



# marram baba Merri Creek REGIONAL PARKLANDS

## FUTURE DIRECTIONS PLAN 2023





## **Acknowledgement of Country**

The Parklands Partners acknowledge that the Wurundjeri Woi-wurrung are the Traditional Owners of the land known as marram baba Merri Creek Regional Parklands and pay respects to their Elders past, present and emerging.

We acknowledge the Wurundjeri Woi-wurrung people and their deep spiritual connection to the marram baba Cultural Landscape and recognise that it is valued in its entirety for the spiritual, archaeological, historical, ecological and living connections that it provides to Wurundjeri Woi-wurrung people.



marram baba short-finned eel artwork by Ash Firebrace Wurundjeri Woi-wurrung artist

## Executive summary

### marram baba Merri Creek Regional Parklands

The Parklands are part of the traditional Country of the Wurundjeri Woi-wurrung people and encompass an area of 2,778 ha, including over 34 km of Merri Creek, 8 km of Curly Sedge Creek, 4 km of Kalkallo Creek, and the confluences of Merri Creek with Kalkallo Creek, Aitken Creek, Malcolm Creek and Curly Sedge Creek. The basalt plains of the Parklands support diverse habitats for protected plant and animal species, and are home to some of the largest remaining native grasslands in the area – galgi ngarrk grasslands and the bababi marning grasslands.

In an area of rapid urban development, the Parklands provide opportunities for existing and new communities to develop strong links with the natural environment. There are several existing parks and reserves within the Parklands enjoyed by visitors, including galada tamboore, Whittlesea Public Gardens, Northpark Nature Reserve, Bells Avenue Wetlands, Donnybrook Cemetery and John Laffan Reserve.

### Traditional Owners

The lands and water of the area known as marram baba are significant for the Wurundjeri Woi-wurrung people for its songlines, creation stories and as a place for continued cultural practice. The name ‘marram baba’ means ‘body of mother’ in the Woi-wurrung language.

The flow of Merri Creek connects culturally significant places, with water having a deep spiritual meaning for the Wurundjeri Woi-wurrung people. Stone artefacts have been found along Merri Creek, and the Parklands provide protection of areas of cultural significance. The Parklands provide for opportunities to heal Country and for Aboriginal people today to continue traditional practices and connection with ancestors.

### Future Directions Plan - Vision

The marram baba Merri Creek Regional Parklands Future Directions Plan (the Plan) sets out a vision, principles and strategic directions for progressive Parklands establishment, protection and management to be achieved by 2050.

The vision for the Parklands is:

**marram baba Merri Creek Regional Parklands is the preeminent natural corridor running through Melbourne’s north on Wurundjeri Woi-wurrung Country, connecting and nurturing culture, nature, water, and people.**

The Plan recognises that the lands and water of the Parklands are part of the traditional Country of the Wurundjeri Woi-wurrung people and supports self-determination, and the goals of the Wurundjeri Woi-wurrung people for the future management of the land known as marram baba.



The Plan supports regional biodiversity and waterway health outcomes by linking, protecting, maintaining, and enhancing the natural environmental values of the Parklands. The Plan aims to improve the connection between the community and the Parklands through improved access to and within the Parklands including access points, trails, and waterway crossings. Opportunities are identified for increasing climate change resilience in the community, the natural environment, and built and green infrastructure. A connected Parklands with areas for nature-based recreation, gathering and socialising will contribute to improved community health and wellbeing, and strengthen the social connections that support resilient communities. A collaborative governance approach to the establishment, protection and management of the Parklands is supported.

The Plan is centred around six interrelated themes – *culture and identity, biodiversity, water, climate resilience, access and movement, and experience*.

### **Culture and Identity**

The marram baba Cultural Landscape is valued in its entirety for the spiritual, archaeological, historical, ecological and living connections that it provides to the Wurundjeri Woi-wurrung community. Embedding this identity in the Parklands establishment and management is essential to build a sense of place that reflects Traditional Owner values and enhances community connections, participation and social inclusion.

The identity of the marram baba Merri Creek Regional Parklands is tied to the Wurundjeri Woi-wurrung's continued custodianship and culture, the volcanic landscape and diverse plants and animals that live within it, the flow of Merri Creek and confluences with Kalkallo Creek, Aitken Creek, Malcolm Creek and Curly Sedge Creek.

The rapid urban and industrial development, and diverse communities that are moving into the surrounding residential areas, will also influence the identity of the Parklands. This will be most significant with the emergence of Cloverton Metropolitan Activity Centre creating a new 'city' for which the Parklands will wind through the middle, viewed by tens of thousands of people every day.

### **Biodiversity**

A key driver of biodiversity in the Parklands is the unique combination of rainfall, geology and geomorphology (the shape of the landscape) of the Merri Creek catchment. The volcanic plain supports a significant diversity of native plants and animals, with over 15% of Victoria's native plant species occurring in an area of less than 0.02% of Victoria's total area. Many of these plants and animals are endangered or threatened. The Parklands will support the significant conservation values that are protected under the Biodiversity Conservation Strategy for Melbourne's Growth Areas. However, these values are under threat from pest plants and animals, encroaching development and climate change. The Parklands provide protection against these threats and provide opportunities for people to connect with nature and contribute to improving the health of the natural environment through education programs and community stewardship.

The Plan is a tool to advocate for greater protection of the Parklands and the significant native biodiversity within it. This includes:

- Opportunities to call for greater areas of open space to allow for habitat corridors and wildlife movement.
- Access for people to commute and enjoy without impacting the biodiversity values.
- The provision of tree canopy cover to reduce heat impacts in areas of the Parklands that do not impact on the habitat of species that require access to light such as the Growling Grass Frog and native grasses.



## **Water and landscapes**

The landscapes and ecosystems of the Parklands are shaped by the basalts of the Victorian Volcanic Plain and the water that flows over and through the Parklands. Merri Creek forms a central spine through a broad, flat valley punctuated by the volcanic cone of Bald Hill and the tributaries that join Merri Creek. The galada tamboore gorge is one of the most distinctive geological features of the Merri Creek catchment.

Merri Creek, Kalkallo Creek and Curly Sedge Creek support significant indigenous plants and provide important habitat for native animals. These natural resources are threatened by changes in land use, climate change, and increasing urban and industrial development that is reducing stormwater quality and changing flow patterns in the creeks and across the landscape.

Providing access for people to view the natural waterways and wetlands of the Parklands creates opportunities for respite from the intense urban environment and opportunities for relaxation that can lead to improved mental health outcomes. Water is at the heart of health of Country and plays an important role in a healthy Parklands ecosystem.

## **Climate resilience**

Climate change threatens the Parklands with hotter and drier summers, more frequent heatwaves, bushfires and grassfires, and more intense storms and changes to hydrological systems. These impacts, when combined with other changes such as urban expansion, will place increased pressure on the Parklands.

The Parklands will be managed to support climate resilience including planting climate appropriate species, access to waterways for animals, cultural fire management, bushfire preventions and safety, water sensitive urban design and shade around picnic areas. The vegetation canopy coverage for the parklands was 23% in 2021. Due to the ecological priorities of the Parklands to protect grassland and Growling Grass Frog habitat it is not intended for the canopy to increase.

The establishment of connected parklands with areas for people to gather, recreate and socialise will also enhance community health and wellbeing and build social connections to support community resilience.

## **Access and movement**

Access to open space and recreational opportunities for people of all abilities and backgrounds is an important and necessary step to ensuring the whole community can benefit from and safely experience the Parklands.

The Plan promotes greater north-south and east-west connections for walking and cycling and connections to public transport, while avoiding impacts on the high conservation values within the Parklands. As the preeminent natural corridor running through Melbourne's north, the Parklands play a strategic regional role in providing active transport opportunities for people living and working in the North Growth Corridor.

The Plan advocates for increased Parkland area so that improved trails can be provided, and the Parklands connected to other regional open space and trail networks, without impacting on conservation values. The Plan promotes better connection to waterways, places to enjoy nature, respite from heat and areas for communities to gather.

## **Experience**

Visitor experience of the Parklands is shaped around enjoying and immersing oneself in the natural environment, gaining an appreciation of the Aboriginal cultural heritage within the landscape, moving through the landscape, and being able to take in the landscape from scenic viewpoints. There is opportunity to create and enhance visitor areas and points of interest that showcase the changing landscape and influence how people will feel moving through corridors with riparian shrubland to wider open plains grasslands and grassy woodlands. This changing landscape provides opportunities for people to engage in recreational activities such as walking, cycling and nature play as well as participate in education programs, volunteer opportunities and citizen science.

Existing visitor areas will continue to be supported and enhanced with an emphasis on walking, picnicking and connecting people to nature. This includes galada tamboore in Campbellfield, North Park Nature Reserve in Somerton, Bell Street Wetland, Quill Reserve and Donnybrook Cemetery in Kalkallo.

Whittlesea Public Gardens in Lalor will be the key visitor area available for more active recreational activities, as well as being a gateway for walking, cycling and enjoying the creeks in the parklands.

Cloverton will also provide new visitor experiences that are co-located west of the Parklands including playgrounds, sports facilities, toilets and picnic areas. From this location, visitors will enjoy an open space link encouraging walking up to Bald Hill for wider Parkland views.

## **Management of the Parklands**

The Plan has been developed by the Parklands Partnership Group that includes the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation (WWCHAC), Parks Victoria, the Merri Creek Management Committee, Hume City Council, City of Whittlesea, Mitchell Shire Council, Melbourne Water, Yarra Valley Water, and the Department of Energy, Environment and Climate Action (DEECA).

The Plan supports self-determination priorities of the Traditional Owners as represented by the WWCHAC and future management of the Parklands by the WWCHAC.

The Parklands Partners will work together to collaboratively develop, protect, enhance and manage the Parklands in line with the vision, guiding principles, strategic directions, actions and management zones set out in the Plan.



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The *marram baba Merri Creek Regional Parklands Future Directions Plan* has been drafted by Mosaic Insights and REALMstudios on behalf of the marram baba Merri Creek Regional Parklands Partnership Group.



# 1 Introduction

The marram baba Merri Creek Regional Parklands (the Parklands) are located on Wurundjeri Woi-wurrung Country in the middle reaches of Merri Creek in Melbourne’s outer northern growth area. Since 2013 the Parklands have been managed under the guidance of the *Merri Creek Marran<sup>1</sup> Baba Parklands Strategic Management Plan May 2013* developed by Parks Victoria, which encompassed approximately 650 ha.

In 2018, the Victorian Government committed to expanding the area of the Parklands to 2,778 ha to create a continuous chain of parks and open spaces stretching from Campbellfield to Beveridge (Figure 2). This expanded commitment was made in response to the expansion of the urban growth boundary and the need to protect the values of Merri Creek, its tributaries and parklands as residential, commercial and industrial development rapidly occurs in areas adjacent to the Parklands. The expanded boundary generally aligns with the Conservation Areas set out in the *Biodiversity Conservation Strategy (BCS) for Melbourne’s Growth Corridors* and Precinct Structure Plans (PSPs).

The *marram baba Merri Creek Regional Parklands Future Directions Plan* (the Plan) sets out a vision, principles and directions for progressive establishment and co-management of the expanded Parklands by Traditional Owners and land managers. The Plan supports self-determination and the goals of the Wurundjeri Woi-wurrung people for future management of the Parklands. The Plan will protect Aboriginal cultural heritage values and areas of biodiversity values on both sides of Merri Creek. It will create new and improved access points and links for visitors, connecting a network of existing and future parks and reserves.

Urban parklands provide a range of important benefits to the environment and the community. The Parklands are no exception and provide important habitat for native animals and plants, access to natural spaces and experiences for the community, and opportunities to mitigate the impacts of climate change through sustainable water management and urban cooling.

The Plan considers the current and future values of the Parklands, and the drivers of change affecting the values and their management into the future. Developed with input from the Traditional Owners, land managers and the community, the Plan provides the basis for establishment and management of the Parklands to 2050.

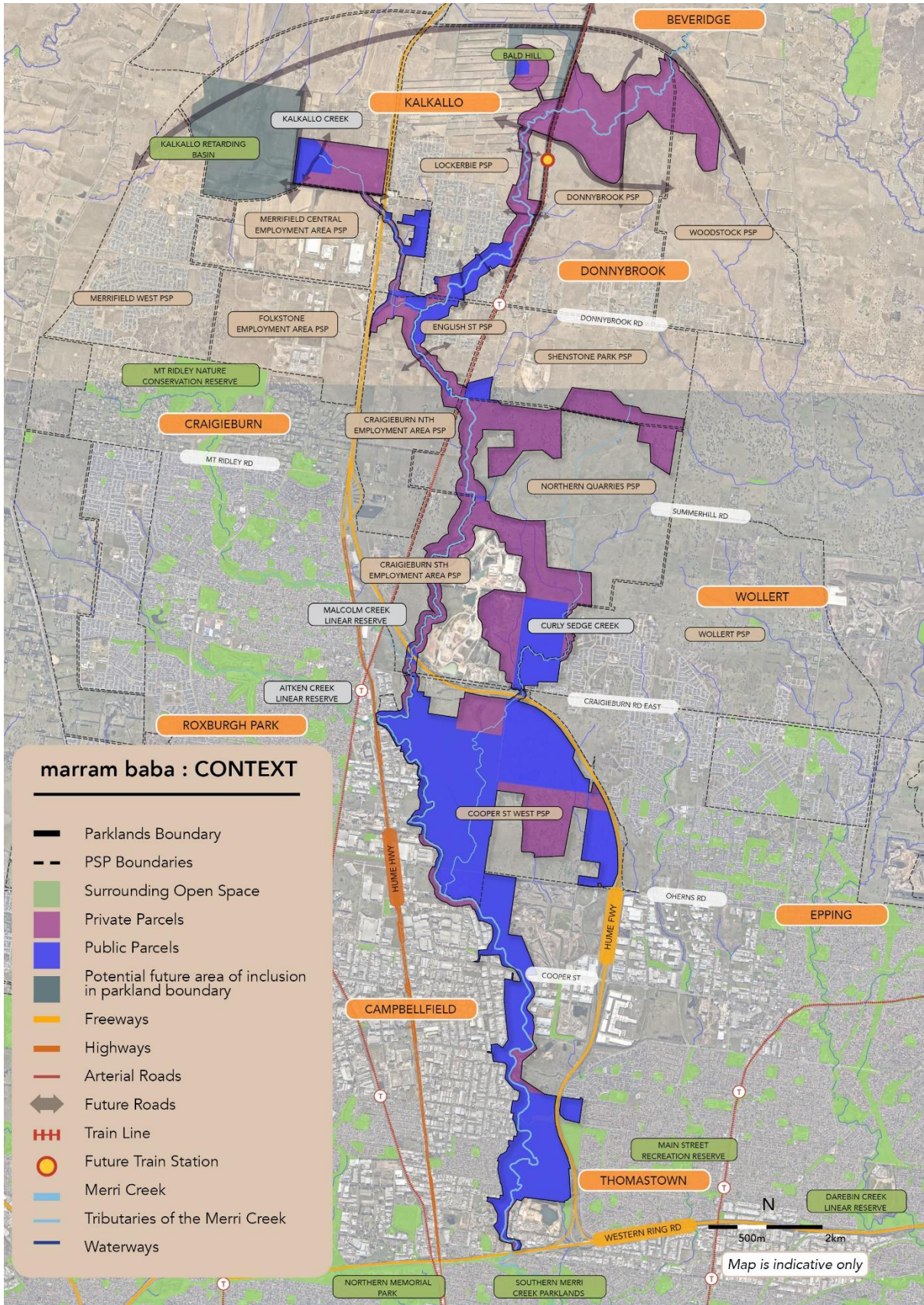


**Figure 1: Looking south across the Parklands from galada tamboore towards the Melbourne CBD**

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<sup>1</sup> Note: at the time of preparing the 2013 plan, the Parklands were referred to as marram baba. Recent naming analysis by the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation confirmed that the name ‘marram baba’ is to be applied instead, meaning ‘body of mother’.





**Figure 2: Context of the marram baba Merri Creek Regional Parklands**



## 1.1 The role of the Plan

The Plan provides a framework to protect and enhance the Aboriginal cultural heritage, and the environmental and social values in the Parklands. The Plan provides guidance for co-management of the Parklands to support more detailed planning to deliver on-ground actions that will be progressively undertaken as land becomes available, visitor demand increases, and funding is allocated.

## 1.2 How the Plan has been developed

The Plan has been developed through a collaborative partnership between the Traditional Owners and land managers responsible for the management of public land within the Parklands. Together, these groups are referred to as the Parklands Partners. An overview of the process for developing the Plan is provided in Appendix 1.

The Parklands Partnership Group that developed the Plan will be responsible for its implementation. The Parklands Partnership Group has representatives from nine organisations:

- Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation (WWCHAC)
- Parks Victoria
- Merri Creek Management Committee
- Hume City Council
- City of Whittlesea
- Mitchell Shire Council
- Melbourne Water
- Yarra Valley Water
- Department of Energy, Environment and Climate Action (DEECA).

## 1.3 The objectives of the Plan

The objectives of the Plan were agreed by the Parklands Partnership Group in four categories:

### Cultural heritage

- Protect and enhance the traditional and contemporary Aboriginal cultural heritage values of the Parklands
- Protect significant heritage features, such as drystone walls, that reflect changing community uses
- Provide opportunities for cultural learning.

### Environmental

- Protect and enhance the biodiversity and natural values of the Parklands
- Protect terrestrial, riparian and instream habitats and overall waterway health
- Increase climate change resilience in the natural environment, the community and parklands infrastructure.

### Social

- Support and foster community connections to and an appreciation for the landscape
- Support nature-based recreation, and environmental and cultural heritage learning and appreciation
- Provide better access to and within parts of the Parklands for local and regional visitors
- Provide opportunities for social connection and physical activity where appropriate.

## **Governance and management**

- Support Traditional Owner-led management of Country and self-determination priorities
- Set out strategic directions to guide collaborative decision-making and management by the Parklands Partners
- Identify parkland management zones that guide decision making on future parkland uses, development and land management
- Identify key actions for establishing and managing the Parklands.

### **1.4 Relationship of the Plan to the Biodiversity Conservation Strategy and Precinct Structure Plans**

The Biodiversity Conservation Strategy (BCS) for Melbourne's Growth Corridors identifies Conservation Areas and outcomes required under the Commonwealth's *Environment Protection and Biodiversity Conservation (EPBC) Act 1999*. The BCS is being implemented as part of the Melbourne Strategic Assessment (MSA) program and is the basis for protecting (and securing) much of the northern reach of the Parklands.

The BCS identifies eight Conservation Areas along Merri Creek to mitigate the environmental impacts associated with Melbourne's urban growth. These areas contain some of the most important habitat for endangered species and ecosystems within the growth corridors. The Conservation Areas protect and enhance habitat for matters of national environmental significance including the preservation of Growling Grass Frog populations and the protection of remaining remnants of Natural Temperate Grassland. The Conservation Areas are integrated into precinct structure planning, removing the need for additional assessment and identification of areas for the protection of National and State significant ecological values.

The marram baba Merri Creek Regional Parklands Future Directions Plan is a high-level strategic plan. Precinct Structure Plans (PSPs) remain the key plans that guide future use, subdivision and urban development of most of the land around the Parklands. This includes stormwater and drainage assets, bridges, trails and interfaces between the Parklands and urban development. Detailed planning and design of land that will be transferred from private ownership to the Parklands will be based on site specific analysis, and will be documented in approved development plans. In areas outside PSPs, land is subject to development approval and this planning permit process will determine inclusion of land in the Parklands.



## 2 Context

### 2.1 Understanding the marram baba Merri Creek Regional Parklands

The Parklands are located on the traditional lands of the Wurundjeri Woi-wurrung people, where there are many places of cultural significance. The Parklands generally follow the course of Merri Creek, incorporating the lower sections and confluences of Kalkallo Creek, Malcolm Creek, Aitken Creek and Curly Sedge Creek.

This landscape is significant for the Wurundjeri Woi-wurrung people as it is an area of movement, songlines, destinations and landmarks. The volcanic plain grasslands, Merri Creek and other creek confluences play a significant role as the source of creation stories and a place for important resources and cultural practices. Stone artefacts and other archaeological remains are found within the area known as marram baba. Water has a deep meaning for the Wurundjeri Woi-wurrung people, allowing for personal connection with ancestors and the past and the continuance of traditional practice today. The flow of Merri Creek connects these culturally significant places, and its health is essential for the health of Country. The Parklands provide greater protection of Country and opportunities for Aboriginal people today to keep community, health, traditional and contemporary practices strong through access to water and the surrounding landscape.

The volcanic landscape of the Parklands supports valuable grassland and grassy woodland communities. It also provides habitat for important and vulnerable native animals including Striped Legless Lizard, Growling Grass Frog, Golden Sun Moth and the critically endangered Swift Parrot and Regent Honeyeater.

Clearing of vegetation from the land around the Parklands for agricultural development, and now urban development, has modified and continues to threaten the ecosystem values by removing indigenous plant species, fragmenting habitat, reducing water quality, changing the patterns of flow of water to the creek, and damaging the health of Country.

The Parklands are located in the North Growth Corridor, which will develop from a currently semi-rural area to accommodate significant numbers of residents and workers. Infrastructure Australia forecast that the corridor is expected to have around 137,000 residents by 2031, an increase of approximately 70% from 2020<sup>2</sup>. The Parklands will be an important regional open space for the rapidly growing number of residents in northern Melbourne, and as a regional parkland will attract visitors from a wider catchment.

The Parklands boundary currently incorporates existing parks and reserves and private land. Collectively, the existing parks and reserves provide a range of functions, including nature conservation, scientific research and protection of areas of Aboriginal cultural significance. These open spaces form important habitat links, and provide areas for visitors with infrastructure to support visitation such as signage, seating, parking, and walking and cycling trails.

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<sup>2</sup> <https://www.infrastructureaustralia.gov.au/map/melbourne-outer-northern-suburbs-cbd-capacity-upgrade>

## **Established parks and reserves within the Parklands**

### **galada tamboore, Campbellfield**

Formed by the erosion of the volcanic plain by Merri Creek over a million years ago, the landscape of galada tamboore encompasses basalt escarpments with Merri Creek flowing through its centre. The name galada tamboore means 'creek waterhole' in Wurundjeri Woi-wurrung language and is culturally significant for the Wurundjeri Woi-wurrung people.

Located just north of the Metropolitan Ring Road in Campbellfield, this 130 ha reserve is a site of biodiversity significance that contains important riparian scrub, significant grasslands and wildlife. It also provides an important function as a natural flood retarding basin.

The community can experience parts of the reserve via the Merri Creek Trail with opportunities for exercise, play, relaxation, views and nature appreciation. Access to galada tamboore from Campbellfield is through the Horne Street Picnic Area, Somerset Drive, Hattie Court Playground, Barry Road and Merri Concourse. Another way to enter is via the Whittlesea Public Gardens in Lalor.

The Merri Creek Management Committee, Friends of Merri Creek and the Wurundjeri Woi-wurrung Narrap Unit work in partnership with the land managers and have been central in the care and protection of biodiversity within galada tamboore. The land is managed by Melbourne Water, Parks Victoria and Hume City Council.

### **Whittlesea Public Gardens, Lalor**

Located in Lalor on Barry Road, the Whittlesea Public Gardens provide over 14 ha of open space for active and passive recreation.

Recent redevelopment of the gardens includes a new playground, nature play areas and a dedicated learn-to-ride area for cyclists. Future upgrades will mean visitors can also enjoy a new skate park, basketball courts, rock climbing wall and outdoor fitness equipment.

Whittlesea Public Gardens provide a major gateway into marram baba for people living in Whittlesea and is a launching place for cycling on the Galada Tamboore shared path east of the Hume Freeway. Walking and cycling trails in the gardens connect to the grasslands of galada tamboore, the galada tamboore reserve and the Merri Creek Trail by crossing the iconic 'Ned Kelly Bridge' over the Hume Freeway.

The land is managed by City of Whittlesea.





### **bababi marning Grasslands, Campbellfield**

Located south of Cooper Street, bababi marning (previously known as the Cooper Street Grasslands) is a nature conservation reserve that protects nationally and state significant native plains grassland. The name bababi marning means 'mother's hand' in Wurundjeri Woi-wurrung language and is culturally significant for the Wurundjeri Woi-wurrung people.

The 50 ha reserve protects critically endangered grasslands and areas of high-value escarpment shrubland and Woolly Tea-tree riparian scrub, providing habitat for the nationally significant Golden Sun Moth and Striped Legless Lizard. bababi marning is also home to several important animal species including the Mistletoe Bird, Stubble Quail, Latham's Snipe, Tawny Frogmouth, Short-beaked Echidna, Swamp Wallaby, Eastern Grey Kangaroo, Blue-Tongue Lizard and Spotted Marsh Frog.

The Merri Creek Management Committee and Friends of Merri Creek have been central in the care and protection of biodiversity within bababi marning. The reserve is managed by Parks Victoria.

bababi marning has restricted access to protect its high conservation values, but visitors are welcome to enjoy the adjacent Metrolink Circuit Reserve (lower image) managed by Hume City Council.



### **galgi ngarrk Grasslands, Epping and Wollert**

Located primarily on the east of Merri Creek, galgi ngarrk (previously known as Craiggieburn Grasslands), is the largest reserve within the Parklands and encompasses approximately 400 ha of nationally and state significant native grasslands. The name galgi ngarrk means 'back bone' in Wurundjeri Woi-wurrung language and is culturally significant to the Wurundjeri Woi-wurrung people.

The reserve includes remnant stony knoll grasslands and provides habitat for protected plants, animals and migratory birds, including nationally and state significant endangered species such as the Matted Flax Lily, Curly Sedge, Striped Legless Lizard, Plains Wanderer, Golden Sun Moth and Growling Grass Frog.

The Merri Creek Management Committee and Friends of Merri Creek have been central in the care and protection of biodiversity within galgi ngarrk. The reserve has restricted public access.

The land is managed by Parks Victoria.





### **Northpark Nature Reserve, Somerton**

The Northpark Nature Reserve is located on Northpark Drive and provides an open space link and walking trail with views of Merri Creek and low escarpments. Wildlife connections under the Cooper Street bridge directly link this reserve to the bababi marning grasslands.

Most of the reserve encompasses sloping grassed areas, rocky escarpments and minor riverine landforms associated with Merri Creek. The trail provides enjoyable respite in a light industrial area with seating and views along the creek.

The 14 ha site has conservation value with Golden Sun Moth and Growling Grass Frog having been recorded in the reserve. A population of Cunningham Skink is also present at this site. The land is managed by Hume City Council.



