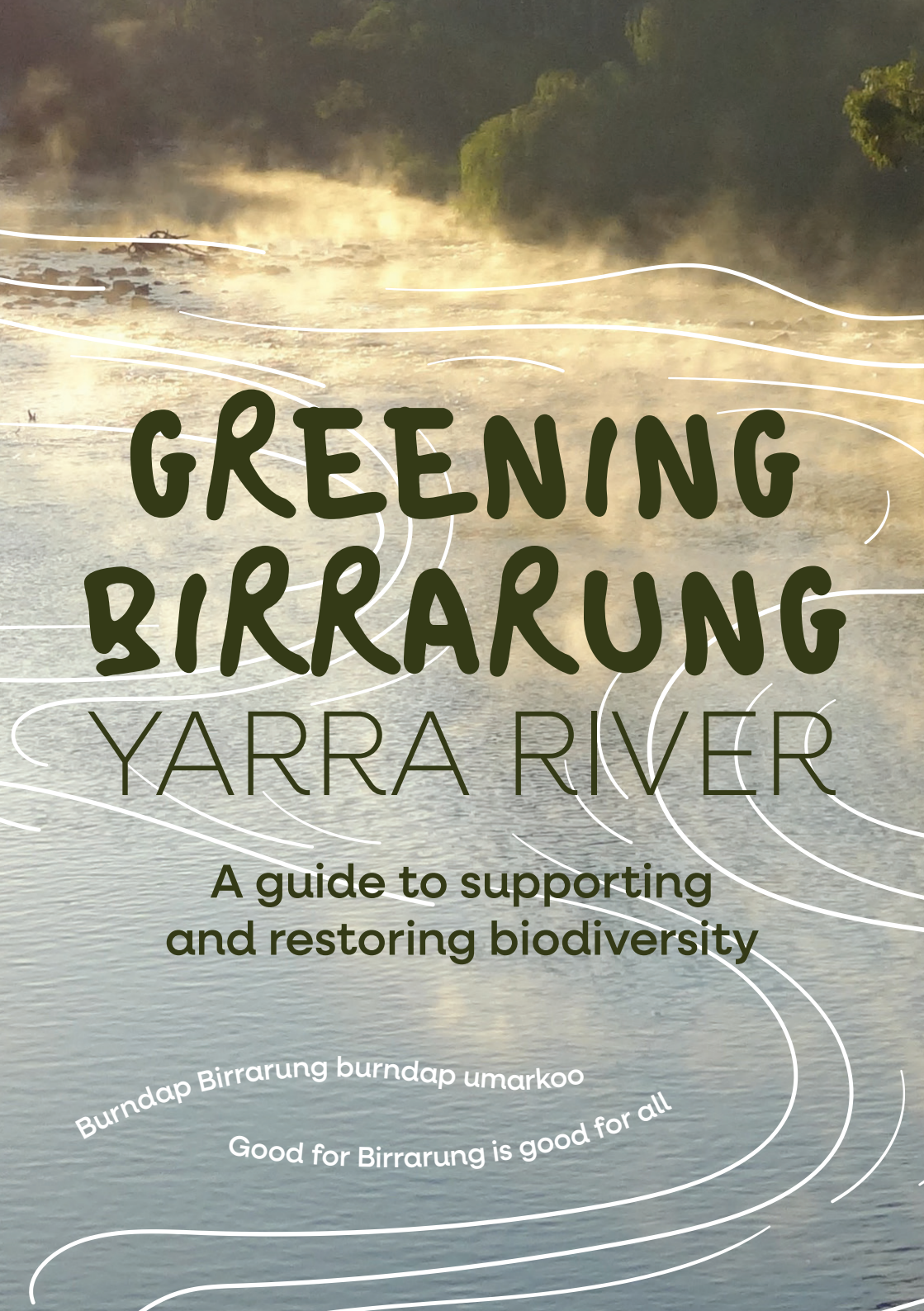


GREENING BIRRARUNG

YARRA RIVER

A guide to supporting and restoring biodiversity

Burndap Birrarung burndap umarkoo

Good for Birrarung is good for all



A still from aquaniullius a film made by OFFICE in partnership with Wurundjeri



CONTENTS

Acknowledgment of Country **02**

About this guide **05**

Our beautiful Birrarung **06**
A landscape under pressure 14
A living entity 16

Our shared approach **18**
1. Respect and support Traditional Owners 20
2. Care for Birrarung as a living entity 28
3. Restore and connect native vegetation 30
4. Deliver and promote environmental net gain for Birrarung 36
5. Adapt through shared knowledge 38
6. Support community stewardship 40

Get involved **49**
1. What can I do? 50
2. Basics of habitat restoration 51
3. Birrarung community indigenous plant nurseries 64
4. Additional resources 65



Bunjil - the Wedge-tailed eagle

ACKNOWLEDGEMENT OF COUNTRY

We, responsible public entities*, acknowledge the Wurundjeri Woi-wurrung and Bunurong peoples as the Traditional Owners of the land through which Birrarung flows.

We pay our respects to their Elders both past and present, and we acknowledge that they never ceded their sovereign rights to their lands and waters. We recognise their deep and enduring connection to Birrarung, we celebrate their knowledge, culture and history, and we honour their rights as caretakers for the river and its lands.

Birrarung is a source of life, ceremony, and connection, nourishing the eels, fish, platypus, and waterbirds, and the river red gums, sedges, and grasses along its banks.

We recognise that the health of Birrarung and all its plant and animal life depends on the wisdom and ongoing custodianship of the Traditional Owners. We commit to listening, learning, and walking together in respect for this ancient and enduring relationship with Country.

* The responsible public entities named in the *Yarra River Protection Act 2017* include Banyule City Council, Boroondara City Council, Manningham City Council, Melbourne City Council, Nillumbik Shire Council, Stonnington City Council, Yarra City Council, Yarra Ranges Shire Council, Melbourne Water, Department of Energy, Environment and Climate Action (DEECA), Department of Transport and Planning (DTP), Parks Victoria, VicTrack.

We, the Woi-wurrung, the First People, and Birrarung, belong to this Country. This Country, and Birrarung are part of us.

Birrarung is alive, has a heart, a spirit and is part of our Dreaming. We have lived with and known Birrarung since the beginning. We will always know Birrarung.

Bunjil, the great Eagle, the creator spirit, made the land, the sky, the sea, the rivers, flora and fauna, the lore. He made Kulin from the earth. Bunjil gave Waa, the crow, the responsibility of Protector. Bunjil's brother, Palliyang, the Bat, created Bagarook, women, from the water.

Since our beginning it has been known that we have an obligation to keep Birrarung alive and healthy—for all generations to come.

Excerpt from *Yarra River Protection (Wilip-gin Birrarung murron) Act 2017.*



Birrarung with Bulbine lilies



Yarra Bend

ABOUT THIS GUIDE

Birrarung was the first river in Australia to be recognised in law as a living entity.

This guide is for those who work to support and restore Birrarung's biodiversity and natural processes, and those who advocate for the river's protection and ecological health.

It has been produced as an output of the Greening the Birrarung project, involving state and local government, Traditional Owner, Trust for Nature and Yarra Riverkeeper Association representatives. This project aims to achieve biodiversity actions in Burndap Birrarung burndap umarkoo (the Yarra Strategic Plan).

The guide outlines our shared approach to revegetation and habitat enhancement of Birrarung land and waters, and provides ideas and resources for community members to get involved.

The guide has benefited from the generous sharing of knowledge by Wurundjeri Corporation.

Responsible public entities look forward to collaboration with Bunurong Land Council Aboriginal Corporation to fulfill Burndap Birrarung burndap umarkoo objectives.



Greening the Birrarung project working group with Wurundjeri Woi-wurrung Elder Uncle Tony Garvey

OUR BEAUTIFUL BIRRARUNG

Birrarung (Yarra River) flows 242 km from the Yarra Ranges to Port Phillip Bay, traversing diverse ecological zones that support rich biodiversity. The catchment spans over 4,000 km² and is home to one-third of Victoria's animal species, including platypus, rakali, eastern banjo frogs, gliders, eastern long-necked turtle and over 190 bird species.[1]

The vegetation along Birrarung forms 25 distinct communities or Ecological Vegetation Classes (EVCs)[2]. Each has a slightly different combination of plant species and characteristics that have evolved with the unique features of that area. These vegetation communities vary markedly from the river's source in the Yarra Ranges National Park all the way to the sea in Port Phillip Bay.



















Images from top to bottom: Eastern dwarf tree frog, orange moss navel fungi, rainbow fungi, jacky lizard, damselfly, swamp wallaby, tawny frogmouths.

Mountain Ranges
The upper reaches

The upper reaches of the river are dominated by damp and wet forests of mountain ash, grey gum, tree fern and a rich understorey of ferns and fungi. There are also patches of cool temperate rainforest of myrtle beech and sassafras. The mountain forests are home to highlands Leadbeater's possums and lyrebirds.













Images from top to bottom: Mountain gully, spider on web, lyrebird, mountain ash forest scene, galaxias, and earth star fungi.













