribi Yaluk) from inappropriate development with stronger built-form planning controls.
- **3.4** Review planning controls for the regional reaches of the Waterways of the West and prepare stronger planning controls for other significant waterways including Skeleton Creek, Stony Creek and Jacksons Creek.
- **3.5** Review interim planning controls to ensure the ongoing protection of waterways.

Study area: urban waterway corridor landscapes

The urban reaches of the Maribyrnong River, Moonee Ponds Creek and Werribee River are the focus of this report.

While the broader 'Waterways of the West' region describes the rivers, creeks, headwater streams and wetlands of Melbourne's west, including the Little River, Laverton Creek, Steele Creek, Kororoit Creek, Skeleton Creek and others, the urban corridor study areas of the Maribyrnong River, Moonee Ponds Creek and Werribee River are the focus of this report.

As shown in maps 1, 2 and 3, the corridor study areas were determined through a landscape assessment and topographical modelling – further outlined in this report. The study areas commence upstream at the urban growth boundary (UGB), and for the Maribyrnong River and Moonee Ponds Creek, conclude where these waterways meet the Yarra River in the port area.

For the Werribee River, the study area concludes where the river flows back outside the UGB into the Werribee South green wedge.

The urban waterway corridors are experiencing the most pressure from urban development, and the impacts of the growing demand for housing and employment across Melbourne's west.

MARIBYRNONG RIVER URBAN CORRIDOR

- Approximately 30km in length
- Brimbank, Maribyrnong, Melbourne and Moonee Valley planning schemes*
- Referenced in approximately 20 regional strategies

MOONEE PONDS CREEK URBAN CORRIDOR

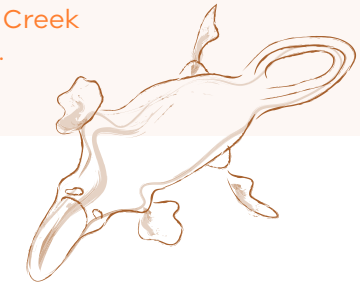
- Approximately 16.5km in length
- Hume, Melbourne, Moonee Valley, Merri-bek planning schemes*
- Referenced in approximately 19 regional strategies

WERRIBEE RIVER URBAN CORRIDOR

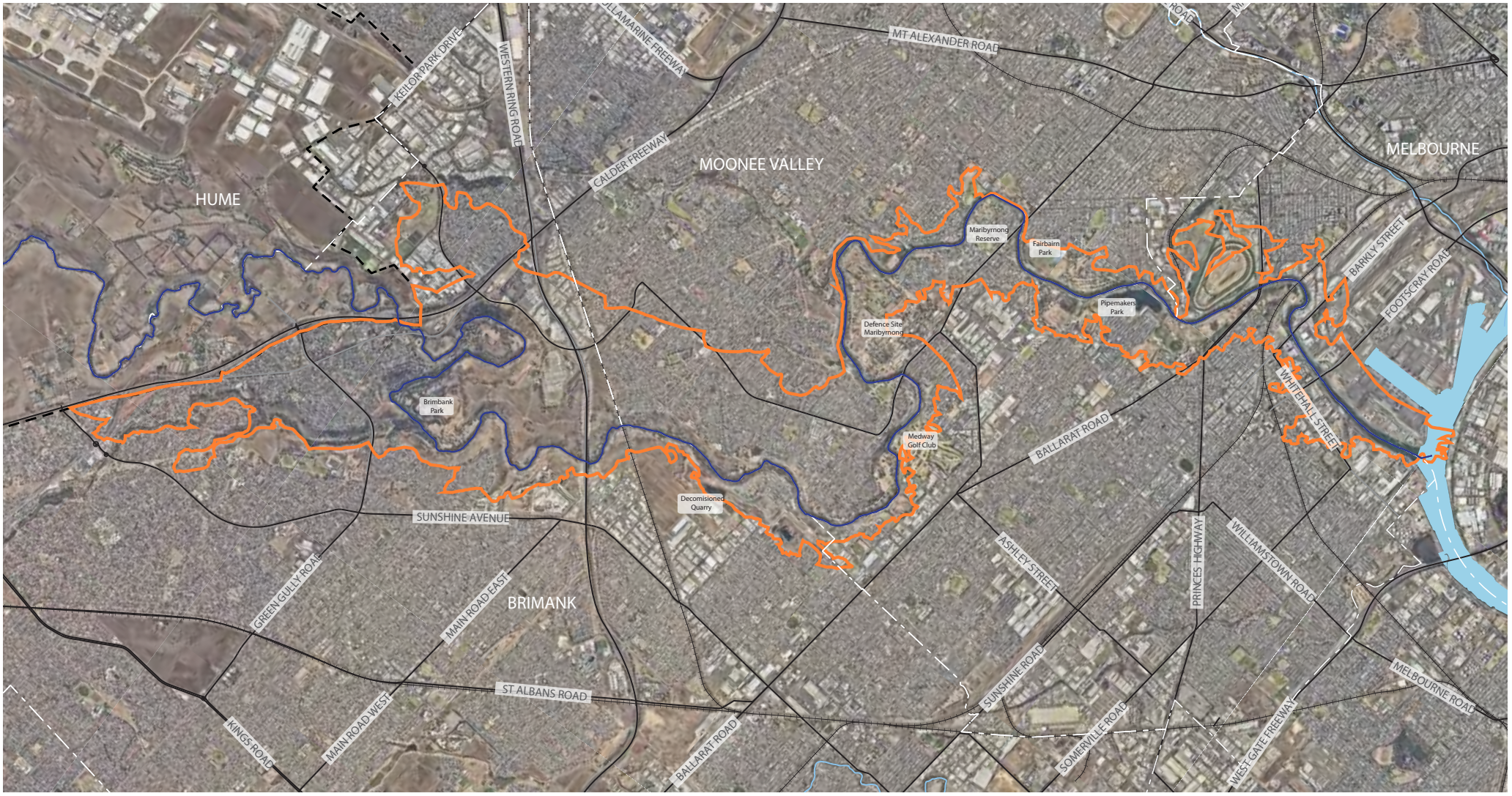
- Approximately 17.3km in length
- Wyndham Planning Scheme
- Referenced in approximately 23 regional strategies

** Note that the Port of Melbourne Planning Scheme was excluded from this assessment.*

While the urban waterway corridor landscapes of the Maribyrnong River, Moonee Ponds Creek and Werribee River are the key focus of this report, the *Waterways of the West Action Plan* also includes longer term actions to investigate opportunities to strengthen protections for the other waterways across the region, and to examine upstream reaches – including the Maribyrnong River's headwaters of Deep Creek and Jacksons Creek.

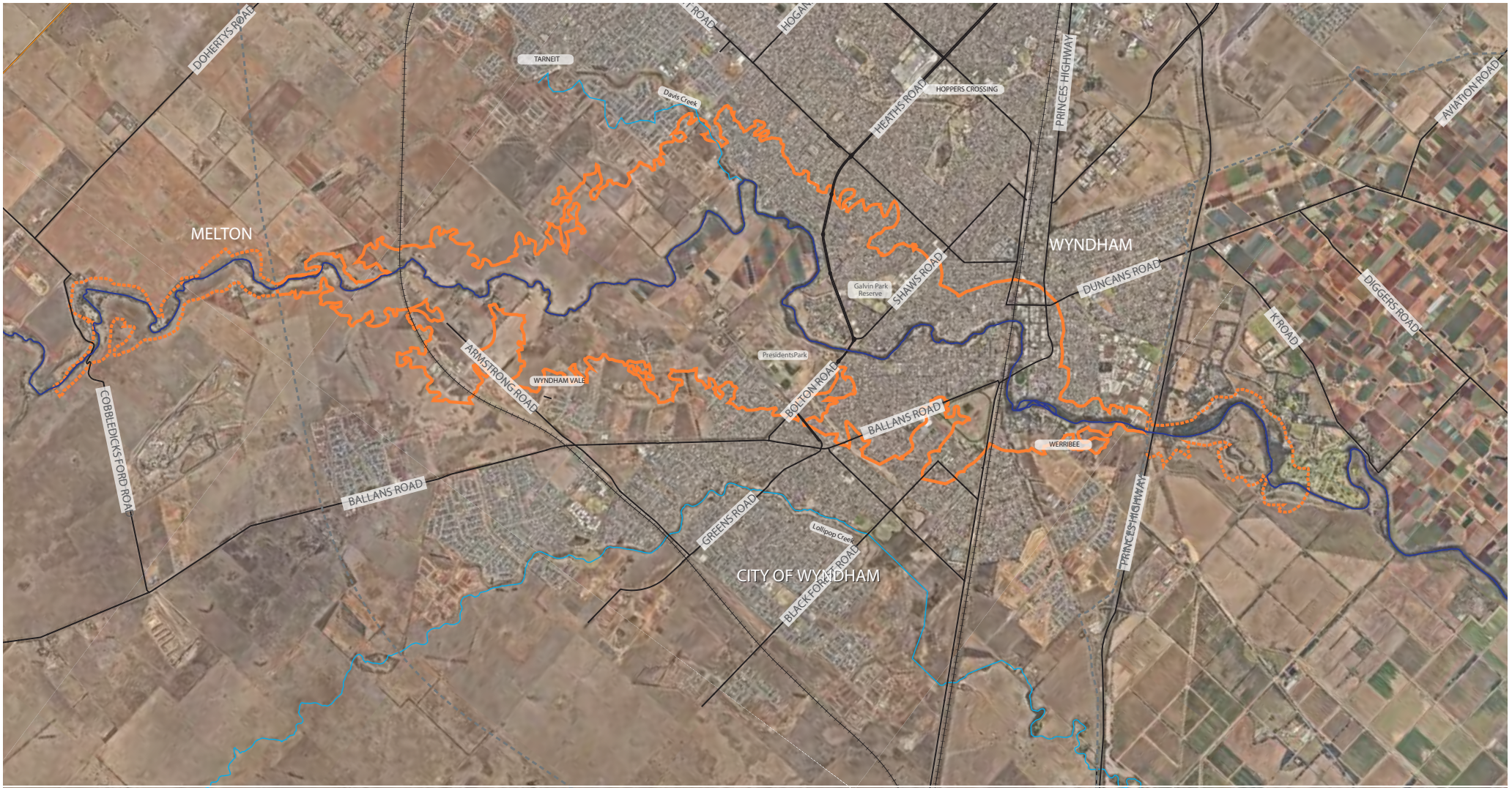


MAP 1: MARIBYRNONG RIVER STUDY AREA



MAP 2: MOONEE PONDS CREEK STUDY AREA

MAP 3: WERRIBEE RIVER STUDY AREA



Our vision for the Waterways of the West

In preparation for the Waterways of the West Action Plan, a landmark community vision was established. It is the first, overarching, long-term vision for this complex, connected, living system of waterways and parklands.

People from across the west came together to create the vision, which represents their aspirations and expectations for the protection of the waterways. The vision is intended to guide policymakers, waterway and land managers and the community as we walk together with the Wurundjeri Woi wurrung, Bunurong and Wadawurrung Traditional Owners of the Waterways of the West and their lands over the next 50 years.

Overall vision

Our vision is for healthy, diverse and sustainable waterways throughout our west. As a diverse community we care for its interconnected rivers, creeks and landscapes. Respectfully acknowledging and embracing the cultural values of the Bunurong, Wadawurrung and Wurundjeri Woi wurrung Peoples, we walk together to care for Country.

The Bunurong, Wadawurrung and Wurundjeri Woi wurrung Peoples cared for Country in many different ways and for all living things. Working collaboratively, the people of the west protect and celebrate these unique and interconnected waterways.

The Maribyrnong (Mirrangbamurn) and Werribee (Wirribi Yaluk) rivers, and their surrounding creeks and tributaries, run cleanly. They're filled with abundant life. Their banks teem with native plants and animals. Crystal clear in the forested hills, the water flows through volcanic grassy-plains under big skies. It seeps into and sustains wetlands, travels down through farms, between homes and into internationally-recognised salt marshes, ending its journey in Port Phillip Bay.

Along these waters we see birds – like Reed Warblers and Rainbow Bee-eaters – nesting along the creek banks, migratory birds from as far as Alaska and Siberia stop and rest in the salt marshes. Tawny frogmouth chicks are spotted by passers-by and the air is filled with the chorus of Growling grass frogs and pobblebonks. We respect and value what the waters provide us: the food they help us grow; and the places that nurture our wellbeing, whose beauty we enjoy. It's where we meet and gather, reflect, run, walk and play.

WoW - it's the emotion evoked by the Waterways of the West.

Vision for cities, suburbs and towns

From Sunshine to Spotswood, Melton to Werribee South, Macedon to Footscray, communities connect and flow through our water corridors. In Footscray Park, Point Cook Coastal Park, Birmingham Reserve and many other parks along our waterways, we see families from different cultures gathering and celebrating. Communities are interacting in harmony with the natural environment, joggers, cyclists commuting to and from work. We hear people laughing together with the sounds of children splashing in the water, frogs croaking, birds singing and the hum of urban life.

Along waterways in our cities and towns, like Moonee Ponds (Moonee Moonee) Creek, cyclists pass protected natural areas with native vegetation and wildlife. Urban development is designed to protect and improve the health of the creek. Communities are proud of their contribution to restoring and growing landscapes that enhance the wellbeing of people and the environment.

We wander through hidden natural refuges, pockets of greenery, a place to escape from the city and along the way we are reminded of the layers of history and different lessons of the waterways.

2// PLANNING ANALYSIS

2// PLANNING ANALYSIS

This section provides an overview of the strategic and statutory planning context in which new controls for the Maribyrnong River, the Moonee Ponds Creek and the Werribee River were developed.

Strategic context

Several key studies and strategies have been undertaken in relation to protecting and guiding development along the riparian corridors and provide the background to this project. The key strategies are listed below, with other relevant strategies summarised in the partner appendices document, produced together with this report.

Plan Melbourne 2017 - 2050

STATE GOVERNMENT, 2017

The Plan recognises the need to continue to protect Melbourne's open space waterway corridors from inappropriate development to ensure that these significant values provided to Melbourne and its residents are maintained and enhanced over time (Directions 4.1, 6.3, 6.4, 6.5).

Plan Melbourne sets the broader framework for State Government to develop partnership with local governments and key stakeholders to prepare and implement planning controls to protect Melbourne's metropolitan waterway corridors.