### **John Laffan Reserve (Donnybrook Reserve), Kalkallo**

The 7.6 ha John Laffan Reserve is used by community groups for its sports ovals and pavilion.

The reserve is the site of the confluence of Merri Creek and Kalkallo Creek and connects public land extending south along the west side of Merri Creek. The conservation area in the reserve includes rocky escarpments and outcrops, grasslands, and remnant riparian vegetation including large, old trees with hollows that provide habitat for native animals. It is an area of cultural significance for the Wurundjeri Woi-wurrung people.

The reserve will be an important link for new communities located in the Donnybrook and the English Street PSP areas. A pedestrian bridge link from the English Street PSP on the east side of Merri Creek will connect to the south-eastern corner of the reserve. The size of and facilities at the reserve are likely to change in the long term, due to the future duplication of Donnybrook Road, and the development of new, larger sporting facilities nearby.

The Merri Creek Management Committee have been central in the protection and restoration of biodiversity in the southern part of the reserve. The land is managed by Hume City Council.



### **Bells Avenue Wetlands, Kalkallo**

The 3 ha Bells Avenue Wetlands reserve is located off Moxham Drive in Kalkallo, just west of Merri Creek. It was created as part of the adjacent housing development.

The wetlands help to remove pollutants from stormwater from local streets and provide habitat for birds and aquatic life. Visitors can relax walking around the wetlands and enjoy the children’s play space at the adjacent Quill Reserve.

The wetlands are set within the Growling Grass Frog conservation area. The land is managed by Hume City Council.



### **Donnybrook Cemetery and Kalkallo Commons Grassland Reserve**

Donnybrook (also known as Kalkallo) Cemetery is located on Malcolm Street at Kalkallo. Established in the late 1890s, it provides an opportunity to explore remnants of local colonial history.

Surrounding Donnybrook Cemetery on the northern, eastern, and southern sides are remnant volcanic plain grasslands known as the Kalkallo Commons Grasslands. The sites provide a critical conservation area for the Gilgai Plains Grasslands, which is nationally and regionally significant. The northern part of the Grasslands can be viewed from Donnybrook Cemetery. Public access is limited to protect the important area for habitat and conservation.

South of the cemetery are the stony knoll grasslands, which show the rocky outcrops created by the volcanic activity that has shaped the Parkland landscape.

Donnybrook Cemetery is managed by the Department of Health through the Remembrance Parks Central Victoria Trust. The Kalkallo Commons Grasslands are managed by Hume City Council.



### **Porto Kallo Park, Donnybrook**

Porto Kallo Park is located on Nature Promenade in Donnybrook and is adjacent to the Porto Kallo wetlands (a stormwater treatment wetland). The Park features a large playground that connects to a long stretch of the marram baba parklands. The Park provides a space for family recreation and a link to the Merri Creek corridor with views of Bald Hill in the distance. The land is managed by Whittlesea City Council.



### **Land managers**

A total of 43% of the Parklands area is currently managed by land managers represented on the Parklands Partnership Group (Table 1). While this land is public, some areas have restricted public access to protect environmental values and critical public assets, and to ensure the safety of the public. The remaining 57% of the area within the Parklands boundary is currently privately-owned land that will be progressively incorporated into the Parklands by 2050.

**Table 1: marram baba Merri Creek Regional Parklands area managed by partners in 2022**

| <b>Land manager</b>                                             | <b>Area (ha)</b> | <b>Proportion of total parkland area</b> |
|-----------------------------------------------------------------|------------------|------------------------------------------|
| DEECA                                                           | 43               | 2%                                       |
| Parks Victoria                                                  | 458              | 17%                                      |
| City of Whittlesea                                              | 98               | 4%                                       |
| Hume City Council                                               | 101              | 4%                                       |
| Melbourne Water Corporation                                     | 185              | 7%                                       |
| Yarra Valley Water Corporation                                  | 172              | 6%                                       |
| Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation | 112              | 4%                                       |
| <b>Total partner-managed area</b>                               | <b>1,169</b>     | <b>43%</b>                               |



## 2.2 Wurundjeri Woi-wurrung values

The lands and water of the marram baba Merri Creek Regional Parklands are part of the traditional Country of the Wurundjeri Woi-wurrung people, a custodianship that endures today. The name marram baba means 'body of mother' in the Woi-wurrung language.

The relationship between the Wurundjeri Woi-wurrung people and the marram baba landscape is one based on social, ceremonial, religious, ecological, archaeological and historical attachment evidenced in the study area by the ethnohistorical record and contemporary connections to place.

*When I am along the Merri Creek I can feel my Mother, Grandmother and Ancestors. It helps me heal in regards to colonisation and the wellbeing of our people.*

- Aunty Di Kerr, Wurundjeri Woi-wurrung Elder.

marram baba features remnant native grasslands which tell the stories of Wurundjeri Woi-wurrung ways of dwelling and land cultivation. Archaeological investigations evidence that galada tamboore (creek waterhole) has significance as a long-term camping location for families, with views of the Merri Creek. Within this landscape, various flora thrived, including kangaroo grass, river red gums, tuberous plants like murnong (yam daisy), and an array of herbs. These grasslands provided a supportive environment for these plant species, creating a vibrant ecosystem with cultural and ecological importance. The Merri Creek, or the merri merri (very rocky) creek, which runs through marram baba, attracted an abundance of animals that were cared for as totems by the Wurundjeri Woi-wurrung people. In turn, these animals could care for the Wurundjeri, providing them with food, clothing, and spiritual connection to Ancestors.

*Like a mother nurtures her children, so we must nurture and look after the rivers creeks and environment; so our children's children can enjoy the wild life, flora and fauna. We can achieve this by ensuring the revegetation and restoration of creeks and rivers like the Merri Creek waterway, which encourages an abundance of bird life to the area.*

- Aunty Doreen Garvey-Wandin, Wurundjeri Woi-wurrung Elder

Waterways hold immense cultural, spiritual, social and economic significance to the Wurundjeri Woi-wurrung people. They are not just physical features of the landscape but represent a living connection to their Ancestors, the land and their way of life. The preservation and protection of these waterways are crucial for the continuation of their cultural heritage and their connection to Country.

*Fire was very important to Wurundjeri; firstly, fire provided my people with warmth and was used for cooking; secondly, it was used to eradicate the old and dying vegetation and promote new growth; thirdly, it was used in almost every ceremony practiced by the Wurundjeri.*

- Uncle Ronald Terrick, Wurundjeri Woi-wurrung Elder.

The growing engagement with cultural fire practices can be seen as an important step toward reconciliation insofar as it recognises the expertise and wisdom of First Nations Peoples in caring for their Country.

The Plan offers an opportunity to better reflect Wurundjeri Woi-wurrung cultural values and land management priorities in future planning. The WWCHAC, which is the Registered Aboriginal Party (RAP) for Wurundjeri Woi-wurrung Country and represents the interests of Traditional Owners, prepared a Position Statement of Cultural values for the marram baba Merri Creek Regional Parklands study area. The Statement outlines seven recommendations to guide the Plan:

1. Strengthen the Management and Protection of Tangible Cultural Heritage

An Aboriginal Cultural Heritage Place (ACHP) is a location with historical or significant contemporary associations for Aboriginal people, but which lacks physical or archaeological materials. It is therefore a location where Aboriginal associations have been documented. marram baba holds an extensive presence of ACHPs that are documented on the Victorian Aboriginal Heritage Register (VAHR).

A complete assessment of the extent, nature and significance of Aboriginal Cultural Heritage Material (ACHM) has not been documented. It is essential that this be assessed to: register previously unidentified ACHM on the VAHR; avoid future impact from parkland infrastructure; and reflect accurate cultural heritage sensitivity mapping. To achieve this objective, WWCHAC seeks support from the Victorian Government, local government and other authorities. In the meantime, it is asked that all partners apply the precautionary principle to avoid any harm.

2. Protect Aesthetic and Natural Attributes

marram baba is significant to Wurundjeri Woi-wurrung people, including the diverse landscape features of Merri Creek and Kalkallo Creek, floodplains, billabongs, basalt plains, stony rises, gorges, grasslands, and grassy eucalypt woodlands. Along with preserved ecological biodiversity, this landscape represents ancestral and present-day Wurundjeri Woi-wurrung Country. The Wurundjeri Woi-wurrung community find spiritual meaning within Country that embodies the living spaces of their Ancestors and which provides a conceptual link to the traditional Country of their people. The Wurundjeri Woi-wurrung Elders and representatives would like the public to enjoy marram baba and that visitors are guided to respect the area. All partners must work together to ensure that walking and driving tracks, lookouts and other visitor attractions support, and do not damage, the significant aesthetic and natural attributes of their ancestral place and that necessary protection is put in place.

3. Support the Wurundjeri Woi-wurrung community in holistic caring for Country

For the Wurundjeri Woi-wurrung Community, both cultural significance and connection to Country in accordance with their traditions is sustained through the continuance of traditional on-Country practices and by ensuring the generational conferral of this knowledge. The Wurundjeri Woi-wurrung people are the custodians of the marram baba Cultural Landscape and hold the responsibility of caring for this place to ensure seasonal maintenance of the right ecology, habitats for totemic and Creation Ancestors and restoration of the landscape traditionally managed by Wurundjeri Woi-wurrung people. Activities such as fire practices, visits and ceremonies should be facilitated as requested by WWCHAC.

4. Conserve and Enhance the Cultural Landscape through Planning Controls

The marram baba Cultural Landscape is valued in its entirety for the spiritual, tangible heritage, archaeological, historical, ecological and living connections it provides the Wurundjeri Woi-wurrung people and other community members. It is important that development occurring alongside marram baba is not undertaken in a way that compromises the Wurundjeri Woi-wurrung Cultural Landscape. Parklands Partners must facilitate WWCHAC to review the impacts and cumulative impacts of development on a case-by-case basis and ensure WWCHAC has oversight of protective management plans for all aspects of the Parklands. This includes opportunity for WWCHAC to review and develop additional planning controls to protect the marram baba Cultural Landscape.

5. Support and Celebrate Cultural Practice

Wurundjeri Woi-wurrung people have been and continue to be the Traditional Owners and custodians of the land known as marram baba for at least 65,000+ years. For the Wurundjeri Woi-wurrung Community, cultural connection is sustained through spiritual connection, continuance of traditional practices and ensuring the generational conferral of knowledge. Practicing and living their culture in many ways, including Caring for Country, undertaking archaeological assessments, walking Country, knowledge sharing and celebrations that include private ceremonies and on-Country cultural activities, ensures Wurundjeri Woi-wurrung people can honour all aspects of their lives proudly. These cultural practices are critical to belonging and connection, as well as fulfilling traditional rights and responsibilities. Partners must respect, support and celebrate cultural practice.

#### 6. Involvement in Decision Making

Recognition and protection of the marram baba Cultural Landscape must be integrated into relevant policies and regulations to ensure protection and cultural respect for the marram baba area. To ensure this is done to the satisfaction of WWCHAC, Wurundjeri Woi-wurrung representatives must be included in all decision making in relation to marram baba from now.

#### 7. Direct Interpretation

It is imperative that only Wurundjeri Woi-wurrung artwork and cultural design elements be reflected in any future buildings, works and infrastructure design in the Parkland. WWCHAC should direct and be involved with these usages.

### 2.3 History and heritage

There are many culturally significant places throughout the area known as marram baba for the Wurundjeri Woi-wurrung people. Before European colonisation, the Wurundjeri Woi-wurrung people lived along Merri Creek, Edgars Creek, Darebin Creek, the Plenty River, and the Maribyrnong River and across the vast and productive grasslands and grassy eucalypt woodlands between these waterways. The creeks, rivers, wetlands and grasslands provided a variety of fish, birdlife, animal and plant foods and the Wurundjeri Woi-wurrung people moved across the area caring for their known sources of food, fresh water, shelter, and resources. Wurundjeri Woi-wurrung values are vastly different from those of the Europeans when it comes to their connection to land. The Wurundjeri Woi-wurrung lived within defined boundaries and ensured the land could be replenished by moving when needed.

In 1835 John Batman, of English descent, led an exploration party to acquire cheap grazing land in the Port Phillip region. In June of the same year, John Batman met up with senior Wurundjeri Woi-wurrung men and according to his understanding 'negotiated' what he regarded as a formal treaty for approximately 243,000 ha. This was not the understanding of the Wurundjeri Woi-wurrung people who had a very different notion of land ownership and would not conceive of Country being sold. John Batman, along with numerous other settlers, began the pastoral expansion of sheep into the grasslands of northern and western Victoria. Two of Batman's outstations are located within the parklands on the west bank of the Merri Creek. These will be protected and featured as part of Melbourne's foundation era heritage.

The Merri and Darebin Creek area was a key region of Port Phillip in the very early years of European exploration, pastoral occupation, and farming. It was regarded as the premier farming land with the best watered land adjacent to the Merri Creek and the Darebin Creek in Wollert. The Merri Creek catchment became one of the major agricultural regions in Port Phillip in the middle to late 19<sup>th</sup> century.

Turnover of pastoral licences in the Settled District was considerable in the 1830s and 1840s, often as a result of sheep diseases, and bankruptcies by small farmers particularly during the 1840s depression. From 1840 the government continued selling lands further up the Merri Creek, in the parishes of Kalkallo and Merriang, along the Darebin Creek at Epping, and along the Plenty River.

Throughout the 1840s the major crop on the small farms, mostly between the Merri Creek and Plenty River, was wheat. In 1845 the Merri Creek had 2,067 acres (836 ha) under wheat, nearly twice as much as the next largest districts.

Fragments of history and archaeology reveal that there were at least two now forgotten mills on the Merri Creek. On the banks of the Merri Creek at Campbellfield archaeological evidence has been found of the Barber & Sons Flour Mill. The Kalkallo Steam Flour Mill was built by 1857 and had ceased production around 1872.

The intensity of dry stone walls in the Epping and Wollert area is the direct consequence of the intensive farming carried out by the small farmers who were able to settle after 1853. The vestiges of many dry stone walls from this early pastoral period - including boundary walls, animal enclosures and early 'cultivation paddocks' associated with stony rises across the landscape - still remain in the area.

In more recent years, the area has seen increased industrial and urban development in the form of manufacturing precincts as well as new suburbs to accommodate for the rapidly growing population. The Plan acknowledges the importance of incorporating the history of the Parklands and the opportunity this presents for learning and healing, particularly for those communities located adjacent to the Parklands.

### **Establishing the Parklands**

The concept of formalising a new park along Merri Creek north of Mahoneys Road in Thomastown was first proposed in the 1929 Melbourne Metropolitan Town Planning Commission Report. It was recommended that a continuous parkland progressing north from the confluence of Merri Creek with the Yarra River be implemented, terminating in a large reservation of approximately 344 ha north of Mahoneys Road. This is the area now known as galada tamboore.

Through the 1990s, the importance of the remnant grasslands along Merri Creek became known, and the Government took action to acquire these significant parcels of land - the galgi ngarrk grasslands and bababi marning grasslands. The Hume Freeway re-alignment in 2001 created further opportunities to preserve areas of remnant vegetation. In combination with galada tamboore, this meant that large but discontinuous areas of public land existed along the Merri Creek corridor from the Metropolitan Ring Road to Craigieburn Road East.

The Friends of Merri Creek and Merri Creek Management Committee have long been advocates for the land surrounding Merri Creek. From 1989 the groups have worked closely with the Victorian National Parks Association, Parks Victoria and local environment groups to advocate for larger parkland areas along Merri Creek, produced plans to protect habitat corridors and conservation areas, and advocated for greater protections against rapidly increasing development. The groups continue to advocate for expanded parkland areas, and play an active and passionate role in the restoration, rehabilitation, protection and management of Merri Creek and its environmental values.

Since 2013, the Parklands have been managed under the guidance of the *Merri Creek Marram Baba Strategic Management Plan May 2013* which encompassed approximately 650 ha south of Craigieburn Road. The Biodiversity Conservation Strategy (BCS) for Melbourne's Growth Corridors was released in June 2013 and identified the area that now makes up the marram baba Merri Creek Regional Parklands as a major biodiversity area in the North Growth Corridor. The area identified in the BCS extended the biodiversity corridor north of Craigieburn Road, which was the northern extent of the 2013 Plan.

In 2018, the Victorian Government committed to expanding the Merri Creek Parklands to create a new 2,778 ha parkland stretching from Campbellfield to Beveridge in Melbourne's north. This Plan recognises the expanded commitment and is an important step in implementation of the BCS for the North Growth Corridor.



## 2.4 Strategic planning context

The future planning, management, and use of the Parklands is informed by state and local government policies and strategies. The policy context for the Parklands is provided in Appendix 2.

### **Planning scheme zones and overlays**

The Parklands lie within the municipalities of Hume City Council, City of Whittlesea and Mitchell Shire Council. The council planning scheme zones and overlays are shown below (Figure 3 and Figure 4).

Much of the private land within the Parklands boundary is zoned Rural Conservation Zone, which aims to protect areas of conservation and biodiversity value. The zoning was enacted as part of the Melbourne Strategic Assessment (MSA) commitment to protect designated Conservation Areas. Other land adjacent to or within the Parklands boundary is Urban Growth Zone, Industrial Zone and Comprehensive Development Zone. The planning for some of these areas, that were established before growth area planning, rely on development plans rather than PSPs. Urban development in these areas will have implications for the Parklands in terms of land inclusion, visual amenity, environmental protection as well as providing opportunities for trail connection and improved surveillance.

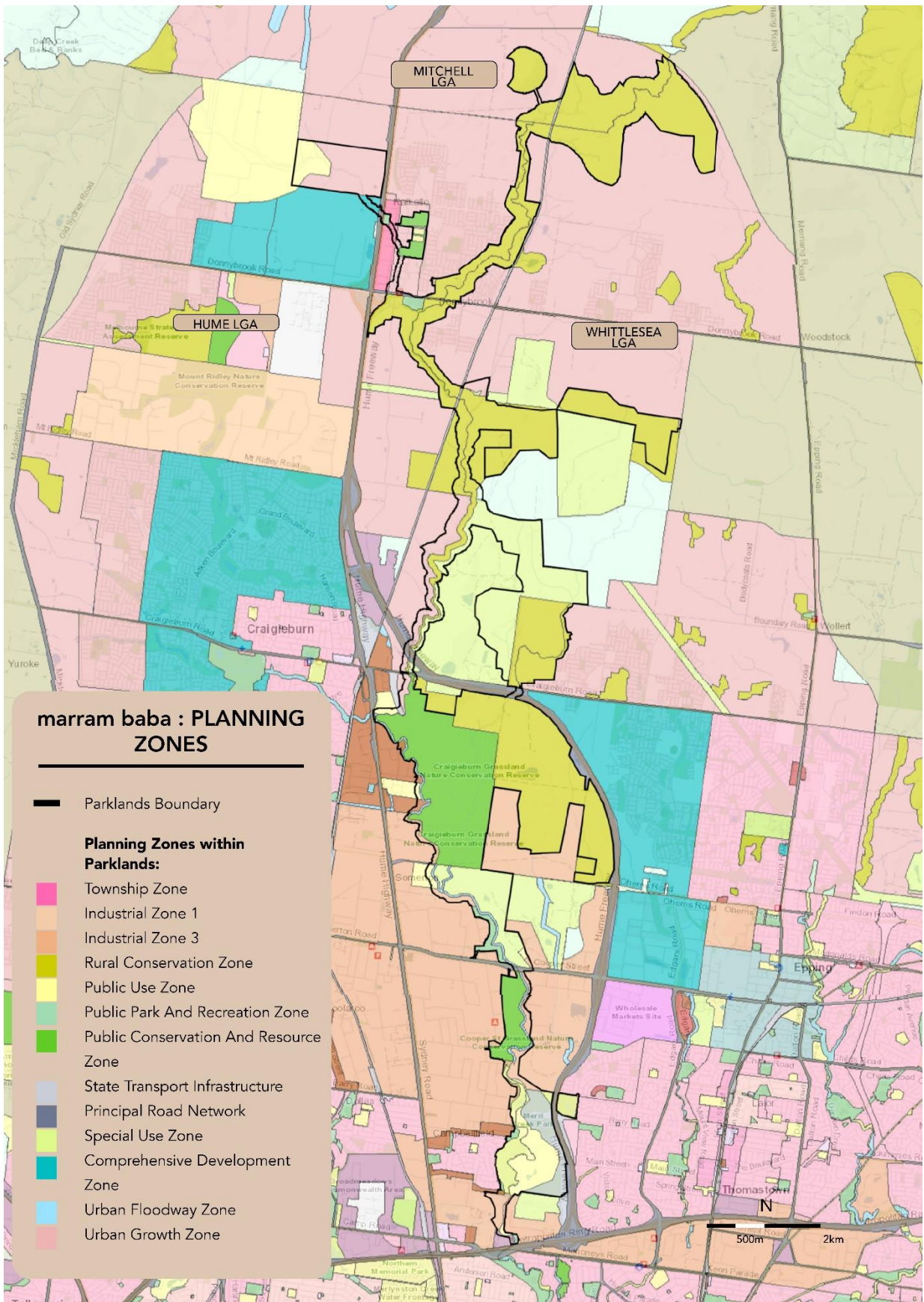
Other planning scheme zones within the parkland boundary include:

- Urban Floodway Zone along parts of Merri Creek and its tributaries
- Public Conservation and Resource Zone designed to protect and conserve the natural environment, provide facilities that assist in public education and interpretation of the natural environment and provide for appropriate resource-based uses
- Public Park and Recreation Zone designed to recognise areas for public recreation and open space, protect and conserve areas of significance and provide for commercial uses
- Areas of Public Use Zone (Service and Utility), Urban Growth Zone, Special Use Zone, Township Zone, Comprehensive Development Zone, Industrial Zone, Transport Zone, Commercial Zone, Farming Zone, General Residential Zone, and Green Wedge Zone. This zoning represents a legacy of past land uses and is not necessarily the intended future zoning of the Parklands.

The Environmental Significance Overlay (ESO) applies to a large portion of the Parklands and is designed to ensure that development is compatible with identified environmental values. In some instances the ESO that applied to Merri Creek was removed because of the planning scheme amendment that implemented the relevant PSP, leading to the uneven coverage of the ESO along the creek. The Land Subject to Inundation Overlay and Rural Floodway Overlay relate to Merri Creek and its tributaries. There are also several Heritage Overlay sites throughout the Parklands that apply to areas of post-1850 heritage.

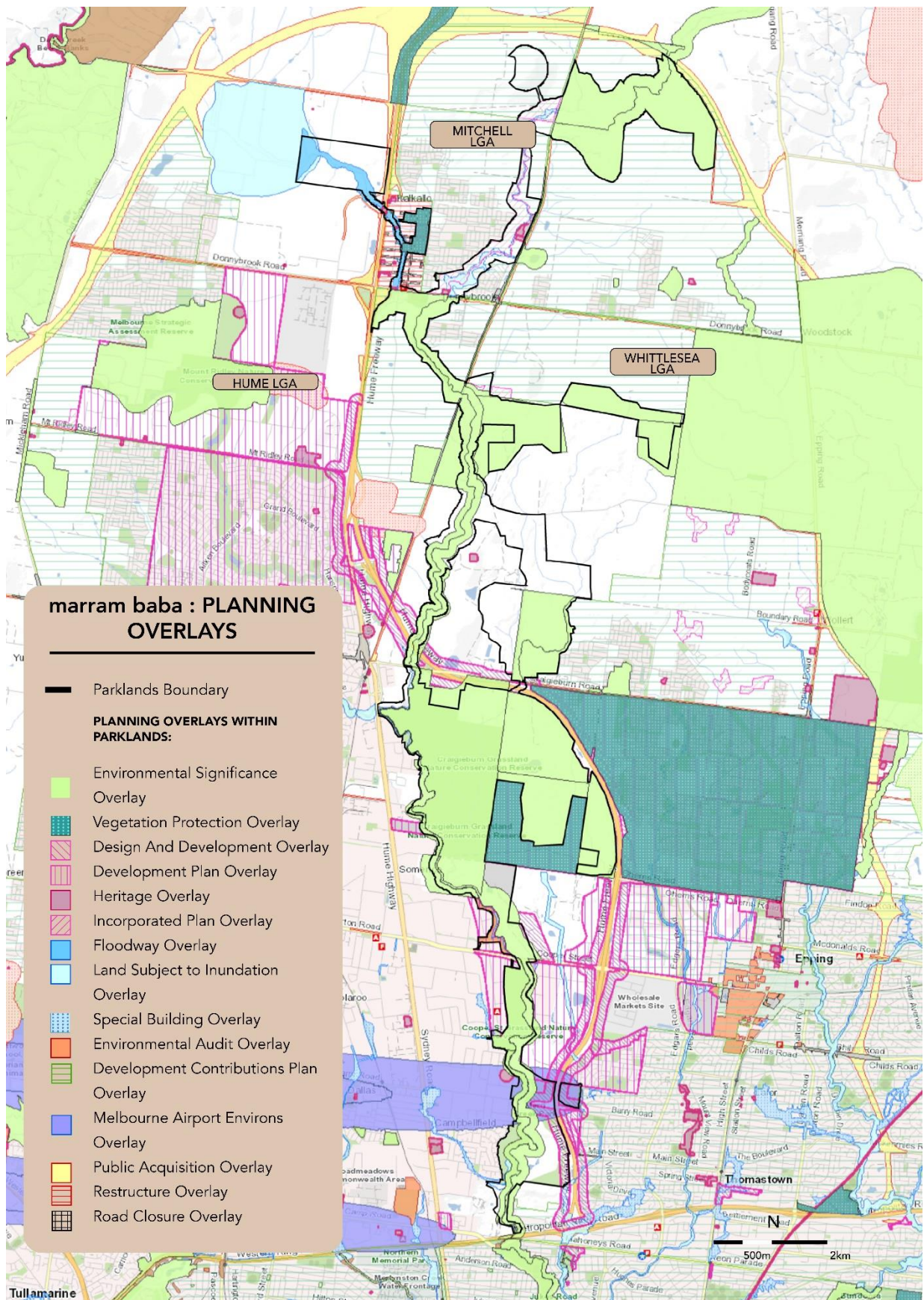
There is an opportunity to apply a more consistent approach to the planning controls that will:

- conserve and enhance the cultural landscape as recommended by the Wurundjeri Woiwurrung Cultural Heritage Aboriginal Corporation
- apply a simpler consistent set of zones and overlays to support the waterways and parklands holistically. This will enable clearer decision-making for development plans and development applications within and adjoining the parklands.



