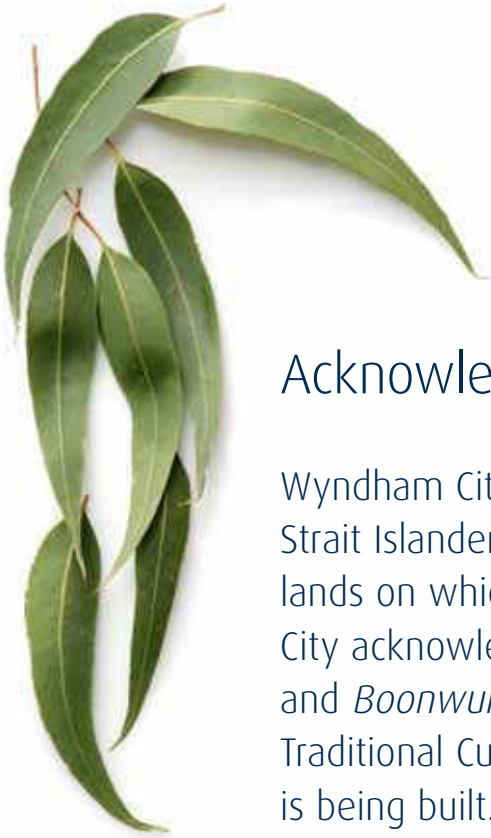




City Forest & Habitat Strategy

2017-2040



Acknowledgement

Wyndham City Council recognises Aboriginal and Torres Strait Islander peoples as the First Custodians of the lands on which Australia was founded. Wyndham City acknowledges the *Wathaurong*, *Woiwurrung* and *Boonwurrung* peoples of the Kulin Nation as the Traditional Custodians of the lands on which Wyndham is being built.

For tens of thousands of years, the Werribee River has been a significant meeting place for Aboriginal people to build community, exchange resources, and share responsibility for its lands.

Wyndham City pays respect for the wisdom and diversity of past and present Elders. We share commitment to nurturing future generations of Elders in Aboriginal and Torres Strait Islander communities.



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1 Introduction

The City Forest and Habitat Strategy vision is for Wyndham to be a vibrant living ecosystem with shade and green spaces that support healthy communities and resilient, connected, natural environments.

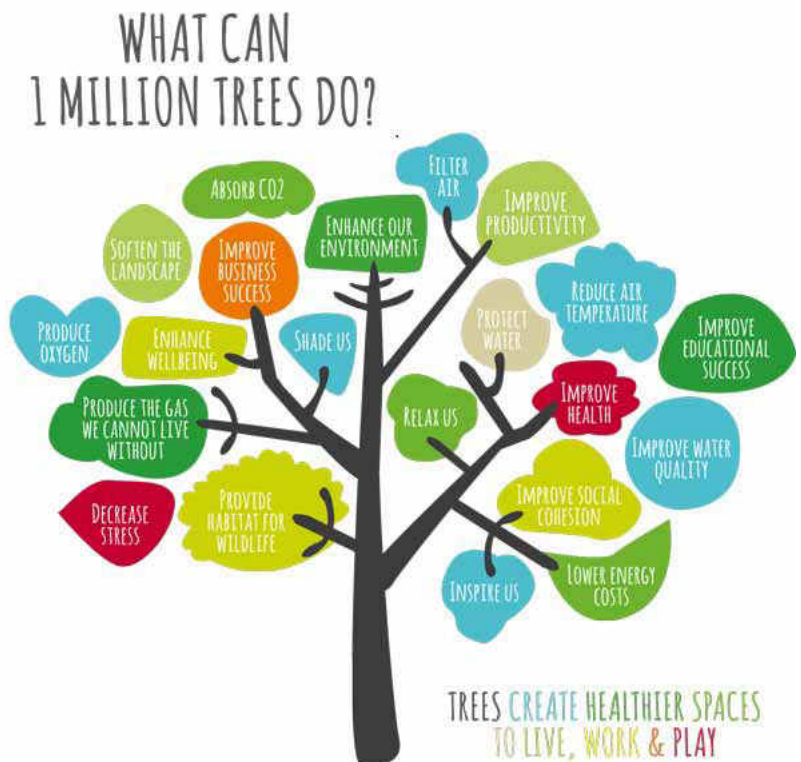
Cities and urban areas haven't always been thought of as green places where humans and nature interact. But as knowledge of the social, economic and environmental benefits of nature in urban areas increases, cities around the world have been resolving to transform their concrete jungles into living ones through the creation of urban forests and reconnecting native habitats. As a result, urban areas are becoming places where humans and nature can coexist and thrive.

Urban trees and habitat not only improve our health and the environment, they deliver a range of cultural and economic benefits¹, such as:

- a sense of place
- improved property value
- amenity and landscape aesthetics
- reduced heat and energy savings
- connection to cultural values and historical events

In recent decades Wyndham has grown rapidly from a small, mostly rural area with small townships into a large City, home to over 200,000 people. This growth will continue as comparably affordable housing located in good proximity to the East Werribee Employment Precinct and the Melbourne CBD attracts thousands of new residents each year.

As Wyndham's large scale development is only more recent, we still retain significant natural environments that provide habitat for native plant and animal species of local to international significance. Important coast line, waterways, wetlands, woodlands and grasslands are within our borders. These natural areas are, however, highly fragmented and modified with



a range of threats to their ongoing health. Wyndham City also manages over 200,000 trees in its streets and open spaces, however our tree canopy cover is lower than most areas of greater Melbourne.

This City Forest and Habitat Strategy is critical to Wyndham City in developing a proactive and sustainable response to the growth and change we face and to grasp the opportunity for leadership in urban/peri urban design.

The Strategy provides a holistic approach to the management of Wyndham City's habitat and tree assets that will ensure integrated strategic plantings, biodiversity protection, land use planning and asset protection. It will be delivered in partnership with other organisations and Wyndham's community.

By implementing this Strategy, Wyndham will:

- Be threaded with natural habitat corridors to foster biodiversity including local wildlife;
- Have a significant increase in tree coverage and diversity;
- Incorporate natural ecosystems into urban areas;
- Provide residents access to nature for recreation and enhanced experiences of public spaces;
- Use vegetation to stabilise urban temperature and humidity as well as increasing resilience to a changing climate; and,
- Facilitate the exchange of information about urban and rural living, well-being and ecological integration.

¹ Tree benefits infographic adapted from Greening the West 1 Million Trees - City West Water/Lead West



2 The Wyndham Context



Wyndham City is located at the western edge of metropolitan Melbourne. It includes residential and industrial urban areas, open farmland, intensive horticulture, natural rivers, coast line and wetlands and some of the most significant remnant native grasslands in the country.

Wyndham builds on a rich and diverse Aboriginal history; the area has been inhabited by the communities of the Kulin Nation for over 60,000 years. We continue to have one of the largest Aboriginal and Torres Strait Islander communities in Victoria, with people from the Kulin Nation and beyond. There are sites of cultural significance across the area, including the Werribee River as a significant meeting place for the first custodians.



Growth

In 2017 Wyndham's population is estimated at more than 225,000. Being in one of Melbourne's designated growth corridors, we are one of Victoria's fastest growing municipalities with numerous large scale urban developments currently being built and planned. The population is forecast to reach 424,000 by 2036, with a diversity of cultural backgrounds from across the globe.

Habitat

Historically the Wyndham landscape was characterized by plains grasslands, coastal salt marshes, plains grassy woodlands and floodplain riparian woodland, all of which are now classified as vulnerable, endangered or depleted. The native grasslands, a once common ecosystem, are highly significant, being critically endangered at a National level and endangered at a State level. Many of the plants and animals found in Wyndham are threatened; including 22 nationally listed species and 119 state listed species.

Natural Features

Wyndham is home to several significant and unique natural features, including the Western Treatment Plant Wetlands, one of Australia's most important wetlands for waterbirds listed under the international Ramsar Convention. The future Western Grassland Reserve dominates our western rural area -protecting endangered grasslands of national significance. Others include the Werribee River, Little River and Skeleton Creek, the Truganina Cemetery remnant grassland and the Point Cook Coastal Park.

Trees

The street scapes and open spaces of Wyndham contain approximately 200,000 trees, a number that is growing annually as street tree assets in new housing developments are planted and transferred to Council. Our tree assets include boulevards of mature trees, street trees of different ages, species and health, and a network of open spaces with varying levels of canopy cover.

Climate

With a warm, dry, temperate climate, Wyndham is characterised by hot summers and cool, moist winters and spring. Historically the average rainfall is 538mm per year, although in the last decade average rainfall declined by 13% to 468mm per year. Summer temperatures are further impacted by hot northerly winds that blow across the open plains.



2.1 Challenges

There are a range of issues that present challenges to create a 'vibrant living ecosystem', our vision for this strategy.

Landscape Context

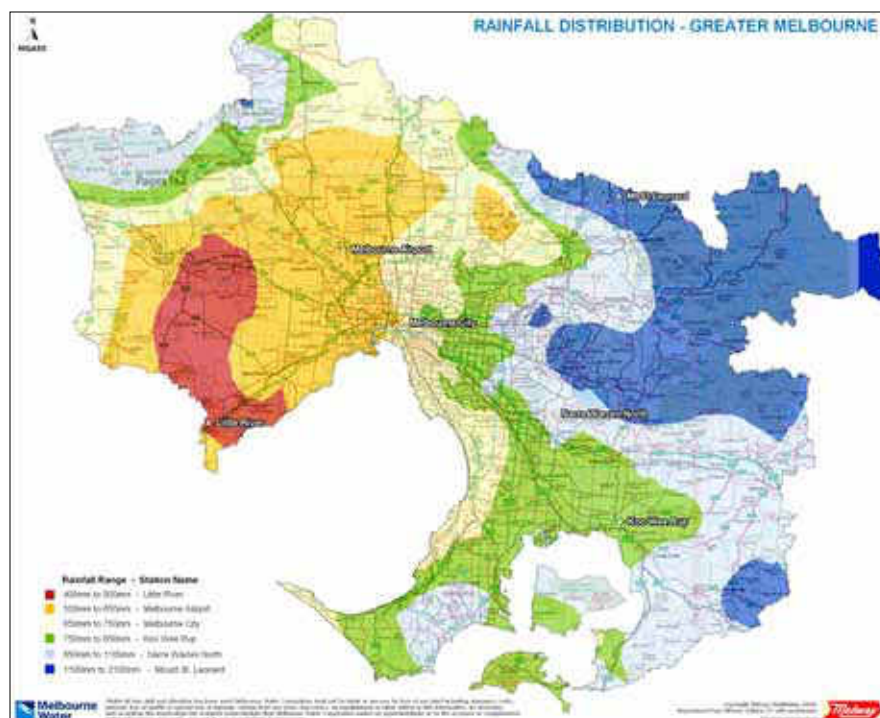
Ecologically, much of Wyndham's urban area is built on natural grassland areas in a low rainfall climate. These factors have, a significant impact on how fast and how large our trees can grow as; this type of ecosystem naturally supported few trees. There is also a relatively low canopy rate in our urban areas, with a vacancy rate of approximately 33%. Factors such as these contributes to Wyndham's high daytime urban heat island effect and reduced amenity for residents both at home and when using our parks, reserves and footpaths (See Appendix 11 for Wyndham's heat hotspots).