Foothills and Ridges

As the topography changes to foothills the vegetation changes with it. The landscape is drier and rockier and the vegetation is slower growing, dominated by red box and red stringybark, peppermint and messmate eucalypts and acacias (wattles). A diversity of subtle flowers appear in the shrub layer and understorey.

Images from top to bottom: Wattles in bloom, a riot of kookaburras, rocky escarpment woodland, brush-tailed phascogale, wine-lipped spider orchid, eastern tiger snake.



Lowland, grassy woodlands

Birrarung then flows into grassy woodlands where grasses, rushes, herbs and shrubs carpet the ground between yellow box, candlebark and sheoak trees. Native grasses provide food for parrots, wombats, wallabies and kangaroos. Grassy woodland once dominated Birrarung valleys. Today they are among the most endangered communities due to their suitability for agriculture and expanding urbanisation.[3]













Images from top to bottom: Grassy woodland, wedge-tailed eagle with hare, Imperial hairstreak butterfly on everlasting daisy, eastern grey kangaroos in modified grassy woodland, kangaroo grass, blue tongued lizard, spotted pardalote.















Lowland, river floodplain

Riparian vegetation changes throughout the corridor and hugs closest to the river. Swamp gum, manna gum and river red gum are the three dominant species. Manna gum in the valley upstream of Templestowe and red gum downstream towards the bay. But in places tea-tree and paperbark thickets crowd out the trees and provide excellent habitat for small birds. Wattle flowers colour the floodplain yellow through late winter to early spring. Amongst this vegetation, there are permanent and seasonal billabongs, floodplains and wetlands. Here the sedges, rushes and reeds provide habitat for frogs, birds and snakes.

Images from top to bottom: Platypus, lowland river floodplain scene, Peron's tree frog, Macquarie perch, prickly teatree, silver wattle, Bolin Bolin billabong.











Birrarung estuary

Birrarung then runs to the city and out into the bay. Historically this area would have been a mosaic of seasonal and permanent wetlands, saltmarsh, and woodland vegetation.[4] The landscape has been heavily modified but still supports pockets of habitat which have been enhanced through restoration.

The river corridor provides critical habitat connectivity and ecosystem services, including water filtration, carbon storage, and wildlife movement. Restoration and revegetation work plays a vital role in enhancing ecological resilience, especially under pressures of urbanisation and climate change.



Images top to bottom: Pelican, possum and lorikeets sharing a gum tree, black swans with cygnets, estuary and foreshore vegetation, cormorants resting by the river.









Biodiversity oases within the Birrarung landscape – urban canopy and scattered trees

The remaining trees scattered across urban parks, roadsides and farmland are often remnants of vanished forests, yet they are vital lifelines in the landscape. They provide isolated havens for wildlife in largely uninhabitable landscapes, housing significant biodiversity and providing critical stepping stones for wildlife between larger habitat patches. As they age these trees develop hollows, fissures and crevices – vital habitat for wildlife. They also provide shade and cooling and bring wildlife into urban areas.[5] Protecting existing trees and establishing new vegetation around them is vital to sustain their ecological function.

Images from top to bottom: River red gum, wildflowers, mistletoe bird, grey-headed flying foxes roosting.

BIRRARUNG – A LANDSCAPE UNDER PRESSURE

Birrarung is the life blood of Melbourne, sustaining a diversity of wildlife and people. However, Birrarung has been significantly altered since colonisation. What was once a meandering river flowing through continuous forests and grasslands has been straightened, dammed, and squeezed into an increasingly fragmented landscape where both the river and wildlife have little room to thrive.



Artistic representation of historical and modern lower reaches of Birraung



Birrarung at Yarra Bend golf course

The river's natural corridors have been carved up by roads, buildings, and cleared land, creating isolated patches of habitat. Native animals struggle to move between these fragments to find food, mates, and shelter. Many species simply cannot survive in small, disconnected spaces.

Climate change impacts

Changing climate and weather patterns bring more intense storms, longer droughts, and unpredictable flooding. Native plants and animals, already stressed by other pressures, struggle to adapt to these rapid changes.

Invasive species

Aggressive weeds like blackberry and hemlock compete with native plants along riverbanks, while introduced fish, birds, and other animals compete with native species for food and habitat. Many of these introduced species have no natural predators in Australia, allowing them to spread rapidly and dominate ecosystems that evolved without them.

Cultural heritage impacts

For thousands of years, Wurundjeri Woi-wurrung people maintained the health of this river system through sophisticated land management practices. Colonial displacement disrupted this stewardship.[6] Modern land management often overlooks Traditional Owner knowledge and inadequately protects Wurundjeri Woi-wurrung cultural values and sites.

Urbanisation and development

As Melbourne grows, more homes, businesses, and industry are spreading across Birrarung's catchment. This creates large areas of hard surfaces—roads, roofs, and car parks—that stop rainwater soaking into the ground. Instead, stormwater rushes into creeks and rivers, carrying pollutants that make it harder for the river to stay healthy. More people also means more pressure on our open spaces. Spending time by the river is important, but heavy use can damage fragile ecosystems through trampling, erosion from informal tracks, litter, and disturbing nesting wildlife during breeding seasons.

Recognising Birrarung as a living and integrated natural entity

In 2017 the Victorian parliament passed the *Yarra River Protection (Wilip-gin Birrarung murron) Act 2017*. "Wilip-gin Birrarung murron" means "keep Birrarung alive" in Woi-wurrung language.

The legislation recognises Birrarung as one living and integrated natural entity, marking a step change in how we relate to and care for Birrarung. For the first time, Woi-wurrung language was woven into legislation, reminding us of the deep, enduring connection between Birrarung and Traditional Owners.

The Act sets out 19 protection principles that responsible organisations must consider when working on Yarra River land*.



Birrarung - river of mists and shadows

* Yarra River land includes the bed, soil and banks of the Yarra River, and Crown and state government-owned land parcels within 500m of a bank of the river. Although it does not include private land, care and protection of private land is critical to the health of Birrarung.



Elements from a Wurundjeri Woi-wurrung water ceremony of commitment

The protection principles in the Act relating to biodiversity and habitat include:

- If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to **prevent environmental degradation** or for failing to assess the risk-weighted consequences of the options (section 9.1).
- Environmental practices and procedures should **ensure that biodiversity and ecological integrity is maintained** or enhanced in ways that are proportionate to the significance of the environmental risks and consequences being addressed (section 9.2).
- If approaches to managing environmental impacts on one segment of the environment have potential impacts on another segment, **the best practicable environmental outcome should be sought** (section 9.3).
- **There should be a net gain for the environment** in the area of Yarra River land arising out of any individual action or policy that has an environmental impact on Yarra River land (section 9.4).
- **Aboriginal cultural values**, heritage and knowledge of Yarra River land should be **acknowledged, reflected, protected and promoted** (section 12.1).
- The role of the **Traditional Owners as custodians** of Yarra River land should be acknowledged through partnership, representation and involvement in policy planning and decision-making (section 12.2).
- There should be **coordination between all levels of government** and government agencies when designing policies and programs and making decisions in relation to Yarra River land (section 13.1).
- Implementation of natural resource management should **aim for continuous improvement and extend beyond compliance** with relevant laws and requirements (section 13.2).

OUR SHARED APPROACH

Aligned with the protection principles of the Act, the organisations entrusted with caring for Birrarung—through revegetation and habitat enhancement—are united in their commitment to improving the river's health. This shared commitment has led to a collaborative approach, outlined as follows:

1

Respect and support Traditional Owners

Support culturally informed biodiversity conservation, guided by Traditional Owners' knowledge and obligations across Country.

2

Care for Birrarung as a living entity

Work collaboratively across boundaries to understand, protect and restore Birrarung as a connected, living system.

3

Restore and connect native vegetation

Enhance diverse plant communities, strengthen ecological connectivity, and apply integrated weed and pest management for lasting outcomes.

4 Deliver and promote environmental net gain for Birrarung

Strive to increase and enhance biodiversity through all restoration actions.

5 Adapt through shared knowledge

Build and apply collective understanding of climate impacts and adaptation through science, cultural understanding, and experience.

6 Support community stewardship

Celebrate and collaborate with environmental volunteers, community indigenous nurseries, and private landowners caring for Birrarung.

The following pages outline why these agreements are important and how the organisations intend to put them into practice to support and restore Birrarung's biodiversity.

1. Respect and support Traditional Owners

Support culturally informed biodiversity conservation, guided by Traditional Owners' knowledge and obligations across Country.

Traditional Owners have never ceded their rights to Country or their rights and obligations to care for Country. These rights are now being recognised through state legislation and policy (e.g. through the *Yarra River Protection (Wilip-gin Birrarung murron) Act 2017).*

Wurundjeri Woi-wurrung people are sharing their knowledge in decision making forums, as well as continuing their ongoing practical land and waterway management through the Narrap Rangers.