**Figure 3: Planning scheme zones**





**Figure 4: Planning scheme overlays**



### **Precinct Structure Plans**

A large part of the Parklands is in the North Growth Corridor which will see increased population growth and urbanisation. The North Growth Corridor Plan, released in 2012, provides a broad land use framework to guide the future planning and development of new precincts to accommodate growth. Before development can occur, detailed planning for each precinct must be undertaken in the form of a PSP, which are prepared and incorporated into Planning Schemes as a subsequent step. Many of the PSPs that are relevant to the Parklands have already been finalised.

Completed PSPs were reviewed in developing the Future Directions Plan. The planning for some PSPs is yet to commence. The relevant PSPs are shown in Figure 25 and include:

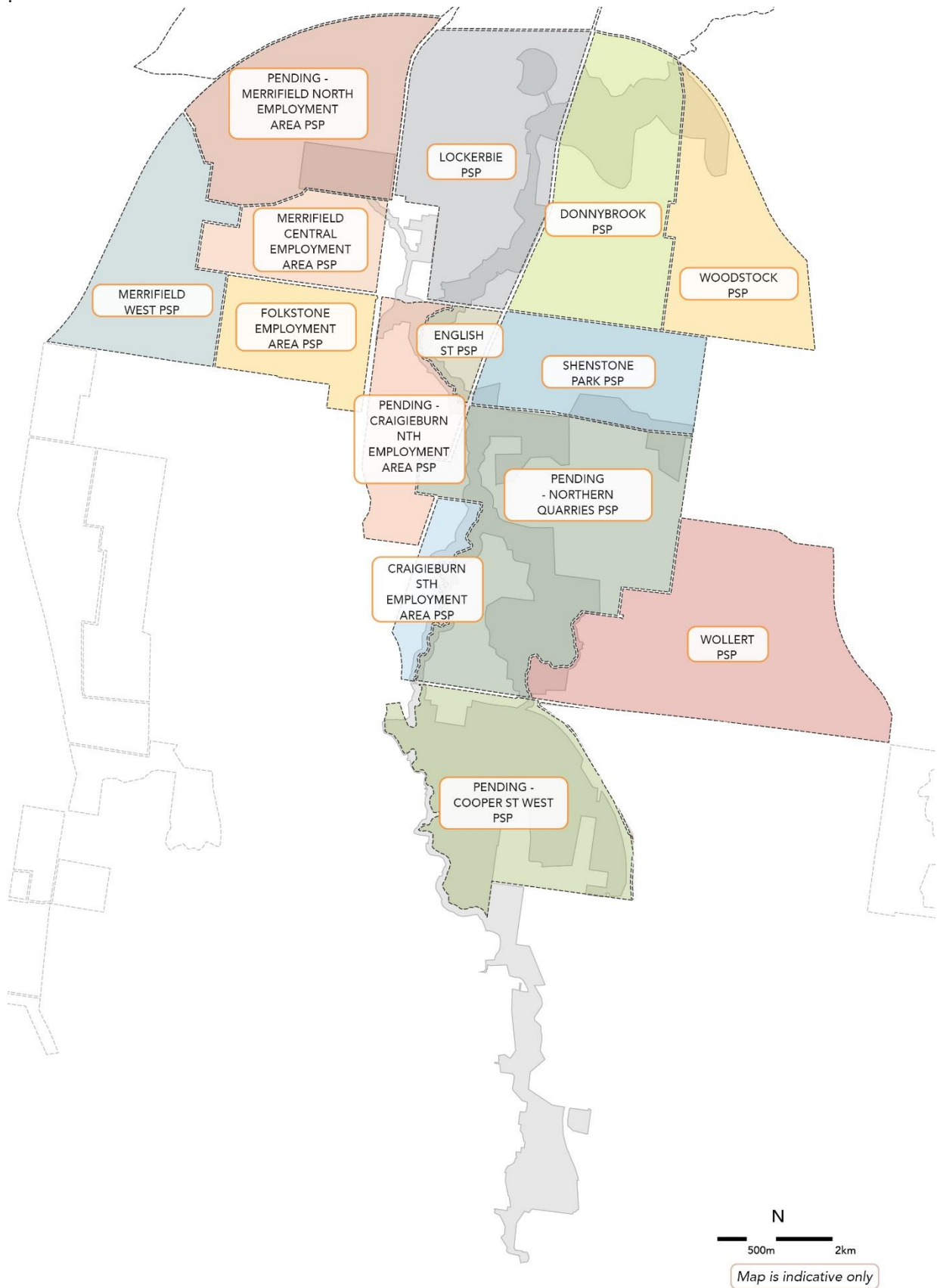
- Merrifield Central Employment Area Precinct Structure Plan 2008
- Lockerbie Precinct Structure Plan 2012
- English Street Precinct Structure Plan 2015
- Craigieburn North Employment Area Precinct Structure Plan 2016
- Donnybrook - Woodstock Precinct Structure Plan 2017
- Shenstone Park Precinct Structure Plan 2021
- Wollert Precinct Structure Plan 2017
- Northern Quarries Precinct Structure Plan (pending)
- Merrifield North Employment Area Precinct Structure Plan (pending)
- Craigieburn South Employment Area Precinct Structure Plan (pending)
- Cooper Street West Precinct Structure Plan (pending).

The Plan is consistent with the approved PSPs and recognises that new communities will benefit from an integrated open space network that provides a distinctive character and amenity. PSPs are the key plans guiding future use, subdivision and development. This includes any subsequent Development Plans that have been approved generally in accordance with the PSP.

The PSPs provide the strategic and statutory basis for land inclusion and will facilitate:

- Protection of BCS Conservation Areas including habitat for Growling Grass Frog and Nature Conservation Areas (nationally endangered woodland and grassland ecosystems that are home to many threatened species)
- The protection and recognition of areas of cultural significance
- Development that sensitively responds to, improves community access to, and protects Merri Creek and tributaries within the Parklands
- Enhanced public and active transport connections for existing and future communities into and through the Parklands, including shared trails
- Development of a network of open space along the creek corridors as well as east-west parts of the network, and a variety of recreational open spaces that adjoin or sit close to the Parklands
- Establishing residential, commercial, and industrial interfaces that will influence the character and visual amenity of the Parklands
- Identified view lines and high points that respond to the existing landscape
- Delivery of essential infrastructure including road networks, creek crossings, services, and stormwater treatment, retardation and drainage

Future pending PSPs will consider the vision and strategic directions of this Plan to support the ongoing creation of the Parklands. This includes seeking opportunities to widen the parklands in narrow sections to support wildlife corridors and share use walking and cycling path access.



**Figure 5: PSP locations (only applies to Parklands that lie north of Craigieburn Road East).**

## 2.5 Drivers for change

The Plan responds to key trends and drivers for change that influence the current and future planning and management of the Parklands.

### **Traditional Owner self-determination**

Aboriginal self-determination places Aboriginal people at the centre of decision-making around the issues that affect their lives. This is a central policy principle of the Victorian Government. The Victorian Aboriginal Affairs Framework 2018-2023 states that the Victorian Government must 'transform its systems and structures to support self-determination and improve outcomes for Aboriginal peoples. This applies across multiple objectives including 18.1- Increase the recognition and enjoyment of Aboriginal land, water and cultural heritage rights.

### **Protecting environmental values**

The endorsed BCS for Melbourne's Growth Corridors identified Conservation Areas and outcomes required under the Commonwealth's *Environment Protection and Biodiversity Conservation (EPBC) Act 1999*.

Some of Melbourne's most threatened animal and plant species live in the open spaces, waterways, and wetlands of the Parklands. Within the Parklands communities of Matted Flax-lily (*Dianella amoena*) and River Swamp Wallaby-grass (*Amphibromus fluitans*) survive, which are listed under the EPBC Act. Curly Sedge (*Carex tasmanica*) is also present within the Parklands and is listed as endangered under Victoria's *Flora and Fauna Guarantee (FFG) Act 1988*. There are several important and threatened fauna species in the Parklands, ranging from common species to critically endangered species. Significant populations of the vulnerable Growling Grass Frog, Golden Sun Moth and Striped Legless Lizard are present in the Parklands.

The Parklands are a critical area of protected habitat for native plants and animals in the rapidly urbanising North Growth Corridor. The management of the Parklands must protect the natural environment from the competing demands of a growing urban population.

### **Community health and wellbeing**

Access to nature has significant benefits in improving mental<sup>3</sup> and physical wellbeing<sup>4</sup>. There has been substantial research into the health and wellbeing benefits of open space, as well as the intergenerational impacts of lack of access to open space for low-income households and communities. Approximately 260,000 people are forecast to live in the area covered by the North Growth Corridor Plan, so the Parklands will play an increasingly important role in providing access to nature for existing and new communities.

The COVID-19 pandemic highlighted the importance of public open space in supporting people coping with personal and community stress. Additionally, the pandemic, and the restrictions on movement that were put in place as part of the public health response, highlighted the inequity of community access to green space<sup>5</sup>. Research published during the Melbourne COVID-19 lockdown illustrated the wide disparity in access to green space close to people's homes. Hume City Council<sup>6</sup>, City of Whittlesea<sup>7</sup> and Mitchell Shire Council<sup>8</sup> recognise the important role a healthy natural environment plays in supporting community health and wellbeing in their strategic plans.

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<sup>3</sup> Francis, J., Wood, L. J., Knuiman, M., & Giles-Corti, B. (2012). Quality or quantity? Exploring the relationship between Public Open Space attributes and mental health in Perth, Western Australia. *Social science & medicine*, 74(10), 1570-1577.

<sup>4</sup> Koohsari, M. J., Mavoa, S., Villanueva, K., Sugiyama, T., Badland, H., Kaczynski, A. T., ... & Giles-Corti, B. (2015). Public open space, physical activity, urban design and public health: Concepts, methods and research agenda. *Health & place*, 33, 75-82.

<sup>5</sup> Zandieh, R., Nieuwenhuijsen, M., & Zandieh, M. (2020). Adaptability of Public Spaces and Mental Health Inequalities during the COVID-19 Pandemic. *The Journal of Urban Design and Mental Health*, 6(5).

<sup>6</sup> Stronger Hume COVID-19 Adaptation and Resilience Plan 2022

<sup>7</sup> Municipal Pandemic Readiness and Recovery Plan

<sup>8</sup> Covid-19 Community Recovery Plan 2021

The establishment of the Parklands will create a connected chain of parks and increase and enhance access for the community to green space. It will provide enhanced opportunities for the community to connect with nature and engage in recreation supporting improved physical and mental health and wellbeing.

### **Climate change**

As the climate changes, Greater Melbourne will experience rising average temperatures, more frequent and longer heatwaves, and an increased frequency and severity of grassfires and bushfires. It is expected that droughts and extreme storms will become more frequent and severe, resulting in increased pressure on green spaces and more flooding. The impact of heatwaves is exacerbated by urban development which causes the 'urban heat island effect' (UHI)<sup>9</sup>, where temperatures are higher in urban areas than surrounding rural areas.

The Victorian Government's Regional Climate Change Adaptation Strategy<sup>10</sup> highlights the increasing importance of open spaces, like the Parklands, in enhancing climate resilience in the community. Green spaces and water bodies can reduce the impact of rising temperatures and heatwaves by preserving permeable, vegetated areas that allow evapotranspiration to occur and provide respite by increasing shaded areas. Currently, tree canopy cover in the Parklands is 23% of the total Parkland area. In addition to improving landscape and community resilience to climate change, the Parklands will assist in cooling the surrounding urban areas, which are particularly vulnerable to urban heat. The Parklands also play a role in mitigating flooding, which will reduce the impacts of extreme rain events on the community and infrastructure.

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<sup>9</sup> Melbourne Water. (2021, November 17). Urban cooling. Retrieved from Melbourne Water: [melbournewater.com.au/water-data-and-education/environmental-issues/enhancing-liveability-our-commitment/urban-cooling](https://melbournewater.com.au/water-data-and-education/environmental-issues/enhancing-liveability-our-commitment/urban-cooling).

<sup>10</sup> Regional Adaptation Stakeholder Committee. (2021). Greater Melbourne Regional Climate Change Adaptation Strategy. Greater Melbourne: Department of Environment, Land, Water and Planning.



### 3 Parklands planning process

Understanding what makes the Parklands unique and what is important to the community and visitors has been essential for preparing the Plan.

The Plan has been drafted to support the cultural value recommendations set out by the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation (WWCHAC), and following this, stakeholder and community priorities and values.

#### 3.1 Community consultation

Community engagement was undertaken throughout July and August 2022 to understand local knowledge and priorities for the parklands. This stage of engagement helped shape the vision, guiding principles and strategic directions for the parklands. A second round of engagement was held in April and May 2023 to seek feedback on the Draft Plan. Participants were encouraged to provide feedback via an online survey, a map survey, written submissions or at an online community consultation session.

The results of the online survey revealed the following

- 93% were 'very supportive' or 'supportive' of the vision for the parklands
- 84% felt that the Plan represents 'very well' or 'well' the importance of Aboriginal culture and commitment to work together with the Wurundjeri Woi-wurrung people
- 88% felt that the Plan represents 'very well' or 'well' the prioritisation of protecting plants and animals
- 88% supported longer walking and cycling trails, 84% supported connecting trails to other networks, 67% support shorter walking loops. Of the Punjabi and Arabic survey responses, 37% support longer walking and cycling trails, 33% support shorter walking loops, and 30% support connecting the trail to other networks

Overall, the feedback from the different methods of engagement showed high levels of support for the Plan and the vision for the Parklands.

Participants felt that the Plan positively reflects the importance of Wurundjeri Woi-wurrung cultural values and protection of biodiversity. Responses supported Traditional Owner language and artwork in the Parklands, as well as resourcing to facilitate Traditional Owner management and cultural land management practices.

A recurring issue identified by participants was the need to widen narrow areas or 'pinch points' to ensure there is enough land to support habitat connections and trail connections. There were several requests to create stronger links to Aitken Creek, Malcolm Creek, Bald Hill and the potential wallan wallan Regional Parklands.

There were some differing opinions around access to the Parklands. Some participants were supportive of more trail connections and facilities, while others wanted nature prioritised and to avoid a trail on both sides of the parklands. While some participants noted that conservation areas should be dog-free. There were concerns raised about cycle paths and conflicts with pedestrians and wildlife. Suggestions around this included separation of cycling and pedestrians in some areas, slow traffic areas, adequate widths for shared use paths, and trails outside of high priority conservation areas.

Some recurring feedback was provided around broader walking and cycling, connections to the potential wallan wallan Regional Parklands and along creek tributaries. The connection to the existing Merri Creek Trail was identified as a priority.

There was support amongst participants for community engagement in the Parklands such as through volunteering, community events, tours and activities. Supporting the parkland experience with interpretation signage including ecological, cultural and heritage stories was considered important by participants. Including links to digital content was also suggested such as QR codes for further information, audio walks, maps of park features, soundscapes and local stories.

Provision of facilities to accommodate the diversity of people within the community was important to participants. This included access for wheelchairs and opportunities for people with disabilities to visit the Parklands and participate in caring for the environment.

Some participants noted that visitor facilities located close to the edge of the Parklands would help to maintain sweeping views. Supporting these facilities with appropriate car parking was also raised.

A number of landowners raised concerns about the inclusion of their land in the Parklands and advised they did not know it needed to be protected and managed for conservation in perpetuity in accordance with the Biodiversity Conservation Strategy for Melbourne's Growth Corridors (2013).

Monitoring and research activities in the Parklands was identified as important to ongoing management activities. There was support for immediate and long-term conservation-oriented land management including private land before it is included in the Parklands.

A number of participants noted the 2050 timeframe to complete parkland land inclusion and requested that this be accelerated due to the detrimental biodiversity impacts the delay creates.

A selection of quotes include:

*"This local community is diverse and is open to learning about indigenous ways of life. I would love to see more First Nations culture around the creek - art, stories, ways to respect the nature around us."*

*"The Parklands are an opportunity to involve the local community and to support their learning about the indigenous history and culture of the area as well as the landscape and the biodiversity it supports."*

*"Conservation of the existing indigenous biodiversity should be your number one priority. Once it's gone it's gone forever"*

*"Urban growth is creating concrete jungles. Need accessible parkland side by side with natural landscapes"*

*"Connection to parkland via public transport and lots of parking areas at [the] entrance."*

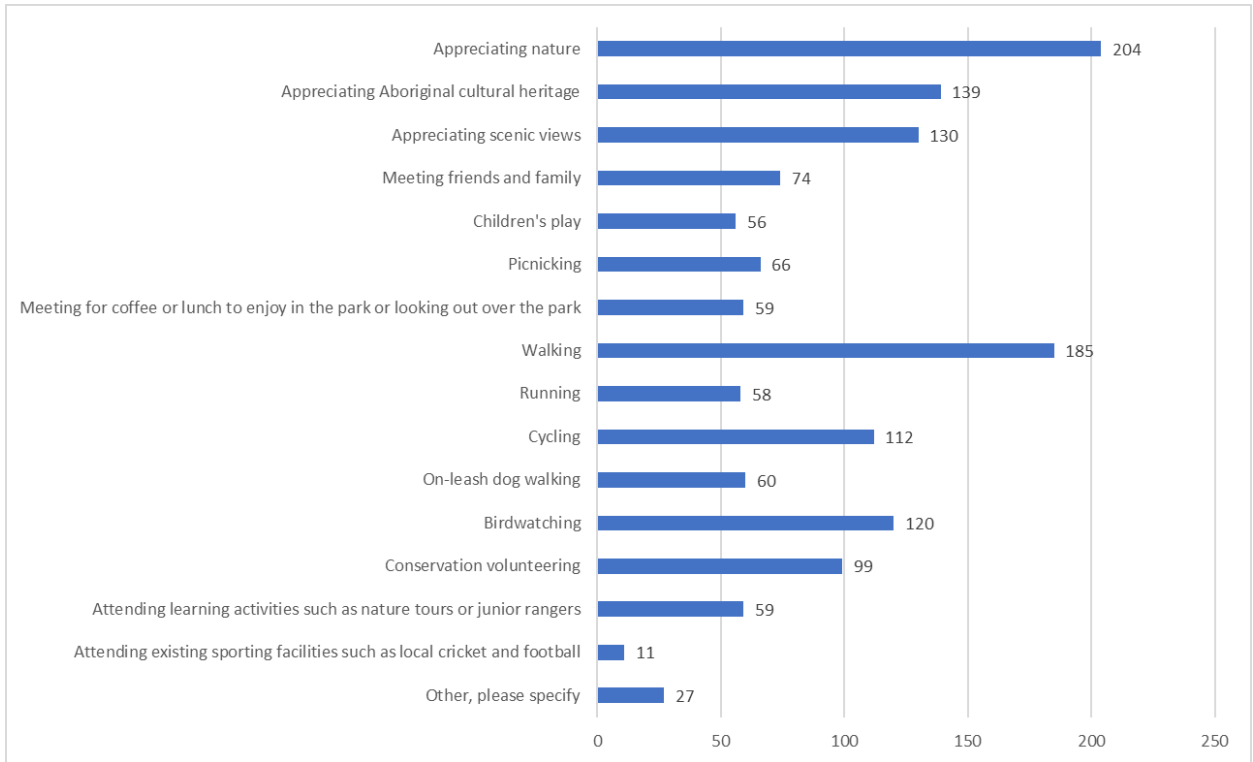
*"People (and animals) need connectivity and to experience and appreciate the endangered grasslands."*

*"Use of volcanic rocks as an architectural theme throughout at least the northern half of the Parklands"*

*"The park is way too narrow, especially highlighted in some sections"*

*"Thank you for incorporating Bald Hill in the park! Is this connection wide enough as a biolink?"*

*"Providing information in signage and online about where paths lead so visitors know they can get out or plan their journey"*



**Figure 6: Activities that respondents would enjoy doing in marram baba Merri Creek Regional Parklands**



**Figure 7: Survey participants at marram baba Merri Creek Regional Parklands**

## 3.2 Strategic opportunities

Understanding what makes the Parklands unique has been essential for preparing the Plan. The key considerations identified below bring together research, analysis and engagement outcomes to help shape the vision, guiding principles and strategic future directions for the Parklands.

### 1. The Volcanic Plain - A special parklands landscape

The Parklands lie in the landscape of the Victorian Volcanic Plain on Wurundjeri Woi-wurrung Country. This landscape was formed by lava flows; consisting of grasslands, open grassy woodlands, extinct volcanic cones, stony rises, escarpments, mineral springs and wetlands.

#### The Plan

- showcases the unique landscape setting and the processes that have formed it
- provides connection to Country and promotes caring for Country principles guided by Woi-wurrung cultural values

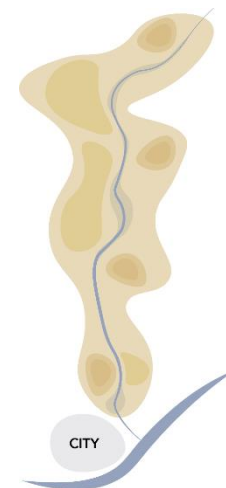


### 2. Merri Creek - A connection from the ranges to the city

Merri Creek rises in the forested foothills of the Great Dividing Range north of Wallan at Heathcote Junction. It flows for 70 km across and within basalt plains. It passes through rural farmland, then the fast-developing residential suburbs on the edge of the outer northern suburbs of Melbourne, and the active quarries, industrial warehouses and arterial roads in Melbourne's north. Merri Creek eventually makes its way through the inner suburbs and meets the birrarung Yarra River at Dights Falls, an important historical confluence for the Wurundjeri Woi-wurrung people.

#### The Plan

- sets a vision for the parklands as the 'preeminent nature corridor running through Melbourne's north'
- contributes to a continuous, connected wildlife corridor and parkland experience from inner Melbourne to the Great Dividing Range by connecting it from the Merri Creek parklands in the south to the potential wallan Regional Parklands in the north
- leverages the southern section of the Merri Creek corridor as a well-known and popular active transport route for commuter and recreational users and linear parklands



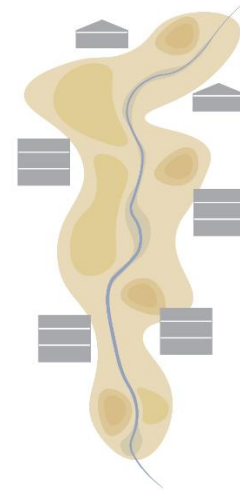


### 3. The Parklands - From rural to urbanised corridor

Showcasing an ancient landscape with ongoing Wurundjeri Woi-wurrung connections, the Parklands sit amongst a corridor that is rapidly changing from open farmland with fragments of remnant native vegetation to dense residential and industrial developments. Rapid urbanisation is in the growth areas that surround the Parklands including the creation of new Cloverton city, putting pressure on the Parklands as a refuge for the threatened volcanic plain grasslands, woodlands and fauna species like Growling Grass Frog and Golden Sun Moth.

#### The Plan

- focuses on the Parklands as one connected landscape buffered from adjacent development impacts
- protects, enhances and sustains the Parklands habitat values

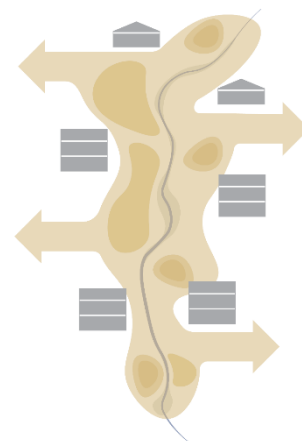


### 4. Connection to nature

As urban growth continues, the Parklands provide an opportunity to connect the new and existing urban areas to nature, and connect existing and planned open spaces within these areas. Ecological links can also be fostered through these connections.

#### The Plan

- supports community connections to the Parklands and enhances community appreciation of Merri Creek, its viewlines, soundscapes, seasons and landscape qualities
- defines the Parklands as regional ecological link along the Merri Creek and supports broader ecological links along its tributaries of Kalkallo, Curly Sedge, Aitken and Malcolm Creeks

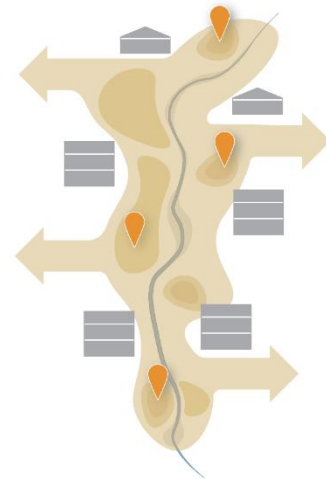


## 5. Opportunity for activation - key visitor areas

The ecological and cultural significance of the landscapes in the Parklands mean there are areas where it is not appropriate to encourage high levels of visitation by people. However, to prevent degradation and ensure ongoing management, strategies must find a manageable balance between no-go zones, access points, viewing points and landscapes that visitors can travel through. The Plan identifies several potential key visitor areas that are places of natural importance, landscape significance and potential recreation activity. They will form a string of connecting points along the Parklands for visitors to enjoy.

### The Plan

- prioritises flourishing nature and connecting people to different landscape experiences, viewpoints, rest points and walking loops
- takes advantage of existing and co-located visitor facilities to provide gateways and activation of the Parklands
- showcases the Wurundjeri Woi-wurrung cultural landscape and places that have stories to tell. It celebrates inclusivity for community groups and people from different backgrounds and abilities.

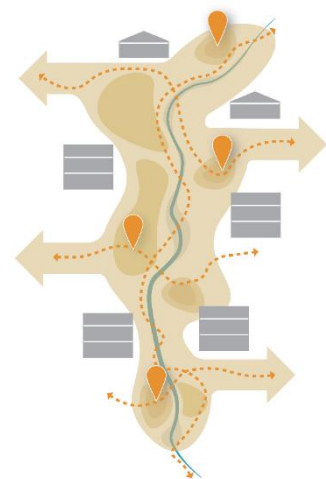


## 6. Connecting the Parklands - North / South and East / West

As the urban areas around the Parklands grow, there is need and opportunity to provide better connection points and wayfinding between east and west and from north to south to support 20-minute neighbourhoods and regional access. The Plan envisions a connected Parklands that allows for travel along the existing Merri Creek Trail and galada tamboore pathway, and new trails extending through the Parklands to Kalkallo and Beveridge in the north.

### The Plan

- supports an expanded Merri Creek Trail as a key shared use path in Greater Melbourne that will connect into the wider regional trail network. Biodiversity and cultural values are prioritised over the trail and in pinch points that reduce trail location opportunities more investment in adjacent land and alternative design solutions is required
- supports new trails and connection points with links into the communities to the east and west, providing commuter connections and enabling recreational walkers and cyclists to enjoy the Parklands trails.