Population Growth

Wyndham's rapid population growth and residential expansion creates significant challenges for retaining and increasing existing tree and native vegetation cover; in some cases, planning processes for environmental protection have not kept up with this pace of change and we have seen the subsequent loss of existing trees and vegetation. The involvement of different levels of Government and stakeholders adds complexity to this environment.

Urban Development

There is competition for space between urban development and street trees/open space. Larger houses and smaller blocks limit the available space for large, shady trees and habitat for native birds and animals. Existing trees have too often been removed for short term planning outcomes rather than incorporated into urban designs. Additionally, the soils retained after urban development processes are often compacted and of poor quality, and some trees struggle to thrive.



Similarly, and common across urban areas, there is competition with roads, services and other infrastructure, which have exclusion zones or other design limitations for trees and other plantings. Trees are often not given priority, only incorporated into the design of urban areas after aspects of infrastructure have been fixed. This often results in inadequate provision for trees and other vegetation, with limited space for trees to either be planted or the provision of sub-optimal conditions where trees cannot grow to their full potential.

Fragmentation

Wyndham City's biodiversity is currently under threat from past and ongoing clearing of native vegetation for urban development and agriculture, further fragmenting an already highly modified landscape. Our native flora and fauna have limited ability to expand their populations which impacts the health and viability of remaining tracts of natural areas. This is further compounded by the spread of weeds, pests and introduced predators.

Climate Change

Climate change poses a significant risk to Wyndham. Rainfall records show a reduced rainfall in recent decades, risking our water security in an already dry climate. We will likely experience further reductions in annual rainfall with an increase in severe storms. At the same time, average and extremes temperatures are expected to increase. These changes will have significant impact on our community and natural assets and require us to support their adaptation.

Valuing Nature

Wyndham's community is diverse, and so too is the attitude towards trees and natural spaces. Most residents consider trees as an integral part of our streetscapes and open space for liveability, health and environmental reasons. However, each year Council receives requests for removal of trees, objections to tree planting, and in some cases vandalism of trees and natural areas. For these reasons we need to bring all of Wyndham's community with us and engage people in the processes for greening our City.



3 Policy and Legal Framework



The Wyndham City Plan (2017-2021) guides all work across the council, along with the Wyndham 2040 Community Vision. Sitting under this Plan is Wyndham's Tree policy, Biodiversity Policy and Environment and Sustainability Strategy (2016 - 2040).

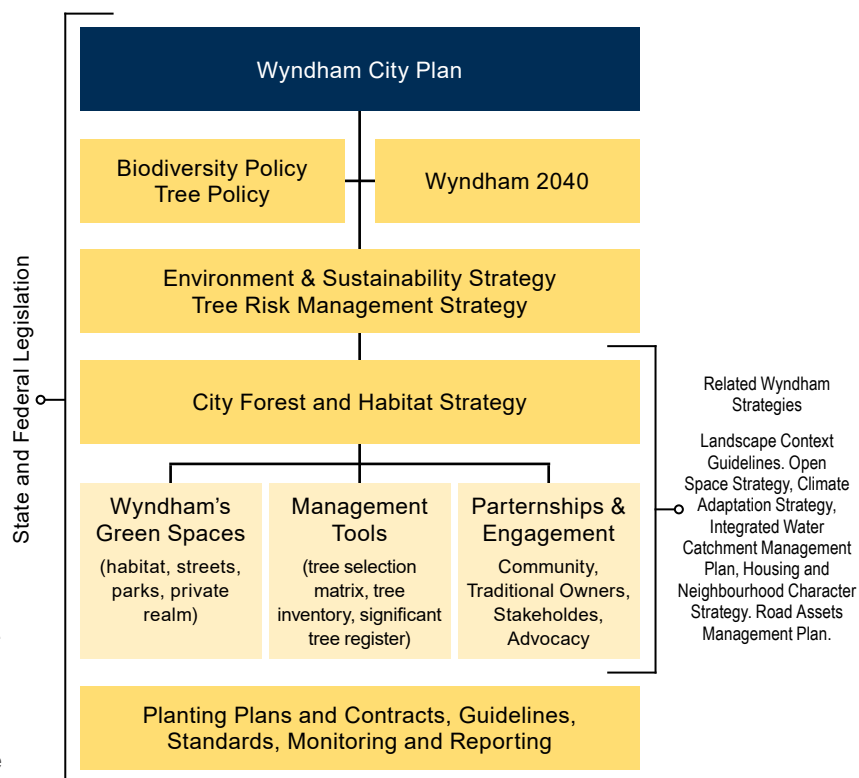
Together these documents set out Wyndham City's high level objectives and targets on biodiversity and canopy cover. The City Forest and Habitat Strategy has been developed as the key vehicle to achieve these objectives.

This Strategy has three core delivery components; Strategies for Wyndham's Green Spaces, Management Tools and Partnerships and Engagement. Each component includes short term targets (2022) and longer term visionary targets (2040). An Action Plan demonstrates how we will achieve the 2022 targets.

The Strategy takes a whole of organisation approach and will coordinate across a range of internal functions to ensure our work complies with legislative requirements and is coordinated with other strategies that guide how we manage and use Wyndham City's assets and open space.

Wyndham City is a partner in the Regional Catchment Strategy (RCS) for the Port Phillip & Western Port region (Port Phillip & Western Port Catchment Management Authority). This Strategy represents Wyndham City's commitment to achieving the RCS objectives as they relate to protecting and enhancing native flora, fauna and habitats.

There is also a range of legislation and state policy that has been considered in developing the Strategy and will apply to the actions to be delivered. A selection (not an exhaustive list) of key state and federal documents is listed below.



Activity Area	Policy and Legislation
Biodiversity and conservation –management of threatened or endangered flora and fauna, protection of soils and management of noxious weeds	<ul style="list-style-type: none"> • Flora and Fauna Guarantee Act 1988 (Vic) • Protecting Victoria's Environment – Biodiversity 2037 (Vic) • Catchment and Land Protection Act 1994 (Vic) • Environment Protection and Biodiversity Conservation Act 1999 (Federal)
Waterways – compliance with the policies and regulations related to stormwater, flood management and riparian land management	<ul style="list-style-type: none"> • Victorian Waterway Management Strategy 2013 • Melbourne Water Local Government Charter • Water for Victoria Water Plan
Strategic Planning – managing urban growth, working with State planning requirements, including fire management	<ul style="list-style-type: none"> • Planning and Environment Act 1987 (Vic) • Plan Melbourne 2017-2050 (Vic) • Wyndham Planning Scheme and Municipal Strategic Statement • Precinct Structure Plans and Guidelines (Vic)
Infrastructure – compliance with policy and regulations regarding safety, damage to infrastructure and ongoing maintenance, including public safety of Council assets	<ul style="list-style-type: none"> • Road Management Act 2004 (Vic) • Electricity Safety (Electric Line Clearance) Regulations 2015 (Vic) • Utility asset protection standards (various -Vic) • Occupational Health and Safety Act 2004 (Vic)
Indigenous and other heritage protection - protecting heritage sites, ensuring rights of Traditional Owners are respected	<ul style="list-style-type: none"> • Aboriginal Heritage Act 2006 (Vic) • Heritage Act 2017 (Vic)



4 Objectives and Principles

4.1 Strategy Objectives

The objectives of this Strategy are to:

- Increase urban tree canopy cover and create an urban forest
- Protect and manage our trees as valuable council assets
- Improve urban and rural habitat protection, connectivity, resilience and health
- Engage our community in understanding and valuing our trees and natural habitat
- Manage risks and better integrate trees into the design of assets, services and the built form



4.2 Principles

A list of principles used in tree and biodiversity management can be found in the Wyndham City Tree Policy and Biodiversity Policy respectively. Key principles that inform the development and delivery of this Strategy are summarised below:

Community is Key

- Education is essential so that all residents appreciate the value of trees and our unique natural habitats.
- Community ownership and care for public assets, with Wyndham City's support, is critical to success.
- Residents should have the opportunity to connect with and understand our unique natural habitats through accessible and well maintained natural plantings and reserves.

Respecting Traditional Owners

- The native species and natural places of significance to Traditional Owners should be protected and enhanced through this Strategy.
- Indigenous stories and history relating to the local natural environment should be promoted and celebrated in accordance with Wyndham City's Statement of Commitment and Reconciliation Action Plan.

We Achieve More Together

- We cannot achieve this Strategy's objectives alone. Partnerships with private landowners, State government departments and agencies, adjacent municipalities, community and other organisations is essential.

Respond to Growth

- Wyndham City needs to be proactive in its response to rapid urban development to achieve long term high quality community outcomes for trees and habitat.

Achieve Regional Outcomes

- Wyndham has unique natural assets of regional and national significance that must be protected and enhanced.
- We look beyond our borders to achieve the best outcomes for entire ecosystems.