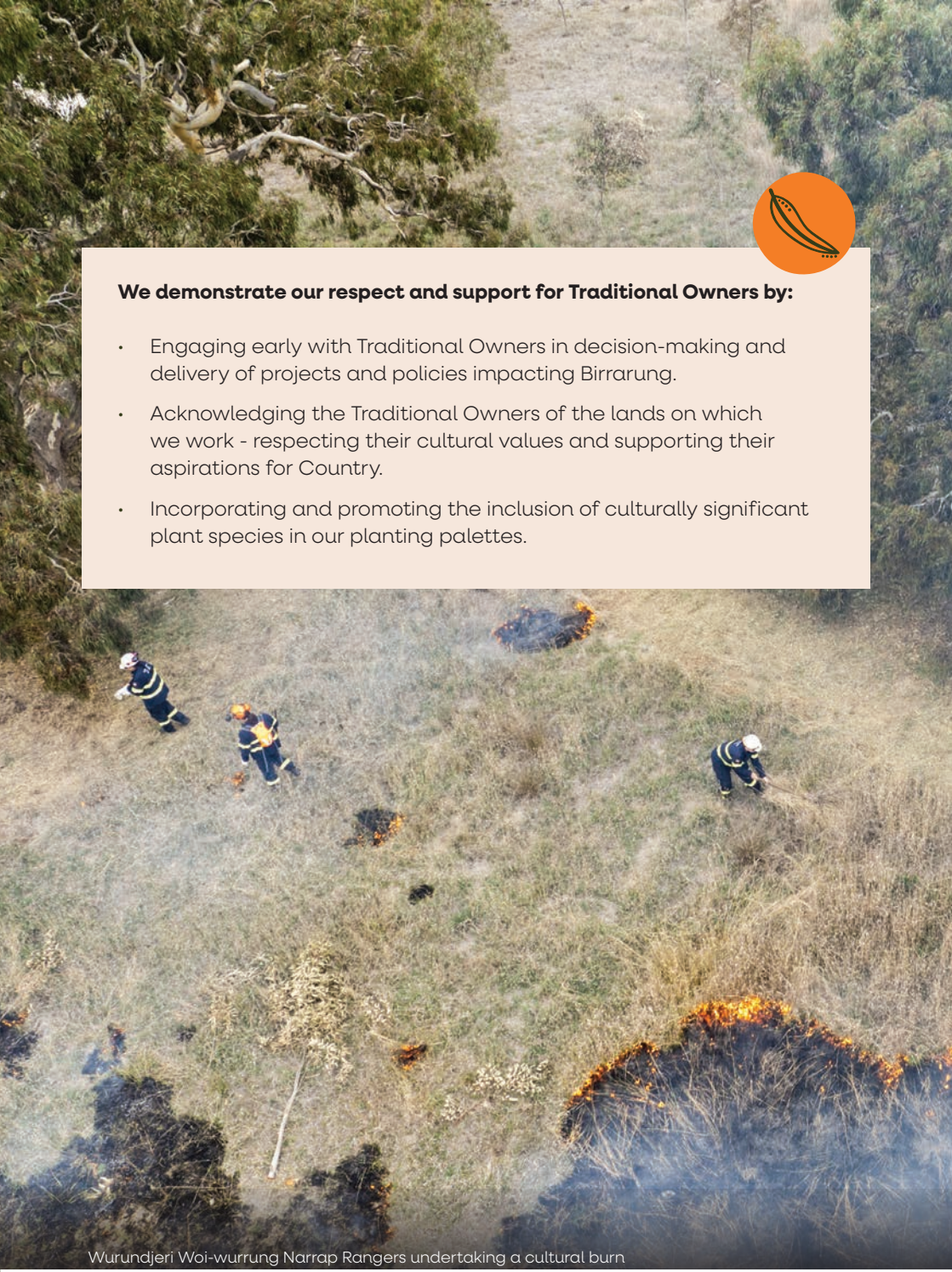
Wurundjeri Woi-wurrung and Bunurong Elders sit on the Birrarung Council, overseeing the implementation of Burndap Birrarung burndap umarkoo (Yarra Strategic Plan).

A Wurundjeri Woi-wurrung Cutural Heritage Aboriginal Corporation and Bunurong Land Council Aboriginal Corporation representative sits on the Yarra Collaboration Committee, sharing Birrarung planning with state government agencies and local councils. The Wurundjeri Corporation also encourages these agencies to engage with them from early inception stages of local policy and project planning.

As organisations with formal land care obligations in the Birrarung corridor, we support culturally informed biodiversity conservation, guided by Traditional Owners' values, knowledge, and obligations across Country.

We demonstrate our respect and support for Traditional Owners by:

- Engaging early with Traditional Owners in decision-making and delivery of projects and policies impacting Birrarung.
- Acknowledging the Traditional Owners of the lands on which we work - respecting their cultural values and supporting their aspirations for Country.
- Incorporating and promoting the inclusion of culturally significant plant species in our planting palettes.



Wurundjeri Woi-wurrung Narrap Rangers undertaking a cultural burn



LIVING CULTURE IN PRACTICE

Wurundjeri Woi-wurrung people continue to care for Country today as their ancestors have done for millennia. The Narrap Team are the Wurundjeri Corporation's natural resource management team, and actively work to care for Country.

Narrap Rangers have been operating since 2012. The program continues to expand as clients increasingly value their knowledge and relationship with the landscape and ecological processes.

Narrap aims to restore ecosystem health of Country through revegetation with indigenous species, preservation and rehabilitation of water quality and flows, and returning cultural fire to the landscape. Narrap delivers a variety of landscape regeneration work including: supply of locally provenanced tube stock, flora and fauna monitoring, integrated weed management, revegetation with indigenous species, erosion control, and cultural burning.



Wild river mint - Mentha australis
My partner and I use this plant medicinally when we are feeling down.



Banksia
Can be used for a hairbrush.







Although Wurundjeri recognise all species are interconnected, Narrap Rangers have shared some particular species that are personally important to them from a cultural or ecosystem perspective.



MANNA GUM



WOMBAT

Murnong daisy
Significant plant and food source for Wurundjeri people and people of the Kulin nations. This plant also symbolises women and the roles they have within their communities.

Wombats
A significant species as they symbolise strength and patience and are used in many Dreamtime stories.

Manna gum
The name Wurundjeri comes from the Manna gum and the grub that lives in it.

River red gum
With its tough, durable bark and hardwood, River Red Gum is an elite resource for crafting Canoes, Coolamons, and Shields. Its sap can also be used medicinally to treat wounds and infections.

Rakali uprising
There has been new evidence that the Rakali are championing pest management roles against the introduced black rat. Working together for healthy country.

Other significant plants include Kangaroo grass and Chocolate lily as these were important food plants for Wurundjeri.

Poa grasses
Like a big umbrella that protects little animals and skinks. They can hide there from predators.

Possums
Their fur was sewn into warm cloaks worn during colder months. Possum skin cloaks are also cultural records, marked with family stories, songlines and symbols.

Eels
Important food source and cultural indicator for the Wurundjeri. Eel harvesting brings communities together. Also an important indicator for healthy waterways.

POA GRASSES





EELS



POSSUMS

Case study: *Narrap Birrarung Ranger program*

Within the Narrap Ranger team, the Birrarung Rangers have a dedicated role in implementing Burndap Birrarung burdap umarkoo. This program empowers rangers to make decisions around water priorities and future water management. The program focuses on embedding cultural values within contemporary caring for Country practice. The Birrarung Rangers have developed methods to assess the health and cultural values of waterways, billabongs and floodplains on Wurundjeri Woi-wurrung Country. These assessments enable the rangers to provide recommendations and guidance around water and land management, influence policy and advocate for Wurundjeri Woi-wurrung priorities.



Narrap Rangers electro-fishing as part of a monitoring program



Narrap Rangers leading a cool burn at Bolin Bolin

Cultural burning

Cultural burning is practiced by First Nations people to enhance the health of the land and its people. Cultural burning can be used to reduce fuel and hazards, and improve access to Country. It can be managed to create mosaic patches and appropriate fire intervals, activate native seed banks and return nutrients to the soil. These benefits improve vegetative regeneration and biodiversity, providing appropriate habitats for wildlife.[7]

The Narrap Team has been working in partnership with the Darebin Creek Management Committee and Melbourne Water at Nangak Tamboree for the past five years. During this time, cultural fire has been a core element of an extensive woody weed and exotic grass management program. Annual burns have targeted senescent native and exotic grasses, and woody debris. These burns have been followed by comprehensive hand and chemical management, resulting in the abundant return of *Dianella amoena* (matted flax-lily – critically endangered) and a strong resurgence of *Themeda triandra* (kangeroo grass).

In recognition of their efforts at this site, the Wurundjeri Narrap Team has received both the Victorian Landcare Award and National Landcare Award.


Narrap Rangers holding seedlings ready for planting


Narrap Ranger removing water weeds


Narrap Rangers logging survey data

Narrap Nursery

The Narrap Nursery was established with Bushbank support in early 2024 to fulfil the vision of Wurundjeri Elders - to grow culturally significant and threatened species from Wurundjeri country. The nursery sowed its first seed in autumn 2024, *Themeda triandra* provenanced from the Wil-im-ee Moor-ing cultural site. Since then, a diverse range of species have been sown and potted up, collected by rangers from many sites across Wurundjeri country.

Narrap tube stock, all with documented provenance, are used by Narrap Rangers to revegetate important Wurundjeri managed sites. Narrap plants have been purchased by councils and community groups for revegetation projects from the upper Birrarung down into the estuarine reaches. The nursery continues to expand its range and quantities.