## 4 The Parklands Plan

This section sets out the vision, guiding principles and strategic directions for progressive parklands establishment, protection and management to be achieved by 2050.

### ***Vision***

**marram baba Merri Creek Regional Parklands is the preeminent natural corridor running through Melbourne's north on Wurundjeri Woi-wurrung Country, connecting and nurturing culture, nature, water, and people.**

The vision for marram baba Merri Creek Regional Parklands was developed by the Parklands Partnership Group and will guide parklands establishment, protection and management.

### ***Guiding principles***

Five principles were established to support the Parklands vision and guide the development of the Plan. The five interconnected principles underpin the Plan and will assist Parkland Partners in the future delivery and management of the Parklands.

### ***Cultural values***

The Plan recognises that the lands, water, sky, plants, animals and more that make up the marram baba Merri Creek Regional Parklands are part of the traditional Country of the Wurundjeri Woi-wurrung people, a custodianship that endures today. The Plan supports self-determination priorities of the Traditional Owners of the land around Merri Creek, as represented by the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation (WWCHAC). The Plan supports the Wurundjeri Woi-wurrung people to care for their Country and the goal of future management of the Parklands by the WWCHAC.

The Parklands will protect significant cultural values, educate the community and visitors about the Aboriginal history of the area, and promote Aboriginal cultural heritage and the importance and continued custodianship of Country.

### ***Natural values***

Natural values include habitat for native plants and animals, creeks and wetlands, and geological features such as volcanic cones, gorges and stony rises. The Plan supports these natural values and biodiversity and waterway health outcomes by linking, protecting, maintaining and enhancing the natural environmental values of the Parklands. The Parklands will create new opportunities for environmental management of these natural values, such as establishing protected Growling Grass Frog habitat and habitat for other matters of national environmental significance including the Golden Sun Moth and Striped Legless Lizard.

The Parklands will foster healthy ecosystems and provide opportunities for people to connect with nature, contributing to improved community education and nature stewardship, social connections and health and wellbeing outcomes.

### ***Access, recreation and enjoyment***

The Parklands provide open space in the North Growth Corridor and the opportunity for people to connect with and appreciate the natural environment.

The Plan supports access into and through the Parklands by providing enhanced visitor areas, trails and creek crossings, with opportunities to immerse in nature and learn about the natural environment and cultural values. The Plan sets out strategic directions to promote safe and inclusive visitor experiences.

## **Resilience**

The Plan sets out strategic directions to increase resilience to climate change within the community, the natural environment and parkland infrastructure. The Plan recognises the substantial ecosystem services (i.e. benefits provided to humans by natural environments) provided by the Parklands. Ecosystem services include flood mitigation, stormwater and air purification, urban cooling, noise reduction, carbon sequestration and wildlife habitat. These ecosystem services are increasingly important as the population around the Parklands grows.

The Plan will help reduce threats to the Parklands from climate hazards by promoting the planting of climate-appropriate plant species, good design and maintenance of landscapes and visitor infrastructure, and integrated water management. The Parklands will provide an important refuge for animals, particularly as urban growth continues in the areas surrounding the Parklands.

The establishment of connected parklands with areas for people to gather, recreate and socialise in nature will enhance community health and wellbeing and build social connections to support community resilience. Wherever possible these areas should be shaded by the canopy of appropriate species of tree.

## **Governance and management**

The Plan supports a collaborative governance approach to planning, establishment and management of the Parklands.

The Plan guides the collective and individual roles of current and future ongoing land managers. This includes the principle that land managers are considered transitional until such time that the WWCHAC has been provided the capacity and resources to take on management of the Parklands.

The Plan also provides strategic directions to increase community involvement in ongoing parkland establishment, protection and management.

## **Themes**

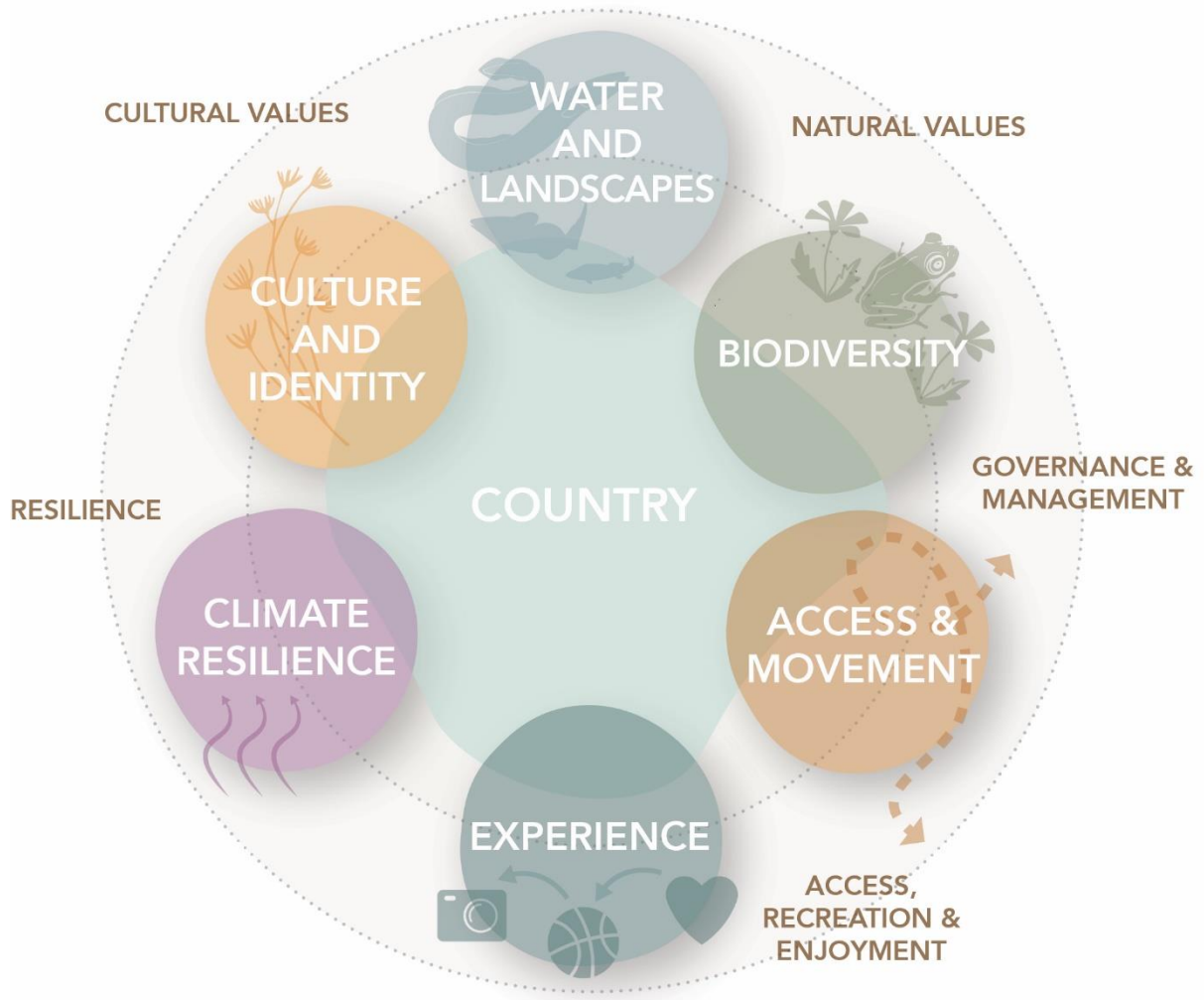
The strategic directions for the Parklands have been developed under six themes:

- Culture and identity
- Biodiversity
- Water and landscape
- Climate resilience
- Access and movement
- Experience

The themes and guiding principles that underpin the Plan are illustrated below (Figure 8). The themes connect to and will support the guiding principles across natural and cultural values; resilience; access, recreation and enjoyment; and governance and management.

The following section outlines the existing context and planning for the Parklands across the six themes. The strategic directions and actions within each theme will guide implementation of the Plan to establish the Parklands.





**Figure 8: The interrelated principles and themes for the Future Directions Plan. The guiding principles are linked to strategic directions for each theme in the following section.**

## 4.1 Culture and identity

*'marram baba' is significant to Wurundjeri Woi-wurrung people, including the diverse landscape features of Merri Creek and Kalkallo Creek, floodplains, billabongs, basalt plains, stony rises, gorges, and grasslands and grassy eucalypt woodlands. Along with preserved ecological biodiversity, this landscape represents ancestral and present-day Wurundjeri Woi-wurrung Country. The Wurundjeri Woi-wurrung Community find spiritual meaning within Country that embodies the living spaces of their ancestors and which provides a conceptual link to the traditional Country of their people.*

*Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation 2022*

The identity of the marram baba Merri Creek Regional Parklands is tied to the Wurundjeri Woi-wurrung's continued custodianship and culture, the landscapes of the Parklands and the biodiversity it supports. Embedding this cultural identity in the Parklands establishment, protection and management is essential to build a sense of place that reflects Traditional Ownership and enhances social connection, participation and social inclusion.

The landscape identity of the Parklands is characterised by the relatively flat volcanic plain formed by lava flows from the now extinct volcanoes at Bald Hill, Mount Fraser and Hayes Hill. The lava flows created volcanic landscape features such as stony rises, old lava flows and extinct volcanic cones.

The distinctive visual landscape is linked by the course of Merri Creek. The confluence of Merri Creek and its tributaries are an important aspect of the visual landscape in the Parklands. The formation of the modern Merri Creek and its tributaries was created by erosion of the basalt plans, which has created the distinctive bluffs, escarpments, cliffs and short sections of gorge that characterise the waterways in the Parklands.

The landscape supports grassland, riparian shrubland and grassy eucalypt woodland, and is home to a range of endangered and vulnerable native animals including the Striped Legless Lizard, Growling Grass Frog, Golden Sun Moth and the critically endangered Swift Parrot and Regent Honeyeater.

The scale of the landscape features and vegetation communities of the Parklands differs markedly to the urbanised lower reaches of Merri Creek, south of the Metropolitan Ring Road, and to the wetlands and steeper headwaters of the upper reaches of Merri Creek around Wallan and beyond to the southern slopes of the Great Dividing Range.

The agricultural identity of land surrounding the Parklands is being replaced with a suburban identity. This will comprise new areas of housing, new commercial districts including the large Cloverton Metropolitan Activity Centre, continued quarrying, and an expansion of industrial precincts and freight and logistics hubs. The importance of the northern metropolitan region in providing these essential functions reinforces the importance and identity of the Parklands in providing a place of nature and calm.

The Parklands will retain its natural and cultural identity amidst the transformation of the industry structure, employment, population, and demographic profile of surrounding areas. These changes will impact how the growing and culturally diverse population perceives and experiences the Parklands, and will influence the sense of place or place identity of emerging communities.

Parkland establishment, protection and management will aim to celebrate the Parklands' identity and invite the community to connect with and care for the environment. The Plan will support and encourage community members to engage with one another in enjoying, protecting, enhancing, and valuing the Parklands.

## **Strategic directions - culture and identity**

The future implementation of the Plan is guided by the following strategic directions:

### *Wurundjeri Woi-wurrung Cultural Landscape*

- The marram baba cultural landscape is valued in its entirety for the spiritual, tangible heritage, archaeological, historical, ecological and living connections it provides the Wurundjeri Woi-wurrung community. It is important that development in areas adjacent to the Parklands is not undertaken in a way that compromises the Wurundjeri Woi-wurrung cultural landscape
- Wurundjeri Woi-wurrung cultural values are embedded in Parklands establishment, protection and management. The WWCHAC will become equal partners to prepare for the long-term goal of returning Country to the Wurundjeri Woi-wurrung community
- The Parklands sustain the continuance of Wurundjeri Woi-wurrung traditional practices and the generational conferral of knowledge through activities including Caring for Country, undertaking archaeological assessments, walking Country, knowledge sharing and celebrations that include private ceremonies and on-Country cultural activities. These cultural practices enhance feelings of belonging and connection, as well as providing opportunities to fulfill traditional rights and responsibilities
- Cultural fire management recognises that fire allows for healing and caring for Country. Burning is the cultural responsibility of Traditional Owners and applies the approach of right fire, right time, and right way for the right cultural reasons. There are substantial positive impacts to Traditional Owner wellbeing and confidence through providing access and authority to practice on Country
- Wurundjeri Woi-wurrung will identify special places of significance for protection within a whole landscape of significance. Areas can be set aside as Wurundjeri Woi-wurrung Country Cultural Reserves. Lookouts, trails, and other visitor infrastructure is to support, and not damage, the significant aesthetic and natural attributes of the Wurundjeri Woi-wurrung ancestral place and necessary protection is to be put in place
- Wurundjeri Woi-wurrung language is supported for naming of the marram baba Parklands and feature areas. This acknowledges custodianship and enhances community knowledge of the cultural importance of the Parklands
- The Wurundjeri Woi-wurrung marram baba artwork and cultural design elements are reflected in any future buildings, works and infrastructure design in the Parklands. Extended roll out of the marram baba signage strategy developed in consultation with WWCHAC will enhance public knowledge of the cultural importance and sensitivity of the marram baba cultural landscape.

### *Biophysical identity*

- Establishment, protection and good management of the Parklands celebrates the diverse landscapes, geology and natural features within the Parklands, including Merri Creek and its tributaries, wetlands, volcanic cones, stony rises, grasslands and grassy eucalypt woodlands
- Provide opportunities for people to connect with the biophysical identity of the Parklands through sensory and immersive experiences, from the open and expansive grasslands to the sheltered and quiet gorge at galada tamboore, and by showcasing the scenic views and inviting visual connection to the volcanic, creek and city landscape.

### *Urban identity and heritage*

- Heritage sites and historic values within the Parklands associated with the farming and industrial heritage of the area are acknowledged and protected through design, maintenance and interpretation of features including dry stone walls, the remains of John Batman's outstation, and other historic values identified during parkland planning
- Planned expansion of industrial precincts and freight and logistics activity (Plan Melbourne Northern Metro Region) will need to maximise enhancement of the Parklands interface and

enable effective, safe connections by implementing high quality design. Workers from the employment areas will benefit from well-designed connections to nature

- The Parklands will weave through Cloverton - a new Metropolitan Activity Centre - that will celebrate the Parklands role as a distinctive area of conservation in a major new commercial district.

*Community connection*

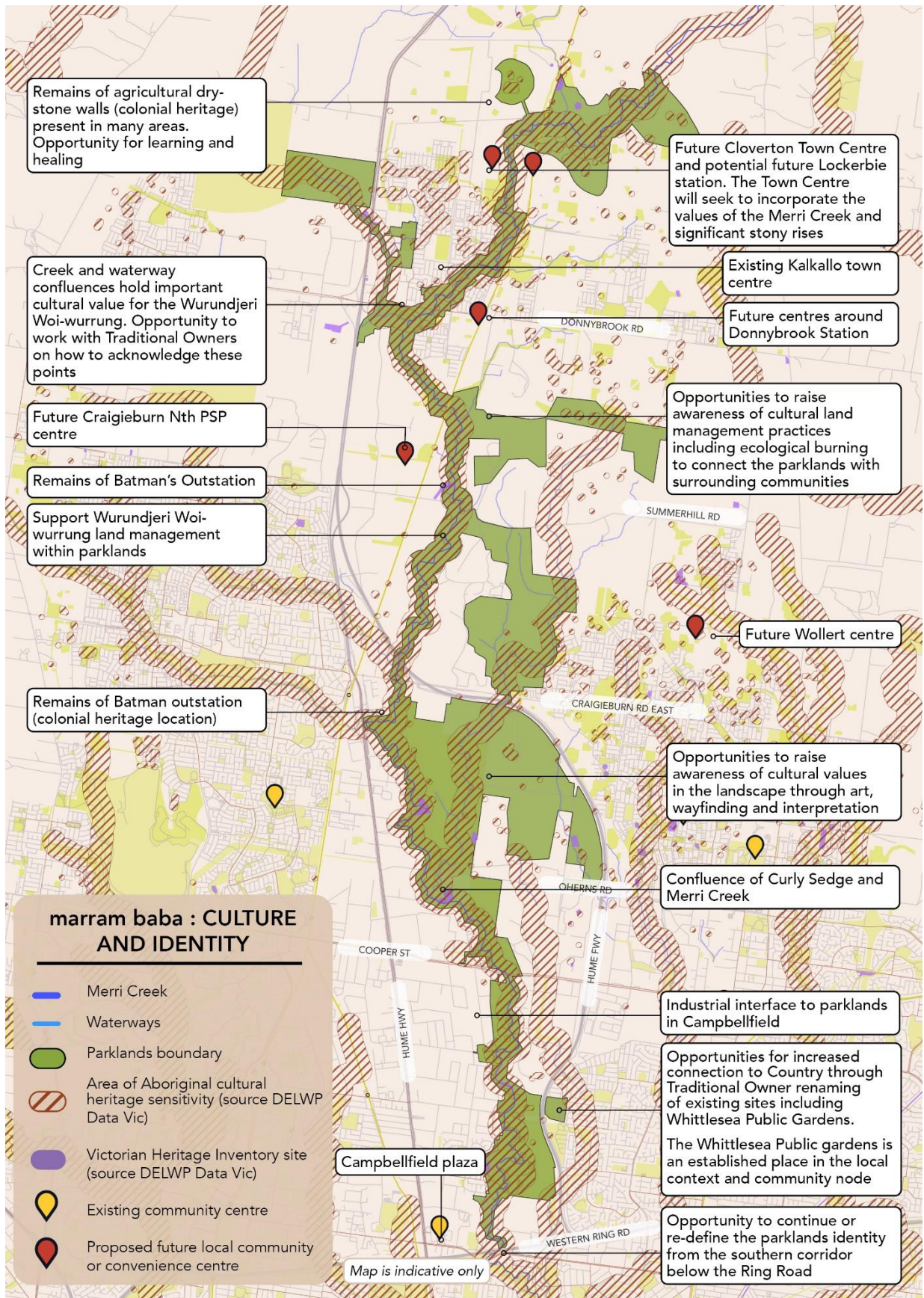
- The Parklands provide opportunities for the diverse communities living and working in surrounding areas to connect to and increase their knowledge and stewardship of the Parklands through interpretation, education, and immersion opportunities (e.g. tours, events, volunteering, recreation and environmental groups).

**Lead actions**

The following actions have been developed in consultation with the Parklands Partnership Group and reflect the priorities of the land managers.

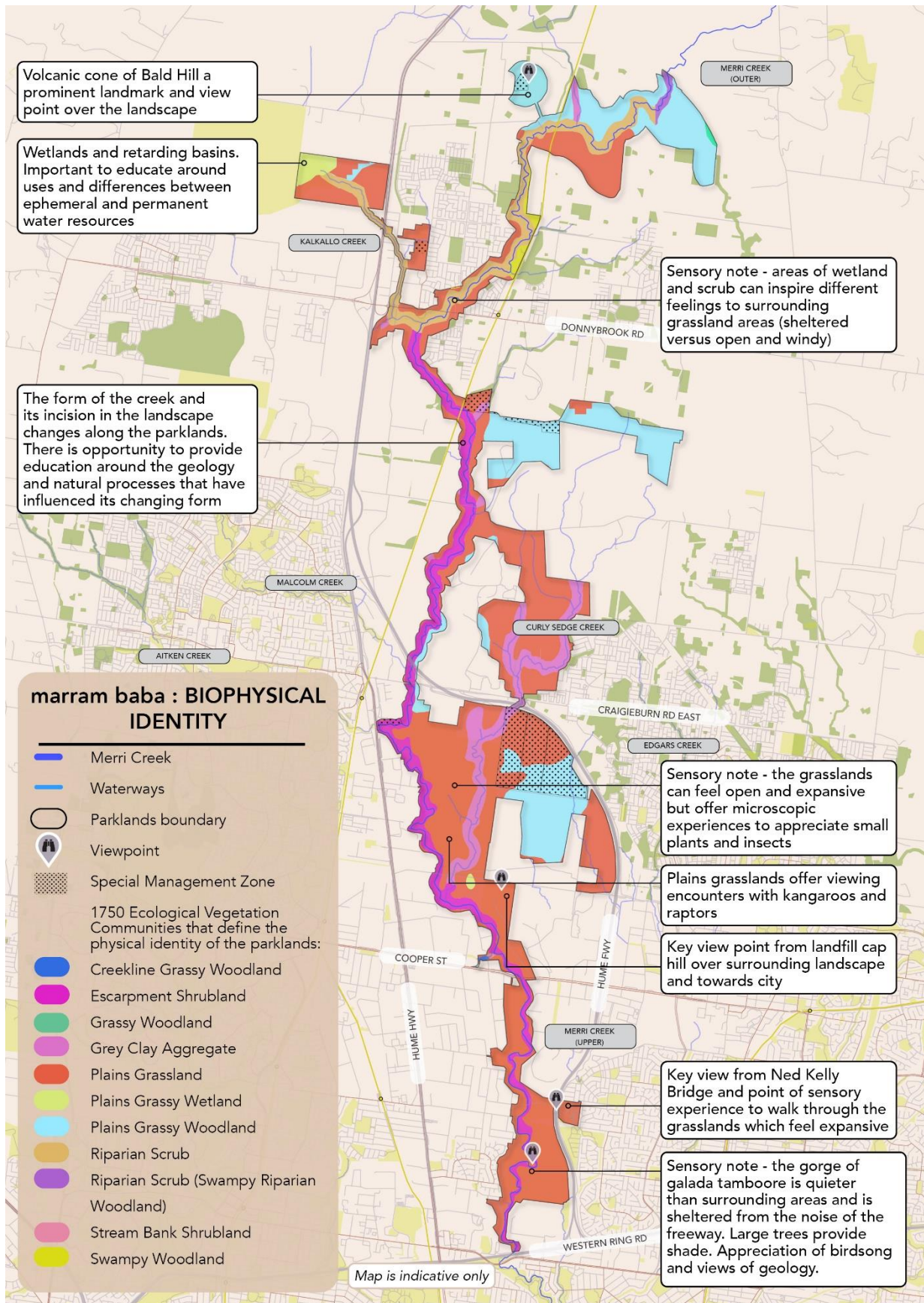
| <b>Actions - Culture and identity</b>                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Protect the marram baba cultural landscape as a priority. Develop protection criteria and plans with WWCHAC oversight. These will be self-determined by Traditional Owners.                                                                                                                                   |
| 2. Celebrate and share Wurundjeri Woi-wurrung culture through naming, signage and interpretation, artwork, demonstrations of traditional cultural ecological management of the land, and talks and walks on Country.                                                                                             |
| 3. Develop a cohesive branding strategy for the Parklands that incorporates the marram baba artwork of the Wurundjeri Woi-wurrung people and supports a sense of place, biophysical identity, cultural and environmental values, wayfinding, and increased community awareness and stewardship of the Parklands. |





**Figure 9: Key features that define the cultural identity of the Parklands and management objectives**





**Figure 10: Key features that define the biophysical identity of the Parklands and management objectives**

## 4.2 Biodiversity

The volcanic plain and valleys carved by waterways through the Parklands provide a range of habitats for indigenous plants and animals. The clay soils derived from the basalt flows are a key element in supporting and regulating biodiversity as they enable a high diversity of plants to survive, from wetland species to wildflowers and ancient Red Gums more than 400 years old. The Parklands contain substantial areas of important biodiversity conservation value that are poorly represented in Victoria today, including at least 454 species of indigenous plants. This is an outstandingly diverse area with over 15% of Victoria's native plant species occurring in less than 0.02% of Victoria's total area.

The Victorian Biodiversity Atlas lists an array of threatened animals native to the grasslands, grassy woodlands, and wetlands, with habitat areas provided by stony rises and eruption points within the landscape (Appendix 4). Grassland-dependent species such as Striped Legless Lizard, Grassland Earless Dragon and Golden Sun Moth, woodland-dependent birds, such as the critically endangered Swift Parrot and Regent Honeyeater, and wetland-dependent species such as Growling Grass Frog, Brown and Southern Toadlets, and Australian Little Bittern have all been recorded in the area, making the Parklands vital to the conservation of these animals.

The Parklands are home to significant populations of Growling Grass Frog which is protected under the provisions of the BCS. Nature Conservation Reserves and Conservation Areas exist in the Parklands to provide critical habitat for many EPBC and FFG listed species, such as Golden Sun Moth and Striped Legless Lizard as well as many others listed in Appendix 4.

The Grassy Eucalypt Woodland of the Victorian Volcanic Plain and the Natural Temperate Grassland of the Victorian Volcanic Plain are both critically endangered ecological communities under the *EPBC Act 1999*. The Parklands support some of the last remnants of these vegetation types and their conservation is a priority for parkland planning.

The life cycle needs of the threatened animals in the Parklands require sufficient habitat and connectivity both within the Parklands and with surrounding regional habitat corridors. For example, a wildlife bridge or underpass across major barriers such as the Hume Freeway, the rail line and (the future) Outer Metropolitan Ring transport corridor will help to connect populations across and beyond the Parklands.

The Plan identifies habitat pinch points (narrow areas) throughout the Parklands that are likely to restrict animal movement and plant dispersal. The Plan commits to investigating opportunities to widen the Parklands at these pinch points before this constraint is embedded into new development areas. The pinch points acknowledge that a walking and cycling path is to be supported in a way so that plant and animal movement is supported, with little to no impact on conservation areas.

The important natural environment values in the Parklands are threatened by weeds and pest animals, climate change and urban development. Effective management of the Parklands will maximise the ecological outcomes. Accessible open spaces provide important opportunities for people to connect with nature, contributing to improved community connection and enhanced health and wellbeing outcomes. Open spaces with ecological values offer the opportunity for environmental stewardship, volunteering, research and citizen science and education.

### **Strategic directions - biodiversity**

The future implementation of the Plan is guided by the following strategic directions:

#### *Protect*

- Protect indigenous plants and animals in the Parklands
- Protect the Grassy Eucalypt Woodland and Natural Temperate Grasslands of the Victorian Volcanic Plain as some of the last remnants of their type in Victoria

- Protect national and state FFG and EPBC listed plant and animal species (Appendix 4) in line with relevant legislation including the requirements of the BCS. This includes investigating and applying measures to ensure protection on private land.