Maribyrnong River Valley Design Guidelines

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT), 2010

These guidelines provide an overarching planning framework to guide the development and management of the river environs with a focus on sustaining river health and habitat protection, enhancing existing parkland and open space, and promoting tourism and recreation opportunities. The document highlights specific, spatially-based priority actions for implementing the vision for the waterway corridor. The guidelines tend to be location-specific and are intended to reinforce the preferred character within the study area.

The guidelines recommended that each municipality should incorporate or reference the guidelines within their planning schemes in order to implement the latest vision and current design guidelines to guide future land-use and development along the waterway. It also recommended that existing Environmentally Significance Overlays (ESO) and other overlays, including Design and Development Overlays (DDO), should be rationalised and revised to better reflect the design guidelines outlined in the strategy document.

Maribyrnong, Melbourne and Moonee Valley City Councils reference the guidelines within their planning schemes to facilitate development in line with the guidelines.

Maribyrnong River Master Plan

CITY OF MOONEE VALLEY, 2011

The Master Plan outlines the long term vision and built form guidelines for the design, development and management of the eastern Maribyrnong River corridor within the City of Moonee Valley. It requires works within the study area to comply with the Maribyrnong River Valley Vision and Design Guidelines (2010).

Chain of Ponds: Moonee Ponds Creek Plan

CHAIN OF PONDS COLLABORATION, 2018

This plan provides a long-term strategic framework to direct the future planning and management of the Moonee Ponds Creek corridor. It provides an assessment of existing creek conditions, identifies opportunities and constraints and identifies strategic recommendations to deliver the objectives of the plan.

Moonee Ponds Creek Strategic Plan

MOONEE PONDS CREEK COORD COMMITTEE, 2011

This strategic plan outlines a framework for the planning, development and management of the waterway corridor across municipal boundaries. It provides an overview of the study area, its environmental setting (in terms of biodiversity, landscape, land-use), as well as recommendations for changes to the existing planning controls affecting the creek corridor.

Moonee Ponds Creek Strategic Opportunities Plan

CITY OF MELBOURNE, 2019

This plan outlines the vision for the future development of the lower reaches of the Moonee Ponds Creek corridor and provides an overview of the existing challenges facing the Moonee Ponds Creek revitalisation. It sets a strategic vision and identifies future opportunities for project implementation along the creek interface including a number of built environment and landscape interventions along the creek corridor.

Planning policy and tools

A range of state and local level planning scheme policies and controls apply to the study area to manage development, while public land and open spaces along waterways are typically managed by Parks Victoria, Melbourne Water or councils

This section outlines relevant planning policies, tools and other provisions that affect the study. These include:

- State Planning Policy at Clause 12.03-1S (River corridors, waterways, lakes and wetlands)
- Policies regarding the waterways in the Municipal Planning Strategy or local policies of each planning scheme
- A range of urban, rural and public zones that relate to uses or development along the waterways

A range of overlay controls that relate to specific management issues including landscape, environment, flooding and built form, and providing for public acquisition.

State planning policy

Relevant state-level policies found in the Victoria Planning Provisions (VPP) include:

- Clause 12.01-S (Protection of biodiversity) encompasses specific State policy on biodiversity, which contains an objective: 'to assist the protection and conservation of Victoria's biodiversity'.
- Clause 12.03-1S (River corridors, waterways, lakes and wetlands) encompasses policy on river corridors waterways, lake and wetlands, and contains an objective: 'to protect and enhance river corridors, waterways, lakes and wetlands'.
- Clause 12.05-1S relates to environmentally sensitive areas in Victoria, notably including the Maribyrnong River.
- Clause 14.02-1 (Catchment Planning and Management) which aims to 'assist the protection and restoration of catchments, water bodies, groundwater, and the marine environment. In relation to built form, it seeks to retain natural drainage corridors with vegetated buffer zones at least 30m wide along each side of a waterway.
- Clause 14.02-2S (Water quality) specifically relates to water quality and seeks to protect the health of waterways and waterbodies, and ensure that development and land use activities are appropriately sited to avoid adverse environmental impacts on the quality of water within the surrounds.

Local planning policy

The Maribyrnong River, Moonee Ponds Creek and Werribee River are generally identified as key environmental features for municipalities within the relevant Municipal Strategic Statements, which highlight them as important environmental and recreational assets with landscape significance. Examples of such references includes:

- Brimbank Planning Scheme - Clause 21.05 (Natural Environment)
- Hume Planning Scheme - Clause 21.08 (Natural Environment and Environmental Risk)
- Maribyrnong Planning Scheme - Clause 21.05 (Environment and Landscape Values)
- Melbourne Planning Scheme - Clause 21.05 (Environment and Landscape Values)
- Moonee Valley Planning Scheme - Clause 02.04 (Strategic Framework Plans)
- Moonee Valley Planning Scheme - Clause 12.03-1L (Maribyrnong River and creek corridors)
- Wyndham Planning Scheme - Clause 02.03 (Strategic direction)
- Wyndham Planning Scheme - Clause 12.05-2L (Wyndham landscapes)
- Wyndham Planning Scheme - Clause 13.03-1L (Floodplain management)

A detailed summary of the above policies is provided in a partner appendices document, produced together with this report.

Particular and general provisions

A range of particular provisions form part of the VPP and are part of all planning schemes. Some of these provisions have relevance to waterway corridors within the study area, particularly if certain types of land-use or development are proposed within immediately proximity. The relevant particular provisions are briefly summarised as follows:

- Clause 52.08 – Earth & Energy Resources Industry – this clause would have specific relevance should any mineral extraction proposals within the riparian corridor study areas be proposed.
- Clause 52.09 –Extractive Industry and Extractive Industry Interest Areas – the decision guidelines of Clause 52.09-4 highlight that the responsible authority must consider the impact of the proposed use and development of land on the surrounding biodiversity, landscape, water quality and other environmental values.
- Clause 53.18 – Stormwater Management in Urban Development – the decision guidelines of Clause 53.18-7 highlight that the responsible authority must consider whether stormwater discharge from the application site will adversely impact on water quality entering the drainage system, which includes watercourses, creeks and rivers.

Zones

A wide range of urban, rural and public uses zones apply along the riparian and set out controls regarding the use or development of land. The zones that apply within the study area are described and mapped in a partner appendices document, produced together with this report.

Overlays

Overlay controls located along riparian corridors which make up the study area typically implement a specific policy direction. They provide a permit trigger for particular uses or development and may specify built form outcomes. More detail regarding each overlay can be found in the partner appendices documnent, however a summary of the key overlays is provided below.

- Design and Development Overlay (DDO): identifies areas which are affected by specific requirements relating to the design and built form of new development. The DDO has been applied along some sections of riparian corridors to manage built form that interfaces with the waterways. This overlay applies in: Brimbank, Hume, Maribyrnong, Melbourne, Merri-bek, Moonee Valley and Wyndham.
- Significant Landscape Overlay (SLO): identifies, conserves, and enhances the character of significant landscapes. The SLO has been applied along some sections of riparian corridors to protect the corridor landscape. This overlay applies in: Brimbank.
- Environmental Significance Overlay (ESO): identifies areas where development of land may be affected by environmental constraints and should protect identified environmental values. The ESO is commonly applied, with other overlays, along riparian corridors to areas of particular environmental significance. This overlay applies in: Brimbank, Hume, Maribyrnong, Melbourne, Merri-bek, Moonee Valley and Wyndham.

Public land management

The extensive areas of Crown and other public land within the study area are subject to individual public land management plans. These are administered by the relevant authority, which may include Melbourne Water, Parks Victoria or councils. In most instances, for development on public land which is consistent with the relevant management plan and the zone provisions, a permit is not required.

While overlay controls are not usually applied to lands in public ownership, given the sensitive nature of the waterway corridors, and an overarching objective to protect an integrated landscape, areas of public land are included in this study. Reasons for this include the identification of a continuous, integrated waterway corridor landscape, the environmental and ecological significance of public land parcels, the capacity for public parcels to be leased or licenced for private investment and development, the capacity for public land to become freehold land through future sale, and to provide direction for the proper siting, design and integration of public works developments (e.g. sheds, depots and pavilions).

The inclusion of public land in this study is consistent with landscape assessments and planning controls implemented along the Yarra River, and at other locations across Victoria.

Analysis and discussion

Through review of existing planning policy, strategy, zone and overlay provisions that apply in the study area, we have identified key issues that affect how development is managed, how landscapes and enviroments are protected and how land is managed.

State Planning Policy

The use of planning policy is effective in reinforcing key issues and initiatives at a state, regional and local level. The main function of a policy is to set out the strategic basis for the application of a provision and, where appropriate, guide the exercise of discretion under other provisions.

At the state level, the VPP provides a suite of planning policies, particular provisions, zones and overlays, in addition to a number of planning advisory notes and practice notes. These state-level policies and provisions generally relate to the protection and enhancement of the environmental, cultural and landscape values of waterways and highlight the importance of water catchment planning and management to safeguard the health of waters and associated biodiversity. The state level policies and provisions broadly outline relevant requirements and directions for land use and development which occurs within and alongside the riparian environs.

A large volume of state and regional strategic work has been undertaken which focuses on an assessment of the riparian corridors and their environs as well as the general landscape character across various municipalities in Melbourne. However, at state level there is limited translation of these strategies into planning policy.

There are also inconsistencies in the application of existing strategies at a regional level. Therefore, there is a clear role for improved and consistent policy to be provided within the three tiers of the VPP, including state, regional and local levels.

Current application of environment and landscape controls

There is inconsistent coverage of environment and landscape controls along the riparian corridor environs. The only location where an SLO control applies is in a small section of the upper reaches of the Maribyrnong River (Brimbank). The ESO is more widely used across the study area, but there are also noticeable inconsistencies across municipalities with regards to its application.

Some municipalities have adopted a proactive approach to applying ESOs to the entire extents of significant waterways and wetlands, while in other municipalities, ESO coverage contains gaps or is missing for certain waterway corridors.

An analysis of current ESO coverage in is provided below. In summary, there is clearly a lack of an integrated, regionally-based approach to applying the controls along the entire extent of riparian corridors, crossing different municipality boundaries. It is therefore recommended that a consistent overlay is applied to significant waterways within the study area.

It may be possible to appropriately reconcile and consolidate the relevant existing ESOs and apply it to areas which currently do not have an ESO. However, it would be necessary to investigate the ecological and biodiversity values and conditions to ensure the control is appropriately targeted.

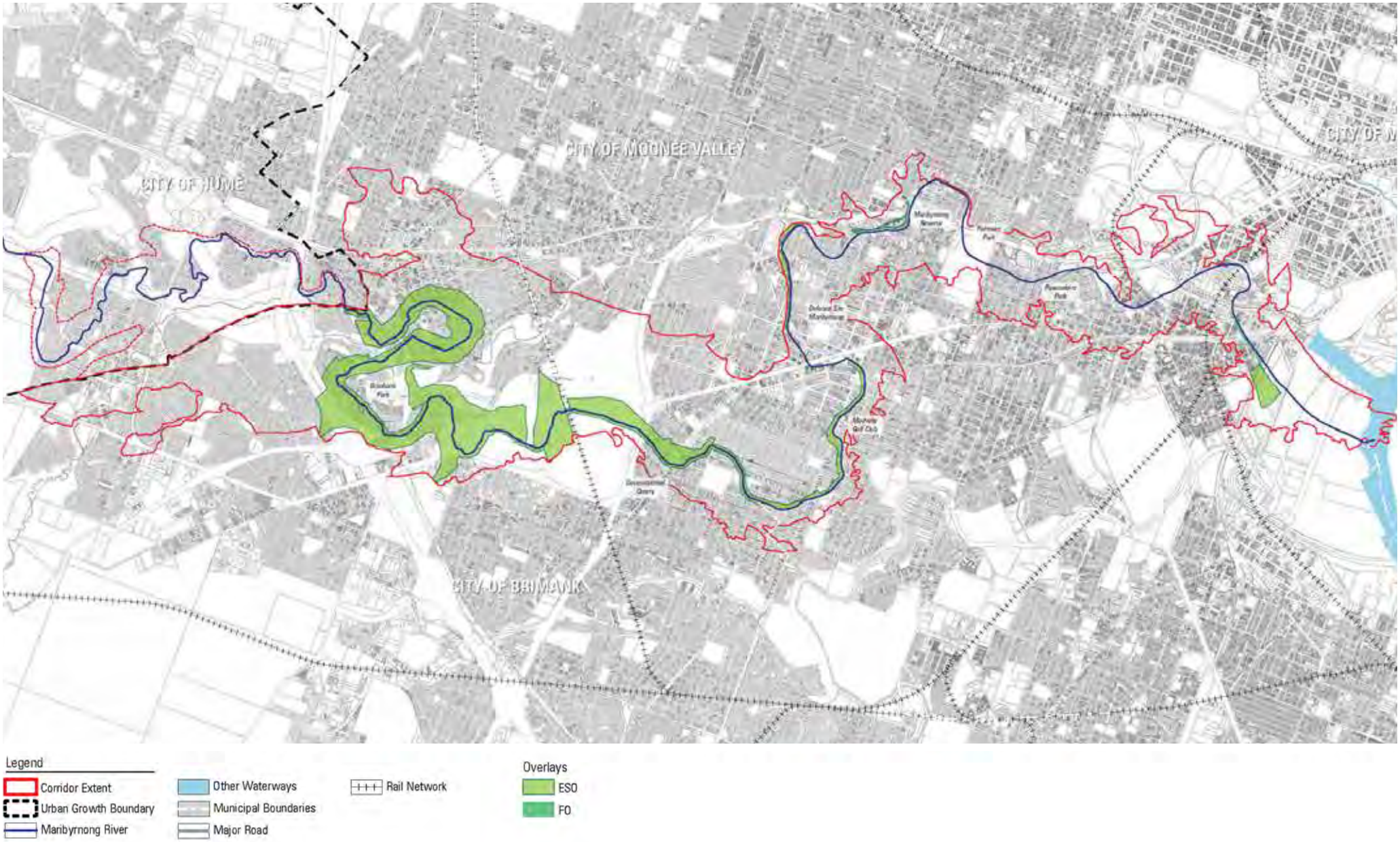
Existing ESO controls: Maribyrnong River