Narrap Ranger pricking out one of the first seedling crops

2. CARE FOR BIRRARUNG AS A LIVING ENTITY

Work collaboratively across boundaries to understand, protect and restore Birrarung as a connected, living system.

Caring for Birrarung as a living entity means recognising the river as a connected, dynamic system — not just a waterway, but a whole landscape with deep cultural, ecological, and spiritual significance. It requires thinking beyond individual sites to the health of the entire catchment, where land, water, plants, animals, and people are interdependent.

This care is grounded in recognising our mutual dependence on Birrarung — the lifeblood of Country — and our responsibility to give back to the river.

It calls for us to consider Birrarung's perspective, not just human interests, and to act in ways that restore and protect its vitality.

Effective care involves coordinated action across boundaries, with councils, community groups, Traditional Owners, and land managers working together to restore habitat, improve water quality, and strengthen ecological connectivity. By collaborating at a landscape scale, we honour Birrarung's living spirit and ensure our shared resilience for generations to come.

We demonstrate our care of Birrarung as a living entity by:

- Considering the broader landscape in planning revegetation and habitat enhancement projects, consulting with adjoining land managers and local conservation groups to strengthen connectivity and quality of vegetation.
- Spending time observing and monitoring seasonal changes and overall health to detect problems early and build the connection necessary for long-term stewardship.

Case study: *Yarra Capital Improvement Program*

Melbourne Water is partnering with the Wurundjeri Narrap Rangers, Parks Victoria, eight local councils, and the broader community to deliver the Yarra Capital Improvement Program.

This collaborative initiative spans 60 kilometres from Abbotsford to Eltham (see map), demonstrating how caring for Birrarung as a connected living system requires working together across boundaries.



River bank before planting



River bank after planting

The program removes invasive weeds, manages land using culturally sensitive practices, and creates vital habitats for native species including waterbirds, fish, rakali, and platypus. By increasing native vegetation along riverbanks, the initiative also promotes urban cooling for communities enjoying shared trails.

The program supports implementation of the Healthy Waterways Strategy and the Yarra Strategic Plan—Burndap Birrarung burndap umarkoo—which reflects a 50-year community vision developed by over 2,500 Victorians.



3. RESTORE AND CONNECT NATIVE VEGETATION

Enhance diverse plant communities, strengthen ecological connectivity, and apply integrated weed and pest management for lasting outcomes.


Echidna

Coordinated, catchment-scale weed and pest management is essential to reduce reinfestation and protect restoration gains.

Working collaboratively across boundaries ensures that efforts are strategic, effective, and aligned with the broader vision for Birrarung as a living, connected system.

To support long-term ecological health, land managers should focus on enhancing diverse native plant communities, improving habitat connectivity, and applying integrated weed and pest control.

Diverse vegetation layers — from canopy to groundcover — provide critical habitat and resilience. Strengthening ecological links between remnant patches helps wildlife move, feed, and breed across the landscape.


Helmeted honeyeater



We demonstrate our commitment to restoring and connecting Birrarung's native vegetation by:

- Referring to Ecological Vegetation Classifications and assessing indigenous species growing in the area to be revegetated.
- Following habitat restoration principles when planning and maintaining revegetation sites.
- Working together to stop invasive weeds and pests from establishing, removing high-risk species early before they spread, and containing those that are already widespread.

Ribbons of Green revegetation site at Gruyere

Goats crash grazing for weed control in contained area at Haining Farm

***Case study:** Haining Farm Safe Haven*

The objective of this project is to establish a secure translocation site for the critically endangered Lowland Leadbeater's possum and helmeted honeyeater. This is being achieved through the creation and maintenance of a 32ha predator-free fenced enclosure (safe haven) at Haining Farm.

To minimise use of machinery and chemicals, goats are being used for targeted grazing to reduce invasive weeds. Native species are also being planted to improve habitat.

The project is being delivered by Parks Victoria and Zoos Victoria, with funding support from Melbourne Water.



Parks Victoria Rangers monitoring Leadbeater's possum

Deer in the Birrarung corridor – a growing challenge

The Birrarung corridor has become a hotspot for deer activity, with sambar and fallow deer particularly encroaching further downstream. These populations are causing significant damage to vegetation, water quality, and agricultural land. They also impact cultural heritage sites.

DEECA is funding and coordinating priority areas under the Victorian Deer Control Strategy and Peri-urban Deer Control Plan through regional partnerships.



Sambar deer



Example of deer impact in Birrarung corridor

As deer move from the upper reaches into more urbanised areas, councils and agencies are responding through a variety of tailored programs.

Manningham has a rebate program for deer control on private property and works closely with Landcare. Nillumbik has agency support to enable control on private and public land, along with community tools like the Deer Directory and incentives for landholders. Yarra Ranges also runs a state funded program to work with private landholders to control deer in the Yellingbo corridor. Banyule is developing a program to address the emerging issue of deer with a focus on community reporting. Parks Victoria conduct intensive control in significant conservation areas such as Warrandyte State Park, to prevent habitat damage and new incursions. Melbourne Water co-funds and conducts research on deer impacts and ecological recovery, especially around drinking water reservoirs.

HABITAT RESTORATION PRINCIPLES

Every site is unique, so restoration should be tailored to local conditions. A simple decision-making framework can guide effective action:

Protect

Prioritise the protection of the most intact and high quality vegetation. Much of Birrarung's remnant habitat remains vulnerable to threats — safeguarding what's left is the first and most critical step.

Improve

Enhance high-quality sites through actions like pest plant and animal control, installing nest boxes, and/or exclusion fencing to reduce disturbance and support fauna.

Regenerate

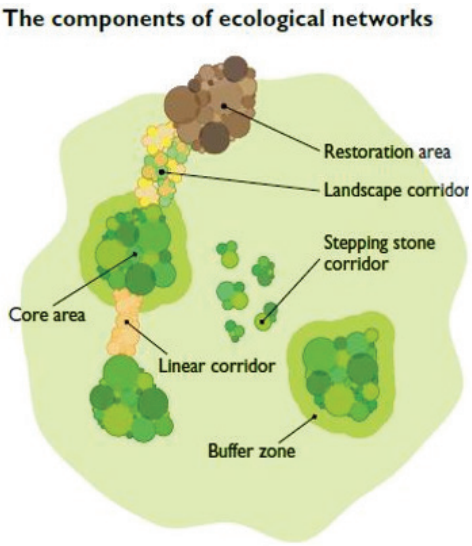
Support natural regeneration by allowing existing seed banks to recover without planting. This approach is slower but often more ecologically robust. Cool burns may promote diversity, but cultural burns must be led by authorised Aboriginal fire practitioners.

Expand and connect

Address habitat fragmentation by linking core patches. Consider edge effects and species-specific needs when designing corridors. "Stepping stones" (small habitat islands) may be more effective than linear strips in some contexts.

Revegetate

Where regeneration isn't viable, revegetate using indigenous plant species from locally collected seed. Larger, well-connected patches better support biodiversity than narrow or isolated plantings.



The guide's "Get involved" section provides more detail on this process and how to plan, prepare, maintain and mature a site in need of revegetation.



Yarra Ranges Council planting at Wandin Yallock Creek

4. Deliver and promote environmental net gain for Birrarung

Strive to increase and enhance biodiversity through restoration actions.

The Yarra River Protection (Wilip-gin Birrarung murron) Act 2017 includes a protection principle that states "there should be a net gain for the environment in the area of Yarra River land arising out of any individual action or policy that has an environmental impact on Yarra River land."

Committing to environmental net gain in the Birrarung corridor means restoring and protecting the river's ecological health while respecting Birrarung's cultural significance as a living entity. It involves working at a landscape scale to enhance habitat quality, improve connectivity, and support biodiversity across public and private land.

This commitment also means partnering with Traditional Owners to respect and embed cultural values and knowledge in land management. Organisations can contribute by aligning their practices with corridor-wide goals, collaborating with neighbours, and investing in actions that deliver lasting ecological and cultural outcomes for Birrarung.

Achieving a net gain for biodiversity means leaving the natural environment in a measurably better state than before any development or intervention takes place.

We demonstrate our commitment to environmental net gain by:

- Monitoring the impacts of our collective revegetation and habitat enhancement programs to measure progress.
- Seeking opportunities to restore Country when working in the Birrarung corridor.



Revegetation activity with local schools at Yering Billabongs organised by Yarra Ranges Council

Case study: *Yering Billabongs Project*

The Yering Billabongs Project is restoring 60 hectares of floodplain, boosting biodiversity. Yarra Ranges Council partnered with DEECA, Melbourne Water and Wurundjeri Corporation to deliver an innovative solution to improve biodiversity and waterway health. Ongoing Wurundjeri stewardship will guide future revegetation, aiming to create an iconic, accessible wetland reserve by 2030.

5. ADAPT THROUGH SHARED KNOWLEDGE

Build and apply collective understanding of climate impacts and adaptation through science, cultural understanding, and experience.