#### *Restore*

- Maintain, restore and enhance high-value environmental values including Grassy Eucalypt Woodland and Natural Temperate Grasslands of the Victorian Volcanic Plain and habitat for FFG and EPBC listed species in Appendix 4
- Undertake revegetation in accordance with Ecological Vegetation Class (EVC) requirements. Re-establish plant diversity by carefully managing remnant vegetation and re-planting significant and important structural species
- Ensure revegetation areas create areas of thermal variation (cool shaded and warm open) to support diverse animal habitat requirements, such as the Growling Grass Frog and reptiles.

#### *Connect*

- Focus on the establishment, protection and management of the Parklands as one connected regional landscape and an important riparian and wildlife corridor. This applies in established areas such as the west bank of the Merri Creek opposite galgi ngarrk that have not been included in the Biodiversity Conservation Strategy for Melbourne's Growth Corridors
- Advocate for future connection of the Parklands to areas beyond the Parklands boundary to provide further biodiversity and habitat connections, including to reaches of Merri Creek upstream and downstream of the Parklands, Hernes Swamp and the potential wallan wallan Regional Parklands to the north, the Grassy Eucalypt Protected Area to the east, and along tributaries including Malcolm Creek to connect to Mount Ridley Nature Reserve to the west
- The habitat link to the Grassy Eucalypt Woodlands is very important and requires additional corridor access along Summerhill Road in pending Northern Quarries PSP, along with focus on land acquisition in the Grassy Eucalypt Investigations Area that links to Quarry Hills Parklands
- Wildlife movement is an important function of the Parklands. Design and works for roads and subdivisions to ensure viable fauna movement and avoid pinch points. This includes consideration of additional land acquisition, wider bridge spans, and animal access infrastructure.

#### *Engage and educate*

- The Parklands provide opportunities for the community and visitors to connect with and value the natural environment through education and interpretation, volunteering, research partnerships and citizen science, to foster stewardship of the Parklands
- Interpretive information applying the 'think, feel, do' framework<sup>11</sup> helps lead to positive ecological and cultural outcomes. Opportunities to interweave artwork, soundscapes and poetry can help people feel a deeper connection, combined with suggestions for people to get involved such as birdwatching or seasonal events.

#### *Manage*

- To care for Country, it is important to consider biodiversity management holistically with water, air, and soil management to help protect and enhance the widest range of ecosystem functions. Undertaking an environmental management plan aligned to Wurundjeri Woi-wurrung values will be an important future step to implement this

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<sup>11</sup> Think Feel Do is an outcome-based engagement framework focused on the three outcomes of effective communication: what we want the audience to think, what we want them to feel, and, as a result, what we want them to do.

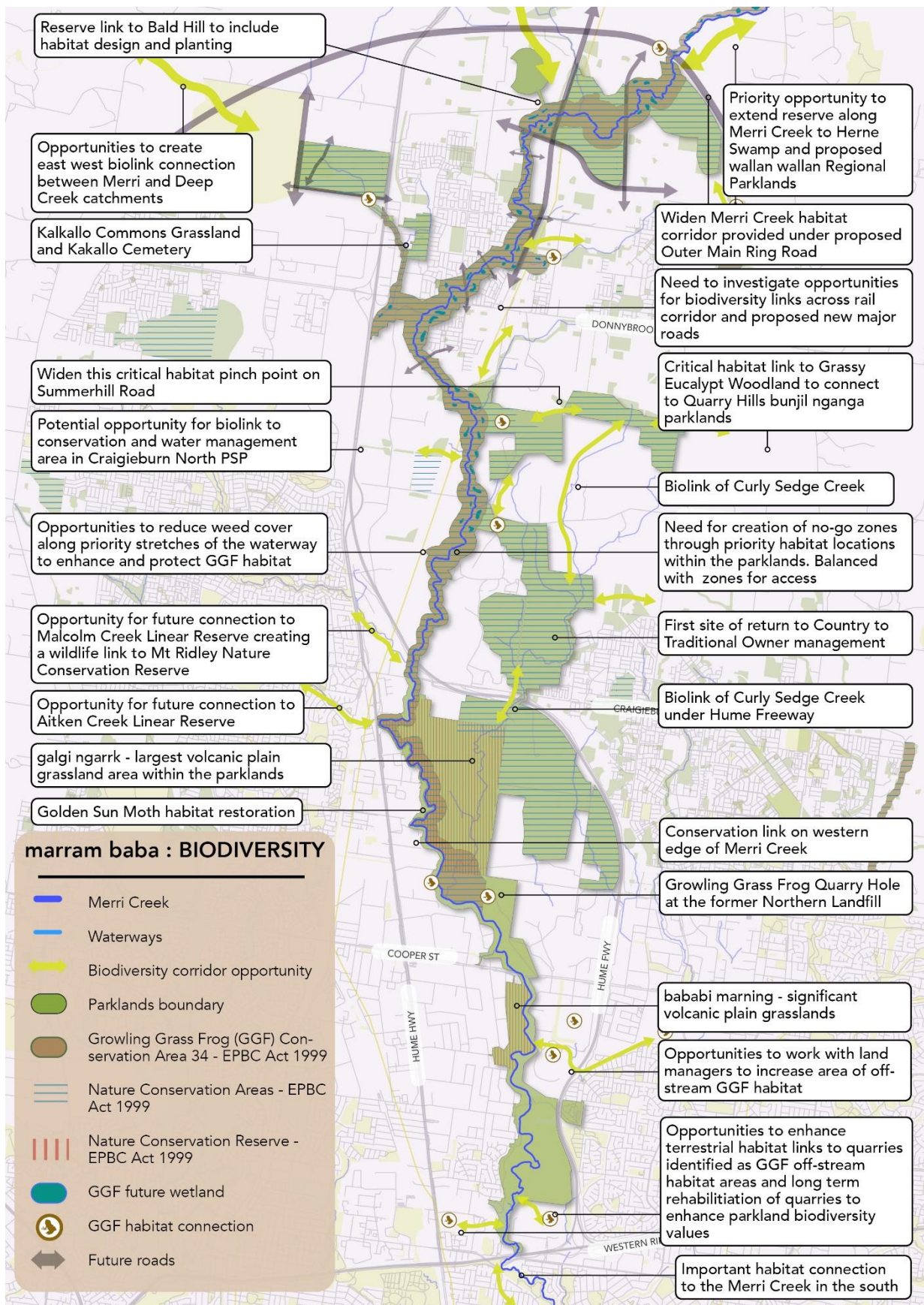
- Cultural fire is living knowledge. Aboriginal fire knowledge is shared for continual learning and adaptive management. Continue to investigate the impact of cultural fire in restoring ecological function. Traditional Owners will work together on each other’s Country to heal Country and guide practice development. Knowledge and practice are shared
- A coordinated landscape-scale approach is adopted for environmental management and the ongoing challenge of weeds and pest animals. Management of grasslands includes ecological burns to be undertaken to deliver enhancement and restoration of ecological values in the parklands
- Undertake ongoing management of protected Ecological Vegetation Classes
- Any visitor access to areas of conservation value is designed and managed to prevent disruption to critical habitat. This includes the restriction of activities such as dog walking
- Urban and industrial development at the edge of the Parklands is designed to reduce threats to natural and cultural values. Pursue opportunities to address existing poorly designed interfaces to ensure any environmental risks associated with that adjoining land use are considered and managed to minimise the impacts on biodiversity and waters values.

### Lead actions

The following actions have been developed in consultation with the Parklands Partnership Group and reflect the priorities of the land managers.

| <b>Actions - Biodiversity</b>                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Protect, maintain and enhance biodiversity values in line with regularly reviewed conservation management plans and strategies. Undertake weed and pest species management via current and continuing implementation with focused ecological restoration works throughout the Parklands.                             |
| 2. Implement habitat obligations to protect nationally significant plants and animals in line with Federal and State commitments, including the Biodiversity Conservation Strategy for Melbourne’s Growth Corridors. Supplement this with Growling Grass Frog enhancement works for the southern area of the Parklands. |
| 3. Investigate, and where feasible, include additional land in a future expansion of the parkland boundary to reduce the impact and encroachment on conservation values from walking and cycling activity.                                                                                                              |
| 4. Develop environmental educational material and signage for the Parklands, including at important features such as Growling Grass Frog wetlands, grasslands and riparian woodland. Signage should help visitors connect and care for the landscape, and help identify the native plants and animals of the Parklands. |





**Figure 11: Parkland biodiversity values and management objectives**

### 4.3 Water and landscape

The landscapes and ecosystems of the Parklands are shaped by the basalts of the Victorian Volcanic Plain and the water that flows over and through the Parklands. Merri Creek forms a central spine through a broad, flat valley punctuated by the volcanic cone of Bald Hill and the tributaries that join Merri Creek: Kalkallo Creek, Malcolm Creek and Aitken Creek from the west and Curly Sedge Creek from the east.

The landscape was formed by lava flows from the now extinct volcanoes at Bald Hill, Mount Fraser and Hayes Hill, which flowed south towards the confluence with the Yarra River. The modern day Merri Creek and its tributaries were formed as water cut into the basalt, eventually forming a relatively narrow 'inner' valley and an adjacent plain that is typically well-defined by escarpments, cliffs and some short gorge sections.

The geomorphology of Merri Creek and its tributaries has been extensively disturbed since colonisation. Some sites of significance and relatively undisturbed sections of waterway remain. Creating the Parklands and conservation areas is an important means to help protect these known, and yet to be known, sites of geomorphological significance.

The Parklands incorporates two geological and geomorphic sites of State Significance<sup>12</sup>:

- The galada tamboore gorge is one of the most distinctive landscape features of the Merri Creek catchment. Also known as the Barry Road Gorge, the site showcases a distinctive 15m high cliff and is an example of unconformity between the overlying basalt and the underlying Silurian bedrock. It also sustains a specialised vertical salt marsh plant community that thrives on saline seepage from the unconformity.
- Merri Creek Escarpment in Somerton showcases a 40m-long cliff between 2-4m high exposing the channel of an ancestral Merri Creek filled by a lava flow upon which a new stream has developed. Including this land in public ownership within the Parklands will protect the site and provide a potential education site.

Stony rises and gilgai (shallow depressions in clay soils that create ephemeral water bodies) are featured in the Parklands. This includes the regionally significant gilgai landscape in galgi ngarrk, Craieburn, and the stony rise formation at Kalkallo Common Grasslands.

The landscape surrounding the Parklands continues to host quarry works for basalt, scoria, clay, sand and gravel to support building needs across Victoria and beyond. Groundwater management is important to protect Merri Creek and tributaries, and in the long term, remediation of these quarries will provide opportunities to remediate the landscape and expand the Parkland boundary. Remediation plans can include the retention of some quarry holes that support water and species conservation including Growling Grass Frogs.

Merri Creek and its tributaries support significant water-dependent plants and provide important habitat for native animals in the creeks and riparian zones and ephemeral wetlands across the Parklands. Groundwater is critical for some species that are part of groundwater dependent ecosystems in the Parklands. Parts of Merri Creek are sustained by groundwater inflow, especially during drought years, and the Red Gum woodlands, although located some distance away from the waterways, are likely accessing shallow groundwater.

The Parklands incorporates Donnybrook Mineral Springs, a regionally significant geological site with natural groundwater discharge and the closest known mineral springs to Melbourne.

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<sup>12</sup> Victorian Resources Online - [vro.agriculture.vic.gov.au/dpi/vro/vrosite.nsf/pages/vrohome](http://vro.agriculture.vic.gov.au/dpi/vro/vrosite.nsf/pages/vrohome)

Waterway values are threatened by changes in the land use of the Merri Creek catchment, including areas outside the Parklands, with increasing urban and industrial development reducing stormwater quality and changing flow patterns in the creeks and across the natural landscape.

The health of water within the Parklands and the way it is managed plays a key role in the themes that underpin the Plan. At the heart, healthy water means healthy Country and healthy people. Merri Creek and its tributaries are identified as important cultural and landscape features with opportunities for connection to Country, respite from urban areas and heat, as well as providing for relaxing visitor experience that can lead to improved mental health and wellbeing. Effective integrated water management can support and enhance many of these values and functions in the Parklands.

### **Strategic directions - water and landscape**

The future implementation of the Plan is guided by the following strategic directions:

#### *Connect people to water*

- Cultural water management processes can restore Country and deliver water justice for Traditional Owner groups. Cultural access to water is supported and aligns with the Wurundjeri Woi-wurrung Nation Statement in *Water is Life*
- Opportunities are provided for visitors to enjoy and engage with water in a safe, respectful and sustainable way
- Parklands management will support management of flows in waterways in the Parklands to mitigate and help respond to floods. Plan for visitor and neighbourhood safety and impacts on natural and built infrastructure in times of flood.

#### *Water and landscape management*

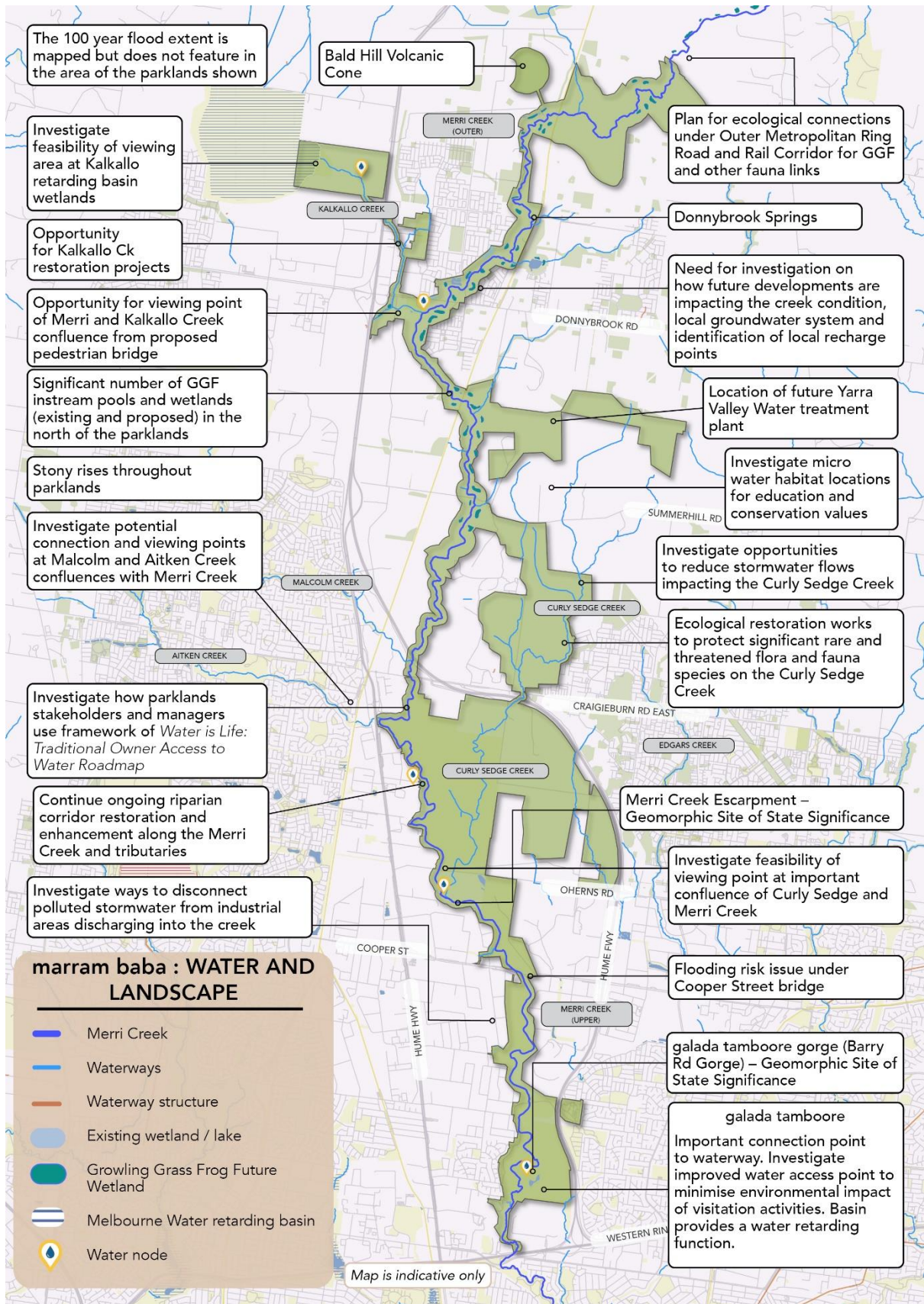
- Manage the Parklands to protect and enhance the health of ecosystems in Merri Creek, Curly Sedge Creek, Kalkallo Creek, Malcolm Creek and Aitken Creek, including their floodplains and wetlands
- To care for Country, it is important to consider surface and groundwater management holistically with flora, fauna, air, and soil management to help protect and enhance the widest range of ecosystem functions. Undertaking an environmental management plan aligned to Wurundjeri Woi-wurrung values will be an important future step to implement this
- Manage the Parklands to protect important and distinctive geological and landscape features. Expand and review surveys of geological sites to ensure conservation and significance of sites
- Parkland planning supports groundwater dependent ecosystems with greater consideration of the impact of surface-groundwater interactions. Ensure adjacent quarries are not detrimentally affecting groundwater requirements needed to sustain a healthy park landscape
- Manage urban stormwater runoff to protect and enhance waterway health and improve Parkland amenity by integrating stormwater treatment systems into the landscape, avoiding significant conservation areas and maximising their habitat and amenity value to the community
- Harvest stormwater in the Parklands to irrigate open spaces (in the limited places where there is no conflict with conservation objectives) to reduce runoff to waterways and provide water for cooling and irrigation of open spaces (where feasible and appropriate)
- Planning controls should be reviewed, updated and enforced to protect waterway and geological values in line with Traditional Owner values.

### Lead actions

The following actions have been developed in consultation with the Parklands Partnership Group and reflect the priorities of the land managers.

| <b>Actions - Water and landscape</b>                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Undertake works and education to reduce stormwater impacts on the Parklands. Consider upgrades to wetlands and infrastructure, and investigate solutions to reduce toxic runoff from industrial areas.              |
| 2. Investigate stormwater harvesting initiatives as a sustainable source of water for irrigation and cooling in the Parklands in areas where it does not conflict with conservation values.                            |
| 3. Investigate opportunities to link the Parklands with future Kalkallo Retarding Basin development, including community and biodiversity connections in line with drainage requirements currently under investigation |





**Figure 12: Parkland water values and management objectives**



#### 4.4 Climate resilience

Urban parks and green spaces provide significant ecosystem services that increase climate resilience, including mitigation of flooding in downstream communities, cooling to reduce the impact of the urban heat island on communities, and carbon sequestration. These climate-related ecosystem services are increasingly important as the population around the Parklands grows.

Climate change threatens the Parklands with hotter and drier summers, extended droughts, more frequent heatwaves and bushfires, and more intense storms and flood events. These changes threaten the environmental values and community use of the Parklands. Climate change impacts, combined with other changes such as population growth and urban development, place increased pressure on the Parklands' values and visitor experience.

The Parklands will provide an important refuge for people and animals during hot periods, particularly as urban growth continues in the areas surrounding the Parklands. At all times, and particularly in times of extreme heat, the Parklands will be managed to protect people and protected species and values from fire danger.

The total vegetation canopy coverage in the parklands was 23% in 2021<sup>13</sup>. It is noted that some of this coverage is likely to be invasive gorse that is intended to be removed through ongoing ecological restoration works. Due to the ecological priorities of the Parklands to protect grassland and Growling Grass Frog habitat, it is not intended that the canopy coverage will increase.

Climate change threatens human health, and this threat will be exacerbated as the population in the surrounding areas exposes more people to areas of high urban heat. The establishment of connected parklands with well-designed areas for people to gather, recreate and socialise will enhance community health and wellbeing and provide opportunities to build social connections which strengthen community resilience.

#### Strategic directions - climate resilience

The future implementation of the Plan is guided by the following strategic directions:

##### *Urban heat*

- Shade tree planting will be limited to areas where it does not impact on the specific habitat requirements of grasslands and Growling Grass Frog
- Maintain climate refuge opportunities for animals, especially access to water
- Promote planting of climate-appropriate, locally-indigenous species
- Provide shade where possible and drinking water at key visitor areas to reduce the impact of heat on visitors
- Alternative water sources (such as harvested stormwater and recycled water) to be used in appropriate areas (i.e. outside conservation areas) for irrigating open space to maximise cooling and increase the resilience of open spaces during droughts.

##### *Fire regime*

- Cultural fire management recognises that fire allows for healing and caring for Country. Fire management is to be viewed as more than asset protection, and future parkland planning will apply a more holistic reflection of cultural fire management
- Cultural fire is applied to achieve culturally meaningful objectives while also reducing the risk of bushfire. Land managers to recognise the authority of Traditional Owners to lead the development and application of cultural fire practice on Country
- Ecological burns are applied to support and develop biodiversity values in the parklands

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<sup>13</sup> Data from Vicmap Vegetation - Tree Density data from 2021

- The Parklands incorporate bushfire and grassfire management measures through design of interface landscaping, species planting, setbacks, mown fire breaks, water supply and emergency access planning
- Urban development interface buffers avoid encroaching into environmentally important areas and provide for emergency and management vehicle access.

#### *Flooding regime*

- Water sensitive urban design is implemented to mitigate floods and retain water in the landscape. Natural wetlands are protected and enhanced to acknowledge their integral role in waterway management
- Visitor infrastructure, such as trails and recreation facilities, is designed and sited to be above major flood levels or alternatively be designed to work with and acknowledge flooding
- Stormwater and flood management is implemented to reduce negative impacts from pollutants and excess urban runoff on waterways and parklands, whilst minimising the use of area within the Parklands for new stormwater infrastructure.

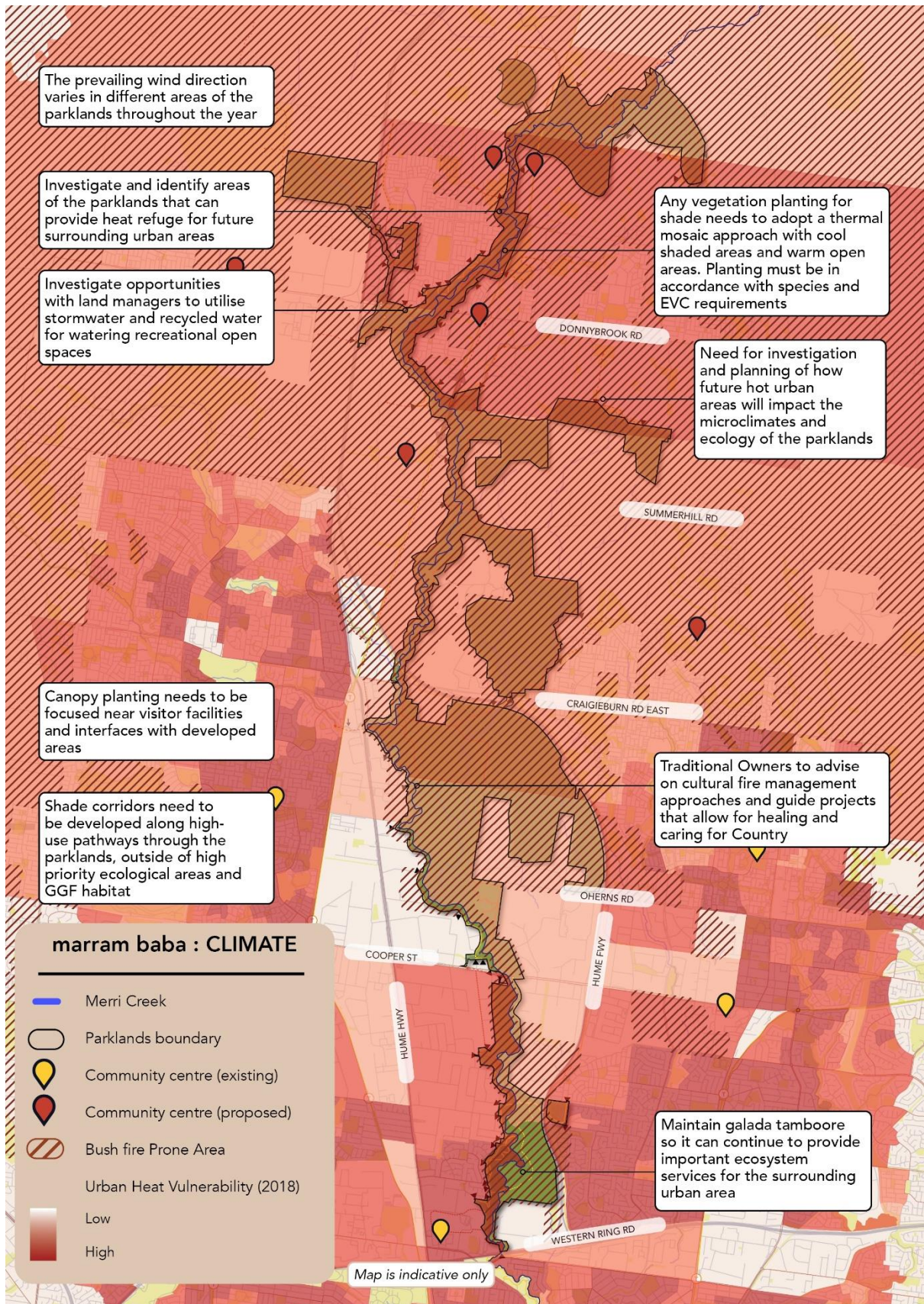
#### *Parkland infrastructure*

- Good siting, design, implementation and maintenance of landscape and built infrastructure enable resilience to climate change and extreme weather events
- Parkland infrastructure uses sustainable materials and renewable energy sources to minimise greenhouse gas emissions throughout their life cycle.