Create Connectivity

- Our native species require connected, quality habitats to maintain healthy populations that are resilient to disease and disturbance.
- Our waterways and drainage reserves provide the best opportunity for connected urban natural habitats.
- Buffer zones along waterways can be used to strengthen the health of wetlands and waterway corridors through reduced edge effects and increased habitat area. Approaches to plantings on public and private land can support this.
- The Western Grassland Reserve and surrounding rural areas provides the best opportunity to invest and care for a substantial resilient grassland habitat.
- Our urban forest and open spaces can support native species movement through residential areas.
- Indigenous plant species provide the most suitable habitat for wildlife and should be prioritised when planting adjacent to existing natural areas such as waterways.

Plant an Urban Forest

- The space available for trees in the private realm is decreasing rapidly. As such increasing canopy cover in the public realm is vital.
- Nature strips should accommodate at least one tree per household.
- Planting plans will be sympathetic to, and avoid impacts on, remnant natural habitats in parks and reserves.

Trees are Community Assets

- Trees need to be managed for whole of life outcomes through well planned species selection, cultivation, soil conditioning, watering and maintenance.
- Trees have a financial value and will be protected through planning controls.
- Works on or around trees will comply with Australian Standards.

Diversity is Vital

- For resilience to drought, climate change, pests and disease we need a diverse tree population encompassing locally indigenous, native and exotic species (Appendix 4).
- Local provenance is preferred where it can strengthen species resilience and health - particularly for native species in conservation reserves.

Trees Provide Visual Enhancement

- Tree selection should address visual form, neighbourhood character and diverse community preferences on tree type.
- Boulevards and avenues are important to showcase the entrance ways and main thoroughfares of our city.

Address Risks and Safety

- Tree selection and planting should account for risk of damage to other assets ('the right tree in the right place').
- Tree selection should consider whole of community benefit and outcomes, for example growing large trees around powerlines can have a greater net value than a low maintenance small tree.
- Crime Prevention through Environmental Design (CPTED) principles should be considered in planting plans. In natural areas this needs to be balanced with habitat objectives.





5 Strategy for Wyndham's Green Spaces



This section sets out the main targets and actions to which Wyndham City commits in order to achieve the Strategy objectives. It examines the core issues based on the types of green spaces present in Wyndham and our ability to influence them. This starts at the regional and city wide scale with a focus on improving habitat connectivity, which in some cases will also contribute towards enhancing and expanding our urban forest. Whilst Wyndham City has committed to ambitious targets and actions at this scale it is recognised that much of the area we wish to influence is not managed by Council and will require strong partnerships with other private and public land managers to achieve the desired outcomes.

At the local scale this section details targets and actions for greening our streetscapes (nature strips and median strips), parks and reserves and the

private realm. In these mostly urban environments there is a significant focus on trees for the creation of an urban forest and community amenity, however it is also critical to examine opportunities to improve habitat connectivity and to connect our residents with the natural environments unique to our municipality.

Wyndham includes a significant stretch of undeveloped coastline that retains important natural values, however the management of coastal areas will be addressed in the Wyndham City Coastal Strategy (in development). The Coastal Strategy will identify conservation reserves and opportunities for habitat connectivity along the coast and to inland corridors (as identified in this Strategy). Habitat needs will be integrated with other coastal land use objectives and coastal climate change considerations with a view to achieving holistic coastal land use management.



5.1 Habitat Connectivity

Wyndham contains a vast array of natural habitats, many of which are regionally or nationally significant. Maintaining the good health of these natural areas and providing connections between them is essential to the long term viability of our flora and fauna.

Our key habitat areas at the regional scale include the Werribee River, Little River and the Victorian Volcanic Plains Grasslands and Woodlands. These important habitats are not defined by our city borders and if we are to achieve the best outcomes for their overall health we must work across these boundaries with public and private land managers in Wyndham and neighbouring municipalities.

Wyndham is also home to other important waterways and wetlands, parks and open spaces that create a network of semi-connected habitats. By strategically protecting and enhancing existing remnant vegetation, strengthening existing connections and creating new links between core habitats, we can support an environment that is healthy and resilient.

The following section refers to Map A - Regional Corridors and Map B - Local Wyndham Habitat Links. The maps and the following sections have habitat connectivity opportunities defined as follows:

- **Existing Links and Waterways** - typically these contain healthy mature indigenous vegetation with only minor breaks in connectivity. This means native flora and fauna can disperse along its length to some degree. The strength of these links needs to be improved.
- **Revegetating Links** - either containing fragments of remnant vegetation/mature plantings where connectivity and/or canopy cover can be improved, or have experienced recent revegetation works that require further care for mature habitat to be established.
- **Future Links** - drains or drainage reserves with little or no native habitat and/or canopy cover which could benefit from future planting.
- **Urban Habitat Zone** - A mostly lower density urban area of Wyndham with larger nature strips and opportunities to support some habitat connectivity between waterways.



Focus Areas

- **Enhancement:** Preserve resilience and long term viability of riparian areas by strengthening and expanding habitat corridor widths. Reduce edge effects through appropriate planting in riparian and buffer zones (Map B) and linking beyond our borders (Map A)
- **Connectivity:** Strategically increase the number and quality of habitat links through urban areas and removing barriers to fauna movement (aquatic and terrestrial) and providing habitat structures
- **Protection:** Ensuring appropriate planning protections cover the entire Werribee River and other key natural areas in Wyndham
- **Collaborate:** Work with landowners to protect and enhance environmental values on private and State Government land





5.1.1 The Werribee River

The Werribee River is one of only three river systems within the Melbourne Metropolitan area. It has been identified as the highest priority by our community for protection and improvement of its natural values (Wyndham City 2040 Vision). It is one of 36 priority waterways listed in the Victorian Water Plan: Water for Victoria.

The Werribee River originates in the Wombat State Forest on the Great Dividing Range, and flows for 110 kilometres south-east via Ballan, Bacchus March and Werribee before flowing into Port Phillip Bay at Werribee South. The River flows through four municipal regions - Hepburn Shire, Moorabool Shire, City of Melton and Wyndham City.

Intensive agriculture dominates much of the 2,700 square kilometre Werribee catchment. Within the municipality the rural upper catchment contains relatively intact streamside vegetation and is an important habitat for native fish, platypus and macro invertebrates. This area includes the historic Cobbledicks Ford Reserve and Werribee Blue Box grassy woodlands.

The middle reaches of the River, while surrounded by urban development, provide some good habitat for fish, birds and reptiles and host a significant platypus population. It includes the future Werribee River Township Park at the junction with Davis Creek, which will protect habitat for the vulnerable Growling Grass Frog. The lower reaches, lined with highly-valued river red gums, are characterised by low flows down stream of the Southern Rural Water Weir. The river estuary is home to

migratory wading birds and numerous fish species including black bream. Native grasslands, which once covered much of the catchment, have been mostly lost to farming and urban activity.

While we are fortunate that many areas of the Werribee River have some reasonable remnant vegetation, it has been highly modified, is subject to weed infestation and in some areas has only very narrow habitat or limited diversity. This has reduced the habitat quality and viability. Sections of the River, particularly middle reaches, have inconsistent planning protections in place.

Water storage, stormwater flows and nutrient run-off significantly impact natural flows and water quality, reducing Werribee River's overall health. These issues are addressed in Wyndham City's Integrated Water Catchment Management Plan, Health of the Werribee River Report and more broadly through the State Water Plan.

To improve the health of the Werribee River, a catchment scale approach is required from beyond Wyndham's northern border to the river mouth in Werribee South. Melbourne Water, as the waterway manager has a lead role in this objective, with Wyndham City playing a critical role as both a land manager and planning decision maker. Our focus is to improve the health of the River through protection and improvement of riparian habitat along the river margins, building on the Werribee River Biolink Action Plan (2012). There is also opportunity to increase amenity through aligning with the Werribee River Shared Trails Strategy.





Targets: The Werribee River

#	Objective	2022 Target	2040 Target
5.1.1a	Habitat Connectivity	Increase recruitment of Werribee Blue Box, River Red Gum and other indigenous plants along the Werribee River	The southern and northern sections of the Western Grassland Reserve are connected by an established nature reserve along the Werribee River
5.1.1b	River Protection	The entire Werribee River corridor within Wyndham is protected by an appropriate planning control	The Werribee River corridor retains significant environmental values throughout Wyndham
5.1.1c	Fauna Connections	At least 2 barriers to fauna movement removed on the Werribee River	Significant fauna have unrestricted movement along the Werribee River

2022 Action Plan: The Werribee River

#	Objective	Action 1	Action 2
5.1.1a	Habitat Connectivity	Develop and implement a riparian corridor vegetation improvement program, in partnership with land managers in Wyndham and Melton (MAP A)	Enhance and/or plant at least 3.5 hectares of native and indigenous trees, shrubs, grasses in Council reserves along the Werribee River (MAP B)
5.1.1b	Habitat Protection	Review baseline condition indicators and studies and undertake community consultation to assess the condition of the Werribee River and the need for planning protection	Subject to Action 1, develop statement of significance and local policy and apply for new or amended overlays in the planning scheme (MAP C)
5.1.1c	Fauna Connections	Review barriers to fauna movement and design solutions	Design and install 2 pilot fauna connections



5.1.2 Little River

The Little River forms Wyndham's southern and much of its western boundary. It supports vegetation types common to the Werribee Plains including Plains Grassland and Creekline Grassy Woodland, and is one of the most important wildlife corridors in Wyndham. Running primarily through agricultural land it remains largely untouched by urban development. Large marsupials such as kangaroos and possums, and smaller animals like Fat-tailed Dunnarts, Rakali (Water Rat) and several species of bats utilise the corridor.

Diverse species of reptiles and frogs find refuge along this corridor, with one of the last sightings of the presumed extinct Grassland Earless Dragon recorded in the area. Rare water bird species make visits to the waterway and Collared Sparrow Hawk and Wedge-tail Eagles sometimes nest in the larger River Red Gums and can often be seen soaring overhead.

There has been a significant increase in River Red Gum dieback since weirs were installed on the Little River during the 20th century and many of the old trees have died as a result. Heavy infestations of tiger pear and African boxthorn are reducing the overall habitat value of the Little River corridor.

Koala numbers in the nearby You Yangs National Park have declined as their habitat has been impacted by the drier, warmer summers. Concerned community groups have encouraged Wyndham City and landowners to investigate opportunities for the Little River to provide koala refuge habitat.

Enhancing and expanding the native vegetation along the Little River will assist the continued survival of its diverse fauna and return it to a healthy, connected natural ecosystem. There are opportunities to work with public and private landowners along its length including those across the border in the City of Greater Geelong.

Targets: Little River

#	Objective	2022 Target	2040 Target
5.1.2a	Habitat Connectivity	Habitat restoration works undertaken on at least 10 ha of private land along Little River	All significant barriers to fauna movement along Little River corridor are resolved
5.1.3b	Habitat Connectivity	The Council conservation reserves adjacent to Little River have at least 20% indigenous vegetation cover	The Council conservation reserves adjacent to Little River have at least 80% indigenous vegetation cover

2022 Action Plan: Little River

#	Objective	Action 1	Action 2	Action 3	Action 4
5.1.2a	Habitat Connectivity	Develop and implement a riparian vegetation improvement program in partnership with land managers in Wyndham and Geelong (Map A)	Investigate and implement options to remove barriers to fauna movement along Little River		
5.1.3b	Habitat Connectivity	At least 10 hectares of grassland vegetation subject to ecological burn	At least 100 new River Red Gums planted and established along the banks of the Little River	At least 50 Red Box planted and established in the You Yangs Reserve (or other locations where deemed suitable)	At least 26 cluster plantings of indigenous tree and shrub species established in riparian areas within Council conservation reserves



5.1.3 Volcanic Plains Grasslands and Woodlands

The Volcanic Plains Grasslands and Woodlands extend across much of south west Victoria, with the vegetation communities seen today likely shaped by the fire farming techniques used by the indigenous peoples of the area. Today the grasslands are critically endangered at the national scale, reduced to less than 5% of its original extent. At the local scale it has been estimated that more than 99% of the original habitat has been lost.

Within the urban growth area, grasslands are becoming housing estates, and wetlands and ephemeral waterways are turning into permanent water bodies. However, most remnant grassland areas in Wyndham are on private rural land outside the urban growth boundary and while modified, retain significant ecological value. There are a few small parcels of public land which have had limited disturbance and support the

highest quality native grassland remnants within Wyndham and are considered sites of national biodiversity significance.

With several flora and fauna extinctions on the plains to date, there are concerns for the future of other species such as the Golden Sun Moth and the Growling Grass Frog. Legislation has been put in place to help protect them (see table on p.12). Flora species listed as threatened include the Spiny Rice Flower, Button Wrinklewort and Large-fruited Groundsel.

A 15,000 hectare Western Grassland Reserve is planned for this area. Ensuring the health of the future reserve area along with surrounding grasslands, connecting to other habitat areas and providing further protection is critical to the survival of these important ecosystems.

Targets: Volcanic Plains grasslands and woodlands

#	Objective	2022 Target	2040 Target
5.1.3a	Habitat Connectivity	At least 100 ha of high value habitat on private land actively managed for conservation	All high value habitat on rural private land actively managed for conservation
5.1.3b	Habitat Protection	All significant rural grasslands within Wyndham are protected by an appropriate planning control	All of Wyndham's native grasslands have high environmental values and integrity

2022 Action Plan: Volcanic Plains grasslands and woodlands

#	Objective	Action 1	Action 2	Action 3	Action 4
5.1.3a	Habitat Connectivity	Develop and implement a habitat enhancement program under the Land Protection Grant Scheme	Develop a rural habitat education package for landowners	Revise the Weed Management Framework	Review opportunities for future native mammal reintroduction programs
5.1.3b	Habitat Protection	Conduct background studies and community consultation on areas of significance	Develop statement of significance, and local policy and apply for new or amended overlays in the planning scheme (MAP C)	Install gates and consult with the community to prevent vehicle use and rubbish dumping on grassland areas	Assess options to connect the Western Grasslands Reserve to the Western Treatment Plant northern grasslands (Map A)



5.1.4 City Connectivity

In addition to the major waterways and grasslands, Wyndham contains other smaller water ways and water bodies such as Lollipop and Skeleton Creeks and Cunningham's and Edgar Road Swamps, and a suite of reserves and parks of differing sizes and uses.

While these natural areas provide significant habitat corridors within Wyndham, historical land clearing and ongoing urban development have created a highly fragmented landscape. The general nature of the main waterway habitats running from north to south, and the relative isolation of many of the smaller habitat areas, prevents flora and fauna populations from dispersing, limiting the long term viability for a range of species. This is particularly critical where habitat qualities are at risk due to climate change and other pressures such as weeds, fragmentation and edge effects, pest species and predators.

Wyndham does, however, contain a range of public and private lands that have the potential to provide improved

habitat linkages. Drainage lines, wide median strips, railway corridors, large residential blocks, storm water catchments and our waterway areas have the potential, with planting and maintenance, to be turned into important habitat connections.

The Main Outfall Sewer (MOS) reserve is one of Wyndham's key future habitat corridor opportunities. This reserve, Crown land currently managed by VicRoads, is being revitalised through the Greening the Pipeline project. The MOS extends from Wyndham's eastern border through to the East Werribee Employment Precinct and on to the Werribee River, and provides a great opportunity to create an east-west connection between many of our waterway corridors. There are opportunities to strengthen urban habitats where these areas border neighbouring Councils.

It is critical that remnant habitats are protected and enhanced, and that new connections are created as stepping stones for species to travel through the altered landscape safely.



Targets: City Connectivity

#	Objective	2022 Target	2040 Target
5.1.4a	Habitat Connectivity	At least 35 ha of native and indigenous trees, shrubs and grasses planted along priority urban waterways and drainage reserves (future and regenerating links) (Map B)	All priority urban waterways and habitat links have optimal native vegetation and/or canopy cover (Map B)
5.1.4b	New Fauna Habitat	All new and 20% of existing Council managed stormwater wetlands include habitat structures	All Council managed stormwater wetlands have habitat structures that are used by local indigenous fauna
5.1.4c	Habitat Protection	The Aviators Field Precinct Structure Plan incorporates protection for the entire Cunningham's Swamp, including adjacent seasonal herbaceous wetlands remnant Lignum and River Red Gums	Cunningham's Swamp and other conservation reserves remain as protected and healthy functioning ecosystems
5.1.4d	Habitat and Vegetation Protection	Wyndham City's planning controls provide protection of trees and native vegetation on public land	Existing trees and vegetation are considered valuable assets and retained within all developments

2022 Action Plan: City Connectivity

#	Objective	Action 1	Action 2	Action 3	Action 4
5.1.4a	Habitat Connectivity	Develop and implement a planting plan to establish 25 ha of new native and indigenous plantings along priority urban waterways and drainage reserves on Council land (Map B)	Develop and implement a planting plan to establish 10 ha of new native and indigenous plantings on Melbourne Water, Vic Roads and Vic Track reserves along targeted links (Map B)	Complete naturalisation of at least one section of concrete drain	Enhance habitat values along Kayes Drain to strengthen William Angliss grasslands health, in partnership with government agencies
5.1.4b	New Fauna Habitat	Update the Council's Landscape Guidelines and Specifications to include wetland habitat and hydrology requirements (natural wetlands and stormwater treatment assets)	Develop and implement a habitat structure retrofit plan for targeted existing reserves and wetlands		
5.1.4c	Habitat Protection	Conduct a review of the extent of Cunningham's Swamp, the adjacent seasonal herbaceous wetlands and hydrological requirements to retain its current environmental values.	Advocate via the Precinct Structure Plan process to protect the Cunningham's Swamp and adjacent native vegetation.	Develop statement of significance, and local policy and apply for new or amended overlays in the planning scheme for habitat areas of significance (MAP C)	
5.1.4d	Habitat and Vegetation Protection	Develop habitat guidelines that outline standards for management of key habitat types, and incorporate into Council's Landscape Guidelines and Specifications.	Update environmental assessment guidelines for all internal and external environmental planning referrals	Update the Wyndham Municipal Strategic Statement to incorporate the State Biodiversity Conservation Strategy Objectives	

5.2 Streetscapes

Wyndham City manages over 200,000 trees, including significant boulevards that help define the character of the area. However, there is still much work to be done, it is estimated that at least 35% of our nature strips have empty spaces that require planting to achieve full street tree cover.

Many of our trees are small and immature as new trees are planted in urban development and transferred to Council ownership. This means our targets and actions need to consider the future canopy cover potential of young trees as much as existing cover of mature trees.

Each new suburb built in Wyndham includes a host of new street trees that eventually become Wyndham City's assets. These trees receive care and maintenance in the short term and usually appear healthy, however the harsh local conditions mean some species never reach their potential in the longer term. Furthermore street trees are not always given a high priority in the planning process and opportunities can be lost to maximise the nature strip space available for planting.

In existing suburbs street trees experience challenges with redevelopment resulting in tree loss as infrastructure such as driveways are added. Road widening to accommodate increased traffic, whilst critical for Wyndham's transport infrastructure,

can also result in the loss of the older trees and tree lined boulevards that are so important to the presentation and amenity of our city. Where overhead power lines remain we are faced with the choice of planting small trees with limited canopy cover or maintaining larger trees growing around power lines at a significantly higher ongoing maintenance cost.

To create a vibrant urban forest and achieve the best long term outcomes for Wyndham's community we must develop modern, proactive approaches to tree planning. Through a strategic approach we can ensure trees and nature strips are considered early in

the planning process, with practical consideration of species selection, soil and watering needs for long term tree health. Ensuring canopy cover is maximised and resilient will require increased tree planting, with innovating treatments and design. Encouraging residents to have greener nature strips and trialling novel changes to traditional nature strips in certain areas, including creation of micro habitats using trees, shrubs and groundcover will support species movement through urban areas. Street tree plantings in areas adjacent to our conservation reserves will be sympathetic to these natural areas.



Wyndham Percentage canopy cover per road (2015)

Focus Areas

- City presentation and amenity: Creation of tree lined avenues and boulevards on Wyndham's key entrance ways and thoroughfares (see Appendix 10)
- Promotion of walkability: Increasing shade for high use pedestrian streets (shops, schools, destinations)
- Urban Heat Island: Increasing canopy cover along our streets to cool our hottest suburbs (see Appendix 11)
- Overhead power lines: Methods to minimise their impact on tree canopy cover and maintenance costs
- Climate Change: Increasing canopy cover for health and wellbeing of vulnerable communities (SEIFA index, age)
- Habitat corridors: Supporting connectivity between core habitat areas through the Urban Habitat Zone and streets located near natural waterways (Map B)
- Innovative Approaches: Trialling methods to increase the health and viability of street tree plantings

Targets: Streetscapes

#	Objective	2022 Target	2040 Target
5.2a	Canopy Cover	At least 12.5% potential canopy cover and maximum stocking rates within streets	At least 25% potential canopy cover within streets across Wyndham
5.2b	Tree health & resilience	At least 5 trials to improve street tree health and canopy cover	Innovative approaches to street tree performance incorporated in all suitable areas
5.2c	Habitat connectivity	25% of the urban habitat zone has habitat vegetation (Map B)	50% of the urban habitat zone and riparian buffer zones have increased habitat values (Map B)
5.2d	Boulevards	Wyndham's key Boulevards and Avenues are identified, managed and have increased protection	All major entries into Wyndham and significant roads have healthy tree-lined boulevards

2022 Action Plan: Streetscapes

#	Objective	Action 1	Action 2	Action 3	Action 4
5.2a	Canopy Cover	Develop and implement a 5 year street tree planting plan for Council streetscapes	Develop and implement council standards to minimise loss of street trees from secondary crossovers (Appendix 5)	Revise the Council's Landscape Guidelines and Specifications and Specifications Manual to specify improved soils, planting design and maintenance requirements on nature/median strips	Revise subdivision approval process to consider space for trees early in development designs
5.2b	Tree health & resilience	Trial different irrigation regimes to understand benefits to tree health	Trial aerial bundling of power lines to allow larger trees to be grown	Trial road cut-outs/ structural soils and permeable pavement in low traffic established areas	Evaluate trials and develop an inventory of potential areas for further roll out
5.2c	Habitat connectivity	Develop planting guidance and resources for residents on nature strip habitat planting	Promote and support nature strip habitat planting with residents in targeted areas	Monitor and evaluate the success of treatments undertaken	
5.2d	Boulevards	Develop a Boulevard and Avenue Plan, including criteria, management and succession planning (see Appendix 10)	Map major boulevards and avenues	Implement management regime for identified boulevards and avenues	Develop landscape planning protections for significant boulevards and avenues

5.3 Parks and Reserves

Wyndham has a significant network of parks and reserves, ranging from natural areas to highly modified open areas. These spaces are one of the last refuges for trees and habitat in the urban landscape and usually the closest natural areas to houses, providing residents with the opportunity to interact with nature. The Wyndham Open Space Strategy describes these spaces in more detail and their purposes for passive and active recreation and/or conservation to meet the growing and varied needs of the community.

There are many opportunities to improve canopy cover within our existing open space network and this can help increase park usability - for example by providing shade for walking paths and playgrounds in summer. Improving tree selection can also ensure that trees in parks contribute to neighbourhood character and improve the health of our urban forest over the longer term.

There are numerous conservation reserves throughout Wyndham set aside for protecting rare or endangered species or to offset loss of habitat from development. Some reserves are managed by Wyndham City, some by State government and some by private landowners. New reserves will also be established in growth areas and are already nominated through the State planning framework. Wyndham City aims to proactively identify which new reserves are suitable for us to manage and where there are opportunities to achieve greater outcomes from reserves currently in private care. Criteria used to assess which reserves Wyndham City is prepared to manage include; the remnant ecological significance, opportunity for community education/engagement, connection to existing Council reserves, size and cost of maintenance (including third party contributions to management costs).

Some of Wyndham's reserves contain locally significant species at risk of localised extinction. These species will benefit from a dedicated Action Plan to aid species recovery in areas that we can influence.

There is great opportunity to integrate more natural habitat areas into our parks to provide habitat linkages and greater connection to nature, complementing other use of open space. Bits of Bush In the Suburbs, or BOBITS, an approach to create small patches of natural style habitat, will be tailored and implemented in parks across Wyndham.

Focus Areas

- **Walkability:** Increasing shade along footpaths, particularly commuter routes
- **Nature Connection:** Increasing opportunities for residents to interact with nature in Council parks, particularly in areas further from waterways or existing natural areas and provision of shade for existing playgrounds
- **Urban Heat Island:** Increasing canopy cover in parks to assist in cooling our hottest suburbs
- **Resilience:** Trialling methods to improve tree health in parks
- **New Conservation Reserves:** Taking on the management of privately managed or future reserves in new developments where Wyndham City can provide improved community outcomes (Appendix 2)
- **Action Plans for Locally significant species:**
Fauna - Cunningham's Skink (*Egernia cunninghamii*),
Flora - Cranberry Heath (*Astroloma humifusum*), Pink Purslane (*Calandrinia calyptrate*), Spiny Rice-flower (*Pimelea spinescens* ssp. *spinescens*), Featherheads (*Ptilotus macrocephalus*), Native Elderberry (*Sambucus gaudichaudiana*), Trim Sun-orchid (*Thelymitra peniculata*)



Targets: Parks and Reserves

#	Objective	2022 Target	2040 Target
5.3a	Canopy Cover	20% potential canopy cover in Council's open space (excluding grasslands)	35% potential canopy cover in Council's open space (excluding grasslands)
5.3b	Nature & People	80 New bush style plantings: Bits Of Bush In The Suburbs (BOBITS) in existing parks and reserves (Appendix 1)	80% of suitable parks and reserve sites contain bush style plantings: Bits Of Bush In The Suburbs (BOBITS)
5.3c	Tree health & resilience	Complete at least 5 trials to improve tree health and utility of trees and habitat in parks and reserves	Successful trials implemented in all suitable areas
5.3d	Habitat protection & resilience	All sites listed in Appendix 2 (owned by the State Government or offset providers) are implementing agreed site action plans	All Council managed conservation reserves have a measured improvement in condition

2022 Action Plan: Parks and Reserves

#	Objective	Action 1	Action 2	Action 3	Action 4
5.3a	Canopy Cover	Develop and implement 5 year planting plan for existing open space sites	Trial a car park redevelopment to achieve a potential for 25% canopy cover		
5.3b	Nature & People	Develop BOBITS guidelines	Incorporate BOBITS into the Wyndham City's park upgrade planning and maintenance plans	Engage communities and develop education resources around targeted parks	Revise the Council's Landscape Guidelines and Specifications for tree and habitat requirements in parks and reserves
5.3c	Tree health & resilience	Trial different irrigation regimes to understand benefits to tree health	Assess and trial use of fruit tree plantings in select park areas	Trail installation of permeable pavement footpaths	Trial 0.5 Ha of direct seeding
5.3d	Habitat protection & resilience	Develop agreements for future reserve management with relevant land owners and identify opportunities for additional planning protections (Map C)	Complete and implement site action plans for existing conservation reserves and develop a classification system based on habitat type/ significance	Develop and implement a biodiversity monitoring program	Develop Conservation Action Plans for locally significant species



5.4 Private Realm Trees

As Wyndham has become one of the fastest growing residential areas in Australia, land has become more valuable with the average residential lot size shrinking from approximately 600m² 10 years ago to under 400m² today. As block sizes shrink houses have been getting bigger, meaning less room for trees and gardens in the private realm. This is highlighted by the contrast between Melbourne's inner and outer suburbs, with private realm trees providing a much greater portion of canopy cover in the older inner suburbs.

If we are to achieve our urban forest and canopy cover objectives in Wyndham we will need to actively protect those trees already in the private realm and support our community to grow trees where ever they have space to do so. Guidance will be provided on the most appropriate tree species in regards to size, climate and other factors, and encourage the planting of indigenous species where residential areas are close to our waterways and conservation reserves.

Wyndham City is already implementing planning controls to ensure that space is retained for trees in new development. The targets and actions listed below are intended to support and build on those existing controls. This will be coupled with community engagement initiatives to encourage and promote the benefits of private trees, including factors related to heat management and energy use, to both reduce the loss of current trees and add to our overall canopy cover.

Focus Areas

- Protection of existing trees: Mature trees can take a long time to grow in Wyndham and they are vital to creating an urban forest
- Encouraging more trees in private gardens: Supporting residents to help grow an urban forest
- Promoting trees: targeted and general communication and community engagement

Targets: Private Realm Trees

#	Objective	2022 Target	2040 Target
5.4a	Tree Protection	The coverage and value of existing private trees in Wyndham's urban area is recorded and quantified	All significant trees on private land in Wyndham are nominated and protected
5.4b	Canopy cover	Every property can obtain a new free tree each year	Private realm tree canopy is at least 15% in established areas (as at 2017) and 10% in new areas
5.4c	Tree Planning	All trees protected in Precinct Structure Plans are retained and incorporated into development	Existing trees are retained and provide an important contribution to the canopy cover of growth areas

2022 Action Plan: Private Realm Trees

#	Objective	Action 1	Action 2	Action 3	Action 4
5.4a	Tree Protection	Complete survey of private realm tree values in potential redevelopment areas	Establish criteria, resources and process required to implement private realm planning protections in Wyndham		
5.4b	Canopy cover	Develop residents free tree program, including species selection, processes and monitoring of planting success	Establish an online tool for residents to request trees, including information on tree size, growth, care, and benefits	Supply display villages with information on private garden trees, native gardens and grasses	
5.4c	Tree Planning	Analyse developed Precinct Structure Plan areas for their intended and actual retention of trees and vegetation	Develop a process to monitor the health of trees identified for retention in Precinct Structure Plans	Pursue negotiations with land owners in existing Precinct Structure Plan development areas to retain existing trees and vegetation	Advocate via remaining Precinct Structure Plan processes to strengthen protection for existing trees and vegetation



6 Urban Forest Management Tools



Wyndham City's 200,000 trees are considered significant environmental and community assets and it is critical they are managed effectively to maximise their health and longevity. To do this we need to apply best practice standards and monitor the costs and benefits of different approaches for continuous improvement. At present we are limited in our ability to analyse and make evidence based decisions, as we lack some of the required tools, information and processes.


A tree inventory is the first step in developing a considered response to urban forest management that can be used to evaluate the health, species diversity, age diversity and financial value of the tree population. The inventory can be used by residents to accurately report damage to trees and Council can monitor maintenance and resultant benefits to tree health over time. The financial value of trees can be calculated including environmental services such as carbon sequestration, stormwater control and reduced energy usage. In this way the true value of our assets can be understood and used to make better decisions about the costs and benefits of tree removal.

The tree inventory can also be used to make better decisions on tree selection with the goal of increasing the diversity within our tree population and ensuring we plant trees that are suited to Wyndham's soil and climatic conditions. Through urban forest diversity we can increase resilience to climate change, disease and pests that can impact some species more severely than others. Similarly we can better manage age diversity, ensuring that we do not experience a large number of trees reaching the end of their useful life at the same time with a resultant large loss of canopy cover.

There are several tree protection guidelines that are essential for managing trees prior to, during and post construction. Wyndham City uses the guidelines within Australian Standard AS4970-2009-Protection of Trees on Development and our own tree management and material reuse standards.

A Significant Tree Register will allow us to identify and protect those trees with important ecological, historical, cultural or amenity value, ensuring we retain this important heritage. Clear guidelines on nomination and governance of this register will be critical to its function.

Focus Areas

- Tree Inventory: understanding and analysing our current tree assets
 - Tree Selection Matrix: ensuring we plant the most appropriate species
 - Diversity guidelines: promoting resilience within the urban forest
 - Significant Tree Register: protecting our heritage
 - Tree valuation: identifying monetary value of trees
 - Tree management standards: implementing best practice
 - Repurposing tree material after removal: recycling and reusing removed trees
- 

Targets: Urban Forest Management Tools

#	Objective	2022 Target	2040 Target
6.a	Tree Selection	All new public realm trees are selected according to Council's Tree Selection Matrix	Our urban forest is diverse, healthy and resilient
6.b	Tree Management	The Tree Inventory contains all council managed tree assets and is the primary data source for all tree planning and management	Wyndham City tree management is supported by high quality tree data
6.c	Tree and Habitat Protection	Tree Management Plans meeting Australian Standard 4970 completed and enforced for all development/construction that impacts on trees.	100% compliance with Tree Management Guidelines for all works near Council tree assets
6.d	Tree End of Life Management	All large scale approved tree removals retain or reuse tree material	All material from removed trees is reused within Wyndham
6.e	Tree Diversity	All new plantings in subdivisions to comprise no more than 30% of a family 20% of a genus and 10% of a species (excluding conservation reserves)*	Entire tree inventory to have no more than 30% of a family 20% of a genus and 10% of a species (excluding conservation reserves)
6.f	Significant Tree Protection	All significant trees in the public realm are identified and protected	All significant trees in Wyndham are identified and protected

*May require revision based on the findings of the tree inventory

2022 Actions: Urban Forest Management Tools

#	Objective	Action 1	Action 2	Action 3
6.a	Tree Selection	Finalise tree selection matrix and publish an online tree selection tool (Appendix 4)	Update the Council's Landscape Guidelines and Specifications to reflect tree selection requirements	Hold an annual workshop with nurseries and developers to update changes to species selection
6.b	Tree Management	Complete data collection of the Tree Inventory and establish systems and processes for its management and use	Analyse inventory data to inform tree planning and management	Publish basic tree inventory information online
6.c	Tree and Habitat Protection	Update and implement Tree Management Guidelines for works on and around Council trees in accordance with AS4970 (Appendix 5)	Develop and implement a compliance, enforcement and monitoring program for unauthorised works and damage to tree and habitat assets	Develop and apply tree valuation charges (Appendix 6) to applications for tree removal
6.d	Tree End of Life Management	Establish systems and process for receiving, processing and reusing harvested trees	Create an inventory of all habitat trees installed and monitor for species use	
6.e	Tree Diversity	Develop planting pattern guidelines that promote diversity and resilience	Update the tree selection matrix at least annually to reflect diversity targets	Revise Council's Landscape Guidelines and Specifications to ensure tree selection meets Council diversity targets
6.f	Significant Tree Protection	Establish a Significant Tree Register, including the governance, criteria, management, maintenance requirements (Appendix 6)	Undertake process to apply planning protections for registered significant trees in the public realm	Undertake process to apply planning protections to all public realm trees over 35cm Diameter at Breast Height (DBH)





7 Partnerships and Engagement

7.1 Community Engagement

There is a growing body of evidence to show that time spent in natural spaces is linked to positive health and wellbeing benefits, including faster illness recovery, strengthening immunity, reducing stress, and alleviating depression. This strategy sets out to make interaction with nature in Wyndham a readily available and positive experience.

On the flip side, community awareness and education is critical to conserve Wyndham's natural habitat and create an urban forest. Formal and informal engagement processes can promote behaviours and a culture within our community that are supportive of a green and sustainable city. We want to encourage our community to actively participate in caring for our open spaces and partner with Wyndham City to collect the information we need to do this. We will also encourage our community to see their gardens and private spaces as potential habitat that links to their broader environment.

Wyndham City will also be a key resource for the community to gain advice, knowledge and opportunities to participate in environmental initiatives and events.

Community engagement and connecting people with nature and trees is integral for the success of this strategy. We will involve the community through a range of engagement practices that build relationships and encourage participation in decision making processes.

Focus areas

- Awareness: Raise community awareness of the benefits of a healthy environment
- Involvement: Create opportunities for community to be involved with monitoring and improving the environment
- Increase Acceptance of Trees: Reduce opposition to and damage to our natural assets
- Diverse Communities: Engage with Culturally and Linguistically Diverse communities
- First Peoples: Partner and connect with Aboriginal and Torres Strait Islander groups
- Advocate and Partner: Work with key government stakeholders to achieve better outcomes



Targets: Community Engagement

#	Objective	2022 Target	2040 Target
7.1a	People & Nature	At least 320 residential properties and 20 schools, clubs and businesses incorporate habitat plantings on their properties	Private habitat plantings play a significant role in habitat connectivity
7.1b	People & Parks	5 Council managed parks have a local community group involved in park care and management	30% of parks have a local community group involved in park care and management
7.1c	Community Involvement	5 targeted sites have environmental data regularly collected by local community members and groups	Community members across Wyndham are providing critical data that feeds into the monitoring of our native flora and fauna populations
7.1d	Community Awareness	There is greater community awareness of the environmental values of public spaces	20% of community members have undertaken an activity to enhance Wyndham's habitat and/or urban forest

2022 Action Plan: Community Engagement

#	Objective	Action 1	Action 2	Action 3	Action 4
7.1a	People & Nature	Plan and continue delivering Habitat Heroes programs targeting waterway corridors and the urban habitat zone (Map B)	Expand habitat Heroes program for schools, businesses and clubs		
7.1b	People & Parks	Develop an 'adopt a park' program, including targeted parks, resources, support mechanisms and recruitment of local groups/residents	Work with existing / new groups and other stakeholder to identify annual activities and priorities in public open spaces for habitat and trees		
7.1c	Community Involvement	Develop a 'Citizen Science' program including data requirements, potential partners and locations	Develop and disseminate a Citizen Science resource support package	Recruit and support volunteers and groups to engage in citizen science initiatives	
7.1d	Community Awareness	Undertake research to identify views and engagement on environmental issues across Wyndham	Develop and implement a community information package for public spaces including signage, interactive features, brochures and online	Develop and implement a community engagement plan that links across all Strategy targets	Develop and disseminate a schools environmental education package



7.2 Traditional Owners

For generations, the grasslands on the basalt plains around Wyndham have been home to a diversity of Aboriginal people; speakers of at least three distinct languages; members of a larger alliance now described as the Kulin Nation. In this region, the Wathaurong speaking Marpeang bulluk community lived west of the Werribee River, the Woiwurrung speaking Kurung jang balluk community lived on the east; and the Boonwurrung speaking Yalukit willam community lived close to the bay.

The protection of cultural heritage is important to Aboriginal people for reinforcing identity and belonging and important to all Victorians as embodying knowledge connected to place. Wyndham contains a number of culturally significant sites. The Aboriginal Heritage Act 2006 sets out legal requirements to protect Cultural Heritage, and Wyndham City will work proactively with Traditional Owner groups to ensure we apply the appropriate care to such sites when implementing any environmental works.

By protecting and enhancing native biodiversity we will also be aiding in the protection of Aboriginal cultural practices, stories and ceremony. Discussions between Wyndham City

and Traditional Owner groups have begun over the provision of places and opportunities for Aboriginal people to carry out traditional practices, plantings and ceremonies such as beside waterways or in places of cultural significance.

Wyndham City will support local cultural knowledge that has been passed down through generations of Aboriginal people which can provide great insight into the way land is managed, even in today's urban context. Council will partner with Traditional Owner groups to share knowledge and learn about traditional maintenance techniques, such as the use of fire or soil aeration, which could be integrated into current approaches to achieve better outcomes.

Focus areas

- Increased knowledge of heritage: To educate Wyndham staff and community on Traditional Owner heritage, culture and values
- Partnership to Protect Heritage: To partner with Traditional Owner groups for the protection and enhancement of Wyndham City's natural heritage

Targets: Traditional Owners

#	Objective	2022 Target	2040 Target
7.2a	Learning and Education	All key staff responsible for parks and reserves management understand Wyndham's indigenous heritage and values	Increased community understanding and respect of the indigenous cultural significance of local natural areas and species
7.2b	Managing Council Land	Indigenous heritage is assessed and managed on all council planting sites	Indigenous heritage and knowledge is an integral part of Wyndham City's land management practices

2022 Action Plan: Traditional Owners

Section	Project name	Action 1	Action 2	Action 3	Action 4
7.2a	Learning and Education	Facilitate training for key staff on local indigenous history and cultural significance in natural areas	Include indigenous history and cultural significance in relevant community educational materials		
7.2b	Managing Council Land	Apply an indigenous heritage assessment process to all new planting sites in parks and reserves (Appendix 7)	Establish an indigenous food larder planting site (local species)	Engage with Traditional Owners in the management of environmental burns	Revise management plans for existing nature reserves to include indigenous heritage management



7.3 Partnerships and Advocacy

Achieving the core objectives of this Strategy will require significant work in partnership with other stakeholders. Many of the opportunities to protect and enhance habitat or increase tree canopy are located on public and private land not managed by Wyndham City. We will need to engage and collaborate with key stakeholders to deliver the desired outcomes. In addition, there are a number of government agencies that set standards and policies that will impact what outcomes can be achieved. Where appropriate we will seek to influence standards, policies and land management to achieve the best outcome for our residents and the environment.

Community groups are key to ensuring our actions are aligned with community expectations and to support community involvement in planning and delivery of actions. They are key stakeholders in our work and we will actively seek to engage them in constructive and meaningful ways.

The stakeholders involved in this Strategy are too numerous to mention, however some key partnership opportunities are identified in the table to the right.

Achieving the Strategy targets will also require advocacy to other levels of government on broader policy decisions and commitments. Wyndham City's key advocacy goals for trees and habitat are outlined below.

Key partnership types	Who
Regional habitat connectivity (grasslands, waterways, the Werribee River)	Cities of Geelong, Melton, Brimbank, Hobsons Bay. Department of Environment, Land, Water and Planning (DELWP), Parks Victoria, Melbourne Water, Werribee River Association, Port Phillip and Western Port Catchment Management Authority (PPWP CMA)
Private land habitat improvement and weed/pest control	DELWP, Department of Economic Development, Jobs, Transport and Resources (DEJTR), Melbourne Water, Landcare groups, Melton City Council, PPWP CMA
Planning overlays and Precinct Structure Plans	Victorian Planning Authority (VPA), Melbourne Water, DELWP, land owners
Traditional Owners	Registered Aboriginal Parties in Wyndham, Aboriginal Victoria, Traditional Owner groups, Wyndham Aboriginal Community Centre Committee
Planting on public land	Parks Victoria, Melbourne Water, City West Water/Greening the West, Vic Roads, Vic Track, V Line, Powercor
Urban Forestry and tree protection	City West Water/Greening the West, Powercor, the development community, DELWP, VPA, nurseries, heritage societies
Community Engagement and Partnerships	Werribee River Association, Friends Groups, NatureWest, Landcare groups, Community and Cultural organisations, residents



Habitat Connectivity

Advocate for:

- Local and State government agencies to support and contribute to strengthening regional habitat connections including along the Werribee River, Little River and between the Western Treatment Plant and the Western Grassland Reserve
- Habitat connectivity across the Outer Metropolitan Ring Road (when designed)

Habitat Protection and Enhancement

Advocate for:

- Government agencies to increase maintenance of high conservation significance areas on public land, in alignment with the State Biodiversity 2037 Plan
- Cunningham's Swamp to be retained and protected from development
- Investment in integrating new nature conservation reserves into urban development so they become accessible and valued community assets
- State government support for new planning protections on significant environmental assets
- Retaining connectivity along natural waterways during development of adjoining sub-divisions, with natural values enhanced

Urban Forest

Advocate for:

- Government agencies to increase tree planting on available public land to meet Melbourne 2030 canopy cover objectives
- Increased space for trees in new subdivisions including in nature strips and the private realm in accordance with the Wyndham Housing and Neighbourhood Character Strategy 2015
- Investment in aerial bundling and undergrounding power lines to increase space for tree canopy
- Stronger protections for existing trees in development areas





8 Continuous Improvement: Monitoring, Evaluation, Learning and Reporting



Wyndham City is committed to a transparent approach to analysing and improving our work. Sitting alongside this Strategy will be a Monitoring, Evaluation and Learning Plan, which will allow us to monitor progress, assess impact and continually learn from and improve our work.

A key component of this will be an Outcomes Framework, which will identify baseline data and specific, measurable indicators of success for all key targets. Appropriate tracking systems will be established or modified to ensure that we are collecting the right information in the most efficient and effective way.

This information will be used in a number of ways. We will use on-going monitoring data to assess if we are delivering on our planned actions and on track to meet the set targets.

Each year this will feed into a reflection process to assess what has been achieved through the year, the efficiency of our use of resources and what we have learnt. This will be incorporated into annual implementation planning with findings reported to Council and publicly available.

This Strategy is flexible in its design, acknowledging that environmental, social and political influences will change the context in which the Strategy operates. A mid term review will be undertaken to assess if we are meeting our targets, to review the external environment and to identify our key learnings. If required we will adjust our actions and targets to ensure the strategy remains relevant and ambitious.

Throughout the delivery period, we will continue to scan external research and practice to ensure we draw on new and emerging approaches, tools and materials. Innovation will be encouraged.

At the end of the first 5 years, the Strategy will be reviewed with a view to setting new 5 year targets and actions in 2022, ensuring we continue to take the best approach to reaching our long term 2040 targets and objectives. Key evaluation questions will be identified and answered, with the review also identifying performance related to relevance, effectiveness, efficiency, impact and sustainability.

The Monitoring, Evaluation and Learning Plan will be developed within the first six months of this Strategy's operation. We will seek to engage the community and external stakeholders in this process.



9 Definitions

Biodiversity:

Biological diversity or “biodiversity” is the variety of life forms, including plants, animals, micro-organisms and the ecosystems of which they are a part. Biodiversity encompasses all living things and, the functions and processes that link and sustain them. At a visual level, we see biodiversity in our local landscapes, natural systems, vegetation and wildlife.

BOBITS - Bits of Bush In The Suburbs:

Planted areas in parks with a dual purpose of providing habitat and connecting residents with nature.

Conservation:

A series of measures required to maintain or restore the natural habitats and the populations of species of wild fauna and flora at a favourable status.

Corridors:

Habitat, vegetation or wildlife corridors are linear links of remnant or planted vegetation that physically connect larger patches of isolated remnant vegetation. Corridors form a continuous link between remnant vegetation patches for wildlife that have difficulty in moving through fragmented landscapes.

Edge effect:

Impacts that occur at the boundary of a habitat due to increased exposure to weeds, pests and other land uses.

Fragmentation:

When large once-connecting or continuous tracts of native vegetation or habitats are modified leaving small isolated pockets of largely-modified remnant vegetation.

Habitat:

An environment with living and non-living factors, in which flora and fauna species lives at any stage of their life cycle.

Habitat Structure:

A natural or artificial installation that can be utilised by native fauna for shelter, nesting or other requirements.

Habitat tree:

A tree, living or dead, that has been artificially modified to provide breeding hollows for birds or mammals.

Indigenous Plants:

Those plant species that naturally occur locally to the Wyndham region.

Native Victorian plants:

As per the Planning and Environment Act native plants are referred to plants that are native to Victoria.

Regenerating Links:

Highly modified open space where full revegetation is planned, but is still in early stages with limited species diversity.

Riparian:

The area related to or situated on the banks of a river.

Priority habitat:

Wyndham City’s assessment of habitat areas that are, or have the potential to provide the highest quality habitat or are strategically located for connectivity.

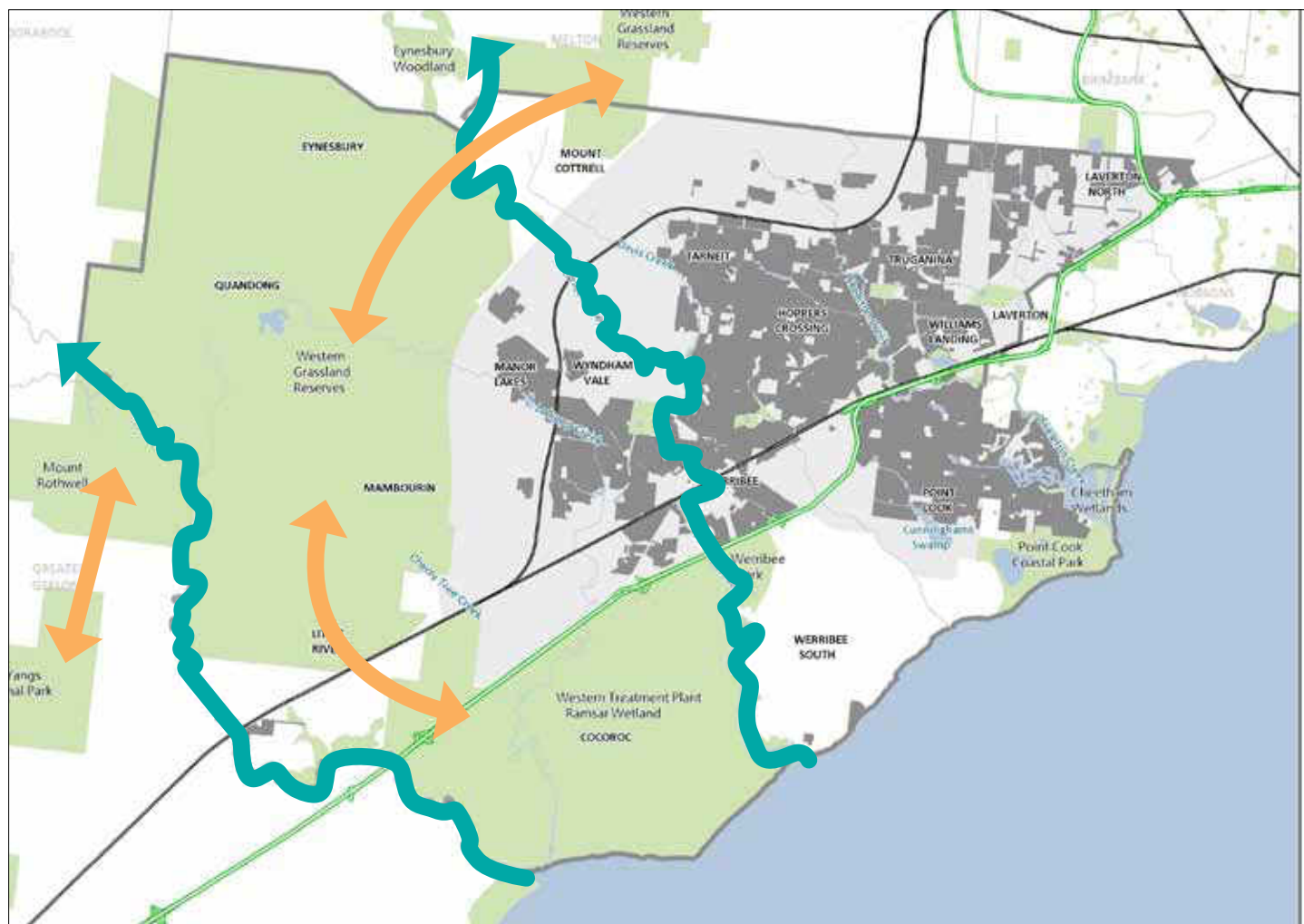
Traditional Owner:

Often used when describing Aboriginal peoples’ connection to land, but also in the native title process. Traditional Ownership is a concept utilised by State and Territory Governments of Australia in order to determine who has the right to form a Registered Aboriginal Party. A Traditional Owner can be an individual, a group and/or an organisation as well as a Registered Aboriginal Party (RAP) organisation.

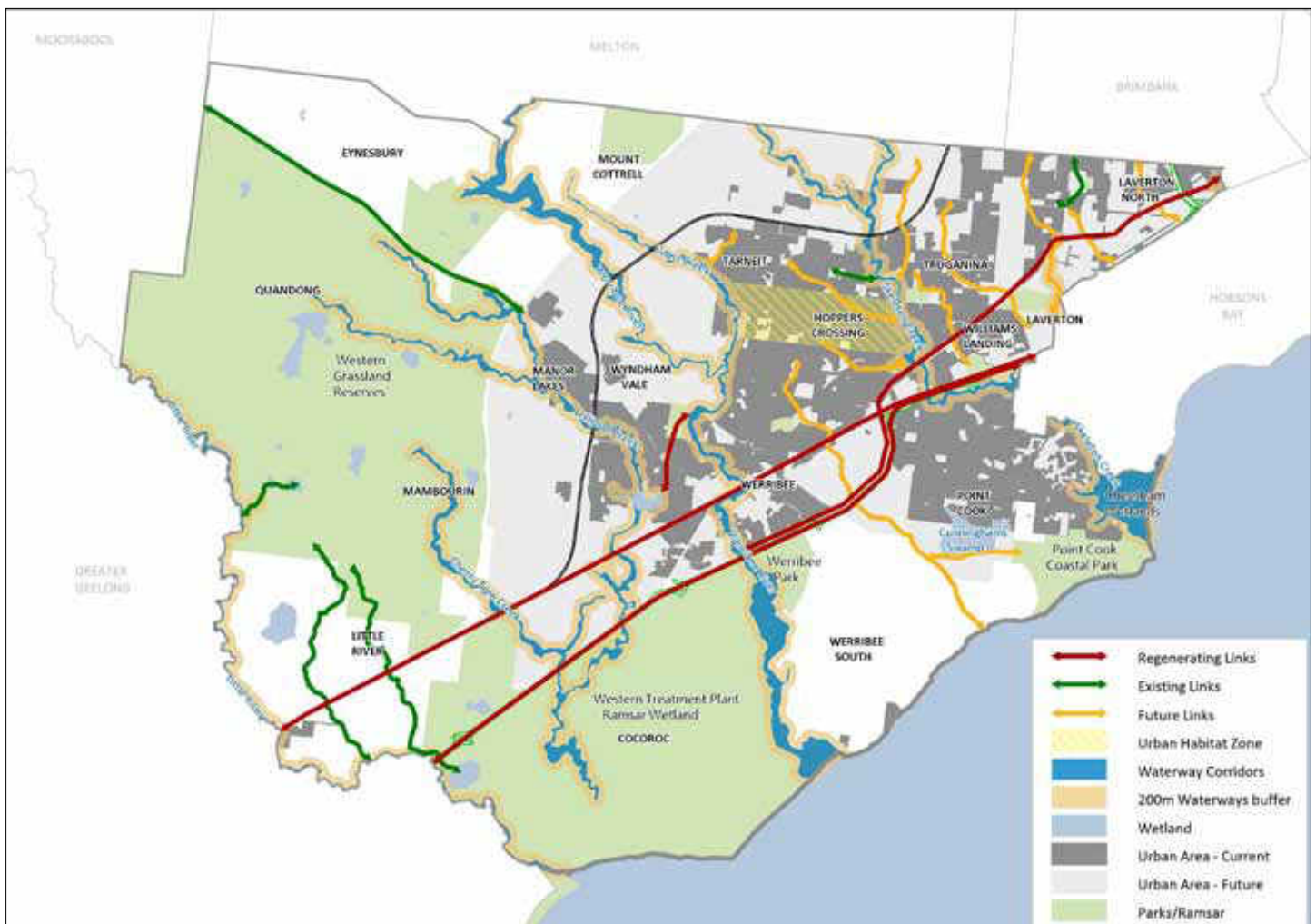


10 Maps

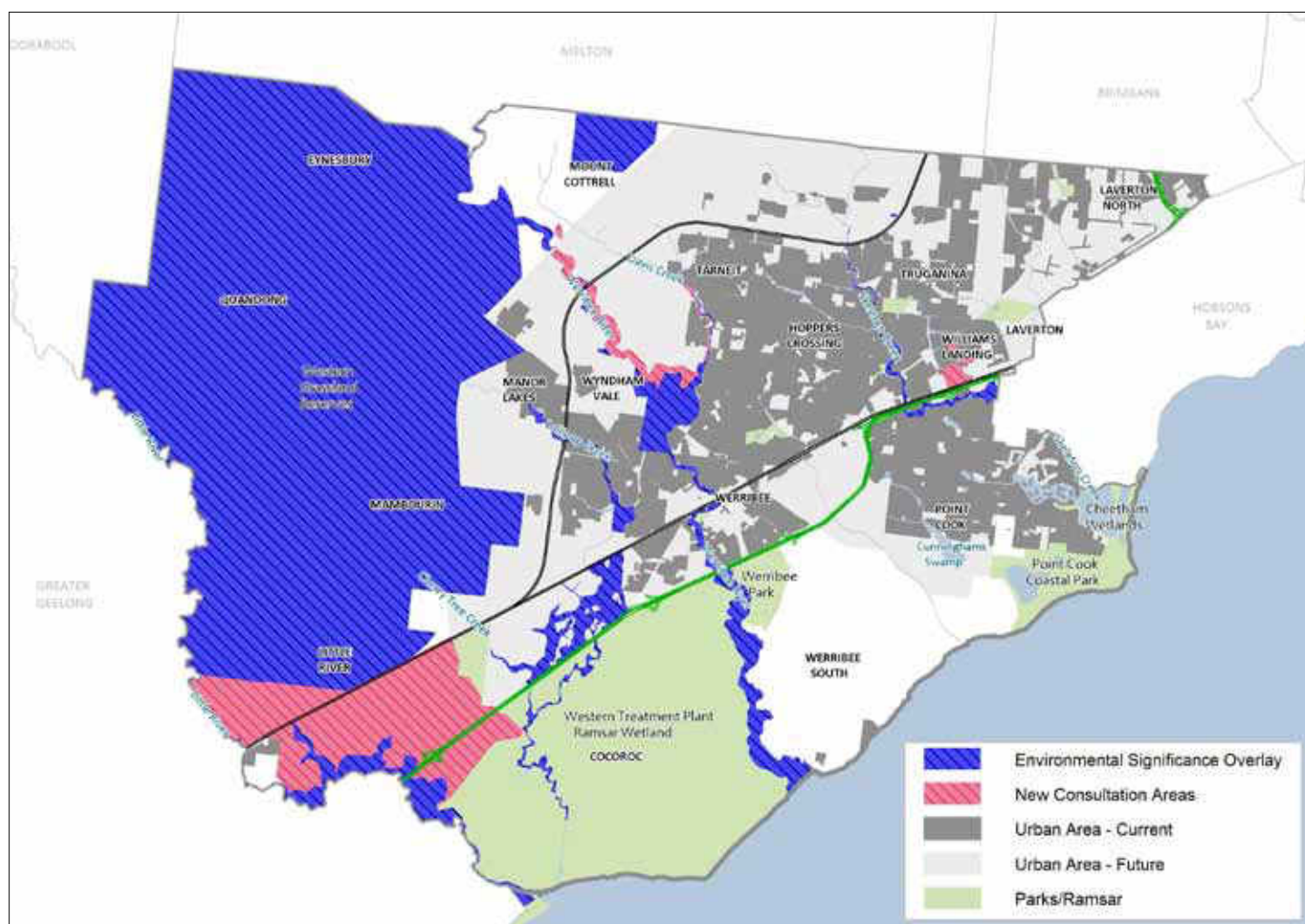
Map A: Regional Habitat Corridors



Map B: Local Wyndham Habitat Links



Map C: Environmental Planning Overlays (new consultation areas)





11 Appendices

The Appendices are provided in a separate document; which contain

Appendix 1 - BOBIT Design Principles

Appendix 2 - Future Conservation Reserve Sites

Appendix 3 - Indigenous, Native and Exotic Species Selection

Appendix 4 - Proposed Tree Selection Matrix Species List

Appendix 5 - Tree Management Standards DRAFT

Appendix 6 - Tree Valuation

Appendix 7 - Governance Arrangements of Significant Tree Register (DRAFT)

Appendix 8 - Management of Traditional Owner Heritage During Revegetation Works

Appendix 9 - Tree Canopy Baseline and Methods

Appendix 10 - Boulevard and Avenue Plan (DRAFT)

Appendix 11 - Urban Heat Island – Wyndham Map

Appendix 12 - List of All Targets and Actions