The ESOs that currently apply to the Maribyrnong River are as follows:

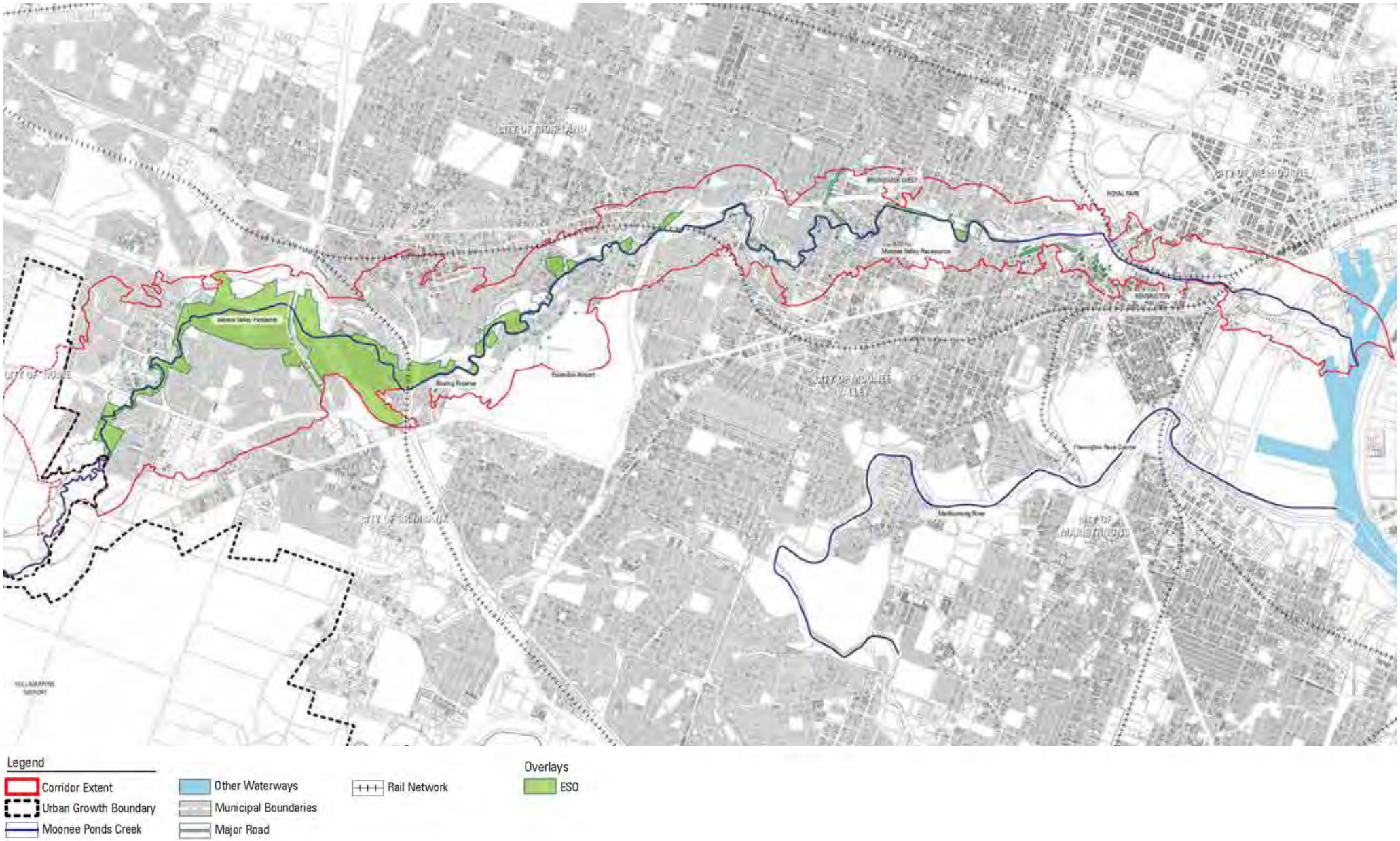
- The Brimbank Planning Scheme includes ESO5 (Maribyrnong River Valley & Environs) which extends along the entire length of the Maribyrnong River corridor within Brimbank. ESO5 references the Maribyrnong River Valley Design Guidelines (2010).
- The Moonee Valley Planning Scheme includes ESO3 (Upper Maribyrnong River; Maribyrnong River Escarpment; Steel Creek Escarpment) which is applied to the Upper Maribyrnong River corridor. There is a gap in the overlay along the Upper Maribyrnong River environs between Canning Reserve and the Maribyrnong River Escarpment. In addition, the ESO does not extend along the Lower Maribyrnong River corridor between the Maribyrnong River Escarpment and Flemington Racecourse. ESO3 does not reference the Maribyrnong River Valley Design Guidelines (2010).
- The Maribyrnong River Design Guidelines (2010) recommends that new ESOs should be applied to each municipality along the Maribyrnong River to implement the Guidelines (2010). The Maribyrnong and Melbourne Planning Schemes currently omit ESOs for the Maribyrnong River corridor.

No ESOs currently apply within Maribyrnong and Melbourne Planning Schemes.

MAP 4: MARIBYRNONG RIVER ESO



MAP 5: MOONEE PONDS CREEK ESO



Existing ESO controls: Moonee Ponds Creek

The ESOs which currently apply to Moonee Ponds Creek, are:

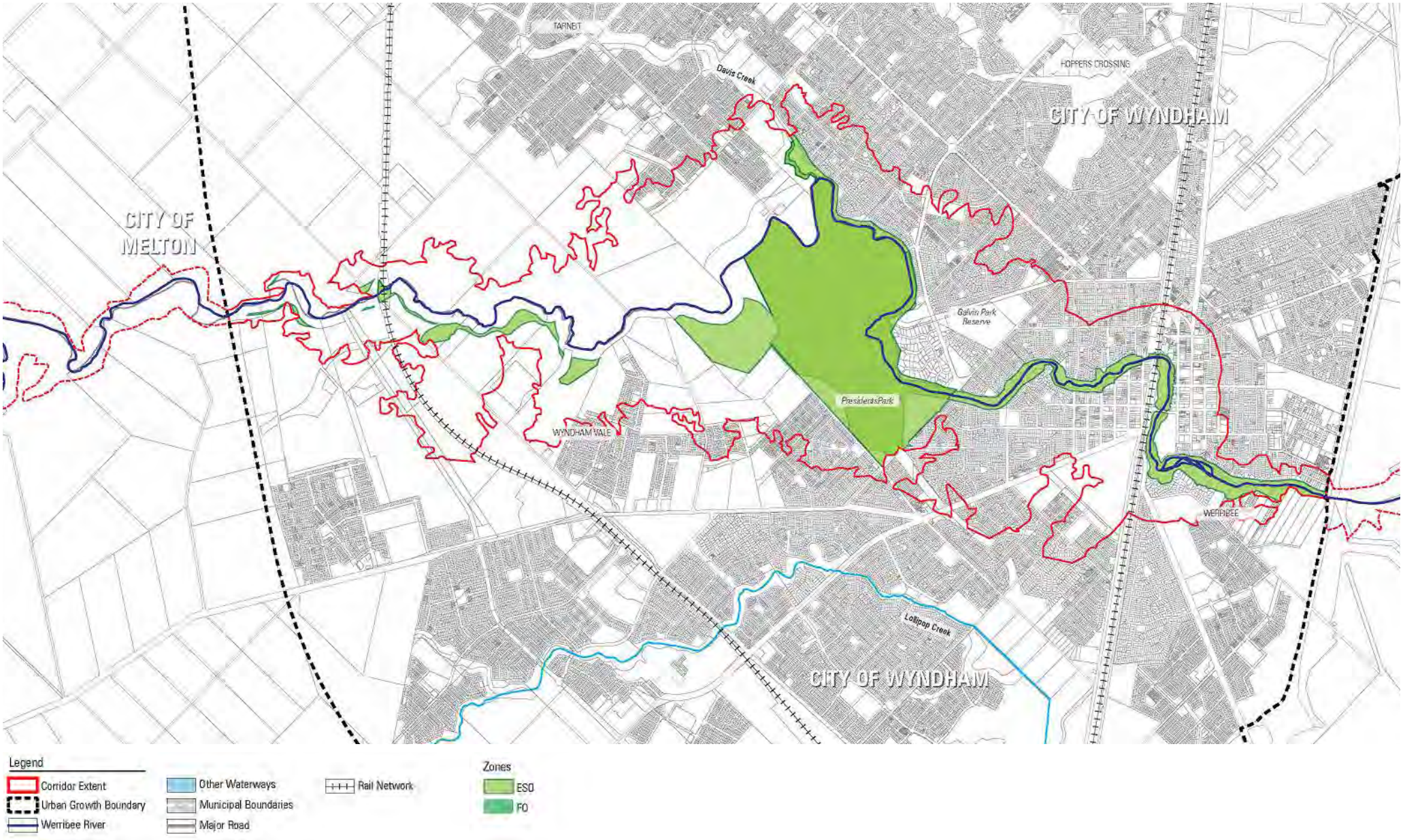
- The Merri-bek Planning Scheme includes ESO2 (Moonee Ponds Creek and Environs) which extends along the entire length of Moonee Ponds Creek within Merri-bek. ESO2 references the Moonee Ponds Creek Concept Plan (1992), even though this has been superseded by the Moonee Ponds Creek Strategic Plan – Final Report (2011) and Chain of Ponds – Moonee Ponds Creek Plan (2018).
- The Moreland Open Space Strategy 2012- 2022 (2012) recommends that the existing ESO2 is reviewed to ensure that effective protection is provided for the Moonee Ponds Creek.
- The Hume Planning Scheme includes an ESO2 (Merri Creek and Moonee Ponds Creek and Environs) which extends along the length of Moonee Ponds Creek within the Urban Growth Boundary. ESO2 references the Moonee Ponds Creek Concept Plan (1992), even though this has been superseded by the Moonee Ponds Creek Strategic Plan – Final Report (2011) and Chain of Ponds – Moonee Ponds Creek Plan (2018)
- The Chain of Ponds – Moonee Ponds Creek Plan (2018) recommends that a new ESO applying to the entire extent of the creek should be developed and implemented to protect its environs. However, the Melbourne and Moonee Valley Planning Schemes currently omit ESOs for the Moonee Ponds Creek corridor and both schemes fall silent on introducing a new ESO applying to the creek corridor.

Existing ESO controls: Werribee River

The ESOs which currently apply to the Werribee River, in addition to strategic documents which make recommendations regarding the ESO application are as follows:

- The Wyndham Planning Scheme includes an ESO1 (Waterway Corridors) which is applied to the Werribee River corridor. ESO1 covers the extent of the lower reaches of Werribee River between the Riverbend Historical Park (west of Hoppers Crossing) and Werribee South Foreshore. However, the ESO1 is inconstantly applied to the waterway corridor in its upper reaches north of Ballan Road between the Riverbend Historical Park and the Urban Growth Boundary.
- The Wyndham Landscape Context Guidelines (2013) recommends that Wyndham City Council review its existing ESO1 to extend the application of the ESO1 to ensure that it encompasses the entire reaches of the waterways, including Werribee River, as well as other waterways and significant wetlands.
- The Werribee River Biolinks Action Plan – Volume 1 (2012) and Appendix A – Werribee River Desktop Report (2010) recommends that any planning scheme amendment to implement the findings of the Biolinks Action Plan should build on the existing ESO provisions and ensure the ESOs are informed by the Biolinks Action Plan.

MAP 6: WERRIBEE RIVER ESO



Improving connections

There is a clear consensus within the existing strategies and policies that councils are seeking to improve the existing trail networks (including shared pedestrian / cycle trails), biolink corridors and open space network corridor connections along the various waterways. This strategy is reflected in the existing transport and open space strategy documents as well as master plans and precinct structure plans. A number of the strategies and policies seek to enhance the existing key trails within the study area.

The existing strategies also identify gaps in the existing regional trail network / open space network coverage and provide recommendations to enhance these networks.

Summary

There is increasing urban and non-urban land use and development growth pressures within the study area. These pressures extend across municipal boundaries, with each municipality applying a slightly different approach. Accordingly, there is a need to strengthen the strategic links between land use planning and waterway management, both along the river corridors and across municipal boundaries.

In many locations along the Maribyrnong River, Moonee Ponds Creek and Werribee River, overlay planning controls to protect the river corridors have been inconsistently applied – or not applied at all.

Based on the planning assessment, there is a clear opportunity to implement a more consistent approach to protect riparian corridor values across municipal boundaries and in recognition of these waterways and their parklands as significant, integrated landscapes.

3// LANDSCAPE CHARACTER ASSESSMENT

3// LANDSCAPE CHARACTER ASSESSMENT

While the Maribyrnong River, Moonee Ponds Creek and Werribee River are often characterised by their basaltic, volcanic plain landscapes, their urban reaches vary greatly. Assessing landscape character provides a key insight into the diversity of waterway corridor landscapes and the impacts of development over time.

Methodology

To assess the landscape character of the study areas, we reviewed land data, aerial photography and GIS (geographic information system) mapping, before conducting field visits to document the existing landscape character of the waterway corridors. Utilising these inputs, we undertook:

- **Character mapping:** in order to provide an understanding of land use and landscape character within the study areas, describing each character type evidenced along the waterway corridors.
- **Landscape value mapping:** to assign value to each character type, based on the methodology outlined in the *Visual Landscape Planning in Western Australia* (Department for Planning and Infrastructure, 2007) manual, providing an evidence-based approach to the determination of landscape value and, subsequently, landscape visual sensitivity.
- **Visual exposure analysis:** to identify the relative levels of visual exposure along the waterway corridors, viewshed modelling was employed and mapping generated to describe which areas are the most visually exposed within the waterway corridors.
- **Visual sensitivity analysis:** to identify the areas within the waterway corridors that are the most sensitive to change, and hence require the most attention with respect to planning controls aimed at protecting identified landscape values.

Corridor Extent

To establish the functional extents of the river corridors, as outlined in maps 1-3, viewshed mapping was prepared using 10 metre contours. These maps were modelled from the perspective of a person standing at the water's edge, to the extent of a person's field of vision (see Figure 1).

Viewpoints taken at one kilometre intervals provide a range of viewsheds that, when merged, spatially define the corridor viewshed extent. The identified areas are the study areas for this report.

Landscape character typologies

Across the study areas, five common landscape character typologies were identified in each waterway. These are:

- Suburban Development
- Waterway Parkland
- Industrial Land
- Active Recreational Open Space
- Waterway Corridor

These character typologies – and the landscape and development contexts along each waterway – are assessed in the following sections.

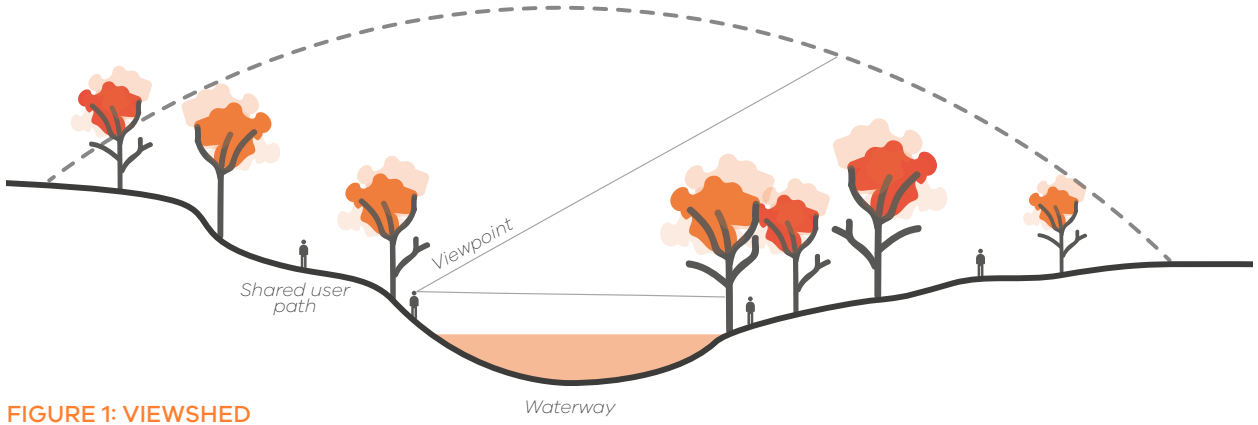


FIGURE 1: VIEWSHED

Landscape Character Assessment: Maribyrnong River (Mirrangbamurn)

The Maribyrnong River extends from Keilor to Docklands through suburban Melbourne for approximately 30 kilometres The topography of the waterway at its source is formed by the volcanic geology of the region. Much of the undulating topography of the upper reaches consists of volcanic terraces and floodplains towards the north west. The Maribyrnong River has a shared user path network for most of its length, from Brimbank Park, Keilor to Footscray Road, Footscray.

Character: Suburban Development

KEY FEATURES

- Established residential areas especially around Sunshine north and Avondale Heights
- Schools and local institutional land use
- Local active public open space, that are not adjacent to waterways

Suburban development makes up most of the area within the Maribyrnong River corridor extent, being most prominent in the middle section of the waterway corridor.

The appearance of the Suburban Development character type is predominantly low density built form. This includes properties with established gardens and nature strips with mature street trees – for example, in Garden Avenue, Keilor.

The existence of stretches of public open space along the Maribyrnong River has resulted in extended areas of the waterway extent being shouldered from some development impacts.

PATTERN OF VIEWING

In older established areas, streets do not generally front onto the Maribyrnong River, with properties 'turning their back' to the waterway. As a result, the rear fences of properties severely restrict views from the river corridor. In contrast, newer neighbourhoods are generally designed to front the Maribyrnong River, creating a visual connection and allowing a wider viewshed from roads and rail corridors which cross the river corridor.

FIGURE 2

Landscape Character Assessment: Maribyrnong River (Mirrangbamurn)

Character: Waterway Parkland

KEY FEATURES

- Dense mixed native and exotic vegetation on the banks of the waterway, especially around Brimbank Park
- Paths and walking tracks adjacent to waterways
- In sections where the river corridor opens to wider parkland, open lawn areas are prominent, for example Canning Reserve
- The majority of land within this character is publicly owned and managed

Vegetation is well established throughout the Maribyrnong River corridor extent. There is limited built form within this character type. Consisting of street furniture commonly found in parkland; park benches, drinking fountains, bike hoops and public toilets.

This character type can be found along the Maribyrnong River at:

- Brimbank Park, Keilor
- Footscray Park, Footscray (contains significant active open space)
- Pipemakers Park, Maribyrnong
- Coulson Gardens, Maribyrnong
- Afton Street Conservation Reserve, Aberfeldie

PATTERN OF VIEWING

Within the Maribyrnong River corridor, views are predominately via shared use paths and recreational areas such as picnic grounds and car parks. From outside the corridor views of and along the rivers are achieved from roads and railways, bridges and neighbouring streets that front onto parkland.

FIGURE 3

Character: Waterway Corridor

KEY FEATURES

- Generally narrow in width
- Often well vegetated

This character type typically consists of the waterway with a buffer on the either side before transitioning other character types. In recently developed areas, the character type is often wider and more generous with a focus on local ecology.

Its width is often narrow, for example, through Footscray. The narrow width restricts use, however, path networks for walking, running or cycling are common throughout river that pass through or near developed areas.

This character type has two distinct stretches of linear open space:

- Between Afton Street pedestrian bridge, Essendon West and Maribyrnong Road, Ascot Vale, bordered by Suburban Development
- Between Dynon Road and the Yarra River, bordered by industrial land
- Within the Afton Street to Maribyrnong Road stretch the waterway corridor boundary sits approximately 30m from the waterway's bank.

PATTERN OF VIEWING

From within the Maribyrnong River corridor, views may be experienced along the waterway, however, the built form of adjoining character types often restricts the view past the character boundary. When viewed from outside the corridor, such as from road, rail and pedestrian crossings, larger viewsheds are possible.

FIGURE 4

Character: Active Recreational Open Space

KEY FEATURES

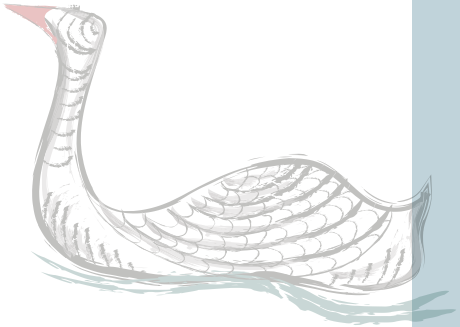
- Local parkland of considerable size
- Contains various sporting facilities
- Not always directly connected to waterways
- Various types of fencing and barriers are commonly seen

Land uses within this character type include active sporting facilities or horseracing tracks and often include formal path networks which intersect passive recreation spaces. The Active Recreation Open Space character type generally connects to Waterway Parkland and Waterway Corridor character types.

Areas within this character type may share fenced boundaries with the waterway or separated by other character types or land uses. Active Recreational Open Space character areas along are often surrounded by a buffer of mature trees, adding to the amenity of these areas.

This character type can be found along the Maribyrnong River at:

- Footscray Park, Footscray
- Aberfeldie Park, Aberfeldie
- Fairbairn Park, Ascot Vale
- Medway Golf Club, Maidstone
- Flemington Racecourse



Of these, the most notable is Footscray Park, a large open space with sporting facilities (including fields and rowing club), open parkland fronting the waterway looking towards Flemington Racecourse and playground facilities. Most identified areas of Active Recreational Open Space have unrestricted frontage to the waterway, however, in contrast Flemington Racecourse is private land has restricted access with high fencing.

PATTERN OF VIEWING

Within and from outside the waterway corridor, views are usually generous due to the open space.

FIGURE 5

Landscape Character Assessment: Maribyrnong River (Mirrangbamurn)

Character: Industrial Land

KEY FEATURES

- Industrial land use abuts the Maribyrnong River in several locations
- Larger built form in proximity to the waterway corridor
- Usually consists of expansive roadways and large block sizes

Land uses within this character type are of a functional, employment nature and generally has lower amenity values. In places, industrial land prevents access to or along the Maribyrnong River corridor.

The built form of this character type varies widely. Elements such as block size, amount of vegetation and the existence of materials, garbage and litter impacts the appearance of areas within this character type

The built form of this character type ranges from traditional red brick warehouses to modern buildings and oil refinery/storage. Some of the buildings and structures present as significantly dominant features within the Maribyrnong River corridor landscape.

Adjacent to the mouth of the Maribyrnong River, the predominant land uses relate to port activities, shipping and petroleum industries. This land is densely developed and is in proximity to the Port of Melbourne's Swanson Docks (east and west), which account for a significant proportion of Victoria's container freight.

South of Footscray Road, there is limited public access to the Maribyrnong River, with development in proximity to riverbanks. For example, on the western side of the waterway, shipping container storage is located within eight metres of the water's edge.

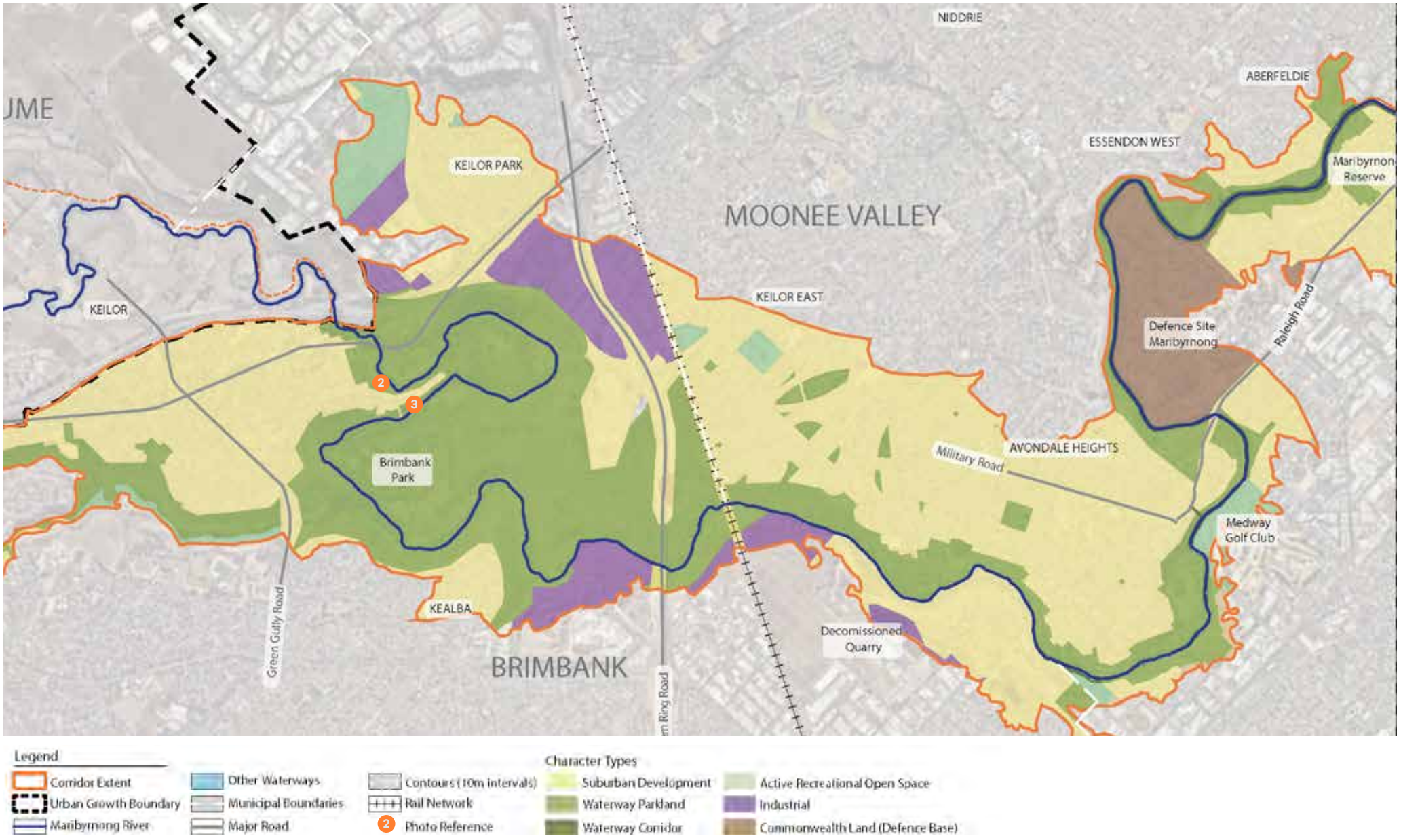
The Defence Site Maribyrnong, a Commonwealth-owned 128-hectare former defence base and explosives research facility, is located at Raleigh Road in Maribyrnong and contains significant river frontage. While of a partly industrial character now, any development of this site in the future has a high potential to impact surrounding areas of Waterway Corridor and Suburban Development landscape types.

PATTERN OF VIEWING

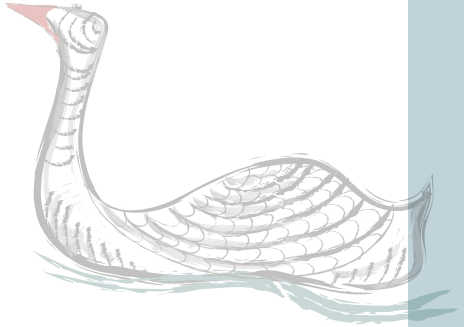
Industrial built form and infrastructure constrains views within the Maribyrnong River corridor. Where an industrial property has permeable fencing, longer views can be experienced. From outside the river corridor, views of the waterway corridor are limited and only possible between buildings and where permeable fences allow.

FIGURE 6

MAP 7: MARIBYRNONG: LANDSCAPE CHARACTER TYPES




ASCOT VALE
FLEMINGTON
KENSINGTON
Fairbairn Park
MELBOURNE
DOCKLANDS
Dynon Road
WEST MELBOURNE
MARIBYRNONG
Pipemakers Park
5
Footscray Park
Footscray Road
FOOTSCRAY
Ballarat Road
Hopkins Street
4
6
MAIDSTONE
PORT MELBOURNE
SEDDON
Whitehall Road
KINGSVILLE
WEST FOOTSCRAY



Landscape Character Assessment: Moonee Ponds Creek (Moonee Moonee)

The Moonee Ponds Creek corridor extends for approximately 24-kilometres from Westmeadows in the Melbourne's north to the Yarra River (Birrarung) under the Bolte Bridge in Docklands. At the source of the Moonee Ponds Creek, the landscape is formed from ancient volcanic-derived stony rises, transitioning to volcanic-derived terraces and floodplains towards Port Phillip Bay.