#### **Lead actions**

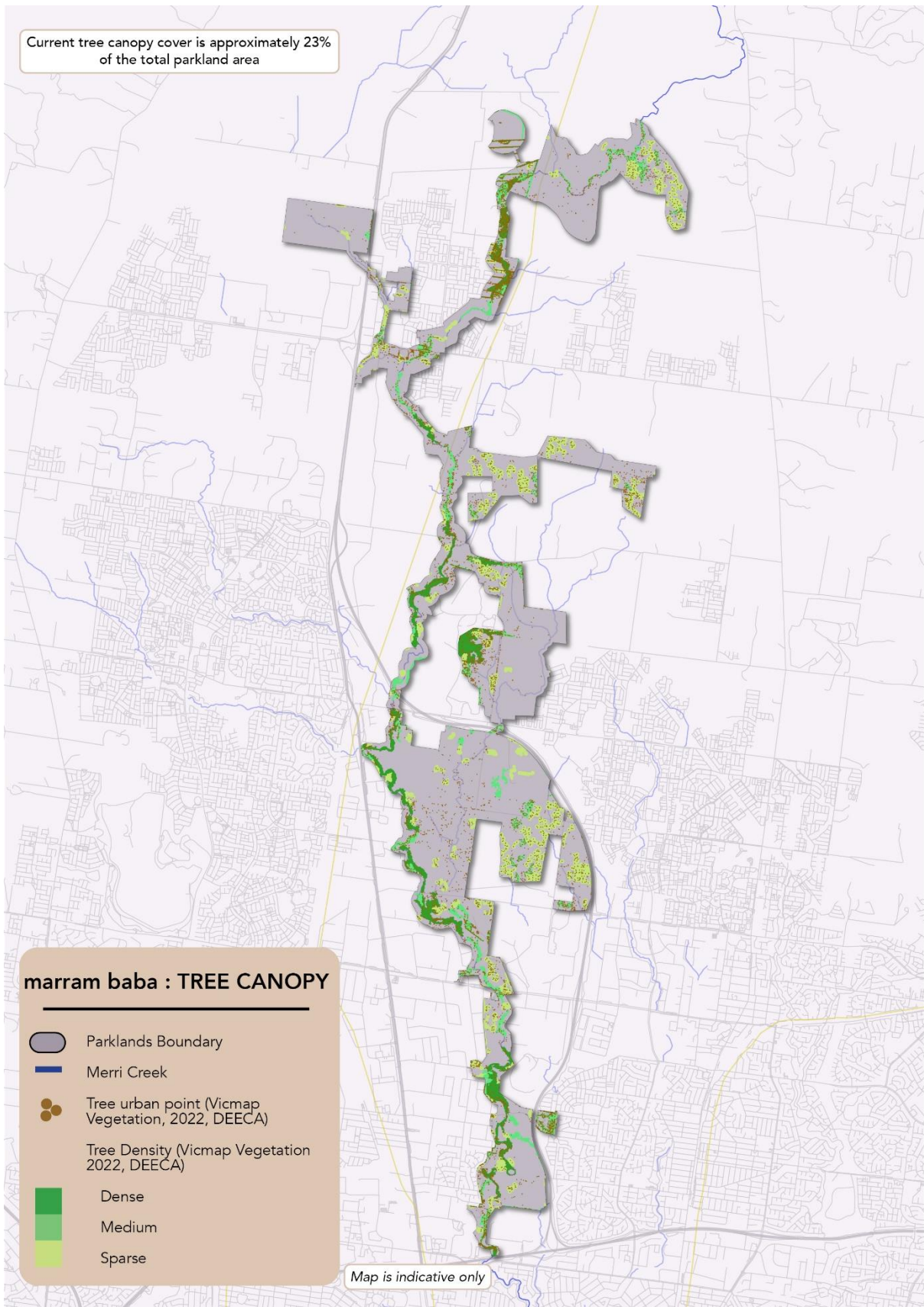
The following actions have been developed in consultation with the Parklands Partnership Group and reflect the priorities of the land managers.

| <b>Actions - Climate resilience</b>                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Provide trees at visitor areas and along trails where appropriate to provide shade and increased thermal comfort for visitors. Tree species will be indigenous and climate appropriate, appropriate to the conservation areas and enhance conservation values. |
| 2. Design and construct visitor facilities to minimise their life cycle greenhouse gas emissions, and to enhance resilience to floods, heatwaves, bushfires, grassfires and storms.                                                                               |
| 3. Cultural fire management to be applied to support healing and caring for Country, including supporting ecological outcomes and managing bushfire and grassfire risks                                                                                           |



**Figure 13: Parkland resilience management objectives**





**Figure 14: Tree canopy cover**



## 4.5 Access and movement

Access to open space and nature-based recreational experiences for people of all abilities and backgrounds is an important and necessary step to ensuring the whole community can benefit from the Parklands. The benefits of access to open space are multi-dimensional, providing opportunities for interaction with nature, respite from heat, quiet calming places to reflect, places to exercise, explore and play, and places for communities to gather.

Access and movement within the Parklands will be shaped around the requirement to protect and enhance biodiversity and cultural heritage values of the Parklands. Visitors may enjoy different areas and features of the Parklands, while other areas will have restricted public access to protect the environmental values and critical public assets, and to ensure the safety of the public.

Enhanced north-south and east-west connections, connections to the waterways, creation of areas for nature-based recreation, and improved connections to established recreation areas will support greater access and movement.

As a major natural corridor running through Melbourne's north, the Parklands play a strategic regional role in providing walking and cycling opportunities for the North Growth Corridor. The Parklands facilitate the northern regional shared trail network providing opportunities for the extension of the existing Merri Creek Trail and connections to the galada tamboore Regional Pathway that follows the Hume Freeway. Direction and advocacy is required to develop a continuous trail along the creek from north to south that does not impinge on environmental values. Regional commuter trails will be separated from quieter walking loops and access paths.

The Plan acknowledges the Parklands area is narrow in several areas, which will limit opportunities for a walking and cycling path in those locations. The Plan identifies pinch points and prioritises further investigations into widening the Parklands to ensure this once-in-a-lifetime opportunity to plan for a connected trail network is maximised. Expansion of the open space corridor provided by the Parklands will benefit the tens of thousands of new residents and workers while protecting and enhancing biodiversity.

There are also opportunities to build connections to numerous regional open spaces and local reserves located within 15 km of the Parklands. These include links to the potential wallan wallan Regional Parklands and Bald Hill via a Cloverton Linear Reserve to the north; the Mount Ridley Nature Conservation Reserve via the Malcolm Creek Linear Reserve and Aitken Creek Linear Reserve in the west; and in the east the Quarry Hills Regional Park via the future MSA Grassy Woodland Reserve.

The need for east-west connections is an important consideration to ensure access to and through the Parklands. There is currently fragmented and disjointed parts of the Parklands, which result in visitors being able to experience only a small portion of the Parklands during a single visit. To link people to their desired destinations, it is important to provide connections to public transport hubs such as train stations and bus routes. Connections must also be planned for safe and easy access to existing centres in the south such as Craigieburn, Campbellfield and to the future centres of Wollert, Cloverton and Merrifield in the north.

The timing and sequencing of land being included in the Parklands is a critical barrier to providing access and continuous open space within the Parklands. Interim access opportunities that benefit park visitors will be investigated to ensure connectivity between open spaces and community places. Private landowners will continue to be consulted on the Parklands planning and opportunities to support the Parklands whilst land remains in private ownership.

A trail hierarchy should be developed that includes commuter routes (direct fast connections, likely located in conjunction with major roads and other non-sensitive easements), management tracks, recreational trails that provide a nature-based experience, and short loop walking paths that will support increased physical activity by residents. Places of meandering, safe, slow riding to be separated from busier commuter riding paths.

## **Strategic directions - access and movement**

The future implementation of the Plan is guided by the following strategic directions:

### *Equitable Access*

- The Parklands promote equity through all-abilities access. This will be achieved through the implementation of universal design and safety principles in future visitor infrastructure development, planning and design
- Visitor areas provide walking and cycling connections, all abilities paths and signage to public transport
- Surrounding communities are connected to the Parklands via safe walking and cycling access
- Visitor areas and trails incorporate elements for visitor comfort such as shade to ensure respite from heat, and seating at regular intervals that support people of all abilities.

### *Connectivity*

- Improve east-west walking and cycling connections into and across the Parklands to better connect communities to the Parklands and other communities. All future bridges are to be designed to minimise the impact on biodiversity, cultural, waterway, and amenity values of Parklands. This includes investment in wider and higher bridges where they support better parkland outcomes
- The Parklands connect to trail corridors along the tributaries of Merri Creek in the Parklands including Kalkallo Creek, Malcolm Creek, Aitken Creek and Curly Sedge Creek
- Commuter pathways are connected with major roads, other non-sensitive easements such as pipetracks and powerlines, and established routes, such as the galada tamboore Regional Pathway to create regional cycling links that avoid impacting the environmental values of the Parklands
- Park information and wayfinding signage promotes awareness and enables access to the Parklands from surrounding activity centres and public transport hubs
- Interim access (alternative route) opportunities will be investigated for communities to access areas of open space or trails while the Parklands are being established
- The high demand for trails and changing recreational needs in new development areas will require land area set aside in pending PSPs and masterplans to support trail creation outside Conservation Areas in pinch points (narrow areas). A longer-term opportunity is for remediated quarries adjacent to the Parklands to dedicate areas for trails and recreation opportunities
- Explore innovative solutions for active transport in sensitive areas where additional land is not available.

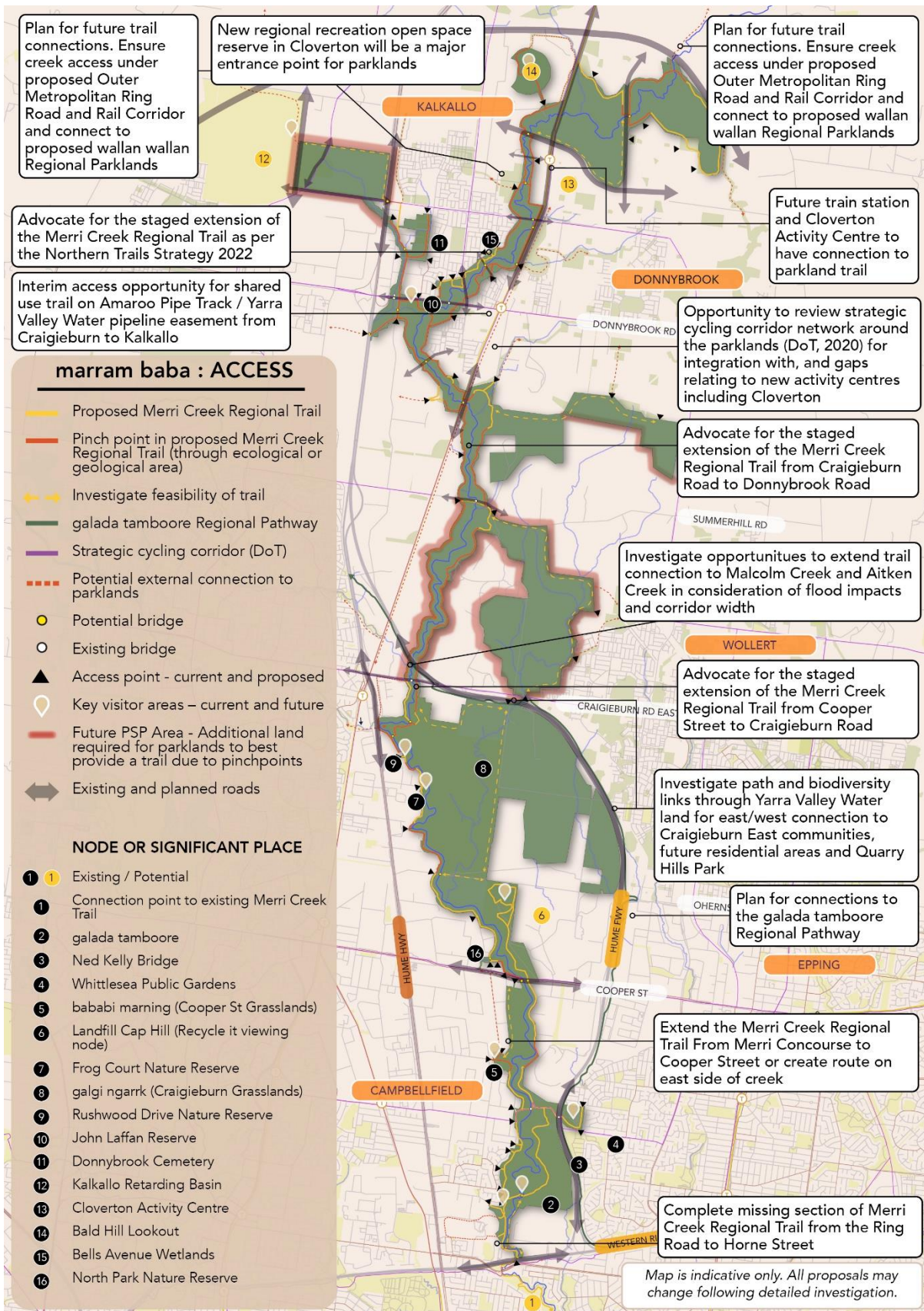
### *Safety*

- The Parklands provide safe spaces so visitors feel comfortable. Safety is a priority throughout the Parklands and design solutions will be applied including universal design principles, trail surfaces, signage, vehicle restrictions and passive surveillance. Lighting will not be installed where conservation is a priority as it is not the intention of the Parklands to support after-dark visits
- Location and design of creek crossings and other access infrastructure is not to increase flooding and risk to people and property.

### Lead actions

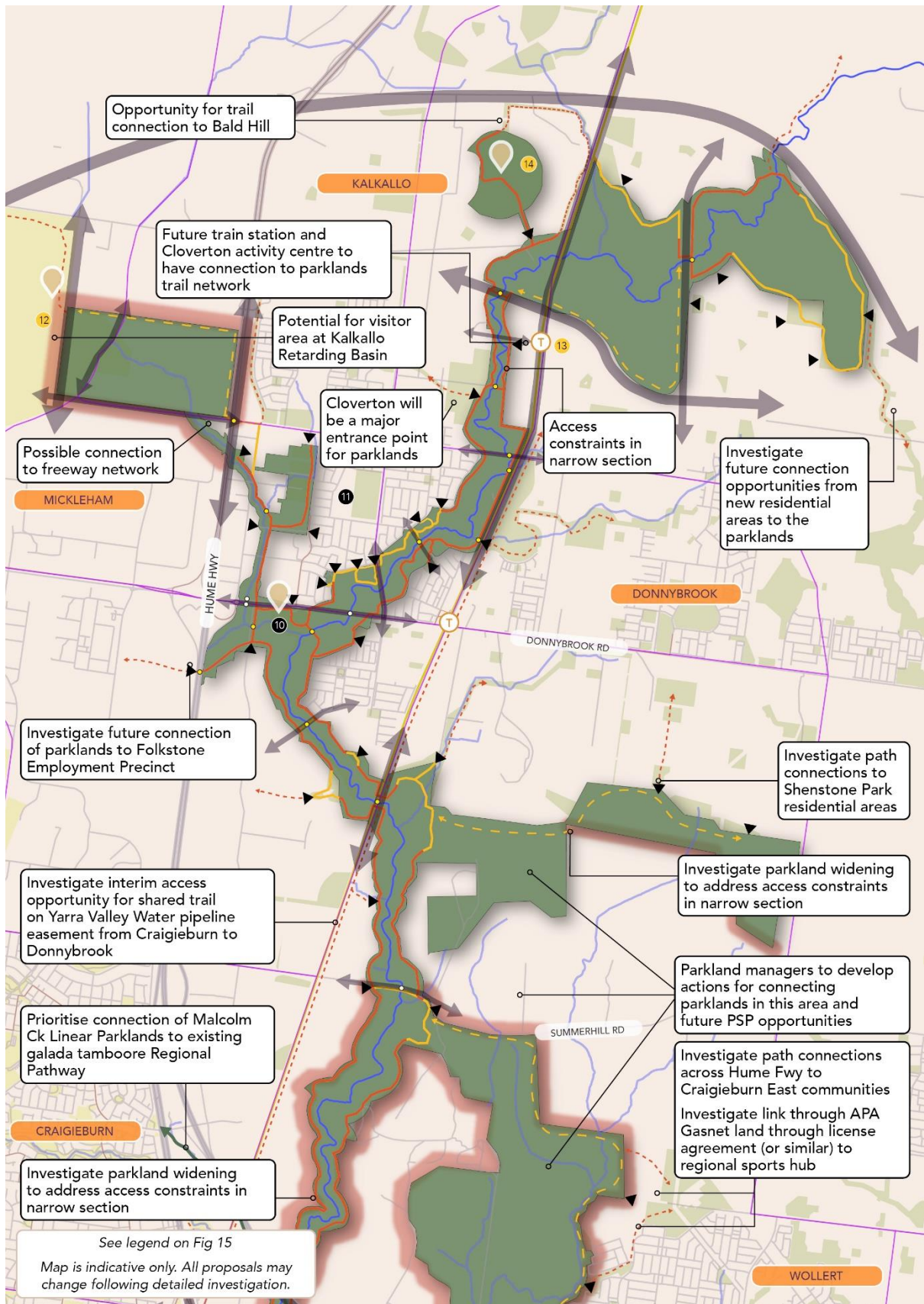
The following actions have been developed in consultation with the Parklands Partnership Group and reflect the priorities of the land managers.

| <b>Actions - Access and movement</b>                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Progressively implement a connected path network that supports recreation and commuter needs, visitor enjoyment and safety while protecting natural and cultural values. This includes a new loop trail in galada tamboore and a new trail in the southern-most part of the Parklands that will connect to the lower Merri Creek Trail.                                                                                                                                         |
| 2. Progress opportunities to widen the Parklands at identified pinch points to provide safe, comfortable walking and cycling access while protecting natural and cultural values. High priority pinch points should be identified through analysis of topography, and environmental and cultural heritage values. Additional area for connected trails will be sought in future PSPs, development plans, planning scheme amendments, and any adjacent quarry remediation planning. |
| 3. Implement east-west connections for walking and cycling across the Parklands to connect communities. This includes improved shared use paths, pedestrian bridges, and maximising walking and cycling access under the future Outer Metropolitan Ring Road and Rail Corridor.                                                                                                                                                                                                    |



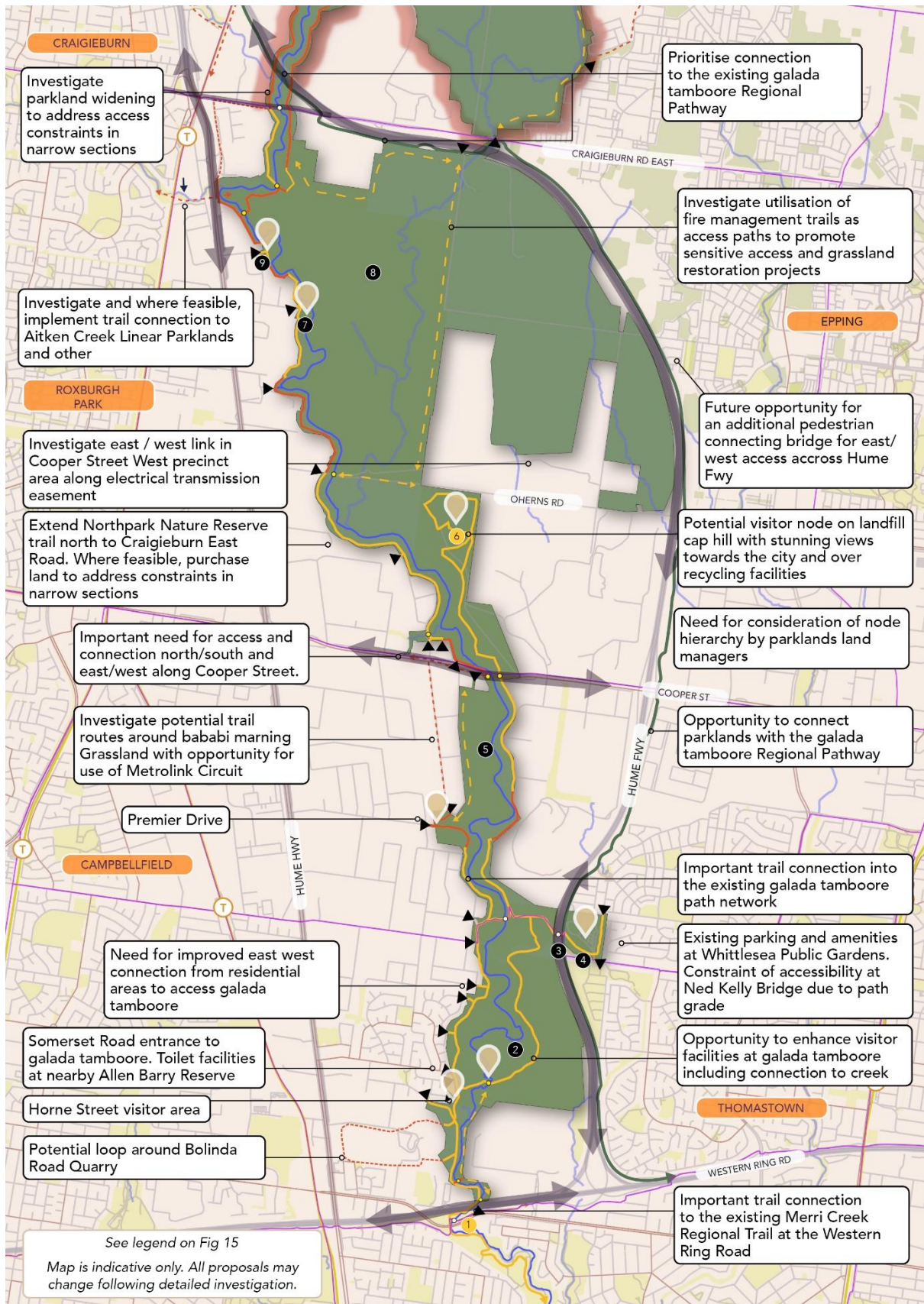
**Figure 15: Existing and potential access and movement (whole corridor)**





**Figure 16: Existing and potential access and movement (northern portion)**





**Figure 17: Existing and potential access and movement (southern portion)**

## 4.6 Experience

The experience of the Parklands is shaped around enjoying and immersing oneself in the environment, gaining an appreciation of the natural and cultural heritage within the landscape, moving through the landscape, and being able to take in the landscape from scenic viewpoints and undertaking nature-based activities.

The sense of place characteristics that inform different people's experience of the Parklands will be strongly influenced by the variation in the water, geology and vegetation communities of the natural landscape. The volcanic plain grasslands, which are open and often windy, feel different to the more sheltered woodland areas and areas of riparian scrub adjacent to Merri Creek. Different ecological areas of the Parklands will also change in different ways across the seasons such as areas where seasonal burning takes place.

The Plan acknowledges the diverse and growing communities that surround the Parklands and that there is opportunity to further understand community recreational needs for visitor areas. It is understood that different people's experience of the Parklands is determined by a range of factors, such as cultural background, life stage, abilities and interests. Provision of knowledge and information is critical to an enjoyable experience for visitors to the Parklands.

Existing visitor areas for the marram baba Merri Creek Regional Parklands emphasise a connection to nature and culture with visitor facilities that emphasis walking, picnicking and other low impact recreational activities. These existing visitor areas include:

- galada tamboore in Campbellfield including the Horne Street Picnic Area and Hatty Court Playground
- Metrolink Circuit Reserve in Campbellfield
- North Park Reserve in Somerton
- John Laffan Reserve in Donnybrook
- Bell Street Wetlands, Quill Reserve and Klandy Drive Reserve in Kalkallo
- Donnybrook Cemetery and Kalkallo Commons Grassland in Kalkallo.

Whittlesea Public Gardens in Lalor is the key visitor parkland area that is available for more active recreational activities including playground, nature play areas, a cyclist learn-to-ride area, and outdoor equipment. This is an important entrance area for Whittlesea residents to enter galada tamboore and increasingly connected areas in the lower reaches of the Parklands.

The Parkland Partners will continue to maintain and enhance the above parks and with the expanded Parklands area will continue to investigate new visitor areas, entrance carparking and viewing sites that allow for appreciation of the landscape and natural and cultural values.

As a place of natural landscape values, situated amongst expanding residential development and industrial land uses, the Parklands provide places of calm, fresh air, views and low impact nature-based recreation. The Plan acknowledges that the Parklands will not be able to accommodate all the recreational needs of the growing communities in its surrounds. The significant conservation values of the Parklands means that certain recreation activities, such as off-leash dog exercise, must be located in and limited to suitable areas, and instead preferentially provided in nearby parks and recreation reserves outside the Parklands. There is the opportunity to work with the ongoing planning for PSPs to strategically co-locate recreation activities that require major visitor infrastructure such as toilets, parking, BBQs, dog off-leash exercise, and active recreation facilities near, but outside, the Parklands.

The Parklands will be influenced by the future development of the Cloverton Metropolitan Activity Centre (MAC) in the north of the Parklands. This Cloverton MAC will create a new 'city' with up to 20,000 residents and many thousands more workers expected to directly view and enjoy the Parklands. This includes a proposed new pedestrian bridge over the Merri Creek providing a busy

thoroughfare connecting the east and west of the activity centre, and viewing opportunity for people walking from the proposed new train station. The new city of Cloverton will include high rise offices and housing with the Merri Creek parklands running through its centre. People living, working and even those looking down from high buildings will be able to appreciate the natural and cultural values of the Parklands.

Just west of the Parklands boundary, the Cloverton activity centre will provide visitor facilities including playgrounds, picnic areas, toilets, and sporting facilities. This will be the most significant place for the community to experience the connection to the northern part of the parklands, enjoying barbeque and picnic facilities amongst river red gums. From this co-located key activity area, an open space link and wayfinding signage can help visitors walk and cycle up to Bald Hill providing a rewarding view over the Parklands.

Like many growth areas, the community surrounding the area of the proposed Cloverton MAC is culturally diverse, and consists of 46% of residents born overseas, including 26% from India providing an opportunity for different cultural groups to engage, connect and influence the future design of parklands<sup>14</sup>.

Significant urban infrastructure is planned for the area around the Parklands including the Outer Metropolitan Ring Road and Rail Corridor. This development reinforces the importance of protecting sites of high biodiversity that may have restricted visitor access, protecting soundscapes and views, as well as limiting inappropriate infrastructure and utility access into and through the parklands (with the exception of Special Use Zones). There are also opportunities to leverage the surrounding development for the Parklands, for example as trail connections.

### **Strategic directions - experience**

The future implementation of the Plan is guided by the following strategic directions:

#### *Landscape experiences*

- Highlight seasonal changes within the Parklands through opportunities such as educational events, citizen science projects, interpretation and art. Information and programs undertaken in partnership with Traditional Owners and management groups can increase visitor awareness of topics such as cultural burning and species protection
- Provide opportunities for people to connect with different landscape experiences such as grasslands, open woodlands, and waterways; including scenic viewpoints and other rest points to invite visual, aural and other sensory connection to the landscape
- Increase viewing opportunities to showcase the natural beauty of the Parklands. This includes viewing points that may be located outside of the Parklands
- Support and enhance natural soundscapes in the Parklands, including the quiet gorge at galada tamboore, flowing creeks, and open grassland areas.