In Victoria, climate change is altering rainfall patterns, increasing extreme weather events, and shifting seasonal conditions across the Birrarung corridor. The average annual cool season rainfall will likely continue to decrease, and as Victoria becomes hotter and drier on average, extreme rainfall events are projected to become more intense. These changes affect soil moisture, plant survival, and habitat stability.[8]

To ensure long-term success, revegetation and restoration efforts must be collaborative efforts to connect habitat across Birrarung lands. Integrating cultural knowledge and working collaboratively across the catchment will help build resilient landscapes that can support biodiversity and ecological function under changing conditions.



We build and apply collective understanding of climate impacts and adaptation by:

- Protecting existing vegetation, improving habitat quality, and reconnecting isolated fragments to support species survival and movement.
- Researching and selecting climate-resilient indigenous species suited to future conditions—such as increased heat, drought, and flooding—while working to maintain local genetic integrity, strategic planting and designing for water retention and soil health.
- Collaborating across the catchment to share data, monitor ecological responses, and coordinate adaptive management that builds resilience at a landscape scale.



Climate trial plots are being used to understand the impact of climate change on the Birrarung vegetation at Haining Farm

***Case study:** Clyde seed collection project - improving genetic diversity*

Royal Botanic Gardens Victoria (RBGV) is partnering with organisations including VicTrack to collect seeds from the Swamp Everlasting (Xerochrysum palustre), an endangered species, to propagate and revegetate.

The genetic diversity of this species on VicTrack land is small and vulnerable. Once RBGV establishes a genetically diverse population, VicTrack hopes to distribute and share approximately 30,000 seeds for revegetation.

6. Support community stewardship

Celebrate, and collaborate with environmental volunteers, community indigenous nurseries, and private landowners caring for Birrarung.

Environmental volunteers, community indigenous nurseries, and residents play a vital role in caring for Birrarung and her lands. Volunteers contribute thousands of hours to planting, weeding, monitoring, and restoring habitat across the corridor. Community indigenous nurseries provide locally sourced plant stock that strengthens ecological outcomes.

Private landowners help protect and connect habitat by managing remnant vegetation, controlling pests, and participating in restoration projects. Together, these groups form a network of caretakers, supporting Birrarung's health across public and private land.



We demonstrate support for community stewardship of Birrarung lands by:

- Celebrating achievements and working in partnership with environmental volunteers, community indigenous nurseries, and private landowners, including through the provision of training, resources, and support where possible.
- Purchasing local provenance plants from community indigenous nurseries to support local knowledge, community connection and habitat restoration.
- Promoting conservation covenants to permanently protect ecologically significant land, including remnant vegetation and habitat.



Yarra City Council planting event held during Birrarung Riverfest

Environmental volunteers, including over 90 'Friends of' and Landcare groups, schools and students participate in planting days, citizen science, and habitat restoration, including BioBlitzes, City Nature Challenge, frog census and pollinator counts. Supported by councils and community organisations, these efforts enhance biodiversity and strengthen ecological resilience. Volunteers also receive training in restoration techniques and safety, ensuring the sustainability of their contributions.

Yarra City Council and Yarra Ranges Council are leading large-scale revegetation efforts to restore Birrarung's natural landscapes. Yarra City's focus is on healing Country by reinstating native vegetation and strengthening wildlife corridors with the help of local community members. Over two years, more than 81,000 native plants were planted, expanding biodiversity-managed open space. Further upstream, Yarra Ranges is growing the forests of tomorrow, partnering with over 50 volunteer groups, nurseries, and schools to plant up to 100,000 indigenous species annually. Together, these projects reflect a strong commitment to ecological restoration and long-term environmental stewardship.



Powerful owl

Case study: Powerful Owl Food Forest

Banyule Council, in partnership with Warringal Conservation Society, is undertaking habitat revegetation at Banyule Flats to support the local Powerful Owl population. This initiative aims to increase the shrub layer, encourage a greater diversity of possum species, which in turn contributes to a more robust and sustainable food source for the Powerful Owl.

Case study: Spring Outdoors festival

The Spring Outdoors festival hosted collaboratively by Banyule, Manningham and Nillumbik councils, provides a wide variety of environmental events, designed to get community out, active and into nature. Events include cultural walks, conservation reserve tours, working bees, citizen science challenges and active living events.

Community indigenous nurseries grow indigenous plants, including locally threatened species for revegetation projects. Supported by volunteers, they help preserve genetic diversity and promote climate resilience through careful seed collection and propagation. Nillumbik council contributes to funding an expert contractor to help their local nursery collect seeds to replenish their seed library during summer and autumn.

Community indigenous nurseries that operate in the Birrarung catchment are:

- Bili Nursery
- Candlebark Community Nursery
- Edendale Farm Community Nursery
- Friends of the Helmeted Honeyeater
- Friends of Warrandyte State Park Nursery
- Narrap Nursery
- Victorian Indigenous Nurseries Coop (VINC).

Private landholders play a vital role in conservation. Landholders can get support from grants and volunteer programs for weed control, tree planting, and habitat protection. Programs like Ribbons of Green, Green links, Liveable Communities, Liveable Waterways, LEAF grants and Gardens for Wildlife connect residents with expert advice and resources to create wildlife-friendly spaces, contributing to broader ecological connectivity. Trust for Nature works with landowners who volunteer to put conservation covenants on their property. Covenants offer long-term protection for significant private land, helping to safeguard biodiversity along the Birrarung corridor.

By using sound ecological restoration methods, and coordinating efforts across boundaries, together we can achieve landscape-scale impact that we can not do individually.


Velvet gecko

Case study: Gardens for Wildlife

The Gardens for Wildlife program helps residents, schools, and businesses care for native plants and animals in their backyard. It's powered by volunteer guides and support from council officers. Participating councils include Banyule, Nillumbik, Melbourne, Yarra, and Yarra Ranges, while Boroondara, Manningham and Stonnington run similar initiatives — **Backyard Biodiversity** and **Our Smart Garden** — tailored to their communities.

For further details on these programs, see your local council, Melbourne Water and state government websites and the 'Additional resources' section at the back of this guide.



New Holland honey eater



Common garden skink



Painted lady butterfly on an everlasting daisy



One of Melbourne City Council's floating wetlands in Docklands harbour

Case study: *Birrarung floating wetlands*

In the heart of the city, Melbourne City Council's Birrarung floating wetlands provide refuge for urban biodiversity. These artificial floating wetland structures feature precolonial native aquatic plants, perching posts, and basking areas that support breeding birds, swans, ducks, Rakali (native rat) and other wildlife. During the breeding season, 21 Black Swan eggs were laid across all sites.

Melbourne City Council and the University of Melbourne are monitoring wildlife using the wetlands. Community members have recorded 291 observations of 20 different species via the iNaturalist mobile app, predominantly birds. Local residents have been overwhelmingly positive, noting the wetlands' role in improving river quality and strengthening their connection to nature.

BIRRARUNG RIVERFEST – A COMMUNITY CELEBRATION OF OUR LIVING RIVER

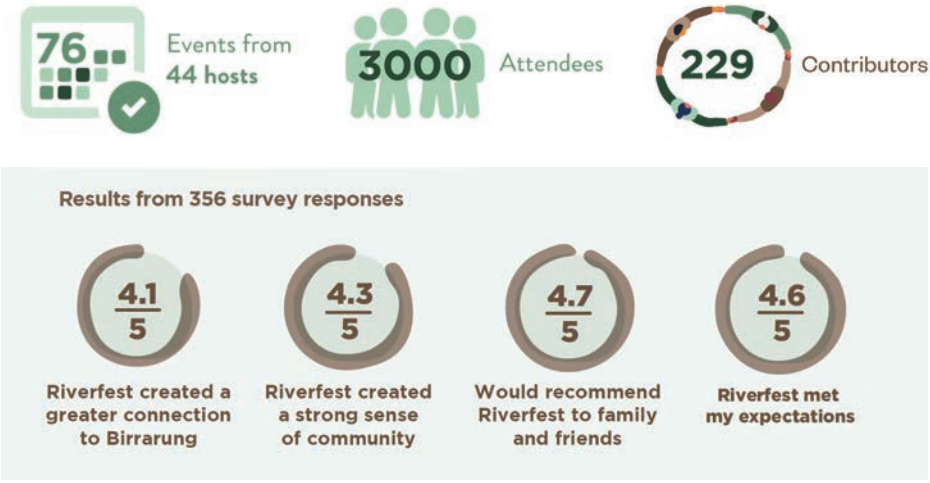
Yarra Riverkeeper Association's Birrarung Riverfest is a vibrant, grassroots celebration of Birrarung. The festival brings together councils, state government, small businesses, artists and community groups, to deliver a program of events spanning the length of the river. These events invite thousands of people to engage with Birrarung in meaningful ways, deepening understanding of Birrarung's cultural and ecological significance, and our shared responsibility to care for Birrarung's lands and waters.



Superb Fairy wren



Platypus



The Birrarung Riverfest 2025 statistics and surveys results











Burndap Birrarung burndap umarkoo

What's good for Birrarung is good for all!









A selection of the 75 events which took place during Riverfest 2025





GET INVOLVED

Birrarung species are resilient to change. Life moved upslope, inland, or down river to adapt. What makes it hard now is that historic land clearing has resulted in disconnected habitats. We need to reconnect the landscape as quickly as we can, planting however we can to allow movement to adapt.

- Uncle Dave Wandin, Wurundjeri Elder

1. WHAT CAN I DO?

Greening the Birrarung is about more than river health—it's about recognising Birrarung as a living entity with stories and relationships. Restoring habitat so wildlife thrives—creating corridors, planting indigenous species, and making space for nature—honours that connection. Plant a tree, join Landcare, or pause to learn the river's stories: each act builds a relationship. Small efforts, woven together, strengthen bonds between people and river, delivering real change. In caring for Birrarung, we care for ourselves.

Simple ways to make a difference



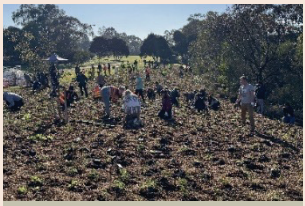
Transform your outdoor spaces

- Consider replacing sections of lawns with native plants that support local wildlife and require less water.
- Create rain gardens or bioswales and replace concrete driveways with permeable materials like stones or pavers to help water seep naturally into the ground.



Prevent pollution at source

- Always deposit litter in bins and pick up pet waste – dog faeces can contribute to E. coli outbreaks in our river.
- Dispose of paint and chemicals properly - never down the drain.
- Use fertilisers sparingly
- Remember that everything on hard surfaces eventually makes its way to Birrarung through drains.



Get involved in your community

- Join local clean-ups.
- Connect with Friends of groups to give back to Birrarung.
- Participate in urban planning processes to advocate for more plantings and infiltration of stormwater.
- Join Waterwatch and monitor water quality in your local waterways.
- Contact your local council for information on local groups. You can also check the Victorian government's Get Involved page.

2. THE BASICS OF HABITAT RESTORATION

Whether you are planning a small patch in your backyard or part of a group restoring a larger landscape, every effort can have a positive impact. Habitat restoration supports biodiversity, improves soil and water health, and creates beautiful green spaces for people and wildlife alike.

Below is an overview of generally accepted approaches for a habitat restoration project. For more technical detail, the Yarra Riverkeeper Association's revegetation guide and other resources listed at the end of this document may be of interest.

In the next section, you'll also find ideas for exploring what it means for the river to be a living entity—practical steps to deepen your connection.



Black wattle (*Acacia melanoxylon*)

Planning restoration projects

Every site is different, so take time to explore and understand your space before planting. Key things to consider:

- Land shape and slope
- Water movement and drainage
- Soil types and condition
- Existing vegetation and opportunities to connect with vegetation nearby
- Human use and foot traffic
- Wildlife activity (look for scats, burrows, nests or hollows).

Plan for a diverse, self-regenerating habitat patch using plants suited to your location. Your local community indigenous plant nursery is a great source of advice on which plants to use. They will know the plants that would historically occur in your area (Ecological Vegetation Classification (EVC)). You can also ask your local council.

***Tip:** Expand on existing native vegetation, this will increase survival rates and provides ecosystem services like shade, shelter, and soil microbial and mineral exchange for new plantings.*


River red gum


Planning site restoration



Noisy miner

Larger patches are more likely to achieve self-resilience. They have less 'edge' compared to their size, which means they're more protected and stable in the middle. At edges, weeds find it easier to establish, and aggressive birds (like Noisy miners) can dominate chasing away other species.

Smaller sites still have critical value and provide shade, pollinator food, amenity and other functions, but they will need more follow up maintenance.

Exploring living entity

Walk outside or look out your windows and record what you see. Use your senses: What do you hear? Smell? Feel?

Think about changing climate patterns in your habitat design, by considering:

- Shade requirements of your patch as the climate gets warmer
- Watering points for animals that visit your patch
- Connectivity of habitat to aid species migration
- Using diverse mix of species, including some suited to predicted future conditions
- Increasing drought tolerance in species selection
- Planning for changing rainfall, flood and fire regimes
- Building soil health for greater water retention
- Using careful plant placement, consider local microclimate and needs of individual plant species (e.g. sheltered, moist or elevated areas)
- Creating resilience through diverse age structures in plants
- Plan for maintenance in your project design.



Magpies at the birdbath

Preparing the site

Good preparation is key to plant survival. Before planting consider:

- Installing fencing to keep out grazing animals (e.g. deer, rabbits)
- Beginning weed control in weeks before planting
- Preparing soil, loosening compacted soil carefully (minimal disturbance reduces further weeds) and adding mulch layers.
- Applying good hygiene - clean boots and tools to prevent spread of plant pathogens (e.g. phytophera)
- Ensuring safety measures are in place for those planting.



Flockhart Reserve

Tip: *Be sure to give your plants a good water before they go in the ground and make sure your tree guards are flush with the ground to stop rabbits and weeds creeping under.*



Pinned jute mat



Indigenous plants ready for National Tree Day



Planted and ready to guard

Maintaining your site

Revegetation is never 'set and forget' - ongoing care supports success.

- Check fencing and tree guards regularly. Remove tree guards when no longer needed to prevent damage to plants.
- Weeds compete for resources and are often the first plants to colonise bare soil. This can reduce survival rates in early months and years after your habitat planting. A healthy, diverse native vegetation cover is your best defence.

***Tip:** Observe a problem in the landscape and decide whether it needs intervention or whether time will resolve it. Check again in a month. What is the smallest action you can take to see if your observation was correct.*

Exploring living entity

Sit in your garden and look for a food chain. Watch a bird and see what it eats. Look for an eaten leaf on a plant and see if you can find what has eaten it.

Before removing any weeds, it is helpful to ask yourself:

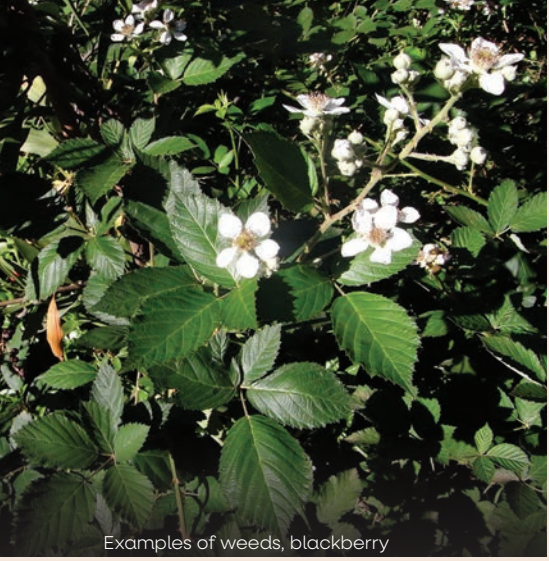
- Is it truly harmful? Is it impacting on desirable plant survival? Is it providing valuable habitat or preventing erosion?
- What's the real impact? Is it spreading aggressively or just filling empty space?
- What wildlife is using it now? Check for nesting birds, beneficial insects, or small mammals.
- Will removal lead to worse weeds?
- Can you commit to long-term maintenance? Incomplete treatment can create bigger problems.

Successful integrated weed control may combine multiple strategies over time:

- Biological (beneficial insects and disease)
- Competition (encourage native species)
- Physical (hand pulling, mowing, brush cutting, mulching)
- Chemical control (selective, targeted herbicide).


Forgotten tree guard


Bend of Islands Exclusion fencing



Examples of weeds, blackberry



Honeysuckle flowers



English broom

***Tip:** Minimise soil disturbance by using your fingers to hold down the soil on either side of the stem while you gently pull the base of the weed towards you. Shake any soil from the roots back into the hole.*

There are many resources available to learn more about common weeds impacting Birrarung – see the Additional Resources at the back of the booklet for more information.

Exploring living entity

Take off your shoes and socks and feel where the ground is warm or cool, moist or dry, soft or hard.

Growing a resilient habitat - maturing revegetation sites

The goal of revegetation is to create sustainable, resilient habitat. Restoration takes time – often decades – but you'll notice small changes quickly.

Vegetation communities are never static. They continuously evolve towards self-sufficiency, which means the mix of species on your site may change as the habitat matures. If there is an existing seed bank in the soil, this will happen naturally over time, provided you manage weeds and browsing pressures. Without an existing seed bank, you will need to return to the site over years to continuously increase plant diversity or thin overcrowded areas.



Multiple habitat layers at Whipstick Gully Reserve



Ground cover and herb layer

Exploring living entity

Do a count of all species which live in or pass through your garden or local park. How many species visit? Are they the same in all seasons?

When and why to thin your habitat restoration site

Fast-growing trees species can sometimes form a dense canopy and dominate a site - either from overplanting, or after major disturbances e.g. bush fires or logging. Some individual trees may need to be removed to open gaps in the canopy.

Thinning helps to:

- Reduce competition for water, nutrients and space
- Restore natural growth patterns for canopy species by giving them room to develop properly
- Open gaps in the canopy, creating opportunity for understory species that need dappled light to survive
- Accelerate habitat development that may otherwise take decades (see diagram).

Sites can become dominated by shrubs after a disturbance. Typically, these are the first plants to establish such as Common cassinia (*cassinia arcuate*) and Hop goodenia (*goodenia ovata*). These early colonisers play an important role in stabilising soil, capturing moisture, and rebuilding the soil layer and nitrogen levels. They are typically short-lived plants eventually dropping out to allow slower growing plants to establish. Thinning of these species should be selective, if attempted at all.

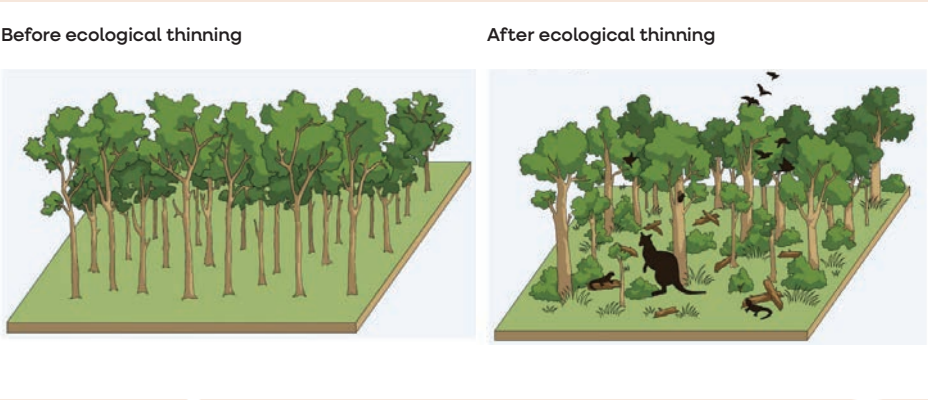


Illustration showing the difference between monoculture canopy dominated site (left) and diverse multi-strata habitat (right). Source: Guidelines for Ecological Thinning, NSW Biodiversity Conservation Trust, August 2020.

Building forest layers – infill planting

Infill planting happens once your site has adequate existing vegetation structure, shade and shelter—either in areas with mature vegetation that aren't fully intact, or in revegetation sites that have had a few years to grow.

The aim is to add missing species you'd expect to find in a healthy, intact habitat patch. Typically, this includes grasses, herbs, and shrubs that build a multi-layered ecosystem. These plants are often more sensitive to disturbance, which is why they're not often present in remnant sites which have been grazed. And they are not always included in initial stage one plantings due to needing dappled light and shelter.

Once restored, these additional layers create habitat niches for birds, insects, and other wildlife by providing nectar, pollen, shelter from predators, and protection from the elements.

Infill planting transforms simple clusters of trees into complex habitat by:

- Accelerating habitat development that may otherwise take decades.
- Introducing shade loving shrubs and ground cover plants like lilies, climbers and delicate herbs.
- Building habitat niches that wildlife need to survive.
- Creating a living seed bank.



Prickly currant-bush (*Coprosma quadrifida*)



Purple coral pea (*Hardenbergia violacea*)



Small-leaf parrot-pea (*Dillwynia phylicoides*)

3. BIRRARUNG INDIGENOUS PLANT LIST

Indigenous knowledge relating to plant use, like all cultural knowledge, is very specific to the Country and communities which it resides. By choosing plants specifically from and common to Country you will not only increase chances of survival but add greatly to the biodiversity of your site. Many animals benefit from indigenous plants, which provide shade, food, and fit with their ecological context.

The following plant list is adapted from Zena Cumpston's Indigenous plant use booklet.[9]



Blackwood
(Acacia melanoxylon)



Hop goodenia
(Goodenia ovata)



Hop wattle
(Acacia stricta)



Kangaroo grass
(Themeda triandra)



River red gum
(Eucalyptus camaldulensis)



Tall sedge
(Carex appressa)

Here are other common species listed in Flora of Melbourne – a Guide to the Indigenous Plants of Melbourne by Marilyn Bull. And there will be many more in your area. Visit your local community indigenous plant nursery or contact your local council for advice:



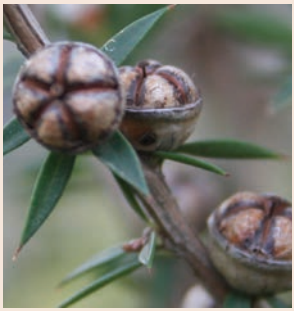
Common heath
(Epacris impressa)



Manna gum
(Eucalyptus viminalis)



Messmate
(Eucalyptus obliqua)



Prickly Teatree
(Leptospermum continentale)



Purple-sheath Tussock grass
(Poa ensiformis)



Silver wattle, Muryan
(Acacia dealbata)



Snow daisy bush
(Olearia lirata)



Sweet bursaria
(Bursaria spinosa)



Yarra burgan
(Kunzea leptospermoides)

4. BIRRARUNG COMMUNITY INDIGENOUS PLANT NURSERIES

The nurseries below are largely run by dedicated volunteers, and we applaud the incredible contribution they make to habitat restoration. Be sure to check for opening hours.

- **Bili Nursery** - 525 Williamstown Rd, Port Melbourne, VIC 3207 www.westgatebiodiversity.org.au Tel. 0492 972 652
- **Candlebark Community Nursery** - 5 Taylor Road, Mooroolbark, VIC 3138 www.candlebark.org.au Tel. (03) 9727 0594
- **Edendale Farm Community Nursery** - 30 Gastons Rd, Eltham VIC 3095 www.edendale.vic.gov.au/Home Tel. (03) 9433 3711
- **Friends of the Helmeted Honeyeater** - 1217 Macclesfield Rd, Yellingbo VIC 3139 www.helmetedhoneyeater.org.au/ Tel. 0413 363 909
- **Friends of Warrandyte State Park Nursery** - Pound Bend Rd, Warrandyte, VIC 3113 https://fowsp.org.au/nursery.php Tel. 0408 317 327
- **Narrap Bush Nursery** - 68 Albert Road, Healesville, VIC, 3777 Email: jeffdickinson@wurundjeri.com.au
  * The Bush Nursery can supply medium orders for selected species but for larger plantings Narrap encourages forward orders.
- **Victorian Indigenous Nurseries Coop (VINC)** - Yarra Bend Rd, Fairfield, VIC, 3078 www.vinc.net.au/ Tel: (03) 9482 1710



Friends of Warrandyte State Park (FOWSP) nursery

5. ADDITIONAL RESOURCES

Bushland Regeneration

- Bringing back the bush: The Bradley method of bush regeneration by Joan Bradley 2002
- Ecological Restoration and Environmental Change: Renewing Damaged Ecosystems by Stuart K. Allison 2023
- Primer of Ecological Restoration by Karen D. Holl 2020
- Yarra River Regeneration Guide: Cremorne Railway Bridge to Westerfolds Park YRKA Regeneration Guide 2021 by the Yarra Riverkeeper Association 2021
- The Plants of Coranderrk by Marita Hanigan, Jeff Dickinson and the Friends of Corananderrk 2020

Mulching, weed control, watering, tree protection, maintenance

- Restoring Natural Areas in Australia by Buchanan R.A. 2009
- Managing weeds: eradication response guide. Department of Environment, Land, Water and Planning Victoria State Government
- Weeding Toolkit 2020 Yarra Riverkeeper Association
- Weeds of the south-east: an identification guide for Australia (3rd edn), by F. J. Richardson, R. G. Richardson & R. C. H. Shepherd 2016.
- Bush invaders of South-East Australia: a guide to the identification and control of environmental weeds found in South-East Australia, Adam Muyt 2001.
- Environmental weeds: a field guide for SE Australia, Kate Blood 2001.

Restoration Ecology

- National standards for the practice of ecological restoration in Australia Society of Ecological Restoration Australasia
- The Science and Practice of Ecological Restoration Book Series - Society for Ecological Restoration

Council Online Resources

Each council has a broad range of resources to help residents understand their local environment. Below are just a few.

- Yarra Ranges Council Local Plant Directory
- Native Splender: A gardening guide to Mannigham's local plants: Manningham City Council
- Mosses, liverworts, fungi and lichens: Cryptogamic organisms of Melbourne's Middle Yarra region: Manningham City Council
- Nillumbik Shire Council Environmental publications
- Weeds in Banyule Booklet
- Boroondara Backyard Biodiversity Booklet
- Stonnington City Council: Sustainable Stonnington
- Wurundjeri History of Yarra: Yarra City Council
- Cooling our City: Melbourne City Council
- Our story: Wurundjeri Corporation

Private land incentive programs

- Banyule Council - Indigenous Plant Voucher Program
- Boroondara Council - Backyard Biodiversity Project
- Green Links - Protecting our waterways so communities and wildlife can thrive
- Liveable Communities, Liveable Waterways Program, Melbourne Water
- Manningham Council - LEAF program
- Nillumbik Council – Land Management Incentive program
- Stonnington Council - My Smart Garden
- Gardens for Wildlife – Yarra Ranges, Nillumbik, Banyule, Yarra City and Melbourne City (See individual council websites)
- Victorian Landcare grants
- Yarra Ranges Council - Ribbons of Green program

References

1. Melbourne Water (2022, Dec 7) *Yarra River*. Melbourne Water website. https://www.melbournewater.com.au/waterand- environment/water-management/rivers-and-creeks/yarra-river.

2. Melbourne Water. *Know your river - Yarra River.* Melbourne Water website. https://www.melbournewater.com.au/media/eyJtZWRpYSI6IjE0MjQxIn0%253D/downloads.

3. Beardsall, Cam (1997) *Sites of faunal and habitat significance in North East Melbourne (Dunmoochin Biological surveys)*. P54.

4. City of Melbourne (2022) *Birrarung Trial Floating Wetlands* https://www.melbourne.vic.gov.au/birrarung-trial-floating-wetlands.

5. Prebedello, J.A., Almeida-Gomes, M., Lindenmayer, D.B (2017) *The importance of scattered trees for biodiversity conservation: A global meta-analysis*. Journal of Applied Ecology. Vol.55 (issue 1) https://doi.org/10.1111/1365-2664.12943.

6. Gammage, Bill (2012) *The biggest estate on earth: how Aborigines made Australia*. Allen & Unwin. ISBN 978-1-743-31132-5.

7. The Victorian Traditional Owner Cultural Fire Knowledge Group (2020) *The Victorian Traditional Owner Cultural Fire Strategy* fireplusstrategyplusfinal.pdf.

8. DEECA (2024) *Victoria's Climate Science Report 2024*. Department of Energy, Environment and Climate Action, State of Victoria. Victoria Climate Science Report 2024 Accessed Oct 2025.

9. Cumpston, Z. (2020). Indigenous plant use: A booklet on the medicinal, nutritional and technological use of indigenous plants. Clean Air and Urban Landscapes Hub, The University of Melbourne, Victoria, Australia.

* Exploring living entity ideas inspired by "Earth restorer's guide to permaculture" by Rosemary Morrow 2022.

Image credits

- Annette Ruzicka, courtesy Country Needs People: Narrap Rangers undertaking cultural burn(pg21), Narrap Rangers with seedlings (pg26), Narrap Ranger removing water weeds (pg26), Narrap rangers collecting data (pg26), Narrap rangers clearing aquatic weeds (Back cover)
- Banyule Image Library: Powerful Owl - Ninox strenua Credit: Tom Crawshaw (pg42)
- Cathy Willis: Birrarung cover crop (cover), Damselfly (pg7), Rainbow fungi (pg7), Mossy fungi (pg7), Earth Star fungi by (pg8), Acacia paradoxa (pg9), Escarpment woodland (pg9), Wildflowers (pg13), Birrarung (pg16), FOWSP nursery (pg47), Acacia melanoxylon (pg51&62), Tree guard which should have been removed (pg57), Blackberry (pg58), Honeysuckle (pg58), Goodenia ovata (pg62), Olearia lirata (pg63), Friends of Warrandyte State Park -FOWSP nursery (pg64)
- Creative Commons: Spotted Pardalote Credit: Creative Commons (pg10), Murnong - Yam Daisy (Microseris sp.) by Visible Procrastinations is licensed under CC BY-NC 2.0. (pg22), Common Wombat Credit: JKMelville (pg23), Short-finned eel (pg23), Noisy miner Credit: Derek Keats Wikimedia commons (pg63), Acacia dealbata Credit: Krysztof Ziarnek Wiki Commons (pg63), Sweet bursaria Credit: Margaret Donald (pg63)
- Manningham Photo Library: Birrarung with Bulbine lilies (pg3), Jackie Lizard (pg7), Eastern dwarf tree frog (pg7), Rakali (pg22), Native garden (pg50), Planning site restoration (pg52), Pinned jute mat (pg55), Indigenous plants ready for National Tree Day (pg56), Planted and ready to guard (pg56), English broom (pg58), Dillwynia phylicoides (pg61), Hardenbergia violacea (pg61), Coprosma quadrifida (pg61)
- Melbourne Water: Leadbeater's Possum in hand Credit: D.Harley, Common galaxia (pg8), Phascogale (pg9), Nillumbik wine lipped Spider Orchids (pg9), Eastern tiger snake (pg9), Bolin Bolin (pg11), Platypus Credit: Doug Gimesy (pg11), Macquarie Perch (pg11), Yarra Bend Bats (pg13), Narrap Rangers electrofishing Credit: Sarah Gaskill (pg24), Yarra capital site before (pg29) Yarra capital site after (pg29), Platypus Credit: Doug Gimesy (pg47), Bend of Islands (pg57)
- National Gallery of Victoria Reimagining Birrarung exhibition: A still from aquaniullius a film made by OFFICE in partnership with Wurundjeri (contents page), Artistic representation of historical and modern lower reaches of Birrarung Credit: Aspect studios (pg14)
- Parks Victoria Image Library: Bunjil – the Wedge-tailed eagle (pg2), Yarra Bend Credit: Greg Elms Photography (pg4), View towards the city (pg6), Tawny frogmouths (pg7), Swamp wallaby (pg7), Yarra Ranges National Park (pg8), Lyrebird (pg8), Riot of Kookaburras (pg9), Grassy woodland (pg10), Wedge-tailed eagle (pg10), Modified grassy woodland with Eastern grey kangaroos (pg10), Kangaroo grass (pg10), Blue

tongued lizard (pg10), Imperial hairstreak butterfly on Everlasting daisy (pg10), Leptosperum teatree (pg11), Possum and Lorikeets (pg12), Cormorants by the Birrarung (pg12), Pelican in estuary (pg12), Black swans with cygnets (pg12), River gum (pg13), Mistletoe bird (pg13), Birrarung towards city (pg15), River red gum (pg22), Banksia (pg22), Manna gum (pg23), Brushtail possum (pg23), Echidna (pg30), Goats eating weeds (Pg32), Leadbeater's possum monitoring (pg32), Velvet gecko (pg43), Common garden skink (pg44), New Holland honeyeater (pg44), Australian painted lady butterfly on everlasting daisy (pg44), Fairy wren (pg47), River red gum (pg48), Kangaroo grass (pg62), River red gum (pg62), Manna gum (pg63)

- Yarra City Photo Library: Quarry park revegetation (pg41), Healing country event (pg47)Credit: Craig Lupton, Community tree planting day (pg50), Flockhart Reserve (pg55)
- Yarra Ranges Council Plant Directory Images: Mountain grey gum damp forest (pg8), Acacia dealbata (pg11&63), Floodplain Creek line Woodland (pg11), Mentha australis (pg22), Poa ensiformis (pg23) Credit: Marilyn Bull, Yering Billabongs Revegetation (pg37), Ground cover and herb layer (pg59), (Goodenia-ovata (pg62), Acacia stricta (pg62), Carex appressa (pg62), Epacris impressa (pg63), Eucalyptus obliqua (pg63) Leptospermum continentale (pg63), Poa ensiformis (pg63), Acacia dealbata (pg63), Kunzea leptospermoides (pg63)) Credit: Marilyn Bull
- Other: Greening the Birrarung working group Credit: Kirsten Hickey (pg5), Birrarung Billabong Credit: Elli MacDonald (pg6), Dew on spiderweb Credit: Kym Saunders (pg8), Peron's tree frog Credit: Museum Victoria (pg11), Estuary vegetation Credit: Lee Harrison (pg12), Salicornia quinqueflora, Beaded Glasswort Credit: Lee Harrison (pg12), (Wurundjeri water ceremony (pg17), Smoking ceremony (pg21)) Credit: Sharon Blance at Imageworks, Narrap burning (pg25), Narrap Ranger pricking out one of the first seedling crops Credit: Paul Mitchell (pg27), Helmeted Honeyeater: Credit M. Serong (pg30), Revegetation Credit: Tim Brown (pg31), Deer and deer impact Credit: Nick Bean (pg33), Components of an ecological network diagram Credit: Somerset Council (pg35), Wandin Yallock Creek 2025 – post planting (pg35), (Climate future plot Haining farm (pg39), Floating wetlands (pg45)) Credit: Rob Molloy, Twilight platypus walk Credit: David Redfern (pg46), Coranderrk revegetation Credit: Carina Watson (pg46), Breakfast with the platypus event Credit: Charlotte Sterrett (pg47), Riverfest Wurundjeri art activity Credit: David Redfern (pg47), Floating Youth Summit Credit: Carolyn Tate (pg47), Know the Flow Credit: Charlotte Sterrett (pg47), Sunrise over Birrarung Credit: Giancarlo Galluchi (pg47), Spadonis walk and talk Credit: John G (pg47), Birrarung clean up Credit: Jed Furlong (pg47), Coranderrk planting: Credit Rob Molloy (pg49), Clean up event Credit: YRKA (p50), Magpies at the birdbath Credit: Lynda Chambers (pg54), Multiple habitat layers at Whipstick Gully Reserve (pg59)



Narrap Rangers clearing aquatic weed Parrot's feather *(Myriophyllum aquaticum)* from a wetland

OUR PARTNERS

Banyule City Council
Boroondara City of Harmony
Bunurong Land Council Aboriginal Corporation
City of Melbourne
City of Stonnington
Yarra
Manningham
Melbourne Water
Nillumbik The Green Wedge Shire
Parks Victoria Healthy Parks Healthy People
Trust for Nature
Victoria State Government Energy, Environment and Climate Action
VicTrack
Wurundjeri Woi-wurrung
Yarra Ranges Council
Yarra Riverkeeper Association
Yarra Strategic Plan Burndap Birrarung Burndap Umarkoo What is good for the Yarra is good for all