The ancient geology of the region created the varying topography of the corridor extent. As a result of the geology, the waterway cuts deep into the landscape where the topography is most pronounced and widens towards the floodplains of its lower reaches.

A major feature of the Moonee Ponds Creek is its channelised reaches, undertaken between the 1940 and the 1980s to control flooding. Channelised sections comprise a modified earth or concrete lined channel, designed to send water downstream to the Yarra River as efficiently as possible, reducing the flood impact of a heavy rain event. The profile of the channel varies, from a deep and narrow to shallow and wide. The profile concentrates flows in the centre of the channel, where the water flow is fastest and most efficient, allowing for increased flows during a rain event.

There are two stretches of channelisation:

- From Strathmore North Primary School to Cross Keys Reserve with an overall 'V' shaped channel profile
- Morrow Street, Essendon to Mt Alexander Road, Flemington. Which widens from 16-metres to 25-metres with a 'U' channel at the centre.

The Moonee Ponds Creek Trail, a shared user path, allows pedestrians and cyclists to travel the length of the waterway, providing constant access to the waterway.

Character: Suburban Development

KEY FEATURES

- Well established residential areas
- Schools and local institutional land uses, such as Strathmore North Primary School
- Local active public open space, that are not adjacent to waterways, such as Boeing Reserve, Strathmore Heights

The Suburban Development character type is easily recognised as typical, residential Melbourne neighbourhoods, with varying block sizes and dwelling styles. It is the most common landscape character typology in the Moonee Ponds Creek corridor. There are many established residential areas near the waterway, creating a very narrow waterway corridor in parts.

Some medium- to high-density residential built form is observed in locations along the waterway, however, low density residential built form is the most common. These neighbourhoods contain established street trees and gardens that are commonly found across Melbourne's suburban areas. Adjacent to Strathmore North Primary School, where the Moonee Ponds Creek transitions from a modified earth channel to a concrete channel. Suburban development has been built so that property boundaries sit within approximately 16 metres on both sides of the waterway's centreline. This offset is the smallest in locations such as Attwood, which differs from 16-metres on the south side to 50-metres on the north side.

Landscape Character Assessment: Moonee Ponds Creek (Moonee Moonee)

Towards the lower reaches of the waterway, there are offsets of 50-metres, before the predominant character type changes to industrial.

PATTERN OF VIEWING

Within the Moonee Ponds Creek corridor, views are generally restricted to the immediate location. Newer areas generally provide more open views towards other character types. External views towards the Moonee Ponds Cree corridor are often restricted, especially in established areas where properties back, rather than front, the waterway corridor. In contrast, newer neighbourhoods generally front the waterway, thereby visually connecting to the waterways and adjacent character types. More open and wider viewsheds of the Moonee Ponds Creek corridor are achieved from roads and rail corridors which cross the waterways.

FIGURE 7

Character: Waterway Parkland

KEY FEATURES

- Dense mixed native and exotic vegetation on the banks of the waterway
- Paths and walking tracks adjacent to the waterway, including the Moonee Ponds Creek Trail
- In sections where the waterway corridor opens to wider parkland, open lawn areas are prominent, such as at Jacana Valley Parklands
- The majority of land within this character is publicly owned and managed

Waterway Parkland areas are utilised for both active and passive purposes. Generally, the parkland adjacent to the Moonee Ponds Creek corridor provides a shared use path, with pedestrian connections between parkland and neighbouring areas common. Kingsford Smith Ulm Reserve in Glenroy is one of the largest of this character type. It is a wide, flat-bottomed valley with a dense vegetation close to the waterway and sparse groups of trees in low areas. The Moonee Ponds Creek Trail diverges out to provide various connections to the wider park and neighbourhoods beyond.

Boeing Reserve is on the opposite side of the waterway and contains similar topography and vegetation types, but also has terraced sporting facilities. Combined, these parklands provide positive amenity for the waterway and its users. There is limited built form within this character type, generally consisting of street furniture, drinking fountains, bike hoops and public toilets. Built form to note includes the stretch of the Moonee Ponds Creek from Strathmore to Flemington Road that was channelised in the 1950-60s.

Aside from channelisation of the watercourse and terraced sports fields, the topography of land within the Waterway Parkland character type is largely unmodified. Expansive lawn areas with vegetation in small clumps are observed, with dense vegetation along the waterway itself and more sparce trees scattered throughout lawn areas. At 5 Mile Creek Reserve in Essendon, 5 Mile Creek merges into the Moonee Ponds Creek. While a relatively small waterway parkland area, it provides local amenity and is well vegetated.

PATTERN OF VIEWING

Viewsheds within the Moonee Ponds Creek corridor are generally via shared use paths and recreational areas such as picnic grounds and car parks. Views looking inward are from roads and railways, bridges and neighbouring streets that front onto parkland.

FIGURE 8

Character: Waterway Corridor

KEY FEATURES

- Generally narrow in width, with some vegetation

This character type typically creates a constricted buffer on the either side of the Moonee Ponds Creek, before transitioning other character types. As a generally narrow open space corridor, its width is as little as 35 metres between property boundaries at Strathmore, and 40 metres in Pascoe Vale South. There are, however, wider sections including channelised extents of the creek. The narrow width restricts use, however, path networks for walking, running or cycling are common, especially close to developed areas.

The Moonee Ponds Creek Trail follows alongside the narrow waterway corridor within much of this character type. Other narrow stretches of the waterway can be found at Koala Crescent, Attwood and Eric Street, Essendon. These locations are at opposite ends of the waterway, suggesting that much of the waterway corridor remains narrow.

PATTERN OF VIEWING

Views from within the Moonee Ponds Creek corridor can be restrictive, particularly in deeper sections of the corridor. In more open sections, the viewshed is longer and wider, however the built form of other character types often restricts the view past this character boundary.

Road, rail and pedestrian crossings offer external viewsheds of the waterway corridor.

FIGURE 9

Character: Active Recreational Open Space

KEY FEATURES

- Local parkland, generally large in size and containing various sporting facilities
- Not always directly connected to waterways, such as Boeing Reserve, Strathmore Heights
- Various types of fencing and barriers are commonly seen

The land use of this character type comprises locations with mostly active sporting facilities or horseracing tracks, such as Moonee Valley Racecourse. This character type often contains formal path networks which create passive recreation spaces. Westmeadows Reserve, Westmeadows and Ormond Park, Moonee Ponds, are both adjacent to the waterway corridor. These open spaces have fences separating them from the waterway, which drops steeply into the landscape relative to both open spaces, visually separating them from the creek.

Moonee Valley Racecourse is separated from the creek by the Citylink Freeway. Its use differs from other active recreational open space as it is private land for the purpose of horseracing and only open to the public at certain times. The racecourse is not easily viewed externally due to fencing.

Landscape Character Assessment: Moonee Ponds Creek (Moonee Moonee)

Areas within this character type may abut Moonee Ponds Creek in places or be separated by other character types or land use. Active recreational open space areas are often surrounded by a buffer of mature trees, adding landscape amenity to the spaces.

PATTERN OF VIEWING

Views along the Moonee Ponds Creek corridor itself and to major roads are generally generous due to the open space. External views, looking towards the corridor are achieved from local road and highways, often backdropped by adjacent Suburban Development and associated fences.

FIGURE 10

Character: Industrial Land

KEY FEATURES

- Industrial land use abuts the Moonee Ponds Creek in several locations, particularly around North Melbourne
- Also characterised by expansive roadways, such as Citylink, and large block sizes

Land use in this character type is of a functional, employment nature with lower aesthetic and amenity values. In places, industrial land prevents access to or along the creek corridor.

Towards the mouth of the Moonee Ponds Creek, industrial land is the predominant landscape character type. Specific land uses vary, from shipping and freight handling to warehouses, manufacturing – as well as smaller tenancies, such as fitness gyms and cafés. Built form varies but generally includes red brick character of traditional industry. For example, buildings in Sutton Street, North Melbourne use a contemporary mix of materials of modern industry. Established street trees are a feature of surrounding streets, including Dynon Road, West Melbourne.

Citylink follows the Moonee Ponds Creek on its eastern side south of Racecourse Road, where the waterway transitions back to an earth channel. The elevated roadway is a strong and domineering visual feature of the corridor in this location and until the creek's confluence with the Yarra River. The immense size of the Citylink viaduct reduces the extent of vegetation leaving a significant portion of Moonee Ponds Creek with limited vegetation coverage and poorer amenity.

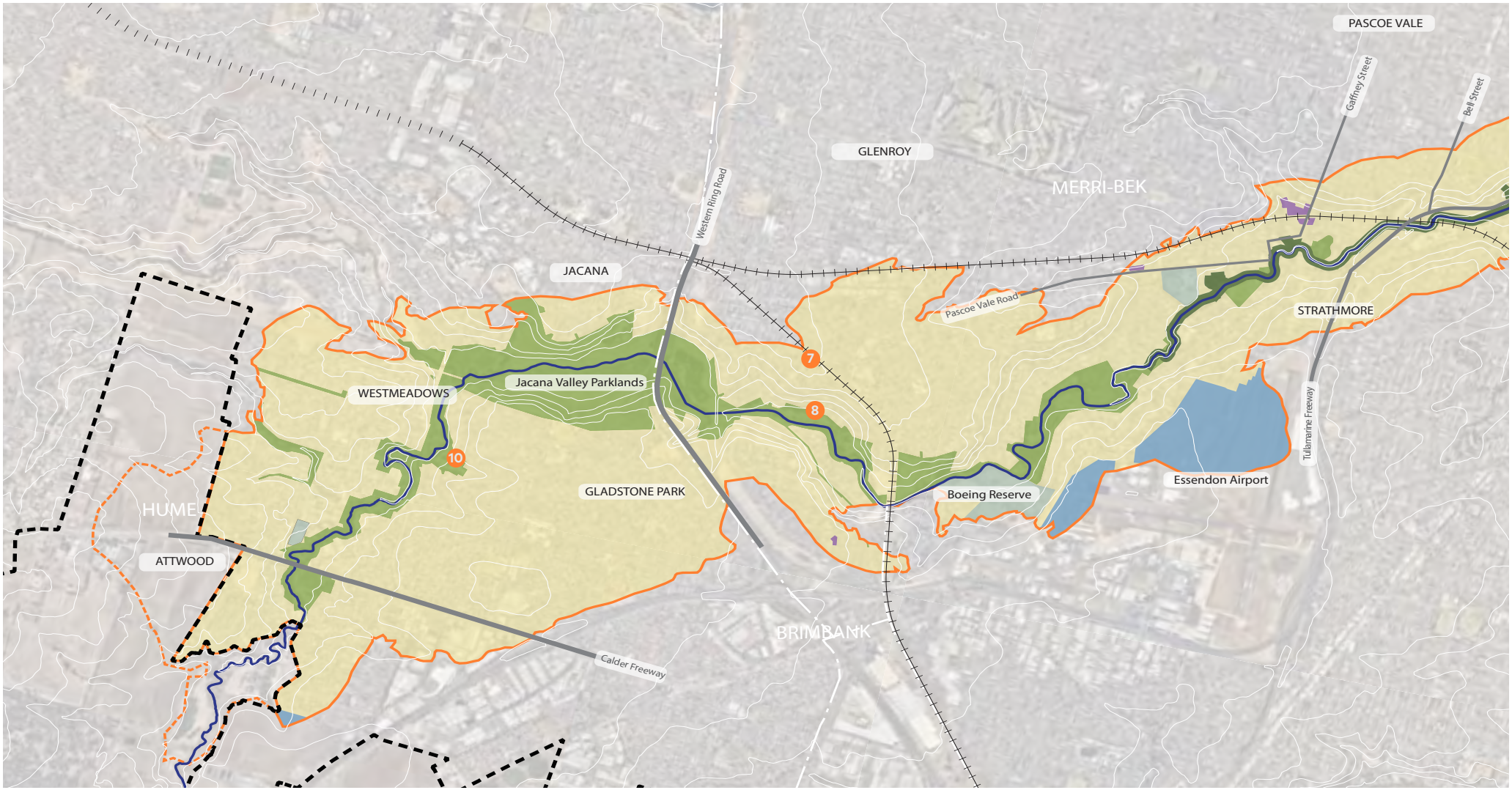
PATTERN OF VIEWING

From within the Moonee Ponds Creek corridor, views are predominately of industrial and transport infrastructure, restricting distant views. On some industrial properties with permeable fencing to the rear, wider viewsheds are achieved looking towards other character types. Views of the creek from outside the corridor are possible from roads, and through properties with permeable fencing.

FIGURE 11


Hapag-Lloyd

MAP 8: MOONEE PONDS CREEK: LANDSCAPE CHARACTER TYPES

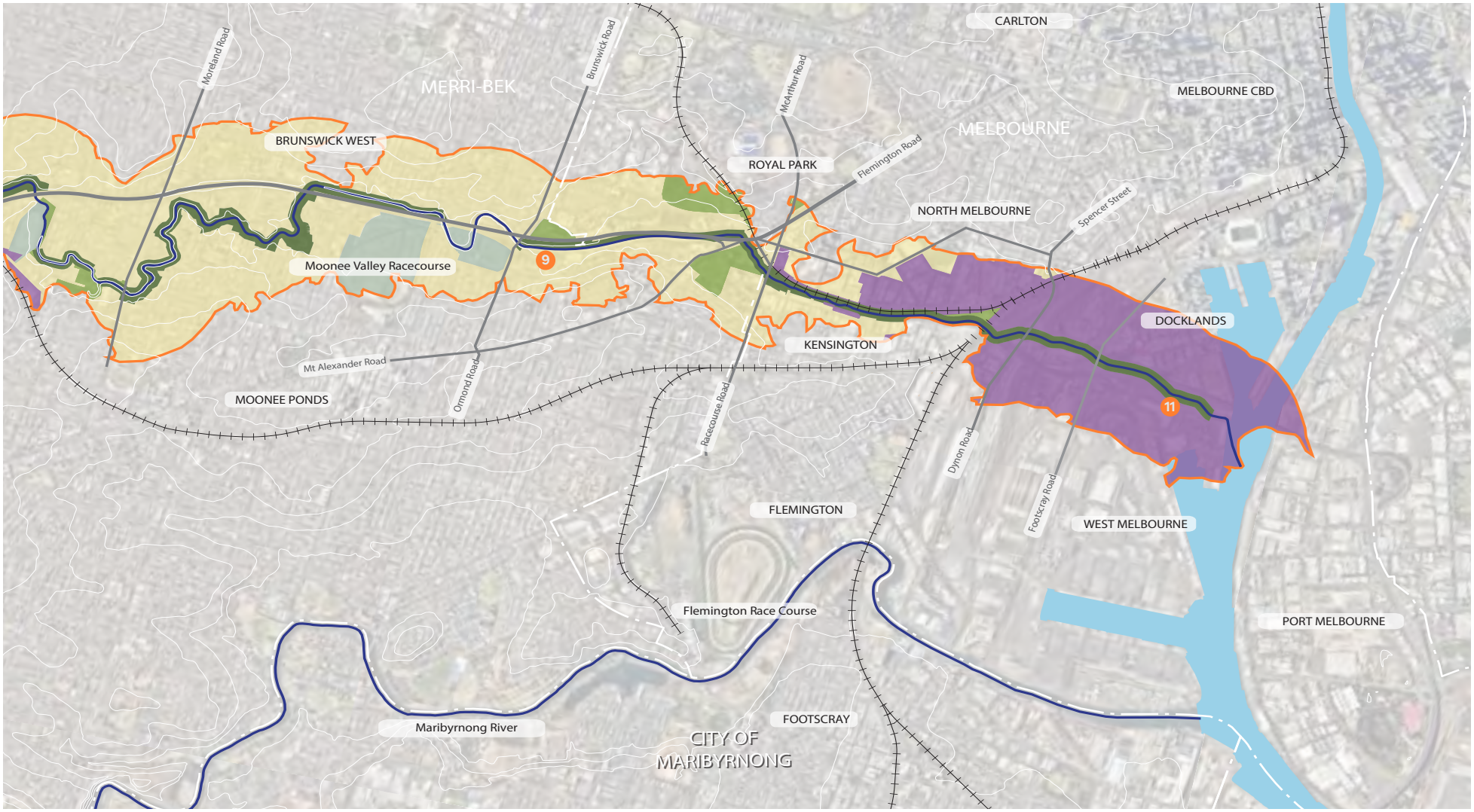


Legend

- Corridor Extent
- Urban Growth Boundary
- Moonee Ponds Creek
- Other Waterways
- Municipal Boundaries
- Major Road
- Contours (10m intervals)
- Rail Network
- 2 Photo Reference

Character Types

- Suburban Development
- Waterway Parkland
- Waterway Corridor
- Active Recreational Open Space
- Industrial
- Commonwealth Land


CARLTON
MERRI-BEK
Moreland Road
Brunswick Road
McArthur Road
MELBOURNE CBD
MELBOURNE
BRUNSWICK WEST
ROYAL PARK
Flemington Road
NORTH MELBOURNE
Spencer Street
Moonee Valley Racecourse
9
DOCKLANDS
KENSINGTON
Mt Alexander Road
Ormond Road
MOONEE PONDS
Racecourse Road
Dynon Road
11
Footscray Road
FLEMINGTON
WEST MELBOURNE
Flemington Race Course
PORT MELBOURNE
Maribyrnong River
FOOTSCRAY
CITY OF
MARIBYRNONG

Landscape Character Assessment: Werribee River (Wirribi Yaluk)

The volcanic topography of the Werribee River is different from that of the northern waterways. This waterway sits entirely on 'Volcanic derived plains with poorly developed drainage and shallow regolith'. The consistent plain that the waterway runs through makes the topography even, with the waterway receding quickly into the landscape.

Character: Suburban Development

KEY FEATURES

- Established residential areas
- Local active public open space, that is not adjacent to waterways, such as Werribee Racecourse and Recreation reserve

The Suburban Development character type within the Werribee River area is made up of more recent development, following accelerated urban growth from the 1990s. The built form of these neighbourhoods is of mixed styles and generally low density. Generally, the built form is single story brick dwellings with limited setbacks to the road. The gardens associated with neighbourhoods vary in maturity, depending on the age of the neighbourhood, with new areas having less established gardens.

The interaction of the suburban built form with the waterway varies. Some Suburban Development fronts on to the waterway and some does not. This impacts the waterway in regard to passive surveillance as well as its landscape amenity.

Continued delivery of our long-term metropolitan land use strategy, Plan Melbourne, including priority actions from the emerging Five-Year Implementation Plan (2023-2028) and government's election commitment to protect waterways so wildlife can thrive.

PATTERN OF VIEWING

Within the Werribee River corridor, views are generally restricted to the immediate location, unless in proximity to the waterway which increases the viewing range, for example at Shaws Road. Newer areas generally support more open views towards other character types.

External views towards the river corridor are often restricted by vegetation and built form, especially in established areas where properties back, rather than front, the river corridor. In contrast, newer neighbourhoods are generally front the waterway thereby visually connecting to the waterways and adjacent character types.

More open and wider viewsheds of the river corridor are achieved from roads and rail corridors which cross the waterways.

FIGURE 12

Landscape Character Assessment: Werribee River (Wirribi Yaluk)

Character: Waterway Parkland

KEY FEATURES

- Mixed native and exotic vegetation on the banks of the Werribee River
- Paths and walking tracks adjacent to waterways, such as the Werribee River Trail
- In sections where the river corridor opens to wider parkland, open lawn areas are prominent, in particular at Presidents Park
- The majority of land within this character is publicly owned and managed

The Werribee River has a considerable area of parkland. The landscape features are generally consistent throughout the length of the river, with vegetation along the banks transitioning to a landscape that is largely cleared to create parkland. There is limited 'natural' bushland in the character type due to the built-up nature of the surrounding land use.

Wyndham Park, adjacent to the rail line, is notable as the waterway broadens out to parkland. Also located within this park is Bungies Hole – a waterhole that is popular for recreation and swimming.

Waterway parkland consists of both active and passive uses with a shared path along or near the river. Within this character type there is limited built form, however views of built form from adjoining character types are present.

PATTERN OF VIEWING

Views from within the Werribee River corridor are generally along shared use paths or across recreational areas such as picnic grounds, such as the Riverbend Historical Park.

Viewsheds of the river from outside of the corridor are generally from roads and railways and bridges.

FIGURE 13

Character: Waterway Corridor

KEY FEATURES

- Generally narrow in width and well vegetated

The topography of the Waterway Corridor character type is generally deeply cut into the landscape. The deep waterway channel allows vegetation (native and exotic) to grow more freely with limited human intervention. This character type creates a buffer on the either side of the waterway before transitioning other character types. While narrow, this character type often accommodates path and trail networks for walking, running and cycling, connecting to other areas.

There are two contrasting sections of this character type along the Werribee River. The first, between Bungies Hole and Princes Freeway, is a 1.6 kilometre stretch of the waterway, alongside which the Werribee River Trail follows. This corridor is heavily vegetated and provides continuous access to the river behind Suburban Development and Industrial Land.

The second corridor length is further upstream, flanked by Future Urban Development character type. Generally surrounded by private property, the waterway is not accessible by the general public until Cobbledicks Ford Road (outside the study area).

PATTERN OF VIEWING

Viewsheds of this character typology can be experienced along the river corridor, however, they are often restrictive if taken from with a section with steep topography. There is limited built form within this character type, however, the built form of neighbouring character types often restricts the longer range views past this character boundary. Views of the river from outside the corridor can be experienced from road, rail and pedestrian crossings

FIGURE 14

Character: Active Recreational Open Space

KEY FEATURES

Local parkland, generous in size and containing various sporting facilities

Not always directly connected to the river, such as Galvin Park Reserve.

The character type contains active recreation facilities, such as sporting fields or horseracing tracks including Werribee Racecourse and Recreation Reserve. Active Recreational Open Space generally accommodates a buffer of mature trees, adding landscape amenity to these areas.

Presidents Park in Werribee is a large park consisting of various active sporting facilities. Walking trails connect to the river, linking with the Werribee River Trail and expanding the path network.

Topography within this character type has been generally modified and flattened for sporting facilities, clubhouses, public toilets and carparking. Galvin Park Reserve, separated from the river, is an active recreation reserve with eight sporting fields. The reserve sits within the Suburban Development character type. Galvin Reserve is in proximity to Riverbend Historical Park, connected to the river by a drainage swale.

PATTERN OF VIEWING

Views along the Werribee River corridor itself and towards major roads are generally generous due to the open space. External views, looking towards the corridor are achieved from local road and highways, often backed dropped by adjacent suburban development and associated fences.

FIGURE 15

Landscape Character Assessment: Werribee River (Wirribi Yaluk)

Character: Future Urban Development

KEY FEATURES

- Land use of this character type is agricultural, however land is zoned for urban growth with evidence of this transition underway
- It is typically open pasture or sparsely vegetated

Future Urban Development is generally located on the outer fringes of the Urban Growth Zone and is land that will eventually be developed into suburban development. Rocky outcrops and volcanic cones are common in the inland regions making the horizon distinctive.

The contents of land varies, it may contain no trees or small groups of trees and vegetation depending on the specific agricultural activity. Commonly seen are long established vegetated wind breaks and agricultural infrastructure. Agricultural practices are the most common use of this land as well as former farmland that is in the process of being developed or prepared for development.

This character type is transitional – representing a crossover from agricultural land to urban land. Future character types will be dictated by structure planning and master planning. It is noted that there may be urban development outcomes currently in planning stages that are not present or resolved at the time of this assessment, including around Wyndham Vale. However, where available, Precinct Structure Plans have been reviewed as a means of confirming planned future land use and development.

PATTERN OF VIEWING

As it is commonly private land along these sections of the river, views are restricted within the corridor. However, from outside the corridor views from roads and crossings are possible and are generally expansive across the character due to the open pasture typology.

FIGURE 16

Character: Agriculture

KEY FEATURES

- Topography or distant volcanic features can be appreciated via expansive views

Within the Agriculture character type along the Werribee River corridor, the ancient and undulating landscape typical of Western Victoria is prominent. At times, the river can be seen from a considerable distance via its vegetation forming a green spine.

Built form is minimal in this character type with pastoral uses prevalent in the study area; however, agricultural infrastructure (old and new) is a common sight.

Rural land use is diminishing within the study area due to urban development approaching the Urban Growth Boundary, for example areas surrounding McGrath Road, Wyndham Vale.

PATTERN OF VIEWING

As the character type is generally private land, internal views are restricted. However, from outside the river corridor views from roads are possible and are generally expansive across the character due to the open pasture typology. River crossings are not common in this character type, limiting wider views of the waterway corridor.

Character: Industrial Land

KEY FEATURES

Industrial land use abuts the waterway corridor consisting of larger block sizes

Industrial Land character type can be found adjacent to the Princes Freeway. Land use in this character type is of a functional, employment nature, backing onto the Waterway Corridor typology, for example at Concorde Crescent. Lots that back onto the river affect accessibility to the waterway reduce the interaction of this character type with the waterway. There are, however, path connections to the Werribee River Trail contained within the Waterway Corridor character typology.

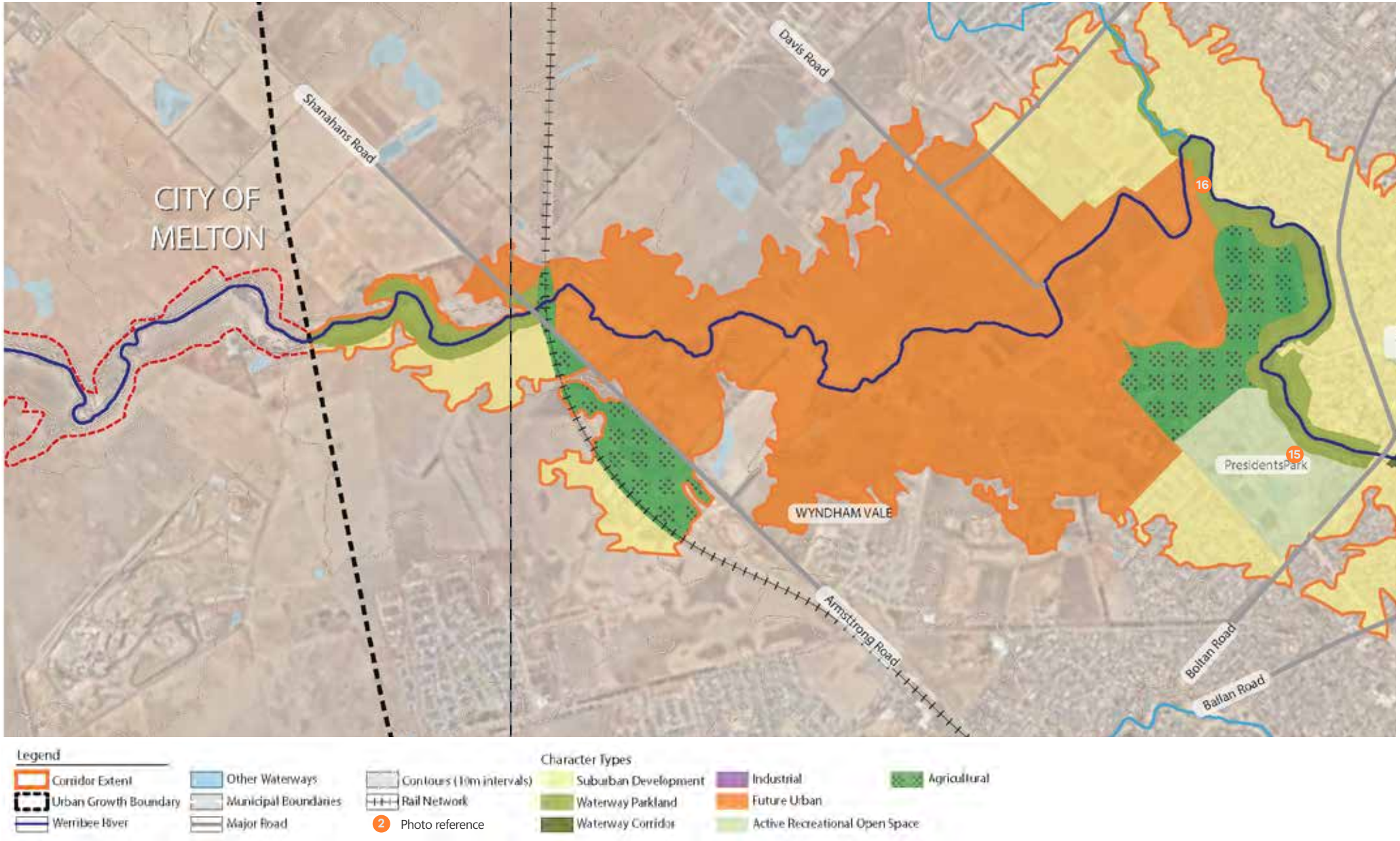
The built form of this character type varies widely. Elements such as block size, the amount of vegetation and the existence of materials, garbage and litter impacts the appearance of areas within this character type. Built form within Industrial Land includes modern corrugated steel and tilt slab warehouses, typically with chain mesh fencing. Most streets lack any street trees.

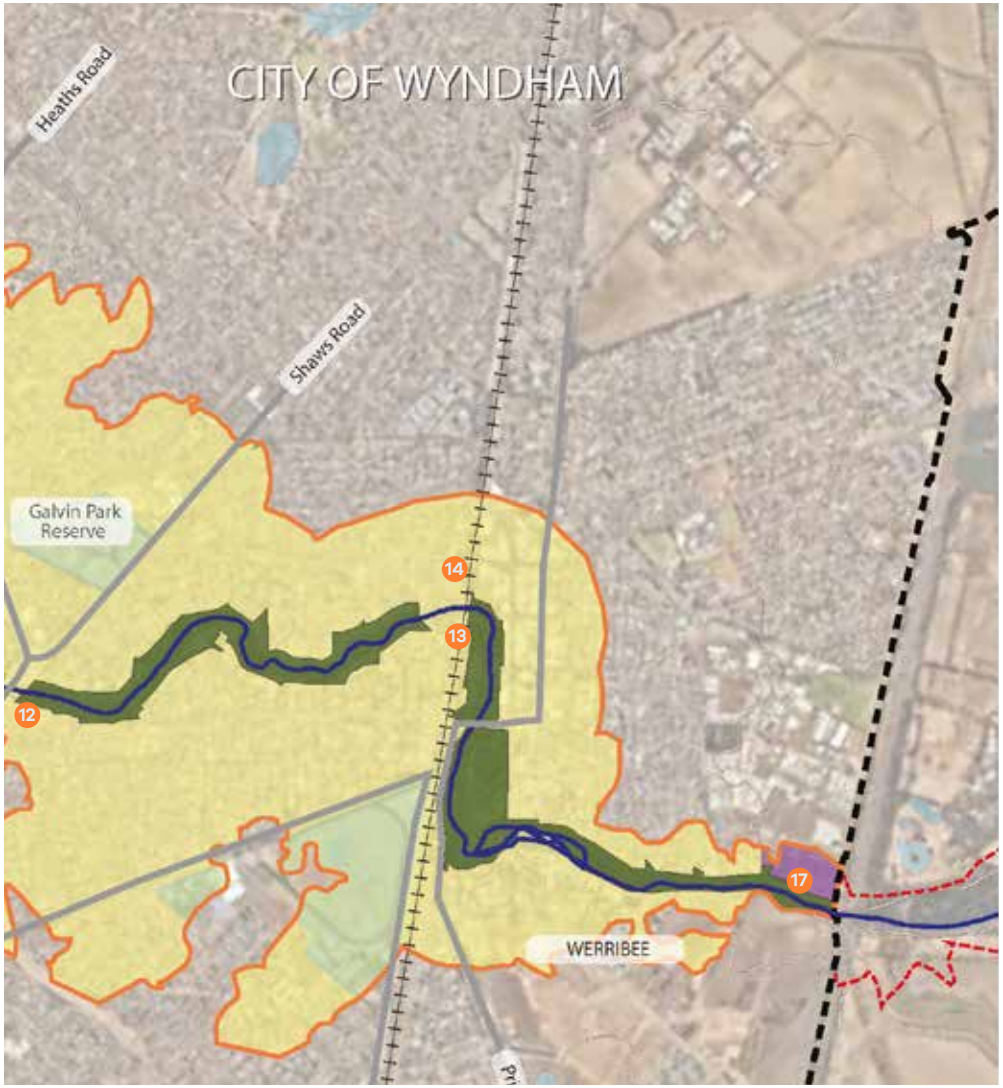
PATTERN OF VIEWING

From within the Werribee River corridor, views are predominately of industrial infrastructure which restricts distant views. On some industrial properties with permeable fencing to the rear, wider viewsheds are achieved looking towards other character types. Views of the river from outside the corridor are possible from roads, through properties with permeable fencing and via public access points to the river.

FIGURE 17

MAP 9: WERRIBEE RIVER: LANDSCAPE CHARACTER TYPES




CITY OF WYNDHAM
Heaths Road
Shaws Road
Galvin Park Reserve
14
13
12
17
WERRIBEE

Landscape value assessment

It is generally accepted that the experience and perception of landscape value varies from person to person and relies on a variety of factors. For the purposes of this study, broad landscape value assessment criteria were developed to assist in approaching the task in as objective a manner as possible. These criteria ultimately take the form of 'landscape preference indicators', and it is intended that they be used to assess landscape value within each waterway corridor in a manner that is as objective as possible.

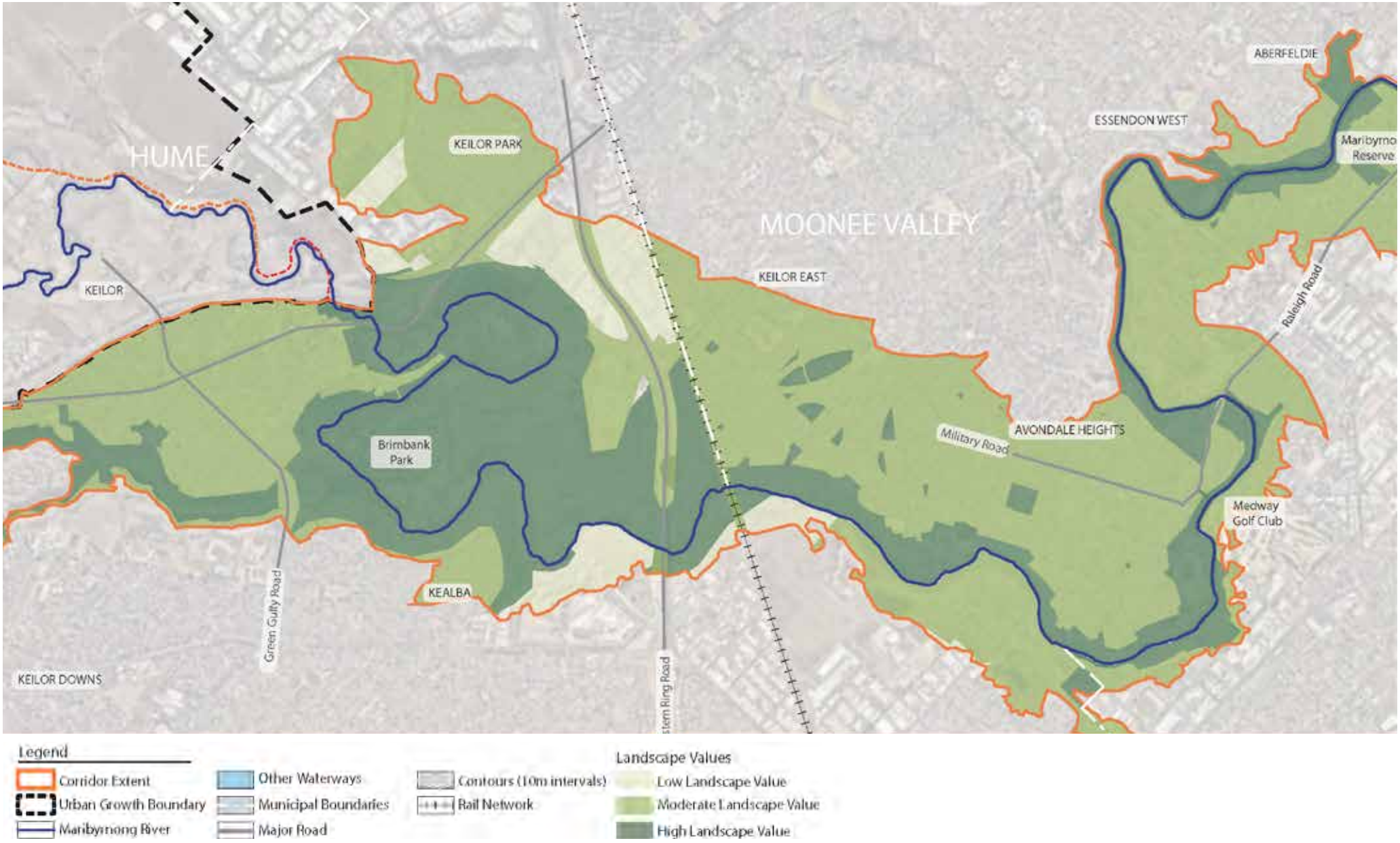
To ensure that the methodology for this landscape value assessment is based on sound practice, it follows the methodology outlined in the guidelines developed by the Western Australian Government in its Visual Landscape and Planning in Western Australia: A Manual for Evaluation, Assessment, Siting and Design (Department for Planning and Infrastructure, 2007). Utilising these guidelines, landscape value assessment criteria were developed, followed by an assessment of landscape value (explained in more detail in the following sections).

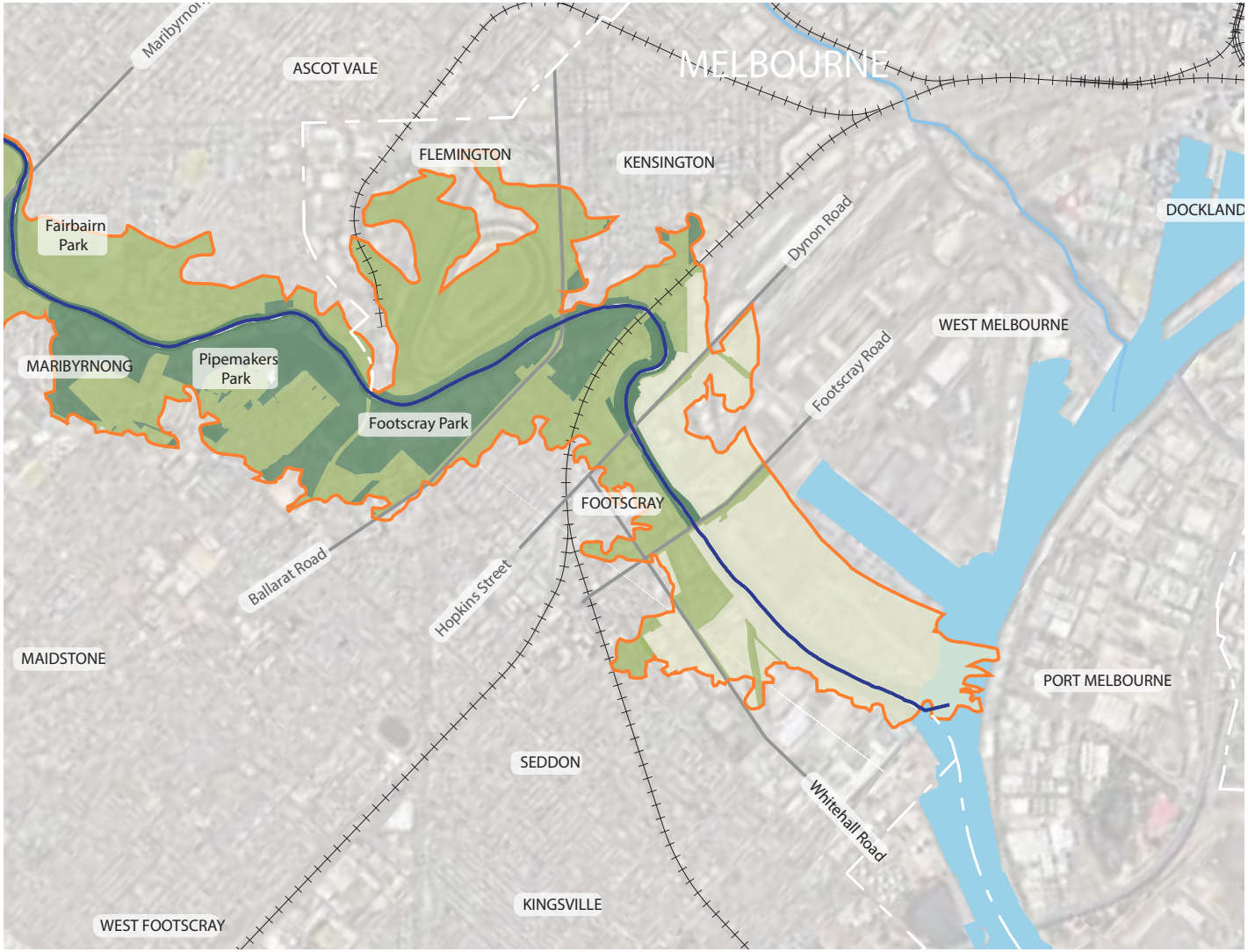
In addition, the assessment has also been informed by the Guidelines for Landscape and Visual Impact Assessment (2013) published by the British Landscape Institute. Specifically, guidelines around the process by which the value of landscapes is established have been reviewed and interpreted within the context of the Waterways of the West.

As part of the landscape analysis, each waterway was assessed on its landscape character and value, as well as the relative levels of 'visual sensitivity' along that particular corridor. Regard was also given to waterway amenity, which can be described through three pillars – **Naturalness**, **Escape** and **Safety** – further outlined in Table 1.

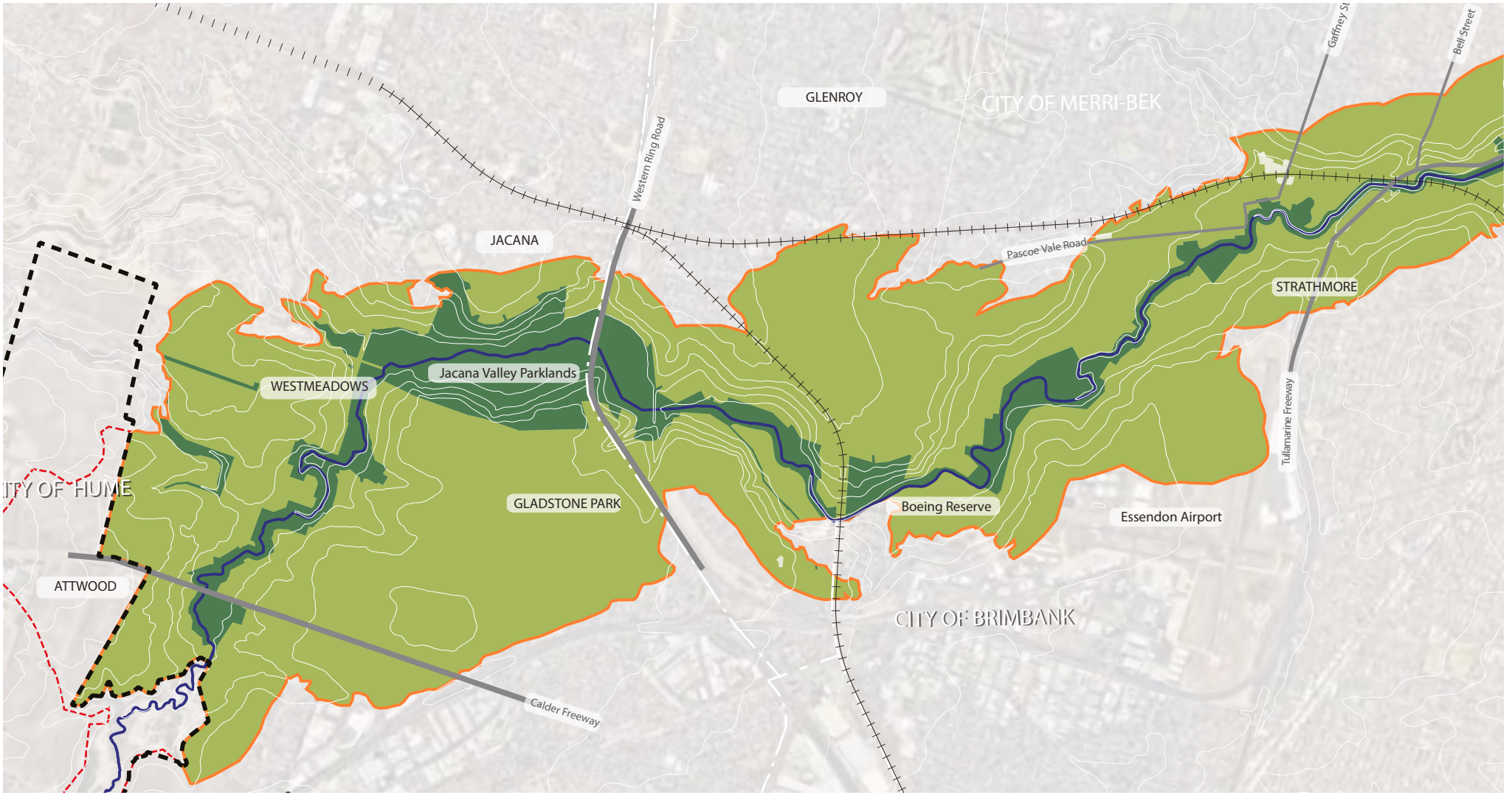
Naturalness	Escape	Safety
Considers: • Views of the waterway • Views of the natural landscape • Canopy cover and native plants, shrubs, grasses and trees (which encourages native animals, birds, insects etc) • Permeable surfaces and use of natural materials (paving, paths, street furniture) • Waterway widths • Natural functions/flooding of waterways can take place	Considers: • Distance from traffic and urban noises/smells • No views (no overwhelming views) of buildings, houses, towers, infrastructure, roads etc • Vegetation (canopy cover, native/non-native/grass/ shrubs) • Coolness • Clean air/good air quality	Considers: • Lighting/natural and artificial • Access, exits (every 400m) • Encouraging places for cultural connections to be practiced, (re-)established, including Traditional Owners. • Continuous corridor connections • Urban designing for safety • Infrastructure/path design (multi modal/widths) • More open views lines (avoid large and high walls, fences) • Natural and human-intervention hazard management (including climate change impacts, urban heat, hazardous waste)

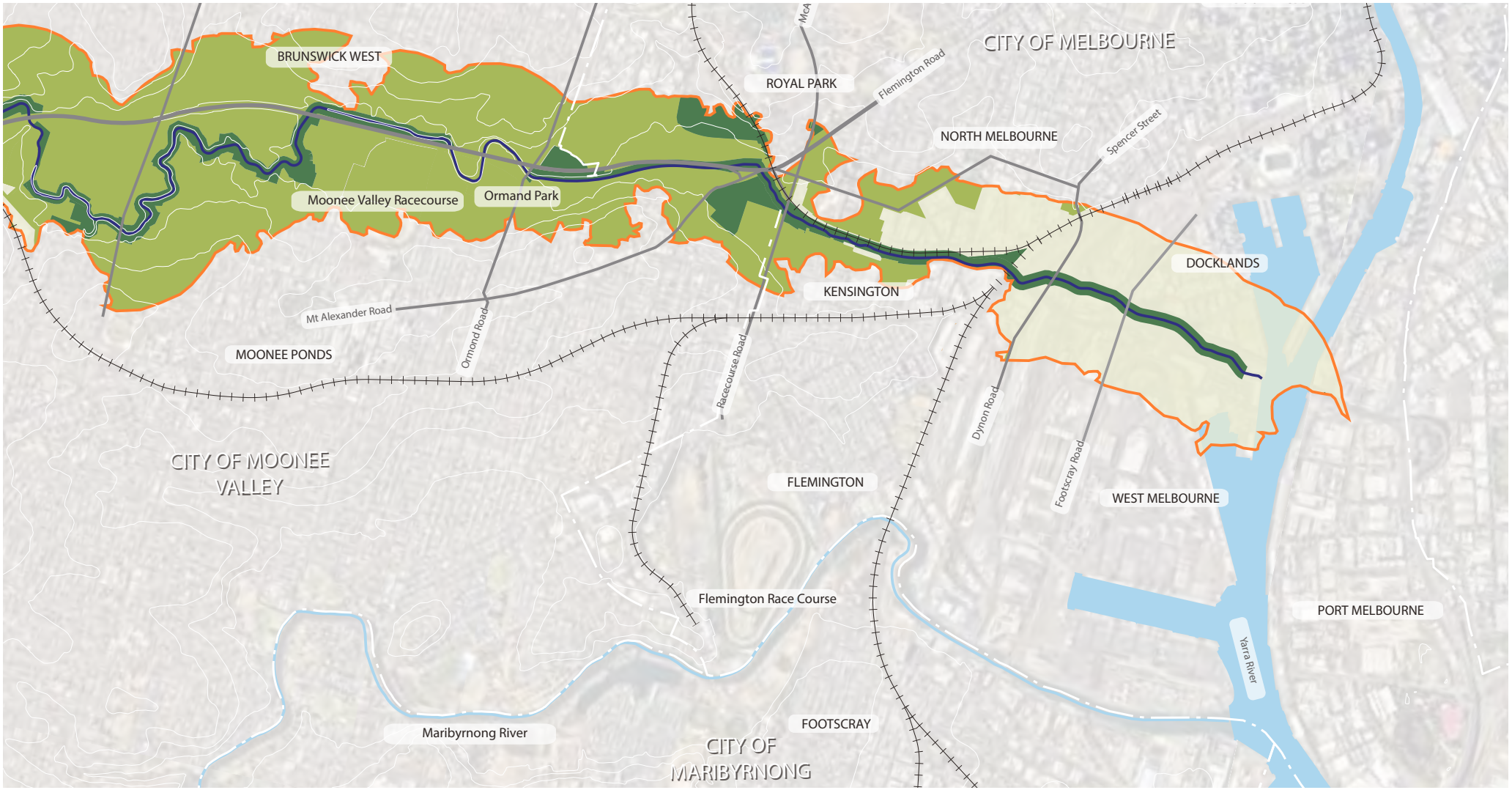
TABLE 1: WATERWAY AMENITY

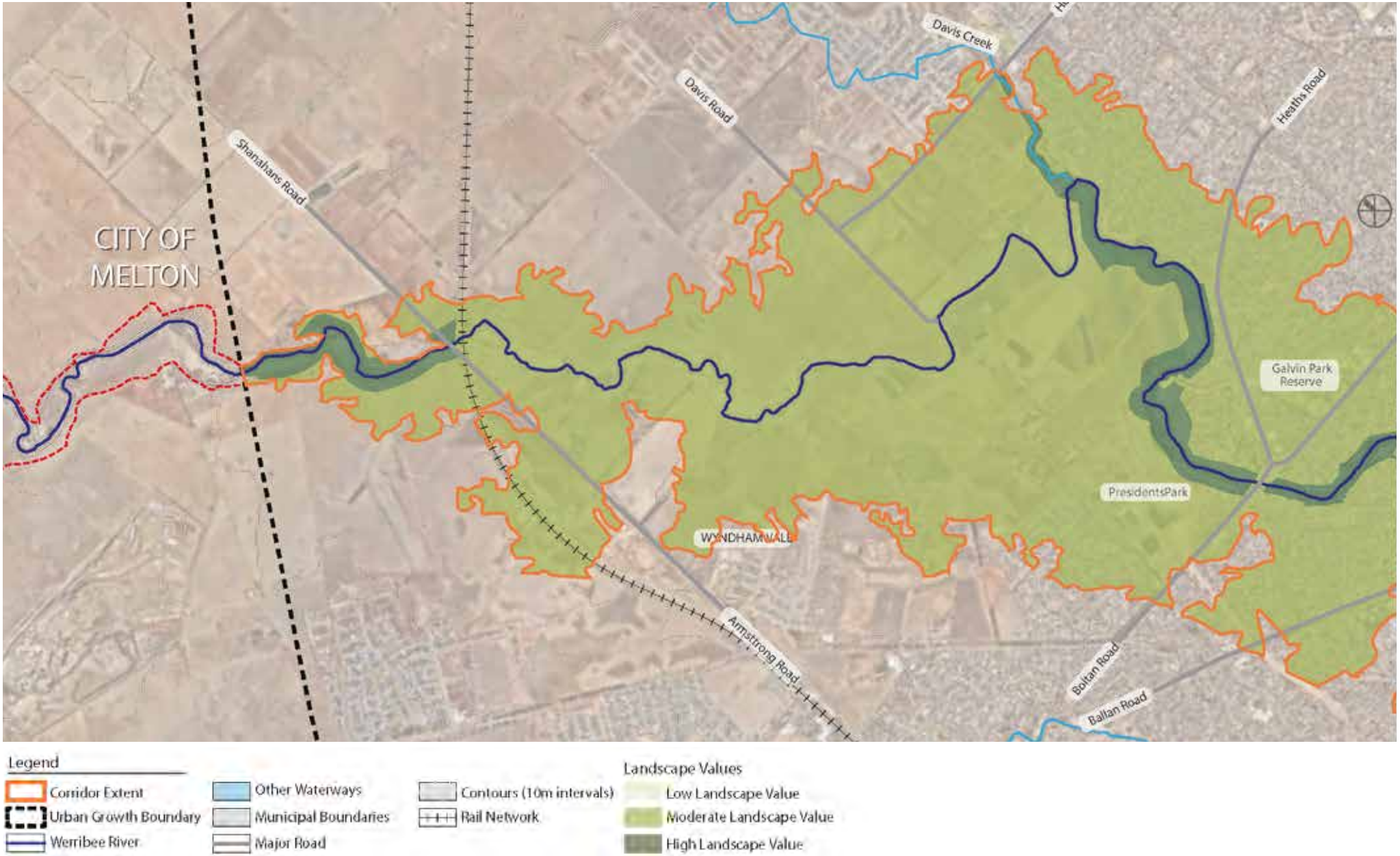

HUME
KEILOR PARK
MOONEE VALLEY
ABERFELDIE
ESSENDON WEST
Maribyrnong Reserve
KEILOR
KEILOR EAST
Raleigh Road
Brimbank Park
Military Road
AVONDALE HEIGHTS
Medway Golf Club
KEALBA
Green Gully Road
KEILOR DOWNS
Legend
Corridor Extent
Urban Growth Boundary
Maribyrnong River
Other Waterways
Municipal Boundaries
Major Road
Contours (10m intervals)
Rail Network
Landscape Values
Low Landscape Value
Moderate Landscape Value
High Landscape Value


ASCOT VALE
MELBOURNE
FLEMINGTON
KENSINGTON
Fairbairn Park
Dynon Road
DOCKLAND
WEST MELBOURNE
MARIBYRNONG
Pipemakers Park
Footscray Road
Footscray Park
FOOTSCRAY
Ballarat Road
Hopkins Street
MAIDSTONE
PORT MELBOURNE
SEDDON
Whitehall Road
KINGSVILLE
WEST FOOTSCRAY

MAP 11: MOONEE PONDS CREEK LANDSCAPE VALUES




BRUNSWICK WEST
CITY OF MELBOURNE
ROYAL PARK
Flemington Road
NORTH MELBOURNE
Spencer Street
Moonee Valley Racecourse
Ormand Park
DOCKLANDS
KENSINGTON
Mt Alexander Road
Ormond Road
MOONEE PONDS
Racecourse Road
Dynon Road
Footscray Road
CITY OF MOONEE VALLEY
FLEMINGTON
WEST MELBOURNE
Flemington Race Course
PORT MELBOURNE
Yarra River
Maribyrnong River
FOOTSCRAY
CITY OF MARIBYRNONG


Davis Creek
Davis Road
Heaths Road
Shanahans Road
CITY OF MELTON
Galvin Park Reserve
PresidentsPark
WYNDHAM VALE
Armstrong Road
Boltan Road
Ballan Road
Legend
Corridor Extent
Urban Growth Boundary
Werribee River
Other Waterways
Municipal Boundaries
Major Road
Contours (10m intervals)
Rail Network
Landscape Values
Low Landscape Value
Moderate Landscape Value
High Landscape Value


HOPPERS CROSSING
CITY OF WYNDHAM
Shaws Road
WERRIBEE