#### *Parkland facilities*

- Develop and expand visitor facilities (where appropriate) at major visitor areas within the Parklands and investigate the use of visitor facilities co-located at nearby local parks or public areas. This includes carparking at entrance points and public toilets
- Provide loop walks, and short nature-based walks designed for 30-60 minutes, for physical activity recreation opportunities that include all-ability opportunities
- Design park facilities to be environmentally sustainable and co-located with heat-refuge areas.

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<sup>14</sup> Hume City Council, Precinct 13: Lockerbie Community Profile, 2023



### *Wayfinding and park information*

- Support inclusivity by providing Parkland information in languages that are commonly spoken in the community. This includes signage and online information
- Provide wayfinding signage and connections across and within the Parklands to link communities from both sides of the Parklands.

### *Education and interpretation*

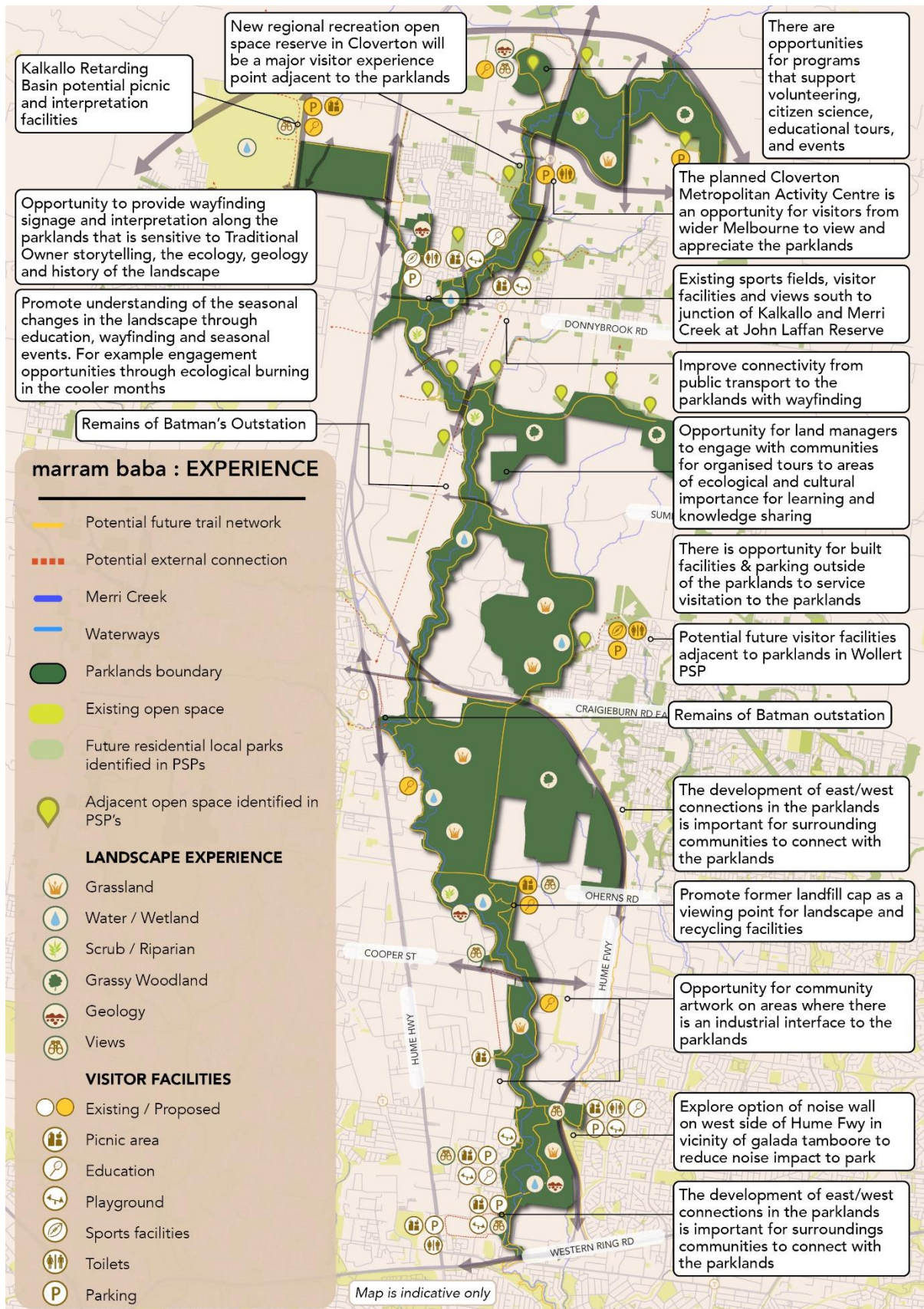
- Information about the cultural landscape and heritage of the Wurundjeri Woi-wurrung people to be shared under the direction of the Traditional Owners. This includes cultural tourism and education opportunities
- Community art projects to support connection to the landscape, ecology, geology, waterways, and cultural and social values of the Parklands
- Celebrate different landscapes and natural features such as the grasslands, open woodlands and waterways, through wayfinding and interpretive educational resources
- Support education programs (storytelling, community tours, citizen science) and interpretation materials (signage, audio and digital guides).

### **Lead actions**

The following actions have been developed in consultation with the Parklands Partnership Group and reflect the priorities of the land managers.

| <b>Actions - Experience</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. Develop and expand visitor facilities (where appropriate) at key visitor areas within the Parklands including co-located local parks or other public areas. Investigate, plan and develop:</p> <ul style="list-style-type: none"><li>• Potential visitor area with views over Inverlochy Swamp at Kalkallo Retarding Basin</li><li>• Visitor facilities adjacent to the Parklands at Cloverton Recreation Reserve to provide active recreation, wetlands and trails. A potential pedestrian bridge will cross the Merri Creek with viewing opportunities and a proposed open space link will encourage walking up to Bald Hill for wider Parkland views</li><li>• Opportunities to co-locate visitor facilities just outside of the Parklands within pending PSPs including Northern Quarries, Craigieburn South Employment Area, Cooper Street West and Merrifield North Employment Area.</li></ul> |
| <p>2. Develop viewing areas to support visitor enjoyment, safety, and the protection of natural and cultural values. Opportunities include:</p> <ul style="list-style-type: none"><li>• Potential viewing point at the City of Whittlesea Northern Landfill cap on Companion Street, which provides exceptional views south towards the Melbourne CBD. Also include interpretation of the history of the cap, the adjacent recycling facilities, Growling Grass Frog habitat and Traditional Owner stories of the landscape</li><li>• Viewing point at Bald Hill in the north which provides sweeping 360-degree views and opportunity for interpretation about the volcanic history of the land and the cultural landscape</li></ul>                                                                                                                                                                      |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Investigate potential viewing points showcasing escarpments, rapids and confluences along waterways and wetlands including the Kalkallo Retarding Basin.</li> </ul>                                                                                                                                                                                                                                                                                                                   |
| <p>3. Land managers, Traditional Owners and community partners deliver and support experiences and educational opportunities that celebrate the unique and precious natural and cultural features of the Parklands. These may focus on:</p> <ul style="list-style-type: none"> <li>• Seasonal changes in the waterways</li> <li>• Seasonal flora and fauna features</li> <li>• Importance of grasslands, grassy woodlands and geological features</li> <li>• Wurundjeri Woi-wurrung cultural stories and education.</li> </ul> |
| <p>4. Support volunteer groups, community programs, citizen science and research partners to promote shared ecological, cultural and community Parkland values, and provide programs to support physical activity and social connections.</p>                                                                                                                                                                                                                                                                                  |
| <p>5. Continue to implement interpretive signage that shares cultural and ecological information. Support with wayfinding signage. Use marram baba Merri Creek branding for both interpretive and wayfinding signage.</p>                                                                                                                                                                                                                                                                                                      |



**Figure 18: Existing and future experiences and activities**

## 5 Management of the Parklands

### 5.1 Management and partnerships

The Plan supports a collaborative approach to planning, development and management of the Parklands. The resourcing for and implementation of actions in the Plan require collaboration between Parkland Partners, other management agencies, adjoining landowners, the community, and user groups to achieve the best outcomes for the Parklands.

### 5.2 Strategic directions

The future implementation of the Plan is guided by the following strategic directions:

#### **Traditional Owners**

- It is the expectation of the Traditional Owners, that Wurundjeri Country will be returned to the Wurundjeri Woi-wurrung people.
- The Parklands Partnership Group supports Traditional Owner self-determination and the goals of the Wurundjeri Woi-wurrung people for future management of the Parklands. It is considered that any land managers (that are not the WWCHAC) are managing the land as a transitional measure until the WWCHAC is provided with the capacity and resources to take on the land manager role.
- Returning land to WWCHAC will be undertaken via a suite of measures ranging from longer term legislative changes regarding land tenure and management to more immediate options including appointment of WWCHAC as a Committee of Management, WWCHAC as a partner on relevant land management decision committees, WWCHAC Narrap Unit appointed as land management contractor.
- Funding models are needed to ensure meaningful partnerships with Traditional Owners to achieve Caring for Country, as identified in Open Space for Everyone.

#### **Parklands Partnership Group**

- The Parklands Partnership Group includes Parks Victoria, Hume City Council, City of Whittlesea, Mitchell Shire Council, Melbourne Water, Yarra Valley Water, WWCHAC, Merri Creek Management Committee and DEECA.
- The Parkland Partnership will review the Plan every four years.
- These land managers will manage and make decisions about land they manage in accordance with legislative requirement and the shared vision, guiding principles, strategic directions and actions set out in the Plan.
- Parklands Partners will maintain strong relationships by continuing to meet as a Parklands Partnership Group to deliver the Plan, work through shared issues, deliver joint projects, support and monitor the Parklands establishment, provide consistent input and guidance for adjacent development, and support consistent parklands communication and connections.

#### **Land inclusion**

- DEECA will continue to progress and coordinate land inclusion for the Parklands. 57% of the Parklands is managed by Parklands Partners in 2022. The remaining land inclusion will be undertaken progressively with new properties acquired as soon as feasible. The final properties will be protected or transferred into the Parklands by 2050.
- Parklands Partners will support private land managers to undertake education and promote Parklands protection and enhancement before private land comes into the Parklands.
- Parkland Partners will use research data and monitoring to inform management planning and responses.



### **Planning Controls**

- WWCHAC request conservation and enhancement of cultural landscape through planning controls.
- Updated and consistent planning controls applied to the Parklands and adjoining properties will help conserve and enhance the marram baba cultural landscape. The marram baba Future Directions Plan can serve as a supporting background document for any revised planning controls, and any permits issued generally in accordance with PSPs.
- PSPs are the key plan in growth areas guiding future use, subdivision and urban development of the land around the Parklands.
- Pending PSPs will consider the vision and strategic directions of this Plan to support the ongoing creation of the Parklands. This includes seeking opportunities to widen pinch points to support wildlife corridors and shared trail access.
- The Parklands extent may vary in response to future detailed site-specific analysis as part of the planning assessment process. Any Parklands boundary will only be supported if the alternative boundary ensures biodiversity, cultural and visitor access values remain protected and enhanced in accordance with the Plan.

### **Community**

- Parklands Partners will support the local community in volunteering activities to increase community involvement in ongoing Parklands protection and management.
- Parklands Partners will continue to work with research partners and volunteer groups including 'Friends of' groups and look for opportunities to further support these groups and other community activities including clean-up events, weeding and planting days, and citizen science activities such as Waterwatch, Frogwatch and bird surveys.

## **5.3 Management zones**

The management zones set out the primary land management purpose and reinforce the identity of different areas within the Parklands boundary. The management zones assist in determining the future land manager for each parcel of land, and are a decision support tool that the Parklands Partners will use to align planning and management activities with the governance and management guiding principles in this Plan.

The management zones will support a consistent approach for all land managers, supporting them to:

- Recognise existing legislative obligations<sup>15</sup>
- Identify priorities for Parkland establishment and land management
- Identify appropriate future land managers for different areas within the Parklands (noting these are transitional until the WWCHAC can assume responsibility for management of the Parklands)
- Land reservation purpose and supporting regulations.

Table 2 sets out the four management zones, the (in principle) land managers and the proposed management measures for each zone, and examples of areas in the Parklands that are classified into each management zone. The location of the management zones across the Parklands are mapped in Figure 19: Future management zones

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<sup>15</sup> Legislative requirements and obligations of agencies and land managers override the Future Directions Plan. Overarching support for initiatives in this Plan is provided on the understanding that further detailed designs will need to be submitted for approval.

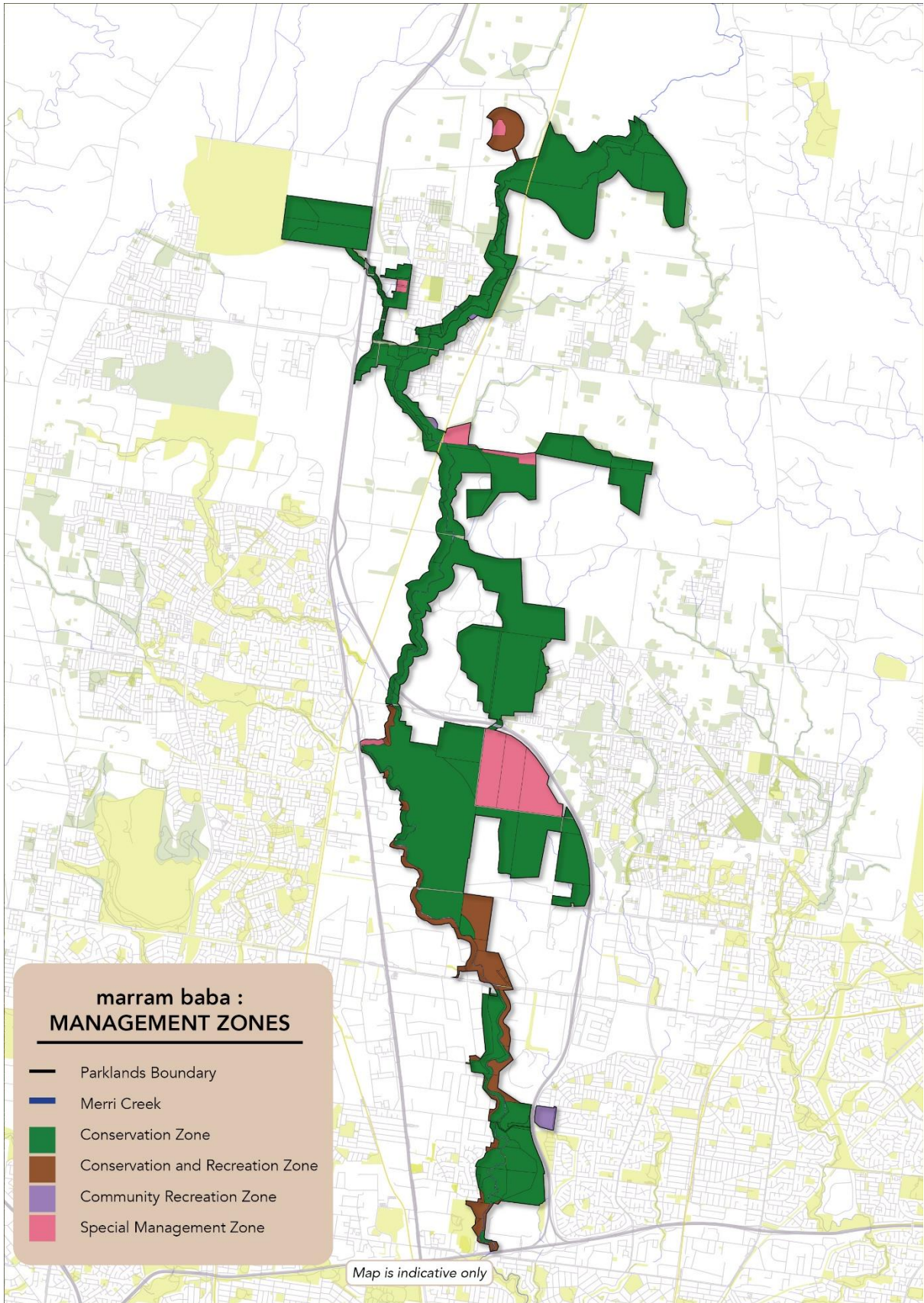
## 5.4 Actions

The following actions have been developed in consultation with the Parklands Partnership Group and reflect the priorities of the land managers.

| <b>Actions - Management of the Parklands</b>                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Establish the marram baba Merri Creek Regional Parklands Partnership Group as an ongoing collaboration to be reviewed every four years or as required.                                                                                                              |
| 2. Progressively secure the transfer of private land within the Parklands boundary to Parklands Partners including land within the Biodiversity Conservation Area.                                                                                                     |
| 3. Investigate, and where feasible update planning controls to help conserve and enhance the marram baba cultural landscape.                                                                                                                                           |
| 4. Investigate options and, where possible, transition to land management by the WWCHAC to deliver cultural and natural resource management outcomes. Collaboratively develop a sustainable funding model that will facilitate the transition of management to WWCHAC. |

**Table 2: Management zones**

| <b>Zone</b>                        | <b>Description</b>                                                                                                                                                                                                                                                                                                                                          | <b>Management measures</b>                                                                                                                                                                                                      | <b>Examples with this zone</b>                                                                                                                                                                                           | <b>Transitional management</b>                                                                                                                                                                                                                                                                                 |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Conservation</b>                | <p>Areas of significant environmental and cultural value where the emphasis is on protection, maintenance and enhancement of values and where human access is predominately restricted.</p> <p>Human interaction might include promoting the enjoyment of these areas to appreciate, learn from, and experience nature and culture.</p>                     | <p>Pest plant and animal management, minimising human activity, litter removal, managing interface areas, enhancing, restoring and managing habitat, ecological and cultural burning, education, monitoring and compliance.</p> | <p>Areas include galgi ngarrk and bababi marning grasslands, much of galada tamboore, Council conservation reserves, Conservation Areas, EPBC offset sites, that are or will eventually be included in the Parklands</p> | <p>Conservation Zones will be considered for management by the WWCHAC, Parks Victoria, and Melbourne Water (where it has a Growling Grass Frog conservation area reservation). Committees of Management will also be considered for management of these areas, including Merri Creek Management Committee.</p> |
| <b>Conservation and recreation</b> | <p>Areas where the management emphasis is on protection of environmental and cultural values while allowing for passive recreation in a natural setting.</p> <p>Recreational activities are provided without significant impact on natural values, and might include walking and cycling, picnicking, scenic viewing, and nature-based children's play.</p> | <p>Pest plant and animal management, visitor infrastructure management, litter removal, interface area management, enhancing, restoring and managing habitat and revegetation of selected areas.</p>                            | <p>Areas include North Park Reserve, the former Northern Landfill site, and future visitor areas.</p>                                                                                                                    | <p>Conservation and Recreation Zones will be considered for management by Parks Victoria, Melbourne Water and local Councils - Hume City Council, City of Whittlesea and Mitchell Shire Council. Committees of Management will also be considered for management of these areas.</p>                           |
| <b>Community recreation</b>        | <p>Provision of a wide range of structured recreation and sport opportunities and events that cater to community and group activities.</p>                                                                                                                                                                                                                  | <p>Revegetation activities and native planting, litter removal, and visitor infrastructure maintenance.</p>                                                                                                                     | <p>Areas include Whittlesea Public Gardens.</p>                                                                                                                                                                          | <p>Community Recreation Zones will be considered for management by local Councils - Hume City Council, City of Whittlesea and Mitchell Shire Council.</p>                                                                                                                                                      |
| <b>Special use</b>                 | <p>Areas of restricted access that support the activities of the land manager while maintaining the cultural and biodiversity values of the Parklands.</p>                                                                                                                                                                                                  | <p>As determined by the nature of the land value.</p>                                                                                                                                                                           | <p>Areas include Yarra Valley Water sites and Donnybrook Cemetery.</p>                                                                                                                                                   | <p>As determined by the nature of the land value or asset, for example Yarra Valley Water requires restricted access to protect important public infrastructure, assets and to ensure separations distances.</p>                                                                                               |



**Figure 19: Future management zones**



## Appendix 1 Future Directions Plan method

The Future Directions Plan has been developed by the Mosaic Insights and REALMstudios team on behalf of the Parklands Partnership Group, whose members are:

- Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation
- Parks Victoria
- Melbourne Water
- Hume City Council
- City of Whittlesea
- Mitchell Shire Council
- Yarra Valley Water
- Merri Creek Management Committee
- Department of Energy, Environment and Climate Action.

The Plan was developed with significant input from the Parklands Partners at each phase. Workshops and meetings with stakeholders, community groups, developers, landholders and other interested parties provided valuable insights into the priorities, challenges and opportunities for the Plan.

The community were consulted through face-to-face meetings and online surveys. The community consultation findings are summarised in the marram baba Merri Creek Regional Parklands: Engagement Summary Report.

Endorsement of the Future Directions Plan will be followed by further detailed design and approvals for parkland infrastructure. Partners will be responsible for assessing against their legislative requirement and obligations. An overview of the phases is provided below.

| Phase                                                 | Overview                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Phase 1. Project planning                             | The first phase of the project focussed on identifying key stakeholders and confirming a roadmap for delivering the Plan.                                                                                                                                                                                                                  |
| Phase 2. Background review and opportunities analysis | In this phase, previous work on the Parklands (including the 2013 Strategic Management Plan) was reviewed. Information was gathered from Project Partners and a range of other sources and used to create maps that captured the current ecological, cultural and social conditions of the Parklands and its surrounds.                    |
| Phase 3. Community engagement                         | In this phase, the community was consulted on the vision and direction for the Parklands through a mixture of online surveys, an information session and face-to-face intercept surveys. The primary purpose of this round of engagement was to generate interest and collect ideas from the community that could be included in the Plan. |
| Phase 4. Draft Future Directions Plan                 | Following feedback from the community and stakeholders, the draft Plan was developed. The Parklands Partnership Group were closely involved in confirming the vision, principles, themes and directions for the Parklands to inform the draft Plan.                                                                                        |
| Phase 5. Consultation                                 | The draft Plan was released and stakeholder and community feedback gathered in April - May 2023. The Parklands Partners were closely involved in reviewing and providing feedback on the draft Plan.                                                                                                                                       |
| Phase 6. Final Future Directions Plan                 | Edited the Plan to account for stakeholder and community feedback. All Parklands Partners endorse their role in the Plan, and the Parkland Partnership Group endorsed the Final Plan.                                                                                                                                                      |

## Appendix 2 Policy context

The future planning, management, and use of the Parklands is informed by state and local government policies and strategies. The following key strategies strongly influence the Plan. Appendix 3 includes a complete list of strategies, plans, and policy documents reviewed in preparing the Plan.

### Plan Melbourne 2017-2050

Plan Melbourne is the State Government plan to guide and manage growth in the city. Plan Melbourne sets the overall direction for open space management at a metropolitan scale through:

- **Principles:**
  - Principle 1 - A distinctive Melbourne
  - Principle 4 - Environmental resilience and sustainability
  - Principle 5 - Living locally - 20-minute neighbourhoods
  - Principle 7 - Strong and Healthy communities
- **Policies:**
  - Policy 4.4.2 - Respect and protect Melbourne’s Aboriginal cultural heritage
  - Policy 5.4.1 - Develop a network of accessible, high-quality, local open spaces
  - Policy 6.2.1 - Mitigate exposure to natural hazards and adapt to the impacts of climate change
  - Policy 6.4.2 - Strengthen the integrated metropolitan open space network
  - Policy 6.5.1 - Create a network of green spaces that support biodiversity conservation and opportunities to connect with nature
  - Policy 6.5.2 - Protect and enhance the health of urban waterways
- **Actions:**
  - Action 93 - Open Space for Everyone.

### Open Space for Everyone 2021

Open Space for Everyone (2021) is the Victorian Government open space strategy for metropolitan Melbourne. The strategy provides the strategic framework for planning, acquisition, design, management, use and maintenance of the Melbourne metropolitan open space network. The strategy aims to give everyone equal access to Melbourne’s renowned parks and open spaces that are central to our health and wellbeing. The strategic framework is presented below (Figure 20).

Several actions are already in progress to fulfill the vision set out in Open Space for Everyone, including a direction specific to the Parklands: *develop a plan and fund park infrastructure to create better facilities, linkages, and access to the marram baba Merri Creek Regional Parklands, which connect stretches of mostly existing public land.*



Figure 20: Open Space for Everyone strategic framework

## **Protecting Victoria's Environment - Biodiversity 2037**

Protecting Victoria's Environment - Biodiversity 2037 is underpinned by two goals to support Victoria's biodiversity: Victorians value nature, and Victoria's natural environment is healthy. State-wide biodiversity commitments include targets for pest and weed control, as well as revegetation and establishment of new permanently protected areas.

An invaluable contribution to the protection of biodiversity is the connection of people to nature. It is crucial to the goal of five million Victorians taking action to protect the environment. The Plan supports the goals and commitments of Biodiversity 2037.

### **Biodiversity Conservation Strategy for Melbourne's Growth Corridors 2013**

The Biodiversity Conservation Strategy governs the protection of biodiversity in the growth corridors. It includes conservation measures to be taken for matters of national environmental significance to meet commitments to the Commonwealth government, as well as measures for matters of state importance to meet state requirements. The purpose of the strategy is to inform the preparation of the Growth Corridor Plans, outline the means of achieving conservation outcomes for matters of national environmental significance, and identify land within the growth corridors that needs to be protected and how impacts will be mitigated.

The Parklands has been identified as a major wildlife corridor providing important habitat as well as connectivity through the growth corridor. A conservation outcome that is specific to the Parklands is the protection and enhancement of important populations of Growling Grass Frogs and the protection and enhancement of habitat for other matters of environmental significance, including native grasslands, grassy woodlands, wetlands, and threatened species.

### **Healthy Waterways Strategy 2018-28**

The Healthy Waterways Strategy covers the Port Phillip and Westernport region and considers conditions over the next 50 years. Integrated catchment management initiatives and catchment planning processes are the key components of the Healthy Waterways Strategy. The strategy provides strategic directions for managing a diverse range of waterways, including Merri Creek.

The vision specific to the Yarra catchment, of which Merri Creek is a part, is that '*Our Yarra catchment waterways are increasingly protected, respected and collaboratively cared for by Traditional Owners, government and community as living and highly valued entities. They are a linked network of thriving corridor and instream spaces which nurture biodiversity, deepen the relationship between people and nature, build resilience as our population grows and the climate changes, and contribute to wellbeing and liveability. Their ecological health and value to the community continuously improves through rehabilitated waterways and balanced uses*'.

The strategy sets out management goals for the catchment, which have directly informed the Plan:

- *Environmental values and significant ecological processes of all the Yarra Catchment waterways are protected and improved.*
- *Riparian and instream habitats provide landscape connectivity, allowing the movement of native species and promoting resilient native flora and fauna populations.*
- *Cultural and heritage values are recognised, protected, maintained and enhanced.*
- *Communities and individuals connect with and appreciate the values of waterways.*
- *An engaged and knowledgeable community acts to protect and promote waterway values.*
- *The waterways support natural system maintenance and tourism in a balanced manner.*
- *The waterways are managed in a transparent and collaborative governance framework.*
- *The cultural, historical, amenity values and landscape settings of all modified waterways are protected and improved.*

The strategy also sets out targets and performance objectives for the sub-catchments, which includes Merri Creek Upper and Merri Creek Lower.

### **Victorian Aboriginal Affairs Framework 2018-2023**

The Victorian Aboriginal Affairs Framework is the overarching framework for working with Aboriginal Victorians, organisations and the wider community to drive action and improve outcomes and sets out whole of government self-determination enablers and principles. The vision is that *'All Aboriginal Victorian people, families and communities are healthy, safe, resilient, thriving and living culturally rich lives'*. Goals of the framework that are particularly relevant to the Plan include:

- *Acknowledge, respect and celebrate the diversity and strength of Aboriginal culture.*
- *Promote greater understanding of and respect for Aboriginal culture and communities among non-Aboriginal Victorians.*
- *Support Traditional Owner-led management and control of land, water and other natural resources.*

### **Victoria's Climate Change Strategy 2021**

The five-point plan in Victoria's Climate Change Strategy includes investing in Victoria's natural environment to protect plants and animals, as well as creating a climate resilient Victoria through protecting landscapes, communities and ecosystems to withstand and recover from extreme weather events. Climate resilience of the community and natural environment is integrated in the Plan.

### **Victorian Public Health and Wellbeing Plan 2019-2023**

The Victorian Public Health and Wellbeing Plan is centred on the vision of all Victorian's enjoying the highest attainable standards of health, wellbeing, and participation at every age.

The plan includes several priorities and actions that are relevant to the Parklands including:

- *Resilient and safe communities that are adapting to the public health impacts of climate change.*
- *Increase the proportion of transport trips that use active modes of transport.*
- *Increase easy access to parks, open spaces and public spaces with opportunities for physical activity where appropriate.*
- *A reduction in the prevalence of mental illness, and increased resilience among Victorian individuals, families and communities.*



## Appendix 3 Strategic document review

Existing strategies, plans and policy commitments of Federal, State and Local Government and Parkland Partners were reviewed to inform parkland planning. Documents were provided by Parks Victoria, Hume City Council, City of Whittlesea, Mitchell Shire Council, Melbourne Water, Yarra Valley Water, Merri Creek Management Committee and DEECA.

The background review was critical in understanding the opportunities and constraints for parkland planning, and directly informed the Plan. A list of the documents included in the review is provided below.

| Organisation       | Documents                                                                                       |
|--------------------|-------------------------------------------------------------------------------------------------|
| Parks Victoria     | Merri Creek Marran Baba Parklands Strategic Management Plan 2013                                |
|                    | Disability Action Plan 2017-2020 (2017)                                                         |
|                    | Galada Tamboore Master Plan (2009)                                                              |
|                    | Nature Conservation Strategy for parks and reserves managed by Parks Victoria 2021- 2031 (2021) |
|                    | Land Management Strategy (Draft - 2021)                                                         |
|                    | Managing Country Together Framework (2019)                                                      |
|                    | Healthy Parks Healthy People Framework (2020)                                                   |
|                    | Volunteering in Parks -Vision for future (2017-2021)                                            |
|                    | Historic Places Strategic Framework and Action Plan (2019-2022)                                 |
|                    | Cultural Diversity Action Plan 2018-2021                                                        |
| Hume City Council  | Open Space Strategy 2010- 2015 (2010)                                                           |
|                    | Land and Biodiversity Plan 2015-2019 (2015)                                                     |
|                    | Leisure Strategy 2013-2018 (2013)                                                               |
|                    | Walking and Cycling Strategy 2010-2015 (2010)                                                   |
|                    | Health and Wellbeing Plan 2021-2025 (2021)                                                      |
|                    | Live Green Plan 2021-2026 (2021)                                                                |
|                    | Pathways to Sustainability Frameworks 2015-2019 (2015)                                          |
|                    | Stronger Hume Covid-19 Adaptation and Resilience Plan (2022)                                    |
|                    | Northern Trails 2022 (also City of Whittlesea)                                                  |
| City of Whittlesea | Active Whittlesea Strategy 2019-2028 (2019)                                                     |
|                    | Biodiversity Strategy 2019-2029 (2019)                                                          |
|                    | Community Plan 2021-2025 (2021)                                                                 |
|                    | Whittlesea Municipal Emergency Management Plan (2021)                                           |
|                    | Health and Wellbeing Partnership Plan 2017- 2021 (2017)                                         |

| <b>Organisation</b>              | <b>Documents</b>                                                                                                                                |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
|                                  | Environmental Sustainability Strategy 2012-2022 (2012)                                                                                          |
|                                  | Extreme Heat Sub- Plan 2021 - 2022 (2021)                                                                                                       |
|                                  | Greening Whittlesea City Forest Strategy 2020-2040 (2020)                                                                                       |
|                                  | Walking and Cycling Plan 2022-2027 (2022)                                                                                                       |
|                                  | River Red Gum Protection Policy (2014)                                                                                                          |
|                                  | Whittlesea Township Plan (2021)                                                                                                                 |
|                                  | A Place For All 2040 (2018)                                                                                                                     |
|                                  | Whittlesea Bicycle Plan 2016 - 2020 (2016)                                                                                                      |
| Mitchell Shire Council           | Asset Management Strategy (2015)                                                                                                                |
|                                  | Economic Development Strategy 2016-2021 (2016)                                                                                                  |
|                                  | Environmentally Sustainable Design for Council Buildings Policy (2021)                                                                          |
|                                  | Open Space Strategy 2013-2023 (2013)                                                                                                            |
|                                  | Health and Wellbeing Plan 2021 - 2025 (2021)                                                                                                    |
|                                  | Heritage Policy (2009)                                                                                                                          |
|                                  | Community Plan (2020)                                                                                                                           |
|                                  | Environment Strategy 2020 - 2024 (2020)                                                                                                         |
|                                  | Heat Plan (2015)                                                                                                                                |
|                                  | Play Space Strategy (2015)                                                                                                                      |
|                                  | Municipal Emergency Management Plan 2021 - 2024 (2021)                                                                                          |
|                                  | Environment Policy (2020)                                                                                                                       |
|                                  | Flood Emergency Plan - A Sub-Plan of the Municipal Emergency Management Plan (2018)                                                             |
|                                  | Parks and Open Space Asset Management Plan (2019)                                                                                               |
|                                  | Sustainable Resource Management Strategy (2011)                                                                                                 |
|                                  | Urban Tree Management Polciy (2021)                                                                                                             |
| Melbourne Water                  | Healthy Waterways Strategy (2018)                                                                                                               |
|                                  | Co-Designed Catchment Program for the Yarra Catchment - Working together for healthy waterways (2018)                                           |
|                                  | Galada Tamboore Site of Biological Significance, Campbellfield: Biodiversity Conservation and Site Management Plan (2018), by Ecology Australia |
| Yarra Valley Water               | Yarra Valley Water 2030 Strategy                                                                                                                |
| Merri Creek Management Committee | Merri Creek and Environs Strategy 2009- 2014 (2009) and Urban Growth Addendum (2013)                                                            |

| <b>Organisation</b>                                                      | <b>Documents</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                          | Masterplan for Southern Populations of Growling Grass Frog in Merri Creek (2022)                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                          | Flora and fauna report 2018-2019                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                          | Rosengren N (1993a) The Merri Creek: Sites of Geological and Geomorphological Significance, prepared for Merri Creek Management Committee                                                                                                                                                                                                                                                                                                                                                            |
| DEECA                                                                    | Pupangarli Marnmarnepu 'Owning Our Future' – Aboriginal Self-Determination Reform Strategy 2020-2025                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                          | Plan Melbourne 2017 - 2050 (2017)                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                          | Draft Northern Metro Land Use Framework Plan (2022)                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                          | Open Space for Everyone: Open Space Strategy for Metropolitan Melbourne (2021)                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                          | Protecting Victoria's Environment - Biodiversity 2037 (2017)                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                          | Biodiversity Conservation Strategy for Melbourne's Growth Corridors (2013)                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                          | Growling Grass Frog Masterplan for Melbourne's Growth Corridors (2017)                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                          | Greater Melbourne Regional Climate Adaptation Strategy (2021)                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                          | Water is Life: Traditional Owner Access to Water Roadmap (2022)                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Victorian Planning Authority                                             | North Growth Corridor Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                          | Precinct Structure Plans: <ul style="list-style-type: none"> <li>• Merrifield Central Employment Area Precinct Structure Plan 2008</li> <li>• Lockerbie Precinct Structure Plan 2012</li> <li>• English Street Precinct Structure Plan 2015</li> <li>• Craigieburn Nth Employment Area Precinct Structure Plan 2016</li> <li>• Donnybrook - Woodstock Precinct Structure Plan 2017</li> <li>• Shenstone Park Precinct Structure Plan 2021</li> <li>• Wollert Precinct Structure Plan 2017</li> </ul> |
| Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation (WWCHAC) | WWCHAC marram baba Merri Creek Regional Parklands Wurundjeri Woi-wurrung Cultural Values Position Statement August 2023                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                          | WWCHAC Interim Statement of Cultural Values for marram baba Merri Creek Regional Parklands November 2022                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                          | WWCHAC Response to Melbourne's Future Planning Framework and Green Wedge Agricultural Land February 2022                                                                                                                                                                                                                                                                                                                                                                                             |
| The Victorian Traditional Owner Cultural Fire Knowledge Group            | The Victorian Traditional Owner Cultural Fire Strategy<br>Federation of Vic Traditional Owners Corporations, DELWP, Parks Victoria, CFA                                                                                                                                                                                                                                                                                                                                                              |

## Appendix 4 Victorian Biodiversity Atlas extraction

Flora and Fauna Guarantee Act (FFG) listed faunal species in the project area. EPBC Act 1999 status is also noted.

| Scientific name                       | Common name               | FFG status                       | EPBC Status | Taxonomic group |
|---------------------------------------|---------------------------|----------------------------------|-------------|-----------------|
| <i>Emydura macquarii</i>              | Murray River Turtle       | Critically Endangered            |             | Reptile         |
| <i>Ornithorhynchus anatinus</i>       | Platypus                  | Vulnerable                       |             | Mammal          |
| <i>Dasyurus maculatus maculatus</i>   | Spot-tailed Quoll         | Endangered                       | E           | Mammal          |
| <i>Dasyurus viverrinus</i>            | Eastern Quoll             | Endangered (Extinct in Victoria) | E           | Mammal          |
| <i>Pteropus poliocephalus</i>         | Grey-headed Flying-fox    | Vulnerable                       | V           | Mammal          |
| <i>Miniopterus orianae oceanensis</i> | Eastern Bent-winged Bat   | Critically Endangered            | E           | Mammal          |
| <i>Turnix pyrrhorthorax</i>           | Red-chested Button-quail  | Endangered                       |             | Bird            |
| <i>Pedionomus torquatus</i>           | Plains-wanderer           | Critically Endangered            | CE          | Bird            |
| <i>Lewinia pectoralis</i>             | Lewin's Rail              | Vulnerable                       |             | Bird            |
| <i>Burhinus grallarius</i>            | Bush Stone-curlew         | Critically Endangered            |             | Bird            |
| <i>Antigone rubicunda</i>             | Brolga                    | Endangered                       |             | Bird            |
| <i>Egretta garzetta</i>               | Little Egret              | Endangered                       |             | Bird            |
| <i>Ardea alba modesta</i>             | Eastern Great Egret       | Vulnerable                       |             | Bird            |
| <i>Ixobrychus dubius</i>              | Australian Little Bittern | Endangered                       |             | Bird            |
| <i>Spatula rhynchotis</i>             | Australasian Shoveler     | Vulnerable                       |             | Bird            |
| <i>Stictonetta naevosa</i>            | Freckled Duck             | Endangered                       |             | Bird            |
| <i>Aythya australis</i>               | Hardhead                  | Vulnerable                       |             | Bird            |
| <i>Oxyura australis</i>               | Blue-billed Duck          | Vulnerable                       |             | Bird            |
| <i>Biziura lobata</i>                 | Musk Duck                 | Vulnerable                       |             | Bird            |
| <i>Accipiter novaehollandiae</i>      | Grey Goshawk              | Endangered                       |             | Bird            |
| <i>Hieraetus morphnoides</i>          | Little Eagle              | Vulnerable                       |             | Bird            |
| <i>Falco subniger</i>                 | Black Falcon              | Critically Endangered            |             | Bird            |
| <i>Ninox connivens</i>                | Barking Owl               | Critically Endangered            |             | Bird            |
| <i>Polytelis swainsonii</i>           | Superb Parrot             | Endangered                       | V           | Bird            |
| <i>Lathamus discolor</i>              | Swift Parrot              | Critically Endangered            | CE          | Bird            |
| <i>Hirundapus caudacutus</i>          | White-throated Needletail | Vulnerable                       | V           | Bird            |
| <i>Pomatostomus temporalis</i>        | Grey-crowned Babbler      | Vulnerable                       |             | Bird            |
| <i>Anthochaera phrygia</i>            | Regent Honeyeater         | Critically Endangered            | CE          | Bird            |
| <i>Stagonopleura guttata</i>          | Diamond Firetail          | Vulnerable                       |             | Bird            |
| <i>Delma impar</i>                    | Striped Legless Lizard    | Endangered                       | V           | Reptile         |
| <i>Pogona barbata</i>                 | Bearded Dragon            | Vulnerable                       |             | Reptile         |
| <i>Tympanocryptis pinguicolla</i>     | Grassland Earless Dragon  | Critically Endangered            | E           | Reptile         |
| <i>Pseudemoia pagenstecheri</i>       | Tussock Skink             | Endangered                       |             | Reptile         |
| <i>Pseudophryne bibronii</i>          | Brown Toadlet             | Endangered                       |             | Amphibian       |
| <i>Pseudophryne semimarmorata</i>     | Southern Toadlet          | Endangered                       |             | Amphibian       |
| <i>Litoria raniformis</i>             | Growling Grass Frog       | Vulnerable                       | V           | Amphibian       |
| <i>Synemon plana</i>                  | Golden Sun Moth           | Vulnerable                       | V           | Insect          |



Flora and Fauna Guarantee Act (FFG) listed flora species in the project area.

| <b>Scientific name</b>                                   | <b>Common name</b>        | <b>FFG status</b>     |
|----------------------------------------------------------|---------------------------|-----------------------|
| <i>Comesperma polygaloides</i>                           | Small Milkwort            | Critically Endangered |
| <i>Eucalyptus kitsoniana</i>                             | Bog Gum                   | Critically Endangered |
| <i>Amphibromus pithogastrus</i>                          | Plump Swamp Wallaby-grass | Critically Endangered |
| <i>Dianella longifolia</i> var. <i>grandis</i> s.l.      | Glaucous Flax-lily        | Critically Endangered |
| <i>Coronidium gunnianum</i>                              | Pale Swamp Everlasting    | Critically Endangered |
| <i>Microseris scapigera</i> s.s.                         | Plains Yam-daisy          | Critically Endangered |
| <i>Eucalyptus X studleyensis</i>                         | Studley Park Gum          | Critically Endangered |
| <i>Geranium</i> sp. 1                                    | Large-flower Crane's-bill | Critically Endangered |
| <i>Eucalyptus leucoxylon</i> subsp. <i>megalocarpa</i>   | Large-fruit Yellow-gum    | Critically Endangered |
| <i>Callitriche umbonata</i>                              | Winged Water-starwort     | Endangered            |
| <i>Carex tasmanica</i>                                   | Curly Sedge               | Endangered            |
| <i>Goodia medicaginea</i>                                | Western Golden-tip        | Endangered            |
| <i>Nicotiana suaveolens</i>                              | Austral Tobacco           | Endangered            |
| <i>Cullen parvum</i>                                     | Small Scurf-pea           | Endangered            |
| <i>Cullen tenax</i>                                      | Tough Scurf-pea           | Endangered            |
| <i>Tripogonella loliiformis</i>                          | Rye Beetle-grass          | Endangered            |
| <i>Lachnagrostis semibarbata</i> var. <i>semibarbata</i> | Purple Blown-grass        | Endangered            |
| <i>Ranunculus diminutus</i>                              | Brackish Plains Buttercup | Endangered            |
| <i>Eucalyptus sideroxylon</i> subsp. <i>sideroxylon</i>  | Mugga                     | Endangered            |
| <i>Podolepis linearifolia</i>                            | Basalt Podolepis          | Endangered            |
| <i>Geranium solanderi</i> var. <i>solanderi</i> s.s.     | Austral Crane's-bill      | Endangered            |
| <i>Geranium</i> sp. 3                                    | Pale-flower Crane's-bill  | Endangered            |
| <i>Melaleuca armillaris</i> subsp. <i>armillaris</i>     | Giant Honey-myrtle        | Endangered            |
| <i>Melaleuca halmaturorum</i>                            | Salt Paperbark            | Endangered            |
| <i>Acacia howittii</i>                                   | Sticky Wattle             | Vulnerable            |
| <i>Corymbia maculata</i>                                 | Spotted Gum               | Vulnerable            |
| <i>Rhagodia parabolica</i>                               | Fragrant Saltbush         | Vulnerable            |
| <i>Dianella amoena</i>                                   | Matted Flax-lily          | Critically Endangered |
| <i>Lachnagrostis adamsonii</i>                           | Adamson's Blown-grass     | Endangered            |
| <i>Lepidium hyssopifolium</i> s.s.                       | Basalt Peppercross        | Endangered            |
| <i>Eucalyptus crenulata</i>                              | Buxton Gum                | Endangered            |
| <i>Xerochrysum palustre</i>                              | Swamp Everlasting         | Critically Endangered |

## Appendix 5 Glossary of key terms

| Term                                           | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aboriginal Cultural heritage</b>            | Aboriginal Cultural Heritage refers to the knowledge and lore, practices and people, objects and places that are valued, culturally meaningful and connected to identity and Country.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Activation (of parklands)</b>               | Activation of parklands refers to new investment in park infrastructure or activities to encourage people to visit an area of parklands that has either been inaccessible or undesirable.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Biodiversity</b>                            | Biodiversity encompasses all components of the living world: the number and variety of plants, animals and other living things, including fungi and microorganisms, across our land, rivers, coast and ocean. It includes the diversity of their genetic information, the habitats and ecosystems within which they live, and their connections with other life forms and the natural world.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Biophysical (identity of the Parklands)</b> | Biophysical refers to the life-environment interactions between living things (bio), such as plants and animals, and non-living things (physical), such as rocks, soil, and water. The biophysical identity of a place is the unique life-environment interactions and processes of an ecosystem that are unique to any given place.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Community resilience</b>                    | Community resilience is the sustained ability of a community to use available resources to respond to, withstand, and recover from adverse situations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Confluence</b>                              | The point where a tributary joins a larger river, called the main stem, or where two streams meet to become the source of a river of a new name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Conservation Areas (CAs)</b>                | <p>Conservation Areas (written with capital letters) refers to dedicated areas of high biodiversity value set out in Victoria's <i>Biodiversity Conservation Strategy for Melbourne's Growth Corridors</i> (2013) (BCS) within the Melbourne Strategic Assessment Program area.</p> <p>Conservation Areas in the BCS are protected from urban development through the conditions in the Strategy, and zoning and overlay controls that apply under relevant planning schemes.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>'conservation areas'</b>                    | <p>'conservation areas' written without capital letters refers collectively to</p> <ul style="list-style-type: none"> <li>- Conservation Areas (CAs) in the BCS (e.g. "Growling Grass Frog Conservation Area 34" (CA34), managed by Melbourne Water, and the "Native Grassland Nature Conservation Area 32" (CA32), managed by the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation)</li> <li>- Crown land reserved for the purposes of Nature Conservation Reserve (NCR) under the Crown Lands Act 1978 (e.g. galgi ngark and bababi marning Nature Conservation Reserves managed by Parks Victoria)</li> <li>- Areas dedicated to conservation managed by local government (e.g. Kalkallo Common Grasslands managed by Hume City Council)</li> <li>- Land subject to an Environmental Significant Overlay in relevant planning schemes (e.g. galada tamboore reserve managed by Melbourne Water)</li> <li>- Dedicated 'offset sites' reserved under the federal <i>Environment Protection and Biodiversity Conservation Act 1999</i>, which are areas reserved to compensate for unavoidable impacts on nationally significant matters on the environment (e.g. Patullos Lane Reserve managed by Hume City Council).</li> </ul> |

| <b>Term</b>                                | <b>Definition</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cultural Fire</b>                       | Fire deliberately put into the landscape authorised and led by Traditional Owners of that Country, for a variety of purposes, including but not limited to: ceremony, protection of cultural and natural assets, fuel reduction, regeneration and management of food, fibre and medicines, flora regeneration, fauna habitat protection and healing Country's spirit. <sup>16</sup>                                                                                                  |
| <b>Ecological Vegetation Classes (EVC)</b> | The standard unit for classifying vegetation types in Victoria. EVCs are described through a combination of floristics, lifeforms and ecological characteristics, and through an inferred fidelity to particular environmental attributes. Each EVC includes a collection of floristic communities (that is, lower level in the classification) that occur across a biogeographic range, and although differing in species, have similar habitat and ecological processes operating. |
| <b>Ecosystem services</b>                  | Ecosystem services are the benefits provided to humans through the transformations of resources (or environmental assets, including land, water, vegetation and atmosphere) into a flow of essential goods and services e.g. clean air, water, and food.                                                                                                                                                                                                                             |
| <b>EPBC offset site</b>                    | Dedicated 'offset sites' reserved under the federal <i>Environment Protection and Biodiversity Conservation Act 1999</i> , which are areas reserved to compensate for unavoidable impacts on nationally significant matters on the environment.<br><br>In these Parklands, two 'offset sites' include Patullos Lane Reserve managed by Hume City Council, and Northern Landfill GGF Quarry Hole managed by Whittlesea City Council.                                                  |
| <b>Ephemeral wetlands</b>                  | Wetlands that only hold water during wetter periods of the year, and periodically dry up in summer or in periods of drought.                                                                                                                                                                                                                                                                                                                                                         |
| <b>Floodplain</b>                          | Low-lying land adjacent to a waterway that is inundated when flows in the waterway are larger than the capacity of the waterway. Floodplains often have ecosystems dependent on inundation during flood events.                                                                                                                                                                                                                                                                      |
| <b>Flow regime</b>                         | The range of flows experienced by a waterway throughout the seasons and years which may include base flows, low flows, high flows, overbank flow and cease to flow (drying) events.                                                                                                                                                                                                                                                                                                  |
| <b>Geomorphology</b>                       | The science of the physical features on the Earth's surface and the processes that form them. Landforms include valleys, plains, gorges, escarpments, gilgai and stony rises.                                                                                                                                                                                                                                                                                                        |
| <b>Gilgai</b>                              | Shallow depressions that form in expansive clay soils and create ephemeral water bodies during wet periods. Gilgais are important habitats for plants and animals and can play a role in water storage and distribution.                                                                                                                                                                                                                                                             |
| <b>Habitat</b>                             | The natural home or environment of an animal, plant, or other organism.                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Hydrological system</b>                 | The short- and long-term circulation, movement and storage of surface and groundwater through various processes including evaporation, transpiration, precipitation, and runoff.                                                                                                                                                                                                                                                                                                     |
| <b>Integrated Water Management</b>         | Integrated Water Management (IWM) is a collaborative approach to the way we plan for and manage all elements of the water cycle. IWM considers how the delivery of water, wastewater and stormwater services can contribute to water security, public and environmental health and urban amenity.                                                                                                                                                                                    |

<sup>16</sup> The Victorian Traditional Owner Cultural Fire Strategy ([ffm.vic.gov.au](http://ffm.vic.gov.au))

| <b>Term</b>                              | <b>Definition</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Nature Conservation Reserve (NCR)</b> | Nature Conservation Reserves refer to Crown land set aside to conserve rare or threatened species and/or plant communities that have conservation significance or provide valuable habitat. In the Parklands, galgi ngarrk (formerly known as the Craigieburn Grasslands) and bababi marning (formerly known as Cooper St Grasslands) are set aside as Nature Conservation Reserves.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Parkland Partners</b>                 | The Traditional Owners and land managers responsible for the management of public land within the Parklands. At the time of writing nine organisations (including the Traditional Owners) were Parkland Partners.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Precinct Structure Plan (PSP)</b>     | <p>A Precinct Structure Plan (PSP) is a land use and infrastructure plan guiding the form of subdivision and new development of an area of land.</p> <p>PSPs sit within the Victorian planning hierarchy which comprises:</p> <ul style="list-style-type: none"> <li>- The Planning Policy Framework set out in all planning schemes</li> <li>- Plan Melbourne guiding the strategic vision for greater Melbourne</li> <li>- Growth Corridor Plans for metropolitan Melbourne - or where finalised Land Use Framework Plans</li> <li>- PSPs facilitating planning for new neighbourhoods, guiding the form of subdivision and development of land over the long term. They are incorporated into relevant local planning schemes and implemented primarily through planning permit applications.</li> <li>- Planning permit applications (for subdivisions or use and development) approve proposed developments (eg Development Plans) that are consistent with the relevant planning scheme and generally in accordance with the PSP.</li> </ul> |
| <b>Riparian</b>                          | Land and vegetation that adjoins a waterway.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Stony rises</b>                       | Small, isolated rocky outcrops that rise abruptly from the landscape at the edges of ancient lava flows that are subsequently weathered by wind and water flows.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Tributary</b>                         | A tributary is a waterway that flows into a larger waterway or other body of water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Urban cooling</b>                     | The reduction of temperatures in urban areas. Examples of ways that urban cooling can be achieved include increasing vegetation to help reduce the urban heat island by providing shade, modifying thermal properties of the urban fabric, and increasing cooling through evapotranspiration.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Urban heat island</b>                 | Temperatures in many urban areas are warmer than their rural surroundings. This phenomenon is known as the 'Urban Heat Island' which refers to temperature differences attributable to urbanisation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Wildlife corridor</b>                 | A wildlife corridor is a link of wildlife habitat, generally native vegetation, which joins two or more larger areas of similar wildlife habitat. Corridors are critical for the maintenance of ecological processes including allowing for the movement of animals and the continuation of viable populations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |