

# JOINT MANAGEMENT PLAN FOR BARMAH NATIONAL PARK



YORTA YORTA TRADITIONAL OWNER  
LAND MANAGEMENT BOARD

2020

### **Cover artwork**

Dixon Patten (Junior)

Yorta Yorta

'Home' 2014

This art depicts the three rivers (our lifelines) that flow through our beautiful Country! Campaspe, Goulburn and of course the Mighty Murray!

The outstretched hands are nurturing the land and I have placed our beloved long-neck turtle (totem) close to the outstretched arms, also nurturing our wildlife.

The various brown/white coloured circles represent the townships/communities that are present today along the river and surrounds. The orange circles depict traditional sacred/special sites for our men and women.

The various (contoured lines) colours represent the bush/forests, sandhills, lakes and plains that you can find on Country.

The three paths that wind, depict our individual journeys — for some of us, that journey has happened off Country, but the paths guide us 'home' for spiritual sustenance and replenishment.

The footprints are those of our old people who have walked this land for millennia, and whose imprints we follow.

# JOINT MANAGEMENT PLAN FOR BARMAH NATIONAL PARK

YORTA YORTA TRADITIONAL OWNER  
LAND MANAGEMENT BOARD

2020

Aboriginal and Torres Strait Islander people are advised that this document may contain images, names, quotes and other references to deceased people.

© Yorta Yorta Traditional Owner Land Management Board and Yorta Yorta Nation Aboriginal Corporation 2020

Prepared by Montane Planning

Maps by Oliver Bleakley

Editing and Graphic Design by David Meagher (Zymurgy Consulting)

This document is also available online at [www.yytolmb.com.au](http://www.yytolmb.com.au)

**Disclaimer**

The plan is prepared without prejudice to any future negotiated outcomes between the Government/s and Traditional Owner Communities. It is acknowledged that such negotiated outcomes may necessitate amendment of this plan.

This plan is also prepared without prejudice to any negotiated or litigated outcome of any native title determination applications covering land or waters within the plan's area. It is acknowledged that any future outcomes of native title determination applications may necessitate amendment of this plan; and the implementation of this plan may require further notifications under the procedures in Division 3 of Part 2 of the *Native Title Act 1993* (Cwth).

Every effort has been made to ensure that the information in this plan is accurate. Yorta Yorta Traditional Owner Land Management Board does not guarantee that the publication is without flaw of any kind and therefore disclaims all liability for any error, loss or other consequence that may arise from you relying on any information in the publication.



River Red Gums (Photo: Parks Victoria)

# PREAMBLE

*‘We don’t set the conditions for life, Mother Earth sets them only that we can survive. Before white man came we were millionaires, we never wanted for anything, everything was free, down to the clear air we breathed, no pollution and clean water, plenty of birds, plant life and animal life. Our People lived and respected each other’s right to co-exist, to care and practise those rights for our land and water. We resent the system that makes us beggars in our own land.’*

— Yorta Yorta Elder, Elizabeth Morgan 1927–2009.

From the earliest days of the British invasion on to this Country — in what become known as Australia, Victoria and New South Wales — the Yorta Yorta people were left out in the distribution of their lands and waters. Without the consent of the Yorta Yorta Nation, the British explorers, squatters, and convicts trespassed on to our territory and claimed it as their own.

The Yenbenon<sup>1</sup> have fought for their rights, and even waged a frontier war up against the colonisers, much of which happened around the Moira Lakes, which is now called the Barmah Lakes. Yorta Yorta people became the victims of massacres,<sup>2</sup> violence, rape and exploitation. All without recognition of our rights, our loss of liberty, without justice or reparations.

These were days of great distress for the Yenbena, for what was once ours, as our paradise of living in harmony on our lands, with all the food and resources at our fingertips, we were to become beggars in less than 20 years, reduced in numbers from being in the thousands to less than a hundred survivors. There was no safe place to dwell, to hunt and to live, as all the Country was claimed by the white squatters, all our natural meats of kangaroo and emus were being herded and shot as pests, the waterways the dwelling place of our aquatic creatures such as Murray Cod, perch and even leeches went to the townships and Melbourne markets. The hundred-year-old red gum trees which lined the rivers and tributaries for thousands of miles were being felled to supply these same townships and cities with building material, firewood for steamers and even transported to far-off places such as India for railway sleepers. Land was being cleared for sheep and cattle where they compacted and damaged the delicate structure of the ancient soils. Existence for the black man was made very precarious for our ancestors who had to rely on the mercy and charity of the white man. But the greatest effects were felt by the black women and their children as they were used to quell the lust of the white man and used and bartered as slaves. There would have been little achieved by colonial land owners in the early days without Aboriginal labourers who were paid in rations and misery.

Yorta Yorta Nation speaks this truth not to find guilt or for pity, but rather it is this truth that has forged the determination of Yenbena to fight for our rightful place for our Country. It has made our Yenbena what we are today, proud and resolute that we are here and we demand a say within our Country and on the way in which it is now managed.

From these earliest colonial days, Yorta Yorta ancestors fought to protect the whole of Yorta Yorta Country, including the place that is now known as Barmah National Park.

This fight took many versatile and innovative forms and included fights for compensation for interference in fishing rights, petitions for rights to land, petitions to the King, applications for fishing reserves at Barmah Lakes, and fighting to return Cummeragunja land. In 1975 and 1983 land rights claims were made for Barmah and Moira, Millewa State Forests which are both in NSW and Victoria, both sides being Yorta Yorta traditional Country.

In 1994 the Native Title claim and Yorta Yorta elders such as Elizabeth Morgan (Hoffmann), Colin Walker, Ken Briggs, Alf Turner, Wayne Atkinson and Margaret Wirrapanda made a claim for the rights to have a

---

<sup>1</sup> Yorta Yorta language: ‘Yenbenon’ — our people; ‘Yenbena’ — a Yorta Yorta person.

<sup>2</sup> Colonial Frontier Massacres in Central and Eastern Australian 1788–1930. Barmah Lakes Massacre 1843. [<https://c21ch.newcastle.edu.au/colonialmassacres/detail.php?r=536>]

say in their traditional lands and waters. This campaign started with our claim over the Barmah forest, which was supported by many non-Indigenous people, both individual and environmental groups and activist groups such as the Friends of the Earth. Our major campaign was for a Barmah/Millewa National Park on both sides of the river and this campaign began in earnest in 1998 with the determination of the Native Title,<sup>3</sup> showing we needed to again rely on our own initiatives with the sit-in protest at the Dharnya Centre by Yorta Yorta Nation and supporters.

In 2004 a historic partnership between the Yorta Yorta Nation and the State of Victoria began when the Yorta Yorta Cooperative Management Agreement was signed at Echuca. Owing to the history of struggle, Yorta Yorta had for the first time a role in management of their Woka (lands) and Walla (waters).

In 2010, following the establishment of Barmah as a National Park, the Yorta Yorta Traditional Owner Land Management Agreement was signed to enable Yorta Yorta to set the management agenda for restoring the health of Barmah National Park. This Joint Management Plan is a result of this agreement.

Yorta Yorta Nation continues with a proud history of strong fighters for social and land justice. This fight continues today as we head into a new era of self-determination.

The Sovereign Yorta Yorta Nation represents the 16 family groups of the surviving Apical Ancestors, with Yorta Yorta Nation Aboriginal Corporation as our representative body that provides for an interface between Victoria and Yorta Yorta.<sup>4</sup>

## *Come here Today Together*

### *Yakarrumdja Imilang yapameyeouka*

- 1 Acknowledgement of First Nations Inherent Rights to their Country; the first step was the signing of the Yorta Yorta Co operative Management Agreement.<sup>5</sup>
- 2 Agreement by Victorian Government that Yorta Yorta Nation are the Traditional Owners of our territory, all lands and waters.
- 3 Provide a process by which Yorta Yorta Nation are provided with the rights to self-determination, which includes the rights as a people over our traditional lands and waters.
- 4 Any relationship between the State of Victoria and Yorta Yorta Nation is as equal partners, and we need to work together to protect and preserve our lands, waters and biodiversity for future generations.
- 5 Yorta Yorta Joint Management is the first step to inclusion of Yorta Yorta Nation in the day to day management of their traditional Country.
- 6 Yorta Yorta people is the original land manager of our traditional lands and waters, and are important in the longer-term strategies in the conservation and protection of Barmah National Park and its important, internationally recognised wetland ecosystems.
- 7 Finally, to achieve a Traditional Owner Settlement with the Victorian Government which will provide further support for our Yorta Yorta aspirations.<sup>6</sup>

---

<sup>3</sup> Yorta Yorta Native Title determination 1998.

<sup>4</sup> See <http://www.yynac.com.au/>.

<sup>5</sup> Yorta Yorta Nation Cooperative Management Agreement 10 June 2004.

<sup>6</sup> Traditional Owner Settlement Act 2010 (Vic.)

# SUMMARY

- 1 Barmah National Park was proclaimed in 2010. It is located in north-central Victoria, between Echuca and Tocumwal, on the Country of the Yorta Yorta Nation, an Aboriginal group that has occupied part of present-day northern Victoria and southern New South Wales for tens of thousands of years.
- 2 The State of Victoria has entered into an agreement with the Yorta Yorta, establishing a Traditional Owner Land Management Board for Barmah National Park. The Board is required to produce this Joint Management Plan for the park, with the Department of Environment, Land, Water and Planning.
- 3 The objectives of the Joint Management Plan are to:
  - a recognise the Yorta Yorta as First Nation People of the Barmah National Park and enable them to enact their rights and cultural responsibilities to manage, restore the health of, gather on and continue to use this part of their Country
  - b develop and apply the combined skills and knowledge of Yorta Yorta and the State in caring for the park
  - c conserve the park's environment and cultural values with the support and active participation of visitors and the community
  - d welcome and provide services for all people to come together to enjoy, understand and respect a forest and wetlands of international significance
  - e conserve, promote and interpret Yorta Yorta culture and the shared history of the park
  - f improve the wellbeing and prosperity of Yorta Yorta people and communities across the region through employment, business and tourism opportunities
  - g provide institutional support and capacity for Yorta Yorta to effectively deliver joint management.
- 4 The Joint Management Plan sets out strategies for:
  - a developing the skills and capacity of Yorta Yorta to undertake joint management of the park and to apply Yorta Yorta cultural knowledge, including links to whole-of-Country programs and the Yenbena Training Centre in Barmah township
  - b improving the health of Country in the park with priority on restoring Moira grasslands and marshes through a better water regime, removing feral horses and other pest animals, and controlling invasive wetland plants
  - c managing a revitalised Dharnya Centre and the surrounding area of the park as a visitor gateway and cultural hub providing interpretation and education, tourism services and events, and training programs
  - d achieving more sustainable visitor use through improved access, camping and boating facilities, and reducing the impacts on cultural heritage and the environment
  - e providing opportunities for Yorta Yorta cultural practice and knowledge transfer including setting aside an area to gather and undertake traditional practices in the park
  - f recognising and interpreting the shared history of the park since the colonial era
  - g developing Yorta Yorta employment and business opportunities in park management, education and tourism, and economic benefits for the region.
- 5 Restoring the health of Country, especially the condition of Barmah's internationally significant Ramsar wetlands is the most important focus of the plan. The declaration of the National Park in 2010 and the allocation of environmental water to the park in recent years has improved some parts of the park but further restoration is required.
- 6 Revitalising the Dharnya Centre is essential to the wellbeing of Yorta Yorta, and will re-establish the gateway to the park, and a vibrant hub for the community and for regional tourism – a place where all people come together to understand, enjoy and celebrate Barmah Forest.
- 7 The strategies for more sustainable visitor experiences recognise that the pattern of visitor use in the National Park needs to evolve. This is essential to ensure the park is used with respect, to provide the environmental and cultural protections required by national park legislation, and to improve the health of Country that continues to be stressed by climate change and drought. Almost all of the existing recreational activities in Barmah will continue but with provisions that ensure that they do not impact on the park or other visitors. The key changes to public access and visitor activities are:



- The overall level of vehicle access to the park will remain similar to the present but some tracks or sections of track will be closed if they are not essential to visitor access or emergency management. This will occur through engagement on a detailed road and track plan with community stakeholder groups and emergency management authorities.
- Dispersed camping will continue to be available in large areas of the park along Dhungalla (Murray River). Areas with environmental values may be closed for periods to allow rehabilitation and, in some locations, camping will be re-sited or closed where cultural heritage values are present.
- Barmah Lakes camping area, canoe camping areas on The Narrows or Barmah Choke, and a new camping area in a location in the southern part of the park to be determined, will be classified as ‘designated camping’ and will be subject to a booking system and overnight fees, similar to other national parks in Victoria.
- Campfires will be allowed all year round within authorised fireplaces in accordance with fire regulations. Dispersed campfires (ie outside authorised fireplaces) will be allowed in the Dhungalla Zone along the Murray River, in accordance with fire regulations, except within 50 metres of any authorised fireplace provided. Dispersed campfires outside authorised fireplaces will not be allowed during the declared fire danger period. Additional authorised fireplaces will be established in the Dhungalla Zone to support this strategy.
- Horseriding will not be allowed in the National Park except along the section of Sand Ridge Track from Rices Bridge to access the Community Use Area during permitted events. Existing horseriding tour operator licences will continue until expiry of each current licence.
- Boating on Barmah Lake and other waters in the park will be subject to a five-knot speed limit except for licensed tour operations and other authorised purposes
- Additional facilities will be provided to reduce impacts including toilets at designated camping areas and additional boat ramps to reduce bank erosion
- Access for vehicles and canoes/kayaks will be improved during flood periods
- Generators will be allowed to be used only in designated sections of the Dhungalla Zone along the Murray River, and in part of the Barmah Lakes Camping Area in the Gulpa Gaka Zone, between sunrise and sunset. Chainsaws will be allowed to be used only in designated areas of the park for cutting firewood for park campfire use.

8 The Joint Management Plan also contains guidance for implementation of the plan and progressing joint management governance.

*The vision for the park is ‘Heal the Land, Heal the People — Healthy Country’. At the centre of this vision is a change in the historical story of the Barmah Forest and the Yorta Yorta: to recognise us as the First Nation People of Barmah, redress our removal from the land and to enable us to take our place once again as custodians and decision-makers on this rich part of our Country. We resume that place in partnership with the State, government agencies and the broader community.*

# FOREWORD

I am delighted to release the *Joint Management Plan for Barmah National Park*. This plan demonstrates the commitment of the Victorian government and the Yorta Yorta people to a collaborative partnership in managing this significant park of River Red Gum forests, internationally significant wetland ecosystems and enduring Yorta Yorta connection to Country.

The plan's vision for the park is 'Heal the Land, Heal the People – Healthy Country'. The plan is predicated on recognition of Yorta Yorta's traditional ownership and custodial rights in a new era of self-determination and equal partnership in decisions, responsibilities and management, for the benefit of all Victorians.

The plan recognises the important past, present and future cultural and natural values of the park both for the Yorta Yorta and the wider community. The plan includes strategies to enhance visitor experiences to ensure the park can be enjoyed by the wider community, balanced with actions that seek to provide environmental and cultural protections to improve the health and resilience of Country, particularly in times of drought and climate change.

At the heart of the plan is incorporating Yorta Yorta knowledge and culture into the management approach of the park. Of fundamental importance to Yorta Yorta is the recognition of their rights to be present and active in the park, to enact their responsibilities to care for and use Country and to undertake cultural practices. Putting the plan into action will empower the Yorta Yorta by building skills and capacity to look after their Country as well as provide new opportunities for education and enjoyment by park users and visitors.

I would like to share my appreciation for the work involved in producing the *Joint Management Plan for Barmah National Park*. It is the culmination of the collective effort of many people and organisations, particularly the Yorta Yorta Traditional Owner Land Management Board, the Yorta Yorta Nation Aboriginal Corporation, Parks Victoria, the Department of Environment, Land, Water and Planning and the wider community. The passion, dedication, and enthusiastic collaboration necessary to establish this plan is evident in the result.

I look forward to seeing the plan successfully implemented over the coming years.



The Hon. Lily D'Ambrosio MP

Minister for Energy, Environment and Climate Change

# APPROVED JOINT MANAGEMENT PLAN

*'Gaka Yawall Ngulla Yenbena Yorta Yorta Woka.'*

*'Come walk with us the people on Yorta Yorta Country.'*

This Joint Management Plan for Barmah National Park has been prepared in accordance with Part 8A of the *Conservation, Forests and Lands Act 1987* (Vic.).

The purpose of the Joint Management Plan is to set the strategic direction for the joint management of Barmah National Park and to enable the knowledge and culture of the Yorta Yorta Nation to influence and be recognised in that management. The Joint Management Plan marks an historic step in enabling Yorta Yorta to participate in and share responsibility for the management of an important part of our Country, in partnership with the Victorian Government.

The plan is consistent with the objects and requirements of the *National Parks Act 1975* (Vic.). The plan meets the preparation requirements of the Traditional Owner Land Management Agreement between Yorta Yorta Nation Aboriginal Corporation and the Victorian Government.

The Joint Management Plan will guide the joint management of the National Park for 10 years, with periodic review and updating of the plan after 5 years.

This plan is agreed in accordance with Section 82PG of the *Conservation, Forests and Lands Act 1987*.



Des Morgan

Yorta Yorta Elder

Chair, Yorta Yorta Traditional Owner Land Management Board



John Bradley

Secretary to the Department of Environment, Land, Water and Planning

This plan is approved in accordance with Section 82PH of the *Conservation, Forests and Lands Act 1987*.



The Hon. Lily D'Ambrosio MP

Minister for Energy, Environment and Climate Change

# YORTA YORTA GLOSSARY

The words and translations below are provided to assist the reader, while recognising that there are differences of view regarding the spelling and translation of Yorta Yorta words. A glossary of other terms and abbreviations is provided in Appendix 1.

Bayadherra .....	Broad-shelled Turtle ( <i>Chelodina expansa</i> )
Biarni.....	the Creator Spirit
Bitja .....	fire
Biyala .....	River Red Gum
Borpa .....	crayfish or freshwater yabbies
Burnanga .....	Murray Cod
Dhungalla .....	Big Water — the Murray River
Dhungalla Watjerrupna.....	Murray River Turtle ( <i>Emydura macquarii</i> )
Djirrungana Wanurra Watjerrupna .....	Common Long-necked Turtle ( <i>Chelodina longicollis</i> )
Gane .....	The great rainbow snake
Gulpa gaka.....	welcome
Gurranyin .....	eagle
Mamel .....	Carpet Python ( <i>Morelia spilota metcalfei</i> )
Manu .....	camp
Nurnamamdatba .....	kingfisher
Nurtja .....	forest
Walla .....	water
Woka .....	land
Wuta yapaneyepuk .....	all together
Yenbenon .....	our people
Yenbena.....	a Yorta Yorta person



Koalas (Photo: Parks Victoria)

# CONTENTS

Preamble .....	iv
Summary .....	vi
Foreword.....	viii
Approved joint management plan .....	ix
Yorta Yorta glossary .....	x
CONTEXT OF THE PLAN .....	1
1 Joint management .....	2
1.1 Principles for joint management.....	5
1.2 Scope of the Joint Management Plan .....	5
1.3 Community input and consultation on the Draft Plan.....	7
2 Significance of Barmah National Park.....	13
3 The story of Yorta Yorta .....	15
4 Legislation, policy and other plans.....	19
4.1 Legislation .....	19
4.2 Policies .....	19
4.3 Other plans .....	20
5 Regional Context.....	22
THE JOINT MANAGEMENT PLAN <i>WUTA YAPANEYEPUK</i> .....	23
6 Vision and objectives .....	24
7 Management zoning .....	25
8 Healthy Country — <i>Yorta Itjumatj Woka Walla</i> .....	27
8.1 Woka — Land.....	27
8.2 Walla — Water.....	27
8.3 Ramsar site.....	28
8.4 Plants and vegetation communities .....	28
8.5 Animals .....	29
8.6 Bitja — fire .....	30
8.7 Environmental condition and threats .....	32
8.8 Climate change .....	35
8.9 Yorta Yorta culture and cultural heritage .....	39
8.10 Post-colonial and shared history.....	42
9 Community connections and partnerships.....	47
9.1 Community connections .....	47

9.2	Government partners .....	47
9.3	Social and economic opportunities for Yorta Yorta .....	48
10	Visitor experiences.....	50
10.1	Moving to more sustainable visitor experiences .....	50
10.2	Visitor Experience Areas (VEAs) .....	51
10.3	Gateway to the park .....	52
10.4	Access roads and tracks .....	52
10.5	Boating .....	52
10.6	Camping, campfires and camping fees .....	53
10.7	Horseriding.....	54
10.8	Visitor safety, compliance and enforcement .....	54
10.9	Tourism .....	55
10.10	Information, interpretation and education .....	55
11	Authorised uses and occupancies.....	64
12	Research and improving our knowledge .....	66
	GOVERNANCE, IMPLEMENTATION AND MONITORING OF THE JOINT MANAGEMENT PLAN.....	67
	REFERENCES .....	71
	APPENDICES .....	75
	Appendix 1: Abbreviations and glossary .....	75
	Appendix 2: Ramsar site ecological character measures .....	78
	Appendix 3: Legislation, agreements and conventions .....	79
	Appendix 4: Threatened species in Barmah National Park.....	80
	Appendix 5: Key threats and levels of risk to conservation assets and values .....	85
	Appendix 6: List of submissions made on the Draft JMP .....	87
	MAPS 2 TO 5.....	90





# CONTEXT OF THE PLAN

A clutch of emu eggs (Photo: Keith Ward)

# 1 JOINT MANAGEMENT

Barmah National Park in north-central Victoria was proclaimed on 29 June 2010 following a recommendation to the State Government by the Victorian Environmental Assessment Council. It covers 28 505 hectares of floodplain forests and wetlands along the southern bank of Dhungalla (the Murray River) between the towns of Barmah and Tocumwal, approximately 220 kilometres north of Melbourne.

The park is on the traditional Country of the Yorta Yorta Nation, who are formally recognised by the Victorian Government as the Traditional Owner Group for Yorta Yorta Country, based on traditional and cultural associations with the land. The Yorta Yorta Nation Aboriginal Corporation (YYNAC) is recognised as the Traditional Owner Group Entity for the Yorta Yorta Nation<sup>7</sup>. It is also the Registered Aboriginal Party (RAP) under the *Aboriginal Heritage Act 2006 (Vic.)* with decision-making responsibilities for protecting Aboriginal cultural heritage, and other matters, within the RAP area.

In 2010 the Minister for Environment and Climate Change, on behalf of the State of Victoria, entered into a Traditional Owner Land Management Agreement (TOLMA) with the YYNAC over Barmah National Park under the *Conservation, Forests and Lands Act 1987 (Vic.)*. The TOLMA:

- provides for the establishment of a board appointed by the Minister, comprising members nominated by the YYNAC and other members
- acknowledges that the appointed land will be managed in accordance with the *National Parks Act 1975 (Vic.)* and other legislation
- recognises the then legislative and management responsibilities of the Secretary (DELWP) and the assignment of certain land management functions for the park to Parks Victoria
- requires the Yorta Yorta Traditional Owner Land Management Board (YYTOLMB) and the Secretary to prepare a Joint Management Plan, to be approved by the Minister.

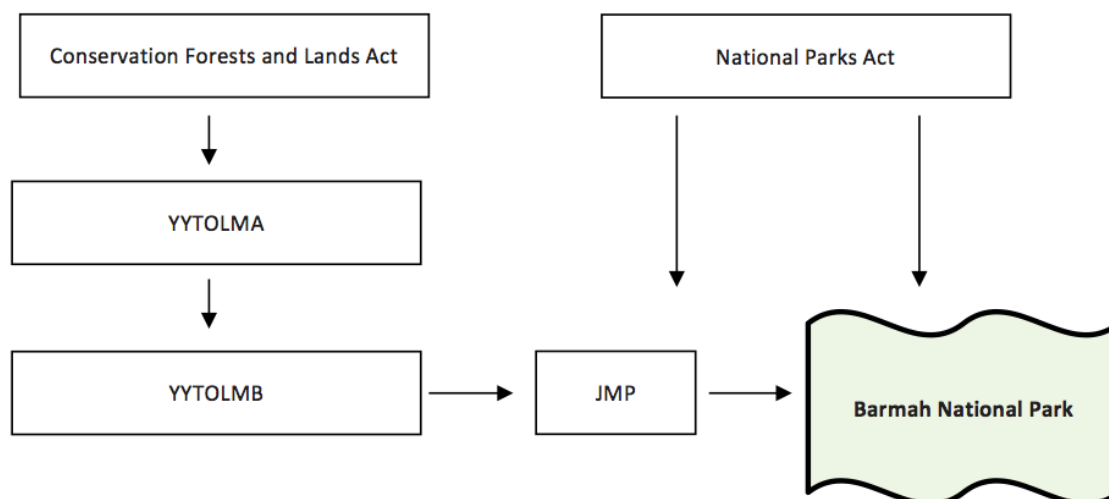


Workshop discussions to develop the Joint Management Plan. (Photo: Liam Neame)

---

<sup>7</sup> See Attorney-General's Recognition Notice, Victorian Government Gazette, No. S 435, 26 October 2010.

**Figure 1. Framework for the JMP.**



Partner	Roles and responsibilities
Yorta Yorta Nation Aboriginal Corporation (YYNAC)	The legally recognised Traditional Owner Group Entity for the Yorta Yorta Nation, which nominates members to the YYTOLMB. YYNAC is also the Registered Aboriginal Party (RAP) under the <i>Aboriginal Heritage Act 2006</i> (Vic.), with decision-making responsibilities for protecting Aboriginal cultural heritage and other matters within the RAP area.
Department of Environment, Land, Water and Planning (DELWP)	Responsible for legislative functions and policy relating to the conservation and use of Victoria’s environment, land and water, including climate change, and public land fire management. Shares responsibilities for joint management with the YYTOLMB under the <i>Conservation, Forests and Lands Act 1987</i> (Vic.). Jointly responsible for maintaining or improving the ecological character of the Barmah Forest Ramsar site - with Parks Victoria (land manager) and GBCMA (waterway manager). Responsible for fire and forest management, and environmental water allocations in Barmah Forest.
Yorta Yorta Traditional Owner Land Management Board (YYTOLMB)	Responsible for enabling the knowledge and culture of the Yorta Yorta to be recognised and incorporated into the management of Barmah National Park, by carrying out the YYTOLMB’s functions, powers and duties and preparing a JMP in accordance with the Traditional Owner Land Management Agreement (TOLMA).
Parks Victoria	Responsible for the management and operation of Barmah National Park and adjacent parks and reserves, to protect, conserve and enhance the land and provide for appropriate use, enjoyment and appreciation. Responsible for recognising and supporting Traditional Owner knowledge of and interest in the land it manages. Administers its functions under the <i>Parks Victoria Act 2018</i> (Vic.) and is responsible for regulation of the national park under the National Parks Act.
Goulburn Broken Catchment Management Authority (GBCMA)	Responsible for regional catchment and land protection, and waterway manager under the <i>Water Act 1989</i> (Vic.) for the waterways in the park.
Murray Darling Basin Authority (MDBA)	Responsible for planning for the sustainable use of the Basin’s water resources; and operating the River Murray system and delivering water to users on behalf of partner governments.

The objectives of joint management under the TOLMA are to establish an equitable partnership between the State of Victoria and Yorta Yorta that:

- ensures innovation and excellence
- benefits the Yorta Yorta people by recognising, valuing, promoting and incorporating their culture and knowledge, skills and decision-making processes
- identifies opportunities for the involvement of Yorta Yorta people in the management of the park
- benefits the community needs of all Victorians and visitors for public education, and enjoyment through quality experiences, services and information
- conserves, protects and enhances natural and cultural values
- enjoys widespread community support
- ensures the wellbeing of Country and the wellbeing of people.

Under the TOLMA, the JMP must cover:

- conservation of natural values and cultural values
- managing threatened species
- the recognition, practice and utilisation of traditional Yorta Yorta knowledge and customs
- attracting and managing visitors
- managing authorised and adjacent uses (including third party interests)
- community awareness and involvement
- managing public use and access to the land
- plan implementation
- providing operational support to the YTOTLMB
- promoting, encouraging and assisting Yorta Yorta persons to take advantage of employment, training and contracting opportunities relating to the National Park
- managing commercial and other land use activities
- managing fire consistently with the directions of the Secretary DELWP
- any additional matters contained in relevant ministerial guidelines.

The JMP must also set out a statement of objectives for achieving sustainable management of the park.

The TOLMA for Barmah National Park is separate from the broader 2004 Co-operative Management Agreement between YYNAC and the State of Victoria. The latter agreement provides for the active involvement of Yorta Yorta in the management of the major areas of public land on Yorta Yorta Country, including Barmah National Park and other parks and conservation reserves, through a joint body. Although an important step forward at the time of its establishment, the Cooperative Management Agreement is seen by Yorta Yorta as giving advisory status only, rather than equal status with Government as joint decision-makers and managers.

Yorta Yorta have lived and prospered on our Country for thousands of years prior to colonial settlement. For the Yorta Yorta Nation, managing Country and using and caring for its resources is a right and a responsibility. Colonisation and past government policies forced the Yorta Yorta off our ancestral lands and removed our ability to care for Country. Through joint management in Barmah National Park, and other arrangements on other parts of Country, the Yorta Yorta are re-establishing our role and capabilities in land management. The Yorta Yorta Whole-of-Country Plan sets out the community's approach to this work and expresses Yorta Yorta objectives for all our ancestral lands including Barmah National Park (YYNAC 2012).

## 1.1 PRINCIPLES FOR JOINT MANAGEMENT

The YITOLMB has adopted the following principles for the Joint Management Plan:

- recognition and incorporation of Yorta Yorta peoples' knowledge and culture in all land management decisions within the park
- valuing Yorta Yorta's principal objectives of the corporation and status as a Registered Aboriginal Party
- valuing the Declaration of Rights of Indigenous Peoples
- including representatives of Yorta Yorta people as active research partners, where they should be vertically integrated throughout all research projects
- maintaining confidentiality of issues raised by all stakeholders
- ensuring that the values of stakeholders in the wider community are taken into consideration in all decision-making processes
- incorporating environmental, social and cultural values and financially sustainable actions into all land management practices that occur within the park
- ensuring compliance with all jurisdictional responsibilities and all Acts under which the Board is appointed.

*'We regard our positions as time-honoured, and wish to act in accordance with those values as set out for us by our ancestry.'*

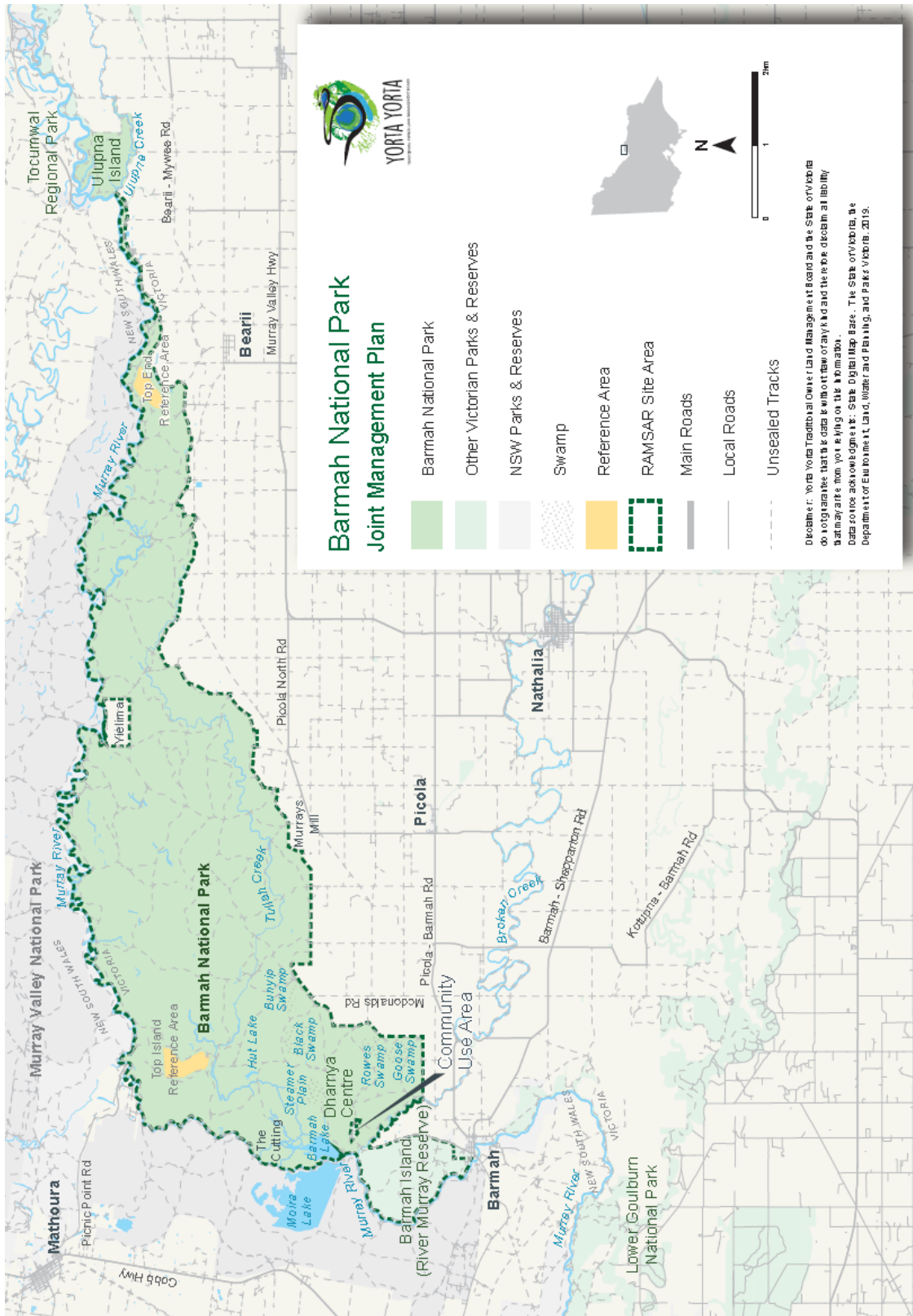
*— Peter Ferguson, late Chair YITOLMB*

## 1.2 SCOPE OF THE JOINT MANAGEMENT PLAN

The planning area for the Joint Management Plan is the whole of Barmah National Park (Map 1).

Two areas of land are separate from the National Park but are encompassed by its boundaries. The 22-hectare Community Use Area in the south-western part of the park, which includes the Dharnya Centre, is Crown land. The Yielima property near The Gulf is owned in freehold by the Yorta Yorta Nation Aboriginal Corporation. These areas are not formally covered by the Joint Management Plan, but the plan proposes directions for collaborative management of both areas.

The JMP supersedes the management plan for the former Barmah State Park and Barmah State Forest, which were public land areas that now form the Barmah National Park. The JMP will guide management of the National Park for 10 years, with periodic review, and updating of the plan after five years.



Map 1. Joint Management Plan planning area.

## 1.3 COMMUNITY INPUT AND CONSULTATION ON THE DRAFT PLAN

A Draft Joint Management Plan was released in early August 2019 for a two-month public consultation period as required by the Conservation, Forests and Lands Act. The Draft JMP was approved for release by the YYTOLMB with the agreement of the Secretary DELWP. An advertisement announcing release of the Draft JMP was placed in newspapers on 6 August 2019. The plan and a summary brochure were made available for viewing and download on the YYTOLMB website. 'Frequently asked questions', and information sheets on specific topics of public interest (visitor access and camping, and horseriding) were also made available through the website. One hundred hard copies of the Draft JMP and 500 hard copies of the summary brochure were printed and distributed through regional outlets. The release of the Draft JMP was publicised on the DELWP and Parks Victoria websites with links to the YYTOLMB website. The community and stakeholders were invited in the Draft JMP, the brochure and the website to make submissions on the plan via email or post to the YYTOLMB, and in person through 'Open House' consultation sessions.

Three Open House sessions were held, to provide the community and stakeholders with face-to-face opportunities to seek information about the Draft JMP and planning process, and to provide comments or make alternative proposals. The sessions were held at Shepparton, the Dharnya Centre at Barmah, and in Echuca. The Open House sessions were staffed by Montane Planning, YYTOLMB members and staff, DELWP and Parks Victoria personnel, who were available to answer questions and to hear views. Participants were able to provide feedback by completing submission forms, providing verbal feedback to staff, and posting comments on a 'graffiti wall'. The sessions were attended by a total of 115 participants. This total includes a number of people who attended more than one session. Responses in the approved JMP to the issues raised during consultation are described below.

ISSUES RAISED IN CONSULTATION ON THE DRAFT JMP, AND YYTOLMB RESPONSE	
<b>Issues raised</b>	<p><b>Restoring the health of Barmah Forest</b></p> <p>A large number of submissions recognised the environmental and cultural importance of the Barmah Forest and supported action to protect and restore its health.</p>
<b>Response</b>	<p>The healthy Country proposals in the JMP have been retained subject to changes outlined on issues below.</p>
<b>Issues raised</b>	<p><b>Water management</b></p> <p>A number of submissions stated that rectifying the water regime should be given greater priority in the plan, especially addressing unseasonal summer/autumn flooding related to downstream irrigation demands.</p> <p>Several submissions called for additional measures to protect the aquatic habitat of the park and Dhungalla (Murray River).</p> <p>Several submissions stated that debris and barriers in creeks should be cleared and re-opened to restore more natural flows in the park. There were also calls for the levee on the southern park boundary to be repaired.</p>
<b>Response</b>	<p>The need to progressively improve the water regime, as part of the complex operation of the Murray River system as a whole, has been given clearer focus in the JMP. The plan has been amended to include a strategy to improve natural flows in 'runners' and drainage lines through the removal or modification of constructed barriers, removal of River Red Gum regrowth, and realignment or careful removal of excessive timber debris, while retaining woody debris levels required for aquatic habitat. The JMP position on the maintenance and repair of levees – based on the 'beneficiary pays' model - has been clarified.</p>
<b>Issues raised</b>	<p><b>Invasive animals</b></p> <p><b>Feral horses</b></p> <p>Many submissions supported the proposals to remove feral horses to protect the park, particularly marsh areas. There was a similar level of objections to feral horse removal which called for changes including: improving the water regime as a more urgent conservation priority than removing horses; the need for more research on the horse</p>

ISSUES RAISED IN CONSULTATION ON THE DRAFT JMP, AND YYTOLMB RESPONSE	
	population before any removal occurs; and that the use of fertility control and rehoming should be used in place of lethal control. A number of submissions objected to total eradication of feral horses and called for a reduced population of horses to be retained for heritage and social values, managed in co-operation with local horse interest groups.
<b>Response</b>	The strategy to remove all feral horses from the park is retained in the JMP due to the critical need to reduce present and future damage to the park's marshes and other environments. Issues raised in submissions regarding control methods and population research (as a pre-requisite to taking action to remove horses) were discussed with Parks Victoria and, based on the available scientific evidence and technical advice, were not accepted as warranting change to the JMP proposals for feral horses.
<b>Issues raised</b>	<p><b>Fire management</b></p> <p>Submissions called for more clarity to be provided as to how public access will be managed on Code Red days including education and warnings for visitors.</p> <p>There were also calls for a greater focus on how fuel loads will be managed.</p>
<b>Response</b>	<p>The JMP has been amended to provide more guidance on management of park access on Code Red days and other emergency periods.</p> <p>Management of bushfire fuel loads is guided by DELWP's Strategic Bushfire Management Plan for the region. JMP objectives will be progressively integrated into that plan. Specific fuel management measures including areas to be burnt or fuel-reduced through slashing or other methods are determined in three-year Joint Fuel Management Plans produced by DELWP and CFA, which also consider JMP objectives. The JMP has been amended to clarify the role of the fuel management plan.</p>
<b>Issues raised</b>	<p><b>Threatened and important species</b></p> <p>The adequacy with which the JMP dealt with threatened and important species was questioned. Concern was expressed about the decline in Murray Cod population with calls for the JMP to address this problem.</p>
<b>Response</b>	<p>The JMP has been amended to expand the provisions for managing threatened and important species.</p> <p>The most recent annual scientific monitoring of fish in the Barmah-Millewa Forest (2018) found that the overall condition of the fish community is good and recorded large-bodied native fish species including Murray Cod, in similar numbers from 2016 to 2018, and in comparatively higher numbers to sample years prior to this period.</p>
<b>Issues raised</b>	<p><b>Cultural and historic trail</b></p> <p>There was general support for increasing the promotion and interpretation of Yorta Yorta cultural heritage and shared history of the park through development of a cultural and historic trail. Submissions from several individuals and organisations sought the opportunity to collaborate in the development of the trail.</p>
<b>Response</b>	The JMP has been amended to identify the opportunity for community collaboration on the development of the cultural and historic trail.
<b>Issues raised</b>	<p><b>Other environmental and cultural issues</b></p> <p>It was suggested that the economic value of carbon sequestration in the park should be recognised and promoted.</p> <p>There was a call for the plan to better address the impacts of climate change on visitor use.</p>
<b>Response</b>	The relevant sections of the JMP dealing with the carbon sequestration function of the park and the impacts of climate change have been expanded.
<b>Issues raised</b>	<p><b>Horseriding</b></p> <p>A significant number of submissions objected to the proposals to restrict recreational horseriding in the park. Concerns raised included the loss of recreational and educational opportunities, loss of heritage, and impacts on tourism businesses and community events</p>



ISSUES RAISED IN CONSULTATION ON THE DRAFT JMP, AND YYTOLMB RESPONSE	
	<p>particularly the Barmah Muster. Some submissions called for horseriding to be allowed on designated tracks to minimise any impacts, while other submissions called for dispersed riding off-track to minimise impacts. Other measures proposed for managing horseriding included allowing riding to continue under existing tour operator licences, under event permits or a code of practice for public riding access.</p>
<b>Response</b>	<p>The restrictions on horseriding, are retained in the JMP. A key management objective of the plan is to restore the health of Barmah in a region that has been extensively modified for agriculture and settlement. Minimising the impacts of non-native animals, including horses, is central to this objective. While the history of horseriding in the forest is acknowledged, nearby opportunities for riding exist outside the park.</p>
<b>Issues raised</b>	<p><b>Camping</b></p> <p>A number of submissions objected to the plan’s camping proposals, expressing concern that dispersed camping was to be prohibited, and calling for camping to be unrestricted throughout the park, and free of charge. Some submissions supported camping fees for designated areas with facilities, providing funds were invested in maintenance. Several submissions were concerned that dispersed camping areas would be converted to designated camping over time, and others that camping fee proposals might be extended to fees for general park entry. There was a call for consultation with local fishing groups where dispersed camping areas are to be closed for protection of environmental or cultural values. There was also a call for walk-in dispersed camping to be allowed in most areas of the park.</p>
<b>Response</b>	<p>The camping proposals in the plan did not appear to be well understood by a number of submitters and people attending the Open Houses. A number of submissions and attendees interpreted the plan proposals as restricting all camping to designated areas where bookings and fees would apply. The camping proposals have been retained in the JMP, but a clearer summary of the changes has been provided in the introduction to the plan and the camping section. The rationale for limiting dispersed camping to the Dhungalla Zone (based on camper demand and the use of River Road as a firebreak for visitor safety and limiting campfire escapes) has been made explicit in the JMP. The proposed designated camping area to be developed in the southern section of the Biyala Zone will be designed so as to provide quiet camping opportunities, as an alternative for those campers wishing to camp away from the designated camping area at Barmah Lakes and the popular dispersed camping in the Dhungalla Zone. Dispersed camping areas closed for protection of environmental or cultural values will generally be limited in size with nearby alternative campsites. Community consultation on specific closures is not practical. Any closures that significantly restrict camping opportunities will be publicised through visitor information channels.</p> <p>Due to the limited use of the park for overnight walking at present, the call to allow walk-in dispersed camping has not been adopted at this time.</p>
<b>Issues raised</b>	<p><b>Campfires, firewood collection and chainsaws</b></p> <p>A number of submissions and Open House attendees objected to the proposal that campfires in dispersed camping areas must be in constructed fireplaces where these are provided.</p> <p>Objections were raised to the proposal prohibiting chainsaw use in the park due to the difficulty for some visitors of cutting firewood by hand, with the potential for larger, unsafe fires. Several submissions suggested alternatives such as allowing electric chainsaws to be used to reduce noise.</p> <p>Several submissions called for campfires to be prohibited during the fire danger period, consistent with the regulations in adjacent park and public land areas of New South Wales.</p>
<b>Response</b>	<p>The JMP has been amended in relation to campfires. Campfires will be allowed all year round within authorised constructed fireplaces in accordance with fire regulations. Dispersed campfires (ie, outside authorised constructed fireplaces) will be allowed in the Dhungalla Zone in accordance with fire regulations, except within 50 metres of any authorised public fireplace provided. Dispersed campfires outside authorised fireplaces will</p>

ISSUES RAISED IN CONSULTATION ON THE DRAFT JMP, AND YYTOLMB RESPONSE	
	<p>not be allowed during the declared fire danger period. Additional constructed fireplaces will be established in the Dhungalla Zone to support this strategy.</p> <p>The JMP has been amended to allow the use of chainsaws to cut firewood collected along tracks in the Biyala Zone, except at Ulupna Island, and along both sides of Gulf Track. The prohibition on collecting firewood for any use outside the park is retained.</p>
<b>Issues raised</b>	<p><b>Generators</b></p> <p>There were a number of objections to the proposed prohibition on the use of generators in the park. These argued that generators were important for camper amenity and convenience.</p>
<b>Response</b>	<p>The rationale for restricting generators has been retained and made explicit in the JMP – allowing visitors to enjoy the natural peace and quiet of the forest without the intrusion of nearby noise-generating equipment. In recognition of the requirements of some visitors and the limitations of alternatives such as solar panels at certain times, the JMP has been amended to allow for designation of a number of areas within the Dhungalla Zone along the Murray River, and part of the Barmah Lakes Camping Area in the Gulpa Gaka Zone, where generators can be used between sunrise and sunset within reasonable noise levels.</p>
<b>Issues raised</b>	<p><b>Roads and tracks</b></p> <p>A number of submissions expressed concern that any closure of tracks will make access for bushfire management more difficult.</p> <p>Several submissions called for more action to manage the impacts of off-road vehicle use as a higher priority environmental threat than other threats identified in the plan. There was also a call for a vehicle speed limit.</p> <p>Several submissions sought clarification of the park’s southern boundary and road reserve at that location.</p> <p>In response to the proposal to raise road levels at low points to improve access during flooding there was a call for this to be limited to main 2WD roads and not 4WD routes.</p> <p>Ensuring integration with the local Shire road network was identified as important, especially to co-ordinate road and track maintenance.</p>
<b>Response</b>	<p>The need to review the road and track network in conjunction with emergency services has been strengthened in the JMP. The JMP has been amended to provide more guidance on management of park access on Code Red days and other emergency periods (see Fire Management above) and to co-ordinate maintenance.</p> <p>Provisions in the JMP dealing with regulation and enforcement have been amended to include an explicit focus on off-road vehicle use, and recognise detection and enforcement action to control off-road vehicle use as an ongoing task. Speed limits are generally only applied to main roads on public land due to the impracticality of the associated regulatory requirements on minor roads and tracks.</p> <p>The strategies in the authorised uses section of the JMP, dealing with the southern boundary, have been retained. Identification of sections of roads and tracks that are appropriate to raise in level will be part of the road and track review.</p>
<b>Issues raised</b>	<p><b>Boating</b></p> <p>A number of submissions objected to limiting boating in ‘passive boating’ areas to 5 knots and limiting the use of motors to 3 horsepower as impractical and unsafe in strong currents. Various alternatives were suggested including revising the speed limit to 10 knots to all passive areas or at least on Barmah Lake. Some submissions argued that boating restrictions on creek mouths on Dhungalla (Murray River) are unnecessary and excessive.</p> <p>Several submissions called for prohibiting all motorised boating in passive boating areas and for personal watercraft (eg ‘jet skis’) to be prohibited from Barmah Lake. There was a call for the Murray River Canoe Trail to be identified in the plan and for improved launching</p>

ISSUES RAISED IN CONSULTATION ON THE DRAFT JMP, AND YTTOLMB RESPONSE	
	facilities to access the trail to be developed. It was suggested that proposals to establish new boat ramps should be developed as part of a boating infrastructure plan with Better Boating Victoria.
<b>Response</b>	The rationale for 'passive boating' restrictions has been made more explicit in the JMP: to reduce wildlife and visitor disturbance and bank erosion by limiting the noise, speed and wake of boats. The JMP has been amended to revise the passive boating restriction to 5 knots speed with no limit on motor size. This speed limit may be varied for licensed tour operations, management craft and authorised researchers. A strategy has been added to the JMP to pursue a prohibition on personal watercraft use on Barmah Lake. The JMP has been amended to clarify that passive boating restrictions do not apply to the Murray River. The Murray River Canoe Trail has been identified in the JMP as a key recreational opportunity to be promoted and further enhanced through improved access. Collaboration with Better Boating Victoria on boating facilities has been added to the JMP.
<b>Issues raised</b>	<p><b>Fishing</b></p> <p>Several submissions expressed concern about the restriction on collection of 'other bait' (eg shrimps and yabbies) as an extension of the prohibition on digging for Bardi grubs.</p> <p>There was a call for recovery stocking of recreational fish species to be complemented by restoring in-stream habitat, riparian zones and removing barriers to fish passage.</p> <p>One submission questioned the need for control of redfin perch due to its popularity as a recreational fishing species, identifying oriental weatherloach and goldfish as invasive species requiring greater control.</p>
<b>Response</b>	<p>The JMP has been amended to clarify that digging for Bardi grubs is prohibited in the park, and that the collection of other bait can only be carried out according to the methods and limits specified in Victorian fishing regulations and does not include frogs, tadpoles, and fish and other taxa protected under the Flora and Fauna Guarantee Act.</p> <p>Redfin perch is known to predate on the native Southern pygmy perch which is a candidate species for native fish re-introduction. However other threats and species will be relevant any re-introduction. The JMP has been amended to discuss a range of predatory species and other threats including redfin, oriental weatherloach and goldfish that will need to be considered and prioritised as part of any re-introduction program.</p>
<b>Issues raised</b>	<p><b>Dharnya Centre</b></p> <p>A large number of submissions supported the proposal to revitalise the Dharnya Centre and several organisations expressed interest in partnering in this work.</p>
<b>Response</b>	The proposals to revitalise the Dharnya Centre have been retained and the potential for partnerships has been strengthened.
<b>Issues raised</b>	<p><b>Tourism and economic development</b></p> <p>Several potential areas for developing tourism based on Barmah were identified in submissions including: ecotourism and 'geo-tourism' interpreting the formation and role of the Cadell Fault/Tilt and the creation of The Narrows; the development of tourism accommodation around the park; and the development of 'glamping' or serviced camping. The potential for an 'indigenous business park' to foster the development of traditional products and services was also suggested.</p> <p>There were calls for the role of the Barmah Forest Heritage and Education Centre in Nathalia and the Murray River Adventure Trail project to be recognised and supported in the JMP.</p> <p>It was also proposed that reliable monitoring of park visitor numbers is essential.</p>
<b>Response</b>	The discussion of tourism and economic development opportunities in the JMP has been expanded to outline a wider range of potential activities, while recognising that particular activities or proposals will require specific assessment. Visitor number monitoring has been included in the JMP as a strategy.

ISSUES RAISED IN CONSULTATION ON THE DRAFT JMP, AND YYTOLMB RESPONSE	
	The role of the Nathalia Centre and the Murray River Adventure Trail have been included in the JMP.
<b>Issues raised</b>	<p><b>Waste management</b></p> <p>There were concerns expressed about the carry in/carry out waste policy, and the cost and operational challenges of improving waste facilities for visitors outside the park.</p>
<b>Response</b>	The carry in/carry out policy has been maintained in the JMP and the need to work with Moira Shire and others to resolve waste management issues has been noted.
<b>Issues raised</b>	<p><b>Zoning</b></p> <p>It was suggested that the Dhungalla Zone along the Murray River should be extended downstream of Sand Ridge Track to Barmah Lake to include other dispersed camping areas.</p>
<b>Response</b>	The JMP zoning proposed in the Draft Plan has been retained. Downstream of Sand Ridge Track the area between River Track and the river is generally much more restricted than upstream where River Road is set back further from the river. This provides less scope for camping downstream of Sand Ridge Track. Wetland areas extend close to the river in the downstream section; protection of wetland values is a primary objective of the Walla zone in the zoning scheme.
<b>Issues raised</b>	<p><b>Other visitor and tourism issues</b></p> <p>There was a call for dogwalking to be allowed on designated tracks and for fossicking and prospecting to be allowed in the park. There was also a call for a toilet to be developed at Rice's Bridge.</p> <p>Several submissions called for existing walking tracks to be better maintained.</p>
<b>Response</b>	<p>The JMP has not been amended in relation to dogwalking or fossicking and prospecting. Dogwalking is generally not allowed in Victorian national parks. Demand for dogwalking is not considered to be significant and opportunities exist on Barmah Island and adjacent to Ulupna Island and other areas closer to townships and residential areas. Fossicking and prospecting are activities only allowed in national parks as specified in the National Parks Act and Barmah National Park is not one of the parks specified.</p> <p>The JMP has been amended to include a strategy to improve the maintenance of walking tracks and investigate provision of a toilet at Rice's Bridge.</p>
<b>Issues raised</b>	<p><b>Plan implementation, resourcing and research</b></p> <p>Several submissions suggested that management of the park was currently under-resourced and there was a significant risk of failure if the plan was not properly resourced and priorities for implementation set. There was a call for the plan to identify existing research and gaps and priorities for future research.</p>
<b>Response</b>	<p>The JMP recognises the challenge of securing adequate resources to implement the plan. The issue of priorities will be addressed in the implementation plan to be prepared after the approved JMP has been published.</p> <p>Research priorities are likely to evolve across the 10-year timeframe of the JMP and will be identified through the rolling implementation plan process.</p>

## 2 SIGNIFICANCE OF BARMAH NATIONAL PARK

Barmah National Park and the adjacent Murray Valley National Park in New South Wales protect the largest River Red Gum forest in Australia. Barmah National Park is an exceptionally diverse environment with records of more than 420 indigenous plant species and more than 300 native animal species. The park is scheduled under the National Parks Act and is listed in Category II (National Parks) of the International Union for the Conservation of Nature's protected area categories, and the United Nations' List of National Parks and Equivalent Reserves (Dudley 2008).

In a region where much of the original forest and woodland has been cleared for agriculture and settlement, Barmah National Park remains in a condition that most closely resembles Yorta Yorta Country during ancestral times and continues to be a very important Yorta Yorta place.

Barmah Forest has also been an important place and resource for non-Indigenous Victorians since colonial settlement in the 1800s and continues to be a place of heritage and important present-day activities for visitors. Some past uses and industries such as logging and stock grazing have ceased since proclamation as a national park. Other activities such as camping, fishing and other recreational pastimes continue as major activities in the forest, which is a significant tourism asset for the region. The park provides very substantial ecosystem service benefits to Victoria and communities in the Murray River basin. These include provisioning services such as clean water and pollination, regulating services such as flood regulation and drought refuge, supporting services such as carbon cycling and sequestration, and biodiversity services.



**Barmah National Park is a floodplain forest and wetland of national and international importance. (Photo: Keith Ward).**

In 1982, following advocacy by Yorta Yorta and environmental groups, Barmah Forest was listed under the Convention on Wetlands of International Importance Especially as Waterfowl Habitat, commonly known as the Ramsar Convention, reflecting its significant wetland values. The

convention is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. Barmah Forest is one of 66 Ramsar-listed sites in Australia, and one of twelve in Victoria. The Ramsar Convention obliges contracting parties to manage Ramsar sites in such a way as to maintain or improve their ecological character in the state they were in at the time of listing. The protection and management of Ramsar sites in Australia is regulated through the Environment Protection and Biodiversity Conservation Regulations 2000 (Cwlth). To be listed as a Ramsar site, a site must meet at least one of the nine Ramsar criteria. The Barmah Forest Ramsar Site meets five of the criteria. The boundary of the Ramsar site does not cover the whole of the park (Ulupna Island is not within the site) and extends to some areas outside the park.

The Barmah–Millewa forest is also one of six ‘icon sites’ identified within the Murray–Darling Basin for their high ecological significance and cultural value and are the focus of environmental health improvements through the joint national-state Living Murray Program. The flows of water through the forest and across the floodplain are critical to the health of this forest, the health of Yorta Yorta Country more broadly, and the environmental, social and economic condition of the downstream reaches of the Murray River system.

### Creation of Dunghalla — The Murray River

Biami created the river by sending an old woman down from the high country with her yam stick to journey across the flat and waterless plain. Biami then sent a giant snake along to keep an eye on her. She walked for many weary miles, drawing a line in the sand with her stick, and behind her came the snake following in and out all about, making the curves of the river bed with his body. Then Biami spoke in a voice of thunder, and lightning flashed above the high crack that was his place. Rain fell, and water came flowing down the track the old woman and the snake had made. After many moons she came to the sea, and went to sleep in a cave, while her dogs ran off and kicked up the sandhills about the river mouth.

— Cato (1976); Dharnya Centre mural



### 3 THE STORY OF YORTA YORTA

We, the Yorta Yorta Nation have been here since the beginning. We are an Aboriginal group that has occupied part of present-day northern Victoria and southern New South Wales for tens of thousands of years. We comprise the descendants of the Original Ancestors of our lands. Yorta Yorta Country extends from Violet Town in the south to north of Finley in New South Wales, and from Howlong in the east to Cohuna in the west, straddling the section of the Murray River known as Dhungalla. Yorta Yorta Country also takes in the lower Goulburn River, Broken Creek and Gunbower Forest.

Dhungalla and the Barmah–Millewa forest provided year-round food stocks such as fish and yabbies, and the annual floods that spread through the forest allowed fish and turtles to breed, bringing nesting and wading birds in large numbers for months at a time. Kangaroos and emus grazed on the grassy plains that occur throughout the forest. The River Red Gum forest and wetlands provided a rich place to live, with fuel for fires and wood for building shelters and making canoes, weapons and other implements. Water continued to flow in the creeks as the floods receded, gradually drying out as the summer and autumn seasons progressed. Yorta Yorta camped throughout the forest and moved across all parts of it, hunting, gathering resources, and managing the vegetation and wildlife through burning and the conservation of plant and animal resources. The entire forest continues to be a very important Yorta Yorta place, not just the sites where cultural heritage artefacts of occupation occur. Water areas are as important as land areas. Most traditional food collecting activities and lifestyle was shaped by the waterways. Survival depended on water resources such as fish, crustaceans, freshwater mussels, turtles, cumbungi and the bird life that gravitates to the waters, particularly ducks and swans. Other resources such as reed spears, fibre for nets and bark for carrying vessels are water-based products (Atkinson 2002).

The arrival of Europeans around the 1840s had a devastating impact on Yorta Yorta. Within the first generation of colonisation, the Yorta Yorta population of some 5000–6000 was reduced by 85 per cent (YYNAC 2012). The remaining Yorta Yorta population and other tribal groups from neighbouring areas were progressively relocated to Maloga Mission on the New South Wales side of the Murray River in 1874. Maloga was eventually closed and the residents were relocated at Cumeragunja Mission in 1888–89, which became the place where the Yorta Yorta were able to regroup. It also provided a base for the development of what became the Aboriginal political movement in the 1930s, led by some of Australia's outstanding Indigenous political leaders such as William Cooper, Sir Doug Nicholls, Marjorie Tucker, Geraldine Briggs, Shadrach James and others.

Between 1860 and 1994 there were 18 separate attempts to claim land and compensation by the Yorta Yorta community (Atkinson 1985). The Yorta Yorta continue to assert our inherent rights in the modern era. In 1998 the Federal Court rejected Yorta Yorta's native title claim, upheld by the Federal Court (Full Court) in 2001 and the High Court in 2002, holding that 'the tide of history had washed away acknowledgement of traditional laws and any real observance of traditional customs' (Federal Court 1998). This interpretation of the consequences of the displacement and destruction of the past has had a traumatic effect on Yorta Yorta people.

The YYNAC, established in 1998 and built on the foundation of previous community organisations, represents Yorta Yorta interests within our traditional jurisdiction. Today the YYNAC carries forward the holistic approach to dealing with matters relating to all aspects of the traditional territories and cross-border issues.



'King Billy's Camp' at Maloga, 1891. (Nicholas Caire, courtesy State Library Victoria)



Cummeragunja School circa 1890. (courtesy Records NSW)



## Yorta Yorta and Country

Yorta Yorta Aboriginal people's identity inherently stems from a belonging to Country:

*The Country is us and we are the Country. This is our home and nowhere else.*

This connection to Country is bound up with a fundamental responsibility to Yorta Yorta ancestors who have been laid to rest in Yorta Yorta land:

*Yorta Yorta identity is created from our ancestors and mother earth. We are produced from this part of the Country and we need to rest here. We have a special and unique relationship with the forest that stems from a belief that we are inseparable from Country. Our ancestors, directly linked to those with us in the contemporary situation, tie us to this land. Our bloodline is created through our waterways, especially as Yorta Yorta stories tell of the creation of Dhungalla; this is the Yorta Yorta word for the Murray River system. Ancestors developed the management strategies that have been handed down to be used today, which is based on oral history.*

As expressed using an anatomical analogy:

*We identify the Barmah Lakes and the Moira Lakes as part of us — they are our kidneys. The narrows (what others call the choke) — is like our central nervous system, and we are part of that. It controls so much of the cultural flow aspect — the correct flooding period is controlled through those narrows and all aspects of flooding in the Barmah–Millewa Forest. We know the health indicators of the river system.*

Yorta Yorta people are inherently linked with their ancestors and with the Dreaming spirits. Responsibility to ancestry and connection with Country is very strong. It provides life direction:

*Our ancestors and our Country — that's who we are. If we deny our ancestors, deny our Country, then we are a ship without a rudder.*

Yorta Yorta consider it essential that they are involved in decisions concerning their Country in order to sustain their connection. Their participation in decision-making must be on equal footing with other decision-makers; if participation is not equal then they cannot accomplish the goal of sustaining connection.

*'We are the First People of this place. We were here even before the Murray River flowed through Barmah.'* — Uncle Des Morgan, Yorta Yorta Elder



Yorta Yorta present-day gathering on Country. (Photo courtesy of YYNAC)

# 4 LEGISLATION, POLICY AND OTHER PLANS

## 4.1 LEGISLATION

The Barmah National Park is managed under the National Parks Act to preserve and protect the natural environment, flora and fauna, features of scenic, archaeological, ecological, geological, historic or other scientific interest; to protect water resources and maintain water quality; and for the study of ecology, geology and other sciences. The Act provides for the park to be used for enjoyment, recreation, education and appropriate study related to conservation. The National Parks Regulations 2013, made under the Act, specify detailed provisions for the protection and use of the park and enforcement procedures.

The Conservation, Forests and Lands Act governs the operation of the TOLM Agreement, the TOLM Board and the preparation and approval of this plan. The Parks Victoria Act governs Parks Victoria's functions and responsibilities as the manager of the park, and its role in supporting a working relationship with Yorta Yorta. Two Reference Areas in the park are proclaimed and managed in accordance with the *Reference Areas Act 1978* (Vic.). The park's environmental and cultural heritage values are managed under a range of legislation including the *Aboriginal Heritage Act 2006* (Vic.), *Flora and Fauna Guarantee Act 1988* (Vic.), *Wildlife Act 1975* (Vic.), *Water Act 1989* (Vic.) and the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth.). Fire management in the park is governed by the *Forests Act 1958* (Vic.) and the *Emergency Management Act 1986* (Vic.) as well as a Fire Management Arrangement between DELWP and Parks Victoria. A number of international agreements are relevant to the management of the park including the Ramsar Convention described in Section 2 above, and migratory bird agreements with Japan, China and the Republic of Korea. A fuller list of legislation, conventions and agreements is provided in Appendix 3.

The park is covered by the Moira Shire Planning Scheme under the *Planning and Environment Act 1987* (Vic). The whole of the National Park is zoned as Public Conservation and Resource Zone (PCRZ), except for a corridor of Public Park and Recreation Zone (PPRZ) along Broken Creek. The purposes of the PCRZ are to protect and conserve the natural environment and natural processes for their historic, scientific, landscape, habitat or cultural values; to provide facilities that assist in public education and interpretation of the natural environment with minimal degradation of the natural environment or natural processes; and to provide for appropriate resource based uses. Any use or works in the PCRZ must be conducted by or on behalf of the land manager. The whole of the park is subject to an Environmental Significance Overlay and a Bushfire Management Overlay. The Community Use Area is also zoned PCRZ and subject to an Environmental Significance Overlay and a Bushfire Management Overlay. It also contains a Heritage Overlay over the Barmah Muster Yards.

## 4.2 POLICIES

### **YYNAC**

The principal governing document for YYNAC is the Yorta Yorta Nation Caring for Country and Culture — Whole of Country Plan 2012–2017 (YYNAC 2012). This sets out directions for managing Country and culture and building community and institutional capacity.

### **VEAC's 2008 recommendations to Government**

Barmah National Park was legislated in 2010 following recommendations to the State Government by the Victorian Environmental Assessment Council (VEAC) in 2008. The recommendations were part of an investigation by VEAC, requested by the State Government, into the condition, management and use of riverine red gum forests on public land extending from Wodonga to the South Australian border (VEAC 2008). In making its recommendation to protect Barmah Forest as a national park, VEAC noted that it was 'the pre-eminent site in terms of natural values in the investigation area'.

VEAC also recommended that approximately 22 hectares around the Dharnya Centre and muster yards be designated as a new community use area to accommodate a broad range of activities and uses.

### 4.3 OTHER PLANS

A number of existing plans and strategies developed by State and Commonwealth government agencies have particular relevance to the management of Barmah National Park:

- Goulburn Broken Regional Catchment Strategy (GBCMA 2013)
- Goulburn Broken Waterway Management Strategy 2014–2022 (GBCMA 2014)
- Goulburn Broken Regional Floodplain Management Strategy 2018–2028 (GBCMA 2018)
- Barmah National Park and Ramsar Site — Pest Plant and Animal Strategy (Parks Victoria 2013).
- Strategic Bushfire Management Plan — Mallee and Murray Goulburn (DELWP 2015a)
- Barmah–Millewa Forest Environmental Water Management Plan (MDBA 2012)
- Statement of Management Intent — Murray Valley National Park and Murray Valley Regional Park (OEH 2014)
- Murray Region Destination Management Plan (Murray Region Tourism 2018)
- Protecting Victoria’s Environment - Biodiversity 2037 (Government of Victoria 2017)
- Victorian Floodplain Management Strategy (DELWP 2016).
- River Red Gum Parks Management Plan (Parks Victoria 2018a).

The applicable provisions of these documents are identified in the relevant sections of this Plan as necessary.

Two planning processes of direct relevance to this Joint Management Plan are:

- Parks Victoria’s Protection of Floodplain Marshes Barmah National Park and Barmah Forest Ramsar Site Strategic Action Plan 2020–2023 (SAP)— This is a detailed analysis of the condition of floodplain marshes in Barmah Forest and evaluation of the threats and control methods needed to protect them (see Section 8 of this Plan). The final Strategic Action Plan was released on 21 February 2020, following public consultation in April-May 2019. Approximately 2,400 people provided feedback on the SAP. Most respondents supported each of the conservation management strategies in the SAP. Over half the participants indicated support for the reduction of feral horse numbers, including the reasons to reduce the environmental damage they are causing. However, support for the method to be used to implement a control program was mixed (Altometer 2019). Most participants were supportive of trapping and rehoming while the level of support for the ‘use of controlled shooting of feral horses by professional shooters under strict welfare and safety protocols’, was almost equally divided. In response to the issues raised during engagement on the draft SAP, opportunities for community members to rehome horses were enhanced in the final SAP and protocols for horse management activities will be strictly observed.
- Barmah Master Plan — This project aims to support recognition and self-determination of the Yorta Yorta Nation by fostering ecotourism centred on the Dharnya Centre and Barmah Lakes. It includes production of interpretive and story-telling materials, minor infrastructure works, and support for development of local Yorta Yorta businesses. The Joint Management Plan will provide context for the master plan and guidance on the integrated operation of the National Park and the Dharnya Centre. The master plan is being developed collaboratively by YYNAC, DELWP and Parks Victoria.

In addition to these planning processes, at the time of the JMP preparation the Parliament of Victoria was conducting an inquiry into the Auditor General’s Report No. 202: Meeting Obligations to Protect Ramsar Wetlands.



**Barmah National Park is an internationally significant location for waterbird nesting and breeding, listed under the Ramsar Convention on wetlands. (Photo: Keith Ward)**

## 5 REGIONAL CONTEXT

In addition to being part of Yorta Yorta Country, Barmah National Park forms part of the Murray River Region and the Goulburn Broken Catchment, the Shire of Moira, and the Murray tourism region.

The small township of Barmah is located close to the western end of park and provides a number of tourism and other services including a caravan park, general store, cafe and hotel. Nathalia to the east of the park and the twin towns of Echuca and Moama to the west of the park are the closest large towns and are important regional communities and service centres. Echuca is one of Victoria's major regional tourism destinations. Strathmerton, to the east of the park, is also a significant local service centre.

The location of Barmah National Park's boundary and the Victorian state border at the top of the southern bank of the Murray River means that management of boating, fishing and other recreational uses on the river are the jurisdiction of the New South Wales government. The Murray–Darling Basin Authority, a Commonwealth statutory authority, is the 'River Operator' under water legislation for the purposes of managing flows and other water functions of the Murray River. The Barmah Forest and the adjacent Millewa Forest in New South Wales have had similar land-use histories, including logging and grazing, and have been relatively recently recognised for their biodiversity and environmental and cultural significance through the proclamation of both areas as national parks in 2010.

A large, ancient River Red Gum tree with peeling bark, standing in floodwater in a forest. The tree's trunk is thick and textured, with patches of grey and brown bark. The surrounding forest is lush with green foliage, and the water is calm, reflecting the light. The scene is peaceful and serene, capturing the beauty of a natural environment.

THE JOINT MANAGEMENT PLAN  
*WUTA YAPANEYEPUK*

A veteran River Red Gum in floodwater.  
(Photo: J. Patrick Pigott)

## 6 VISION AND OBJECTIVES

At the centre of the Joint Management Plan vision is a change in the story of Barmah and the Yorta Yorta. For tens of thousands of years — long before the Murray River flowed along its present course — the Yorta Yorta have lived in the Barmah Forest, one of the richest parts of our Country. With the onset of colonial settlement, the Yorta Yorta were forcibly removed from Barmah and other areas. In the 1990s that removal and dispossession was a reason why our traditional connection and rights could not be legally recognised. Since then steps towards greater inclusion have been taken, but Yorta Yorta have struggled for recognition as the First Nation People of our Country and for the right to fulfil the cultural responsibilities we have to manage and care for the Barmah Forest. In recent times the wider communities of the Central Murray Region have gone through a great transition in their industries and the use of land and water resources, in the search for a sustainable future. The vision of this Joint Management Plan is to change the story of Barmah — to re-enable the Yorta Yorta to enact our rights and responsibilities over this part of our Country, and to work in partnership with the State and the broader regional community, for the health of both Barmah National Park and all people.

### *Heal the Land, Heal the People — Healthy Country*

#### *Yorta Itjumatj Woka*

There are seven major objectives in the Joint Management Plan for realising this vision:

- 1 recognise the Yorta Yorta as First Nation People of Barmah National Park and enable us to enact our rights and cultural responsibilities to manage, restore the health of, gather on and continue to use this part of our Country
- 2 develop and apply the combined skills and knowledge of Yorta Yorta and the State in caring for the park
- 3 conserve the park's environment and cultural values with the support and active participation of visitors and the community
- 4 welcome and provide services for all people to come together to enjoy, understand and respect a forest and wetlands of international significance
- 5 conserve, promote and interpret Yorta Yorta culture and the shared history of the park
- 6 improve the wellbeing and prosperity of Yorta Yorta people and communities across the region through park employment, business and tourism opportunities
- 7 provide institutional support and capacity for Yorta Yorta to effectively deliver joint management.



## 7 MANAGEMENT ZONING

Zoning is used to identify the management intent for different parts of the park and the uses and activities that are appropriate in those zones. This Joint Management Plan establishes five zones in the park. The location of the zones is shown on Map 2, and the management intent and priorities for each zone are described below. Allowable activities and conditions for each zone are listed in Table 3 in Section 10.

### GULPA GAKA (WELCOME) ZONE

This zone takes in the Dharnya Community Use Area, and the nearby camping area and day visitor area at Barmah Lakes. The management priority for this zone is the provision of gateway access to the park with services and facilities for orientation, information, interpretation, education services including tourism commercial services, and designated camping with facilities at Barmah Lakes. Any substantial built facilities would be located in the adjacent Community Use Area and linked to the Dharnya Centre. This zone will be the main location for tourism events. Services and development will be controlled to avoid impacts on natural values and cultural heritage. This zone corresponds to the 'Recreation Development Zone' in other Victorian national park management plans.

### WALLA (WETLAND) ZONE

This zone contains most of the areas of floodplain marsh in the park, including sensitive vegetation communities and extensive breeding areas for birds and other animals. The zone provides for camping in designated camping areas only, day visitor activities, and passive boating. The management priority for this zone is on the conservation of Country and cultural heritage. This zone corresponds to the 'Conservation Zone' in other Victorian national park management plans.

### DHUNGALLA (MURRAY RIVER) ZONE

This zone extends along the Murray River from Budgee Creek in the west to Morgans Beach in the east of the park, and also includes part of the northern section of Ulupna Island. The southern boundary of the zone is River Road. The vegetation is mainly riparian River Red Gum woodland. The zone provides for riverside camping in dispersed camping areas, fishing, boating, and other visitor activities. River Road provides a clear definition of the boundary of this zone for visitors, and also provides a firebreak for containing campfire escapes. The management priority in this zone is on providing for dispersed recreation while minimising impacts on Country and cultural heritage. This zone corresponds to the 'Conservation and Recreation Zone' in other Victorian national park management plans, with provision for dispersed camping.

### BIYALA (RED GUM) ZONE

This zone takes in the areas of River Red Gum and Grey Box/Black Box forest and woodlands in the southern part of the park. It provides for camping in designated camping areas only, driving, cycling and walking on the track network and other recreation opportunities. The management priority for this zone is on the conservation of Country and cultural heritage, and also providing for low-intensity recreation. This zone corresponds to the 'Conservation and Recreation Zone' in other Victorian national park management plans, with provision for camping in designated areas only.

### REFERENCE AREA ZONE

This is a zone covering areas proclaimed under the Reference Areas Act in which human interference is minimised so that, as far as practicable, the only long-term change results from

natural processes. No access is permitted except that associated with natural processes, emergency operations, and approved research. The zone may then be used for comparative studies against land where human activities occur, showing the effects of human utilisation of land. There are two reference areas in Barmah National Park: Top Island Reference Area and Top End Reference Area.

### Visitor Experience Area overlay

A Visitor Experience Area is a management overlay applied to a part of the park that is popular for particular visitor activities in a certain setting, providing an identifiable type of visitor experience. Five VEAs have been applied to Barmah National Park (shown on Map 4). Goals and strategies for Visitor Experience Areas are described in Section 10.



**River Red Gum Forest in the Biyala Zone. (Photo: J. Patrick Pigott)**

## 8 HEALTHY COUNTRY — YORTA ITJUMATJ WOKA WALLA

This section provides a summary of the environmental and cultural heritage values of Barmah National Park, the condition of those values and major threats, and the proposed goals and strategies for improving the health of Country.

### 8.1 WOKA — LAND

The extent of the Barmah–Millewa River Red Gum Forest, Australia’s largest River Red Gum forest, is mainly a result of geomorphological changes in northern Victorian and southern New South Wales in the last 30 000 – 35 000 years. The generally western flow of Dhungalla (the Murray River) has been blocked and altered several times by dunes that formed on the edge of ancient Lake Kanyapella (the Bama Sandhills) and the uplift of a new line of hills (the Cadell Tilt Block) along the Cadell Fault running on a north south line near Echuca–Moama (VEAC 2006). In addition to diverting the river south through what is now known as The Narrows or the Barmah Choke, the impeded river became prone to more frequent overbank flows, producing the floodplains and forests of the Barmah-Millewa.

These events occurred during the time Yorta Yorta have occupied our Country. Dreaming stories describe the changes in the course of the river — the creation of Dhungalla by ‘the flick of a giant snake’s tail’ — and oral history recounts Yorta Yorta people moving away from a great flood (Atkinson 2005). The geomorphological history of the land is both an important physical determinant of the Barmah Forest environment and a demonstration of the profound depth of Yorta Yorta occupation and connection to Country — older than the course of the Murray River itself.

### 8.2 WALLA — WATER

Water is fundamental to Barmah National Park. Higher and lower levels of water are part of the natural annual cycle in Barmah Forest, with overbank flows feeding into the marshes and lower areas in winter and spring, and then progressively drying out during summer and autumn. The concept of an annual ‘flood’, implying an abnormal disturbance and threat in non-Indigenous culture, was not recognised in Yorta Yorta tradition.

The natural water cycle in the National Park and other parts of the Murray River system has been altered by the development of river regulation and irrigation since 1915 (Dexter et al. 1986, Bren 2005). The river system is operated for a complex range of objectives including township water supply, irrigated farming, flood mitigation and hydro-electricity generation. Snowmelt and winter–spring rains in the alpine areas and mountains of the Upper Murray catchment, which once swelled the downstream reaches of the Murray River, are now captured and detained by the Hume Dam, Dartmouth Dam and other water storages. Water is generally released from the Hume Dam and other storages from September to May, largely opposite to the natural hydrology of higher winter–spring flows and lower summer–autumn flows. This alteration in the timing and level of water flows has brought major changes to Barmah Forest, including interference with natural flowering and growth stages of Moira Grass (*Pseudoraphis spinescens*), altering the natural thinning of regenerating River Red Gum stands, and creating altered conditions that preference other plants including weeds and invasive native species (Parks Victoria 2020). Modifying the watering regime is complicated by downstream demands for irrigation and domestic water supply in Victoria and South Australia.

Beginning in the 1990s with the creation of a system of national and state ‘environmental water reserves’, the implementation of the joint national–state Living Murray Plan and the recognition of the Barmah–Millewa forest as an ‘icon site’ for delivery of environmental water, this alteration to the natural watering regime has been mitigated by ensuring allocations of water to the forest.

However, the frequency, timing, depth, variability and extent of flooding is not what is needed to protect and conserve the environmental values of the National Park. Water managers currently apply the best available water regime for Moira Grass in accordance with the environmental water management plan (MDBA 2012) while recognising that this does not fully achieve the preferred conditions for Moira Grass due to flow constraints in the Murray River downstream of Yarrawonga.

### 8.3 RAMSAR SITE

In 1982, following advocacy by environmental groups and Yorta Yorta, Barmah Forest was listed as a wetland of international importance under the Ramsar Convention, reflecting its significant wetland values. The boundaries of the listed area are not identical to the present-day National Park: the Ulupna Island section of the National Park is not within the Ramsar site, while Barmah Island, which is outside the National Park, is within the Ramsar site (see Map 1).

The Ramsar Convention is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. Barmah Forest is one of 66 Ramsar-listed wetlands in Australia, and 12 in Victoria. To be listed as a Ramsar site, a site must meet at least one of the nine Ramsar criteria. The Barmah Forest Ramsar Site meets five of the criteria.

The Ramsar Convention obliges contracting parties to promote the conservation of listed wetlands, and the wise use of wetlands in general, and to manage Ramsar sites to maintain or improve their ecological character as at the time of listing. The critical components, processes and services that make up this ecological character are detailed in Appendix 2 and limits of acceptable change for those components, processes and services have been established by the Australian Government (Hale and Butcher 2011). The protection and management of Ramsar sites in Australia is regulated through the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth).

### 8.4 PLANTS AND VEGETATION COMMUNITIES

The Barmah Forest contains an exceptionally rich and diverse range of plants and animals, with records of 421 indigenous flora species (Ecology Australia 2013). Of these, a number of species are listed as threatened in Victoria under the Flora and Fauna Guarantee Act and/or nationally under the Environment Protection and Biodiversity Conservation Act (see Appendix 4). These include Mueller Daisy (*Brachyscome muelleroides*), Swamp Wallaby Grass (*Amphibromus fluitans*) and Winged Peppergrass (*Lepidium monoplacoides*).

Very little is known of the National Park's non-vascular plants (mosses and liverworts), lichens, fungi and algae.

The vegetation of the National Park has been mapped and classified into Ecological Vegetation Classes (EVCs), the standard unit for classifying vegetation types in Victoria. EVCs are described through a combination of floristics, lifeforms and ecological characteristics. For the purposes of management EVCs can be aggregated into sub-groups. These are shown on Map 3 and comprise two broad environments:

- River Red Gum and Box forest and woodlands are tree-dominated wetlands. These cover about 24 000 hectares, or 84 per cent of the park, of which almost nine-tenths is River Red Gum forest (Chesterfield et al. 1984).
- Floodplain marshes feature a number of different vegetation communities that occur in low-lying areas that are subject to more frequent inundation, including reed beds, moist grasslands, and aquatic herblands.

These wetlands can be either permanent or ephemeral, fluctuating in their extent and composition relative to water availability through flooding. The marshes originally supported the largest expanses of Moira Grass in the Murray–Darling Basin. Around the time of Ramsar listing, the extent of Moira Grass was about 1500 hectares, and that of Giant Rush about 500 hectares (Chesterfield et al. 1984).

## 8.5 ANIMALS

A total of 303 species of native vertebrate fauna have been recorded in Barmah Forest (Ecology Australia 2013). In addition to animals such as kangaroos and emus (which are abundant within the park and in the region) the National Park is a particularly important habitat and refuge for wetland-dependent birds, native fish and aquatic mammals, frogs and reptiles.

### Totemic animals on Yorta Yorta Country

Turtles are important to the Yorta Yorta as a totemic animal and a food source. Bayadherra, the Broad-shelled Turtle (*Chelodina expansa*), is a totem species and plays a significant role in Yorta Yorta creation stories. Two other turtle species, Dhungalla Watjerrupna, the Murray River Turtle (*Emydura macquarii*), and Djirrungana Wanurra Watjerrupna, the Common Long-necked Turtle (*Chelodina longicollis*), are culturally significant as a food source (YYNAC 2012).



*All plants and animals are part of Creation but some have special importance to us. Bayadherra, the Broad-shelled Turtle, is a provider, guide and protector. Burnanga, the Murray Cod, Borpa, the Crayfish, Nurnamamdatba, the Kingfisher and Gurranyin, the Eagle are special animals and birds for us.*

*Animals and plants are always important, not just when they are rare or endangered. If Bayadherra and Borpa are plentiful it shows that the rivers and creeks are healthy, the water is clean and there is food for yabbies, frogs and small fish. If fish and frogs are plentiful, thousands of waterbirds come to nest in the Barmah marshes and forest.*

*When our totem plants and animals are abundant on the land and in the waters, it's a sign that our Country is healthy.*

Key animal species include:

- Wetland-dependent birds. Records show that Barmah Forest has supported colonies of up to 20 000 colonial nesting waterbirds, including spoonbills and egrets, which are particularly dependent on river flows for the critical breeding stage of their lifecycle. At least 60 species of wetland-dependent birds have been recorded, including the nationally threatened Australasian Bittern (*Botaurus poiciloptilus*), the critically endangered Curlew Sandpiper (*Calidris ferruginea*), and Superb Parrot (*Polytelis swainsonii*) which nests in River Red Gum forest and forages for food in Box woodlands. (Hale and Butcher 2011). The Ramsar listing identifies Barmah Forest as a drought refuge for water birds (see Appendix 2).
- Native fish. Seventeen species of native fish have been recorded, including three threatened/nationally listed species: Silver Perch, Murray Cod and Trout Cod (Hale and Butcher 2011).
- Other aquatic fauna. Three wetland-dependent mammal species have been recorded, nine species of frogs, four water-dependent reptile species and a burrowing crayfish - the swamp yabby (*Cherax* spp.).

Many plants and animal species have cultural importance for Yorta Yorta as totems with spiritual and ceremonial significance, and in some cases as staple traditional foods (see box above). Turtle species hold particular totemic importance for many Yorta Yorta people, especially Bayadherra, the Broad-shelled Turtle (*Chelodina expansa*) (YYNAC 2012). Totemic importance is not related to status as a threatened species (although some totemic species may be threatened) but is central to the signs that Country is in a healthy condition. Native bees have also been an important traditional source of honey, although the current status of native bee populations in the park is not known.

The conservation of threatened and culturally important plants and animals in the park is focused initially on ensuring that broader habitats and ecosystems are healthy, that threats to those habitats are reduced and that, as far as practical, natural processes are restored. Strategies to restore more natural water and fire regimes, control or eradicate invasive plants and animals and to reduce disturbance from visitors and other sources will generally contribute to the protection and conservation of both ecological communities as a whole and particular species. Some species with an endangered or threatened status, such as Superb Parrot (which is highly dependent on Barmah Forest as its principal breeding location Victoria), require special management action, guided by state or national action plans or recovery plans.

## 8.6 BITJA — FIRE

Fire is a natural process in Yorta Yorta Country. However, Barmah's floodplain forests are more sensitive to fire than drier landscapes. River Red Gums depend on flooding for regeneration, unlike many other eucalypt species that are adapted to or dependent on fire. They are particularly sensitive to high-intensity fire, but even low-intensity fire can kill seedlings and young trees. Old trees may be more vulnerable to fire because hollows and surface root systems can allow fire to penetrate the tree, leading to its collapse. Fires in River Red Gum forests are generally carried by fine fuels in the grassy ground layer and are slow-moving, although coarse woody debris in the form of logs of all sizes can burn for long periods at high temperatures (DELWP 2015a).

Forest Fire Management Victoria, a Division of DELWP, is responsible for fire management in Barmah National Park and on surrounding public land, supported by Parks Victoria. The Country Fire Authority is responsible for managing fire on adjacent private land and in townships. The Code of Practice for Fire Management on Public Land (DSE 2012) provides the framework for public land fire management across the state. The Code's primary objectives for bushfire management on public land are to:

- minimise the impact of major bushfires on human life, communities, essential and community infrastructure, industries, the economy and the environment. Human life will be afforded priority over all other considerations.
- maintain or improve the resilience of natural ecosystems and their ability to deliver services such as biodiversity, water, carbon storage and forest products.

There have been few large-scale fires recorded in the park but there are a significant number of small bushfires. By far the largest agent for these fires are recreational visitors (70%) with lightning (12%) as the second major agent (VEAC 2006, DCE 1992). DELWP's broad strategy for managing bushfire risk to life and communities in Barmah National Park, expressed in the 'Strategic Bushfire Management Plan – Mallee and Murray Goulburn' is to maintain river tracks and other strategic tracks for vehicle access, patrol camping areas and slash along priority tracks (Gulf Track, Sand Ridge Track and River Road) and the southern park boundary, to respond quickly to bushfires (DELWP 2015a). JMP objectives will be progressively integrated into this plan. Specific fuel management measures including areas to be burnt or fuel-reduced through slashing or other methods are determined in three-year Joint Fuel Management Plans prepared by DELWP and CFA, which also consider JMP objectives. In managing the road and track network (Section 10) it is critical that adequate access for emergency management is maintained.



**Burning invasive Giant Rush at Steamer Plain. (Photo: Keith Ward)**

Planned burning in River Red Gum forests is generally small-scale, mainly to manage invasive plants such as Giant Rush and to moderate potential bushfire behaviour in some high-risk areas. Burning to reduce fuel levels needs to be conducted in ways that protect conservation values as far as practical, including veteran trees with hollows that provide habitat for Superb Parrots and other wildlife, and cultural heritage, particularly scarred trees and pile trees (see Post-colonial Heritage and Shared History section). Managing coarse woody debris, such as logs, must balance the need to reduce fuel risks with the need to protect the habitat it provides for reptiles such as Carpet Pythons and other fauna, and the role of debris in moderating water flows across the forest floor.

### Cultural fire

The Victorian Traditional Owner Cultural Fire Strategy (VTOCFKG 2019) defines cultural fire as:

'Fire deliberately put into the landscape authorized 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.'

The right and responsibility to undertake cultural burning is one of the most important priorities for Yorta Yorta, as an expression of cultural practice and as an obligation to keep Country healthy. The past approach to fire management by government agencies has not adequately engaged Yorta Yorta in decision-making or provided opportunities for building and applying skills in burning and general bushfire management. The YITOLMB and YINAC recently hosted the National Indigenous Fire Workshop 2019.



**The National Indigenous Fire Workshop was held in Barmah Forest in June 2019 to promote and exchange cultural burning knowledge and skills. (Photo: Tim Neale, Firesticks)**

*‘We have obligations as the people from this Country. We believe that we were placed here, that we come from this Country and we have obligations to look after it and be a part of it.’ — Aunty Monica Morgan*

## 8.7 ENVIRONMENTAL CONDITION AND THREATS

A significant number of environmental monitoring studies have been undertaken in the park in recent times including assessment of forest stand condition (MDBA 2015), successive studies of fish condition (Raymond et al 2016, 2017 and 2018), surveys of threatened species (Belcher et al 2016) and annual monitoring of the effectiveness of invasive plant and animal control (Ecology Australia 2015, 2016, 2017 and 2018). The combined condition of the main environmental conservation assets in the park was analysed by Parks Victoria in 2018 drawing on a range of monitoring studies (Parks Victoria 2018b). The current condition and trend in condition for each of the key assets are shown in the following table. The threats to these environmental conservation assets (and in some cases cultural and recreational values) have been identified using monitoring data, and their risks have been rated by means of expert analysis. The threats and risk ratings are shown in detail in Appendix 5. In summary the priority risks are:

- changes to the natural water regime including operational constraints in the delivery of environmental flow components, affecting the frequency, timing, duration, depth, variability and extent of flooding
- grazing, browsing and trampling pressure on wetlands and cultural sites by feral horses, feral pigs, rabbits, feral goats, feral deer, feral sheep, and kangaroos



- invasive wetland plants, including introduced species (eg Arrowhead) and invasive native species (Giant Rush and River Red Gum seedlings)
- inappropriate fire regimes (consecutive high-intensity bushfires, fuel reduction burns, suppression)
- predation by non-native terrestrial animals (foxes and cats)
- exotic fish, mainly Common Carp
- illegal recreation activity, causing water contamination and damage to vegetation
- allowable recreation activities, causing bank erosion, sedimentation and disturbance.

**Table 2. Condition of key environmental conservation assets in Barmah National Park.**

Key environmental conservation asset	Indicator	Current condition	Current trend
<b>River red gum forests and woodland extent</b>	Hectares of River Red Gum forest; hectares of River Red Gum woodland	Very good	→
<b>River red gum forests and woodland condition</b>	River Red Gum condition using Cunningham et al. (2009) method	Good	→
<b>Floodplain marshes</b>	Hectares of Moira Grass; hectares of Giant Rush invasion; hectares of River Red Gum invasion	Poor	↘
<b>Colonial nesting waterbirds</b>	Successful breeding events; abundance of colonial nesting birds	Good	↗
<b>Superb Parrot</b>	Recorded presence and evidence of breeding	Good	→
<b>Australasian Bittern</b>	Recorded presence (males)	Very good	→
<b>Native fish</b>	Species richness, presence of Murray Cod, Trout Cod and Silver Perch	Good	→
<b>Crayfish</b>	Presence of Swamp Yabby and Murray Crayfish	Baseline survey 2018	To be determined
<b>Frogs</b>	Species richness, breeding attempts	Knowledge gap	
<b>Turtles</b>	Abundance and condition of Broad-shelled, Murray River and Common Long-necked Turtles	Good	→

(Source: Parks Victoria 2018b)

The conservation assets in poorest condition are the park's floodplain marshes. In particular, the highly significant Moira Grass communities in the marshes have declined in extent by more than 80% since the late 1990s (Colloff et al. 2014). Without management intervention the current rate of loss is forecast to result in the complete loss of Moira Grass floodplain marsh community in the park by 2026.

Invasive plant and animal threats have been identified and prioritised in the Barmah National Park and Ramsar Site Pest Plant and Animal Strategy (Ecology Australia 2012). The Strategy identifies twenty-six 'priority one' invasive plant species that pose a high risk to the health of the park. The Strategy also identified ten types of invasive animal threats including feral horses, foxes, dogs, cats, pigs, deer, rabbits and exotic fish. The monitoring plan developed for this Strategy included targets for very significant reductions in priority invasive plants in a specified sector of the National Park over 5 years as well as targets for reduction of pest animals (Ecology Australia 2014). These reduction targets have been only partially met or, in some cases, risks have increased, due to flood interruptions to programs, the level of available resources and the complexity of controlling multiple threats across a large landscape.

More recently, Parks Victoria has developed a Strategic Action Plan (SAP) to address threats to the park's floodplain marshes (Parks Victoria 2020). The SAP focuses on the water regime, grazing and trampling pressure (particularly by feral horses and other feral animals), and encroachment by invasive wetland plants through several approaches:

- Achieving changes in the watering regime through a program of long-term adjustments to the volume and timing of water delivery into the Barmah marshes that is dependent on changes to water operations by the Murray–Darling Basin Authority in the broader Murray River water system. Current state and national water management legislation recognises ‘environmental water’ as a legal concept (i.e. water required to conserve ecological systems) but not ‘cultural water’ (i.e. water required to conserve cultural places). The Murray–Darling Basin Authority, in partnership with some Traditional Owners, DELWP and catchment management authorities, have been recently trialling the Aboriginal Waterways Assessment tool for determining cultural water requirements.
- Removal of feral horses is a high priority that needs urgent action to deal with impacts. Infra-red aerial surveys undertaken for the SAP have revealed that the feral horse population is much higher than previously reported, and is at least 750 feral horses. Further aerial surveys were undertaken in mid-2019, with data still being analysed at the time the JMP was published. The SAP evaluates in detail the technical requirements for removing feral horses from the park and proposes a combination of trapping and rehoming horses, a mustering trial, and shooting of free-ranging horses. Welfare, post-capture management and other measures are also proposed as part of the removal program. In evaluating control methods, the SAP rejected the use of fertility control as inappropriate and determined that ground shooting of horses under tightly managed conditions was a more humane and effective approach than other methods.
- The main invasive plants threatening the marshes are the aquatic weed Arrowhead, which has entered the wetlands from adjoining waterways, and the encroachment of native Giant Rush and River Red Gum saplings as a consequence of the changed water regimes in the forest due to river regulation. To manage this:
  - weed control works are undertaken throughout the wetlands, with an effort to target new incursions before they take hold; and
  - removal of invasive native species in wetlands (Giant Rush and dense stands of juvenile River Red Gum regrowth) has recently been undertaken in the park in wetlands and creeks, to promote ecological health and a greater diversity of native species.

Historically, in the higher floodplain, harvesting and silvicultural thinning was undertaken through much of the park as part of timber production objectives. Throughout much of the forest, this has changed the structure of the overstorey whereby stands of trees are now much more dense, with a more closed canopy. This has reduced light penetration to the understorey and impacted on the diversity and vigour of these species. The density of trees also creates greater competition for available water. Ecological thinning of River Red Gum forest by mechanical methods has been undertaken in the Murray Valley National Park in New South Wales to promote habitat diversity, arrest the decline in canopy condition and the risk of mass tree death. The success of this work is still being evaluated, but learning is likely to provide valuable information to inform management at Barmah Forest. The preferred method for removing invasive wetland River Red Gums in the higher floodplain of Barmah needs to be evaluated through the joint management process to minimise the impacts on the environmental and cultural values of the National Park. Use of any thinning by-product for community firewood could reduce the pressure of firewood collection on other public land such as Barmah Island, but should not become a rationale for thinning operations in the National Park (DELWP 2018).

DELWP’s Strategic Management Prospects decision support tool for biodiversity conservation provides information about which threat control actions are likely to be not only beneficial but also the most cost-effective, within the National Park and as part of a regional and statewide conservation effort. An analysis for Barmah National Park by DELWP confirms that control of grazing animals (horses, deer, pigs) and weed control are likely to be the most cost-effective interventions for protecting the park’s native vegetation. Threatened plants are likely to benefit from these interventions but regular monitoring is necessary to determine whether more targeted protection is required. Fox and cat control is very cost-effective for protecting the park’s birds and other animals.



Yorta Yorta Turtle Survey: cultural conservation of freshwater turtle project. (Photo: YYNAC)

## 8.8 CLIMATE CHANGE

Average temperatures in and around Barmah National Park have risen by 1.2 to 1.4 degrees Celsius since 1950, and average annual rainfall has fallen by 100 to 200 millimetres in the same period (DELWP 2015b). This warming and drying trend is projected to continue. In a national park context, climate change is best understood as an intensifier of numerous threats and changes rather than a discrete threat in its own right. This includes the increased likelihood of bushfire, reduced water availability and drying out of wetland ecosystems, increased frequency of extreme events such as storms, and generalised stress on plants and animals, particularly those dependent on a narrow range of land and water characteristics. These stresses can then favour invasive animals such as pigs, foxes and cats, and various weeds that can tolerate a wide range of conditions. Climate change is also likely to have a range of impacts on recreation and tourism in the park and the region. These include an increasing frequency of heat wave conditions and park closures due to extreme fire danger, increased risk of blue-green algal blooms affecting water quality, and increased severity of storms and storm damage. The *Climate Change Act 2017* (Vic.) requires the establishment of adaptation action plans for the water and natural environment systems. In addition, DELWP is currently working with stakeholders to develop adaptation plans for each region of Victoria.

The Barmah Forest represents a significant store of carbon and has the potential for increased carbon sequestration through restoration of vegetation cover and improved soil condition. This sequestration can contribute to reducing the atmospheric carbon levels that drive climate change.

The strategies outlined below for particular values and threats (water, fire, feral animals, etc) will address many of the threats to the National Park posed by climate change. However, there is a need to ensure that the combined effect of these threats is periodically assessed in terms of climate change, and that the overall approach to managing climate risks is reviewed and adjusted if necessary (Griggs et al. 2014). In particular, the National Park's role as a refuge for birds and other animals during drought is potentially threatened by climate change and should be regularly evaluated.

## ENVIRONMENT

### Goals

- The health of Country and the ecological character of the Barmah Forest Ramsar Site in the park are maintained or improved, with increased application of Yorta Yorta knowledge and approaches.
- The current water regime is maintained or improved.
- Impacts on the park's floodplain marshes are reduced and marsh plant communities are restored.
- Threats to the park's forests and woodlands are controlled and the ecological health and structure of forests and woodlands is improved.
- Plant and animal species that are threatened and/or culturally important are protected and where possible their populations increase.
- Alterations to the natural ecological processes in the park are reduced, including Walla and fire regimes.

### Strategies

E1 Increase the understanding and application of Yorta Yorta knowledge and approaches to management of Country through knowledge exchange, training programs and through the planning and delivery of environmental programs by Yorta Yorta employees. Ensure Yorta Yorta are fully and actively engaged in authorising, designing and implementing research programs in the park (see R4).

---

E2 Maintain and improve Barmah's ecological character as defined in its Ramsar site listing, prioritising the protection of environmental values at highest risk, currently floodplain marshes.

---

E3 Reduce the impacts and restore the health of the floodplain marshes of the park through a range of actions:

Remove all feral horses from the park through staged reduction in the population density of horses by effective and integrated control programs primarily through two control methods: (i) passive trapping and rehoming where appropriate recipients are secured, and (ii) ground shooting of free-ranging horses using professional shooters. The sequencing of implementing trapping and rehoming, and the deployment of ground shooting may depend on environmental conditions, park accessibility and the extent of available rehoming opportunities.

Ensure opportunities are provided for community members to rehome horses, and that protocols and safeguards for horse welfare and public safety during the control program are strictly observed.

Increase community support for rehoming captured horses and horse management, and build community support for the success of feral horse management in the National Park.

Re-instate Moira Grass thatch in areas of floodplain marsh to at least its 1982 extent.

Monitor the effectiveness of horse control in reducing population abundance, improving the extent of the Moira Grass community and reducing wetland impacts.

Reduce the population densities of other large invasive animals including feral pigs, deer, goats, and eradication of sheep, as part of control programs across the park (see E4).

Reduce the extent of encroaching native species (Giant Rush and River Red Gum) to restore the boundary between forest and grassland open plains using fire and other methods.

Control Arrowhead to acceptable levels, where floodplain marsh communities are at risk.

Collaborate on these actions through implementation of Parks Victoria's Strategic Action Plan: Protection of Floodplain Marshes in Barmah National Park and Barmah Forest Ramsar Site (SAP) 2020–2023.

---

## Strategies

- E4 Control and, where practical eradicate, invasive animal and plant threats to the River Red Gum and Box forests and woodlands of the park, focusing on priority threats identified in the Barmah National Park and Ramsar Site Pest Plant and Animal Strategy:
- invasive predators (foxes, dogs and cats)
  - invasive herbivores (pigs, deer, goats, rabbits and sheep)
  - invasive plants (particularly plants identified as Priority One threats in the Strategy).
- 
- E5 Eradicate any new or emerging invasive animal or plant populations before they become established.
- 
- E6 Engage with volunteer hunting groups to assist with invasive animal control programs.
- 
- E7 Renew the monitoring plan for the park's Pest Plant and Animal Strategy to take account of the SAP and to set achievable targets for control of invasive animals in the other parts of the National Park (see R3).
- 
- E8 Ensure invasive animal control programs in the park are integrated with control on the adjoining Yorta Yorta-owned Yielima property and the Community Use Area.
- 
- E9 Assess the structure and ecological health of River Red Gum forest stands in the park, building on previous stand condition assessments by MDBA. Determine the need for treatments such as ecological thinning using fire, cutting or other means, incorporating monitoring results from River Red Gum removal on the boundary of marshes. Make use of the thinning byproduct for community firewood or campfire use in the park, as an incidental benefit only.
- 
- E10 Undertake further research to identify nesting locations and determine populations of *Bayadhera* Broad-shelled Turtle and other turtle species.
- 
- E11 Protect turtle nesting habitat from disturbance and control foxes in and around nesting locations (see E4).
- 
- E12 Educate visitors about reducing impacts on turtle habitat, including water contamination, turbidity and bank erosion.
- 
- E13 Work with partner agencies to provide environmental and cultural water flows, particularly to sustain ephemeral wetland habitats for turtles and other animals during times of drought.
- 
- E14 Undertake research to determine the distribution and condition of native bees in the park.
- 
- E15 Work with Goulburn–Murray Water, MDBA, GBCMA and other partners to remove barriers to the passage of native fish, turtles and other aquatic species in waterways in the National Park.
- 
- E16 Implement programs with the Victorian Fisheries Authority to re-introduce or re-stock native fish species, including Trout Cod, Southern Pygmy Perch, Murray Cod and Long-tailed Catfish.
- 
- E17 Reduce the impacts of exotic fish on native species where control methods are available, including promotion of Barmah as a key site for implementing the National Carp Control Plan.
- 
- E18 Support research into the management of other invasive fish species such as Eastern Gambusia and redfin, oriental weatherloach and goldfish including impacts on native fish re-introduction.
- 
- E19 Implement watering strategies and control introduced predators to protect wetland-dependent birds especially threatened species including Australasian Bittern and Nankeen Night Heron, and to promote colonial nesting events, particularly for ibis, egrets and spoonbills. Monitor breeding success.
-

## Strategies

- E20 Ensure existing and potential nest trees for Superb Parrot are protected from damage or disturbance by fire operations, siting of visitor facilities and activities, and management programs. Monitor Superb Parrot population and breeding success.
- 
- E21 Monitor populations of abundant native animal species in the park and develop control strategies, where necessary, to prevent overabundance.
- 
- E22 Monitor the locations of threatened and culturally important plants and animals determine the need for any specific measures to ensure protection from park operations, visitor use or other disturbances. Integrate the requirements of threatened and culturally important plants and animals into planning for broader conservation works including invasive plant and animal control, and fire management.
- 
- E23 Work with partner agencies to ensure that managed water regimes enhance the ecological character of the National Park, particularly floodplain marsh vegetation on open plains, including:
- provision of an appropriate water regime (frequency, timing, duration, depth, variability, and extent) to increase the extent and diversity of floodplain and wetland vegetation, with emphasis on re-invigorating floodplain marsh species such as Moira Grass
  - continuing to minimise the frequency and magnitude of summer and autumn flooding of floodplain marshes (e.g. Steamer Plain, Hut Lake, Little Rushy Swamp and War Plain) caused by unexpectedly large rainfall events that lead to irrigation rejections, by instead diverting unseasonal floodwaters to wetlands dominated by Giant Rush, such as Boals Deadwoods and Top Island or connecting creeks leading to higher terrain usually containing water-stressed red gums.
- 
- E24 Help to sustain healthy Country through the use of environmental water flows. Use environmental flows of Walla to sustain ephemeral habitats and support culturally important species such as turtles.
- 
- E25 Pursue the development of cultural water allocations. Ensure Aboriginal water values and uses are identified and supported, for example through the Aboriginal Waterways Assessment tool enabling Traditional Owners to assess the cultural health of their Country and inform priorities for environmental water delivery.
- 
- E26 Improve natural flows in drainage lines ('runners') through the removal or modification of constructed barriers, removal of River Red Gum regrowth, and realignment or careful removal of excessive timber debris. Retain fallen trees and woody debris levels required for aquatic habitat.
- 
- E27 Monitor and evaluate the effectiveness of environmental water planning (including water deliveries and planned dry periods) in achieving the desired water regime and ecological and cultural outcomes.
- 
- E28 Work with water agency partners to reduce and manage the impacts of blue-green algae and blackwater events on the park environment and visitor safety.
- 
- E29 Develop knowledge and skills in cultural burning and incorporate into fire management in the National Park through partnership between Yorta Yorta and fire management agencies.
- 
- E30 Work with DELWP to incorporate cultural burning practices into fire management programs and procedures.
- 
- E31 Ensure timely and regular annual engagement of Yorta Yorta by DELWP and other fire management partners to identify and incorporate cultural burning priorities into fire management plans.
-

## Strategies

- E32 Develop an operational fire management forum to ensure liaison and co-operation (see IG7).
- E33 Develop skills and capability within the Yorta Yorta Woka Walla natural resource management team to implement cultural burning practices and to participate in other fire management operations and opportunities for training and development.
- E34 Monitor the effects of climate change on the park and visitors, including extreme events and slow-onset changes.
- E35 Periodically review and assess the overall condition of the park in relation to the range of threats and impacts driven or exacerbated by climate change and the effectiveness of the park in providing a climate refuge for wildlife.
- E36 Promote research into the present and past structure of forests in the park and develop a long-term vision and objectives for healthy forest as the basis of future management actions.

## 8.9 YORTA YORTA CULTURE AND CULTURAL HERITAGE

The TOLMA between the State of Victoria and Yorta Yorta aims to recognise, value, promote and incorporate Yorta Yorta culture and knowledge, skills and decision-making processes. The importance of Barmah Forest to Yorta Yorta culture, which regards Country, culture and people as inseparable, is described in Section 3.

It is important to distinguish between cultural heritage and culture as a whole. Aboriginal cultural heritage is defined by the Aboriginal Heritage Act as 'Aboriginal places, Aboriginal artefacts and Aboriginal ancestral remains'. The Act also regulates and protects Aboriginal intangible heritage, which it defines as 'any knowledge of or expression of Aboriginal tradition, other than Aboriginal cultural heritage, and includes oral traditions, performing arts, stories, rituals, festivals, social practices, craft, visual arts, and environmental and ecological knowledge, but does not include anything that is widely known to the public'. These definitions encompass only part of Aboriginal culture, particularly rights and responsibilities for caring for and using Country. Yorta Yorta culture, like other Indigenous cultures in Australia, is about practice in the present, not just heritage from the past. Recognising and incorporating Yorta Yorta culture into the management of Barmah National Park is therefore broader than the protection of cultural heritage and intangible heritage alone.

### Cultural heritage

The last systematic survey of cultural heritage in the Barmah Forest was carried out in the early 1990s (Bonhomme 1992). A small proportion of the forest was sampled by transects. This identified 182 sites, including a burial site, stone artefact scatters, mounds, middens and scarred trees. These are considered to be a small part of the total number of cultural heritage sites that exist in the National Park. Many sites were recorded close to water features, including lagoons and swamps. A significant number of sites were located on sand ridges, which are also known to be places of ceremonial use and importance.

The absence of stone deposits on the Murray floodplain indicates that the stone artefacts that have been recorded in Barmah Forest, such as axe heads and fragments, were obtained by travel or trade. Scarred trees can indicate a number of uses but in the Barmah context they generally indicate canoe-building. Mounds are sometimes associated with ovens, but very large mounds in Barmah may have been used for camping or food processing (Bonhomme 1992).

A significant number of cultural heritage sites have been disturbed or damaged in the past by track construction and logging, and by present-day recreational use. Bonhomme identified 10 sites that had been destroyed or damaged by the construction and maintenance of the Sand Ridge Track. Damage by horses, rabbits and pigs was recorded at a number of surveyed sites, and has almost

certainly occurred at other sites (Bonhomme 1992). Camping along Dhungalla and the creeks in the park is almost certainly causing disturbance to cultural heritage sites.

## Cultural responsibilities and practices

Of fundamental importance to Yorta Yorta is the recognition of our rights to be present and active in the National Park, to enact our responsibilities to care for and use Country, and to undertake cultural practices. These practices include camping, fishing, hunting, gathering food, and collecting materials such as grass for weaving and ochre for ceremonial use, as well as land management practices such as burning. Yorta Yorta and academic researchers have mapped the extensive range of Yorta Yorta uses and knowledge of the Barmah–Millewa Forest (Griggs et al. 2014).

Some of these cultural activities are allowable in the National Park under current legislation (e.g. camping and fishing). Others, such as the taking of plant and animal foods, are not permitted by the National Parks Act except where a Recognition and Settlement Agreement has been established under the Traditional Owner Settlement Act. Some activities that need to be undertaken away from public areas (such as ceremonial practices) are not prevented by law, but past policies and plans have neither recognised them nor provided appropriate locations. This plan proposes strategies for recognising and incorporating Yorta Yorta culture into the National Park, within current laws and policies, and also by pursuing expanded legal arrangements that are necessary to achieve the objectives of the YTOTLMA.

The visibility of Yorta Yorta cultural connection in the National Park for visitors has been improved in recent times, but could be improved. The Yamyabuc Trail interprets culture and the natural environment around the Dharnya precinct, and this could be complemented by a cultural trail through the main part of the National Park that would be suitable for drivers, cyclists and walkers. Most track and place names in the park are post-colonial names. Parks Victoria is the naming authority for places in National Parks and can re-name places in accordance with the guidelines and consultation process under the *Geographic Place Names Act 1998* (Vic.).

YYNAC's Yenbena Training Centre in Barmah township, and the Yielima farm property, which is an inlier in the park, are important Yorta Yorta community assets. They offer the opportunity for linked training and education that combines programs at Yenbena with on-Country activities in the Dharnya Centre or at Yielima. This has been described as the 'bush university' concept (YYNAC 2012).

*'People tend to think of Aboriginal culture as this fixed, ancient practice. But it was constantly evolving.'* — Deborah Cheetham

### EMBEDDING YORTA YORTA CULTURE AND KNOWLEDGE IN THE MANAGEMENT OF COUNTRY

#### Goal

Yorta Yorta culture and concepts of Country are recognised and embedded into the joint management of Barmah National Park.

#### Strategies

- |      |   |
|------|---|
| YYC1 | Increase the understanding among joint management partners, researchers and others of the Yorta Yorta way of seeing Country, recognising that nature, culture and people are inseparable.                                   |
| YYC2 | Increase Yorta Yorta participation in the management of Country, including cultural burning and watering, and invasive plant and animal control, through the YYNAC Woka Walla team and other channels (see E1, E4 and E29). |
| YYC3 | Increase understanding of the breadth of Yorta Yorta cultural heritage, including tangible artefacts and sites, places, and intangible heritage such as stories, knowledge and practices.                                   |



## YORTA YORTA CULTURAL HERITAGE PLACES AND SITES

### Goal

Knowledge of Yorta Yorta cultural heritage places and sites in the National Park, as well as intangible heritage associated with the park, is expanded.

### Strategies

- YYC4 Update and expand mapping of cultural heritage in the National Park, especially in areas at risk of disturbance such as popular visitor areas and access routes.
- 
- YYC5 Protect cultural heritage from the impacts of visitor use and management operations. (See strategies for camping and vehicle access and use in Section 10.)
- 



Yorta Yorta dancing. (Photo: Tracey O'Keefe)

## YORTA YORTA CULTURAL PRACTICES AND RESPONSIBILITIES

### Goal

The central importance to Yorta Yorta culture of rights and responsibilities is recognised and Yorta Yorta have the opportunity to gather on, care for and use Country and to pass on traditional knowledge and skills.

### Strategies

- YYC6 Set aside an area on part of Top Island outside the Reference Area Zone, for Yorta Yorta cultural gatherings to enable community and customary practices to be undertaken and for cultural knowledge sharing and instruction. Establish processes for managing and monitoring access and use.
- 
- YYC7 Pursue legal arrangements, through the Traditional Owner Settlement Act or other processes, to recognise rights to collect and use traditional plant and animal foods and materials in the set aside area and/or other parts of the park.
-

## PRESENTING YORTA YORTA CULTURE AND KNOWLEDGE TO VISITORS AND THE COMMUNITY

### Goal

The understanding and appreciation of Yorta Yorta culture among visitors and the community is increased.

### Strategies

- |      |   |
|------|---|
| YYC8 | Develop a cultural interpretation plan for the National Park, including improved information and interpretive materials about Yorta Yorta culture for visitors as well as partners and workers in the National Park, including online and printed information, signs, and training and induction opportunities. |
| YYC9 | Expand the use of Yorta Yorta names and dual names for places and tracks in the National Park where current names are not historically significant, using the joint management decision-making process and the rules and consultation process under the Geographic Place Names Act.                             |

## 8.10 POST-COLONIAL AND SHARED HISTORY

Colonial explorers and pastoralists began moving into the Murray River forests in the 1830s (Hibbins 1991). In the early 1840s pastoralists moved sheep to Barmah Forest from the south, to take advantage of summer grasses. Despite a government prohibition on unlicensed land occupation (squatting), they took up pastoral runs known as Lower Moira, Upper Moira, Yielima and Yalca (Curr 1883). Sheep grazing required limited labour — just a few itinerant shepherds — and few parts of the forest were actually settled during this period. Roderick McDonnell took up a right to purchase the one square mile Yielima block in 1864, which remains the only private land in the forest (Fahey 1986).

Government controls on squatting, followed by the high demand for timber and firewood created by the Victorian gold rush in the 1850s, led to timber-cutting becoming the dominant colonial use of the Barmah Forest. The strength and rot-resistance of River Red Gum was highly valued. The initial trade was in the cutting of railway sleepers for local use and export to India, and then timber props for mine shafts in Bendigo and elsewhere. The level of timber extraction was very high, and in the late 19th century successive official inquiries recommended protecting Barmah and other Victorian forests (Fahey 1986, Legg 1995).

Management of Barmah by the Forests Commission of Victoria beginning in the early 20th century, brought more sustainable timber-cutting under a multiple-use approach that encouraged grazing of the forest, predominantly by cattle rather than sheep. The completion of the Hume Weir near Wodonga in 1930s ushered in the regulation of the Murray River system, with its downstream effects on natural flooding regimes, including in Barmah Forest. The impacts of regulation on the health of the River Red Gum forests were identified by forest managers and others as early as the 1930s (Fahey 1986, Dexter et al. 1986). Regulators were constructed in Barmah Forest from the early 1940s, initially at The Gulf, to prevent summer flows of water that local foresters believed were affecting River Red Gum regrowth. Cattle grazing was also suspected of damaging seedling regrowth, although research indicated that grazing by rabbits and kangaroos were also important factors (Fahey 1986). In 1982 the State Government asked the Land Conservation Council to review public land use in the central section of the Murray Valley, including Barmah State Forest. The Government implemented the Council's recommendation that a State Park be created over the western and eastern parts of the forest, including Ulupna Island, but did not accept the recommendation to end logging and grazing in the State Park, which continued until logging ceased in 2003 (Clode 2006).

The river transport, timber cutting, charcoal production and grazing history of the park is known from a number of locations in the National Park, although in some cases little tangible evidence remains (DCE 1992):

- Cornalla Landing is the site of a crossing to Cornalla Station directly over the river in New South Wales. The property, settled in 1843, was one of the earliest in the district. Stores and livestock were brought across the river by punt. In the 1880s a mill on this site was exporting railway sleepers to India.
- Various spot mills were established in the forest between 1860 and 1910. Green Engine is the site of one of these mills which was powered by a bright green steam engine. At Thistle Bed an old boiler near the river is from a sawmill operated by Corry from 1924 to 1934.
- Other mills were located at Barmah Island, Ramp Track, Trickeys Track, Bunyip Waterhole, Tram Island, Eddys Track, Tarma, Stewart Kitchen, Cornalla Landing, Long Plain Track and near Black Engine Lagoon. Several mills were also located just outside the forest.
- Punt Paddock Lagoon was named after a cable operated punt which connected the colonies of Victoria and New South Wales in the 1860s and 1870s. The punt keeper lived in a hut by the river bank. This hut was later moved to the Cherry Tree yards. The area was often used by forest workers as a camping area during flood times. A well and several wooden huts were established, but no evidence of these remain. However, remnants of the wooden fences that were used to hold cattle until the 1950s are still present.
- Late last century logs were removed from the Tram Swamp and Tram Island area via a wooden tramline running to Nicholas Mill, which was situated at the site of the present Murrays Mill. Long Landing was the site of a landing used for loading logs for transport down the river to Echuca from 1860 to the 1930s. Other similar landings along the river were located at The Gulf, Honeymoon Bend, Stewart Kitchen, Mill Log Landing, Bull Paddock, Sapling Landing, Rowes Camp and Burnt Landing.
- During summer local people went to the Picnic Ground (near The Rookery) to use water from the nearby water holes. The area became established as a place for meeting friends and socialising. A regular event known as the Harvest Home and Farmers Union Picnic was organised, and sporting activities took place on a prepared track. The picnic was held in the forest in most of the years between the 1880s and 1944. Mannions Yards were originally used for mustering on the Yielima end of the forest. They were shifted to the present site from the Picnic Ground in 1922.
- The Barmah Muster Yards, located outside the park but inside the Community Use Area, are listed on the Victorian Heritage Register (VHR No. H2212) for their significance as part of the cattle grazing history of the forest.



Family camping in the Barmah Forest c. 1940. (Courtesy of Museums Victoria)

Barmah Forest has been an important location for Victorian forestry management and forest science research, in particular the physiology and regeneration of River Red Gums (Dexter 1978). A number of veteran River Red Gum specimens of exceptional height and straight, branchless form (known locally as pile trees) are listed on the Victorian Heritage Database, including Munro's Pile between Long Plain Track and Gulf Track north of Gower's Track, Assessor's Tree in the north-western area of the National Park, and Code's Pile on Sand Ridge Track, considered to be the tallest River Red Gum in Victoria with a height of 49.3 metres in 1992 (HCV 2019). A monument to forestry history was established on a fallen tree near Dharnya in 2005 by the former Department of Natural Resources and Environment and community groups.

Historic places (dating from the time of the first colonial arrivals to the present) are managed to conserve their cultural values in accordance with the *Heritage Act 2017* (Vic.), and the Burra Charter (ICOMOS Australia 2013). The locations and details of historic places are held in Parks Victoria's Asset Information System to help protect the places in the event of proposed works, fire suppression or other activities in the area. The Victorian Heritage Database (HCV 2019) includes the Victorian Heritage Register, which lists the state's most significant places and objects and provides public access to information about historic places in Victoria.



**Alf (left) and Frank Corry, near Moira Lakes at the end of the sand ridge, Murray River half a mile away, early 1900s. (Courtesy of National Library of Australia)**

The history of Barmah Forest since the arrival of Europeans in the 1840s is a history that is shared by Yorta Yorta, the incoming settlers and the broader Victorian community. It includes both conflict and cooperation. The 19th century in particular was a period of traumatic displacement for Yorta Yorta people, who suffered from introduced diseases, removal to missions and assimilation policies. A battle at Barmah Lake between Yorta Yorta and the police in 1843 was reported to have resulted in the massacre of 26 Aboriginal people (Cannon 1990, Clark 1998).

The timber and grazing industries employed both Indigenous and non-Indigenous workers, who shared in the livelihoods created, the impacts of their closure, and who share important communal and family histories (Teese and Wright 2008). In 1998 Yorta Yorta Elders sought out a strategic alliance for a coordinated campaign to protect the Barmah–Millewa forest, and to re-establish Yorta Yorta rights to manage the forest. Elders made a formal request of Friends of the Earth, the Goulburn Valley Environment Group, and the Victorian National Parks Association. While this alliance was seen as a challenge for some within the environment movement, the groups recognised the importance of Yorta Yorta leadership in the campaign to protect Country and, in the process, contributed to a reorienting of single focus environment movements to one that centralised Indigenous voices (La Nauze 2009).

All of these histories create a layered heritage in and around the National Park. The National Heritage List documents the places of outstanding heritage importance to Australia as a nation. The Barmah–Millewa Forest represents a natural and cultural landscape of profound heritage importance, which demonstrates some of Australia’s most significant historical themes: ancient ancestral occupation by Yorta Yorta, the mission era, pastoral expansion, the timber industry, stock grazing, river regulation and water extraction, and the struggle for Indigenous land justice. Listing of the Barmah cultural landscape should be pursued.

## CONSERVING AND PRESENTING POST-COLONIAL HERITAGE

### Goal

The post-colonial heritage of the National Park is identified, conserved and promoted.

### Strategies

- |     |  |
|-----|--|
| SH1 | Develop improved visitor information and interpretive materials about post-colonial heritage in the National Park, including web and printed information.  |
| SH2 | Identify and interpret post-colonial heritage sites in the National Park, including sites relating to the timber industry, charcoal burning, grazing, shearing, river transport and forestry research. |

## ACKNOWLEDGING AND INTERPRETING SHARED HISTORY

### Goal

The shared history of Yorta Yorta Nation and other Australians in the Barmah Forest since the colonial era is recognised and interpreted.

### Strategies

- |     |  |
|-----|--|
| SH3 | Acknowledge and interpret the shared history of the National Park in visitor information and management, including openly recognising conflict and trauma. |
| SH4 | Pursue listing of Barmah as a National Heritage Landscape through the Commonwealth Government.   |

---

SH5 Using existing roads and tracks, develop a cultural trail through the National Park that recognises and interprets the park's cultural landscape and shared history: the story of Yorta Yorta as First Nation People, the era of settlement and extractive use, and the evolution of present-day conservation. Seek community input on the features and stories to be recognised and interpreted.

---

# 9 COMMUNITY CONNECTIONS AND PARTNERSHIPS

## 9.1 COMMUNITY CONNECTIONS

Barmah National Park is part of a broader community that includes neighbouring landholders bordering the park, residents and businesses in the nearby townships of Barmah, Picola and Bearii, local service centres such as Echuca, Moama, Nathalia and Tocumwal, and the Yorta Yorta community across Yorta Yorta Country and elsewhere. Beyond these local and regional communities there are many people and groups throughout Victoria and southern New South Wales that have special connections to Barmah National Park because of individual or family history, recreational use, or a personal or professional interest in the environmental and cultural values of the area. All of these groups and individuals represent a community of interest in how the National Park is managed, as well as a network and potential resource for collaborative management and improvement. This collaboration can take many forms, including volunteer activities, business partnerships, education and research.

Although the Yorta Yorta Nation is formally represented on the YITOLM Board through YYNAC, Yorta Yorta and other community members should have the opportunity to connect with the park through community activities, not just through formal governance structures. There is also an opportunity for increasing the understanding between local communities and Yorta Yorta through joint activities and projects in the park. YYNAC's Yenbena Training Centre, in Barmah township, and the Yielima farm property, are important community-owned assets that offer collaborative opportunities. Management of both the park and Yielima are complicated by the narrow corridor of national park land lying between the property and Dhungalla.

Projects and programs to connect with the community should be targeted at two levels: building and maintaining relationships with local communities, especially Yorta Yorta, neighbouring landholders and townships; and working with regional and peak statewide organisations with an interest in the park, including recreational, environmental and educational bodies, Moira Shire and Murray Regional Tourism.

## 9.2 GOVERNMENT PARTNERS

Many government agency partners are essential to the management and operation of the National Park. In addition to the primary partners (YITOLMB, DELWP, YYNAC and Parks Victoria), key government agency partners include:

- Goulburn Broken Catchment Management Authority
- Victoria Police
- Goulburn–Murray Water
- Country Fire Authority
- Victorian Fisheries Authority
- New South Wales Maritime Services
- Shire of Moira
- Murray–Darling Basin Authority
- New South Wales National Parks and Wildlife Service
- Murray Regional Tourism
- Victorian Environmental Water Holder
- Goulburn Valley Waste and Resource Recovery Group
- State Emergency Service
- Better Boating Victoria.

Over time the course of the River Murray has altered since the state border was determined. A 43-hectare area of New South Wales known as Native Dog is effectively an inlier and contiguous with

the Ulupna Island section of Barmah National Park. An agreement should be sought with the New South Wales Government to enable Parks Victoria to manage the Native Dog area as part of the Barmah National Park under the existing provisions of the National Parks Act.

### 9.3 SOCIAL AND ECONOMIC OPPORTUNITIES FOR YORTA YORTA

Barmah National Park provides the opportunity for increased economic benefits to the local and regional community through employment and service businesses, and by capturing the value of ecosystem services (see description in Section 2). The areas with greatest potential are:

- jobs and contract services to implement the strategies outlined in this section, including feral animal and invasive plant control
- jobs and contract services to maintain park facilities and access, including repairs and renewal works
- jobs and contract services to revitalise and operate the Dharnya Centre, and to provide activities including arts and crafts tuition, retail sales, and cultural training and education
- jobs and business opportunities associated with guided tours and events in the National Park and the Community Use Area
- carbon sequestration in the park and on the inlying Yielima property.

Experience shows that the development of additional employment and business opportunities can be challenging and requires dedicated programs and project management to achieve results. Development should focus on working with existing organisations and businesses to expand jobs and business opportunities, as well as new and innovative opportunities. This includes YYNAC (particularly its Woka Walla natural resource management team), retail businesses in the Barmah township, licensed tour operators, and the economic development arms of Moira Shire and Murray Regional Tourism.

#### COMMUNITY CONNECTIONS AND PARTNERSHIPS

##### Goal

Community and partners strongly support and collaborate in the joint management of Barmah National Park.

##### Strategies

CCP1	Periodically update the local and broader community and partners about progress on implementing the Joint Management Plan (see IG8).
CCP2	Establish decision-making and operational arrangements to ensure that the implementation of the Joint Management Plan is collaborative and widely supported (see ‘Governance, Implementation and Monitoring’ section).
CCP3	Establish cross-cultural knowledge sharing projects for water management and fire management in the National Park which increase water and fire managers’ understanding of Yorta Yorta priorities and traditional knowledge, and enable Yorta Yorta to understand and participate in agency policy formulation and decisions.
CCP4	Create training, research and education programs that combine on-ground activities in the park with the facilities and services available in the Dharnya Centre and the Yenbena Training Centre in Barmah township.
CCP5	Investigate the creation of a knowledge-sharing platform to hold education, research, monitoring and other data and information about Barmah National Park and Yorta Yorta Country for use by all partners and the community, subject to confidentiality and intellectual property provisions.



---

CCP6 Ensure that researchers proposing to work in the National Park engage with Yorta Yorta in the design, approval and conduct of their research, through the joint management process.

---

## Strategies

CCP7 Create an economic development program with dedicated project management that identifies and develops opportunities for the additional employment of Yorta Yorta people and businesses in:

- Healthy Country works and operations, including pest plant and animal control and fire management
- visitor facility maintenance
- commercial visitor services such as sales of firewood, ice and camping supplies
- tourism services such as guided tours, craft teaching and merchandise sales
- waste management in and outside the National Park
- development of a local species seedbank for revegetation work in the park and the whole of Yorta Yorta Country.

---

CCP8 Implement an immediate increase in the participation of the YYNAC Woka Walla Team in park operations and works and develop a longer-term plan for building Woka Walla skills and capacity as part of the economic development program.

---

CCP9 Work with the Shire of Moira to improve the management of visitor waste and rubbish including development of a waste dump point for recreational vehicles in the vicinity of the park (see VE11 and VE12).

---

CCP10 Work with Murray Regional Tourism to jointly progress the Barmah National Park Tourism Development Plan, with a focus on nature-based and Indigenous tourism, and the development and promotion of the Murray Valley Adventure Trail (see VE26).

---

CCP11 Collaborate with Yorta Yorta Nation Aboriginal Corporation on the management of the interface between the National Park and the inlying Yielima freehold property. Integrate pest plant and animal control programs and other activities across the park and Yielima to improve effectiveness.

---

CCP12 Investigate the legal mechanisms to enable Yorta Yorta Nation Aboriginal Corporation to control and manage the Dhungalla (Murray River) frontage adjacent to Yielima.

---

CCP13 Establish an agreement with the New South Wales Government to enable enforcement of regulations by Victorian joint management rangers on the Native Dog area of Ulupna Island and other areas on the south side of Dhungalla (Murray River) (see VE36).

---

CCP14 Work with New South Wales Maritime Services to ensure safe and environmentally responsible boating on Dhungalla (see VE23).

---

CCP15 Work with Picnic Point caravan parks and tourism operators in New South Wales to promote the national parks on both sides of Dhungalla, and to educate visitors and operators about Barmah National Park.

---

CCP16 Pursue opportunities for closer links with businesses and service providers in Barmah and Picola to improve the range of services for National Park visitors, especially for events and group visits.

---

CCP17 Investigate ways to increase volunteering in the National Park using Parks Victoria's knowledge and networks in the recreational, conservation and educational sectors.

---

CCP18 Liaise with caravan park and resort owners adjacent to Ulupna Island on visitor information and services and park management issues.

---

# 10 VISITOR EXPERIENCES

Barmah National Park is a popular destination for campers and day visitors. Visitor numbers are not currently measured. Camping, swimming, fishing, boating (including canoeing and kayaking), birdwatching, and bushwalking are the main recreational activities. The park is also used for horseriding, cycling and trail-bike riding. Educational groups frequently visit the park as part of canoe and rafting trips on Dhungalla (Murray River). Several licensed tour operators operate in the park, providing boat tours of the wetlands, horseriding and other activities. Most visitor use occurs in the warmer months of the year, with peak periods from Christmas to the end of January, public holiday weekends and Easter. The park is one of the highlights of the 350-kilometre River Red Gum Drive touring route through northern Victoria and the Riverina. It is also visited as part of various canoeing and kayaking events along the Murray River.

Visitor use is concentrated at Barmah Lakes, at camping areas along the river and at the beaches on Ulupna Island which are readily accessible for day visits.

Access to parts of the park, especially the Murray River camping areas, can be difficult in winter and spring because of flooding. This limits the recreational and educational use of the park during a period when the park is at its most spectacular, with intense bird nesting and fish and frog breeding. Access during flooding could be improved, with management to avoid disturbance of bird colonies.



**Camping is the most popular visitor activity in the park. (Photo: Parks Victoria)**

## 10.1 MOVING TO MORE SUSTAINABLE VISITOR EXPERIENCES

In establishing Barmah National Park in 2010 the Victorian Government recognised the importance of protecting the River Red Gum forests along the River Murray, threatened by drought and climate change, so that they can be enjoyed by future generations (Victorian Government 2009). The Government supported the continuation of much of the pre-existing pattern of recreation activity, such as dispersed camping, but recognised that more intensive management was required for high visitation areas to prevent long term environmental damage. In the period since 2010 the pre-existing pattern of visitor use has largely continued, except where practices were no longer allowed by the National Park Regulations. However, a number of changes are now needed to ensure visitor use is sustainable in the longer term, consistent with the objectives of national park legislation, and that the park can cope with the increasing stresses from climate change and drought.

The goals and strategies outlined in this section allow most of the existing visitor activities in Barmah to continue but with provisions that ensure that they do not impact on environmental and cultural values, and other visitors. The key changes to access and visitor activities are summarised below.

#### Key changes to access and visitor activities

- The overall level of vehicle access to the park will remain similar to the present. Some tracks or sections of track are likely to be closed if they are not essential to visitor access or emergency management. This will occur through engagement on a detailed road and track plan with community stakeholder groups and emergency management authorities.
- Dispersed camping will continue to be available in large areas of the park along Dhungalla (Murray River). Some areas with environmental values may be closed for periods to allow rehabilitation and, in some locations, camping will be re-sited or closed where cultural heritage values are present.
- Barmah Lakes camping area, canoe camping areas on The Narrows or Barmah Choke, and a new camping area in the southern part of the park to be determined, will be classified as 'designated camping' and will be subject to a booking system and overnight fees, similar to other national parks in Victoria.
- Campfires will be allowed all year round within authorised fireplaces in accordance with fire regulations. Dispersed campfires (ie outside authorised fireplaces) will be allowed in the Dhungalla Zone in accordance with fire regulations, except within 50 metres of any authorised fireplace provided. Dispersed campfires outside authorised fireplaces will not be allowed during the declared fire danger period. Additional authorised fireplaces will be established in the Dhungalla Zone to support this strategy.
- Generators will be allowed to be used in designated sections of the Dhungalla Zone along the Murray River and in part of the Barmah Lakes Camping Area in the Gulpa Gaka Zone, from sunrise to sunset.
- Chainsaws will be allowed to be used only in designated areas of the park for cutting firewood for park campfire use.
- Horseriding will not be allowed in the National Park except along the section of Sand Ridge Track from Rices Bridge to access the Community Use Area during permitted events. Existing horseriding tour operator licences will continue until expiry of each current licence.
- Boating on Barmah Lake and other waters in the park will be subject to a five-knot speed limit except for authorised purposes.
- Improved facilities and services will be developed focused on the Dharnya Centre to provide information, education, tours and events.
- Additional facilities will be provided to reduce impacts including toilets at designated camping areas and additional boat ramps to reduce bank erosion.
- Access for vehicles and canoes/kayaks will be improved during flood periods.

## 10.2 VISITOR EXPERIENCE AREAS (VEAs)

A Visitor Experience Area is a management overlay applied to a part of the park that is popular for particular activities in a certain setting, that combine to provide an identifiable type of visitor experience requiring management strategies. Five VEAs have been applied to Barmah National Park (shown on Map 4):

- Barmah Lakes VEA which takes in the Barmah Lakes day visitor area and camping area, as well as Dharnya Centre in the Community Use Area adjacent to the park
- Picola VEA which extends along Dhungalla from The Cutting in the west to Tongalong Creek
- Yalca VEA which extends along Dhungalla from Tongalong Creek east to Ulupna Creek

- Ulupna Island VEA which covers the eastern end of the park
- River Red Gum Drive VEA which is a 'journey' VEA covering a recreational four-wheel drive route through the park.

The goals and strategies for each VEA are described below.

### 10.3 GATEWAY TO THE PARK

The Community Use Area and the nearby Barmah Lakes Camping Area and day visitor area form a logical gateway to the National Park, especially for first-time visitors who need orientation and information. The Dharnya Centre in the Community Use Area is a major asset for presenting and interpreting Yorta Yorta Country and culture, and the park's values. This area is also close to tourism facilities in Barmah township, including the Yenbena Training Centre. The current Barmah Master Plan process provides the opportunity to upgrade gateway services and facilities.

### 10.4 ACCESS ROADS AND TRACKS

The road and track network in the park provides access for visitors as well as for park operations, conservation works and emergency management. The current network is largely an artefact of the logging history of the forest, where tracks were required to access each area where timber was extracted. As a result, there are 18 vehicle entry points to the park and a number of parallel and redundant tracks. There is a significant management cost to maintaining unneeded tracks and bridges, as well as managing track closures and openings and warning signs during emergency conditions. Many of the entry points on the southern boundary of the park have gates on a disused Crown land road reserve. The road reserve is not subject to park regulations, compromising the legal enforcement of closures. Reviewing the need for all tracks in consultation with recreation stakeholders and emergency managers is likely to identify tracks that can be closed to public access or converted to walking and cycling use only, without compromising vehicle access for bushfire and other emergency management, and for visitor use.

There is also a need to undertake minor works and re-alignments on retained tracks to reduce their impact on known environmental and cultural values, and to improve access during floods by raising the road level at low points. A road-based cultural trail through the park could use existing tracks to interpret Yorta Yorta culture and take in historic sites in the park.

### 10.5 BOATING

Boating is a very popular visitor activity, including boating on Barmah Lake, in the forest and creeks during flooding, and on Dhungalla (Murray River) for fishing and other recreational activities. Boating on the Murray River is outside the park boundary and is subject to New South Wales regulations. However, boats may be moored or landed within Barmah National Park. Barmah Lake and other floodplain waters in the park are well suited to canoes, kayaks and motorised craft operating at low speeds for bird and wildlife watching, passive recreation and fishing. The Murray River Canoe Trail extends from Picnic Point near Top Island to Barmah township and provides an important recreational opportunity for enjoying the park.

High-speed boating on the park waters is not appropriate due to bank erosion, noise impacts and disturbance caused to wildlife and visitors.

The creation of informal launch points on the banks of the Murray River and creeks creates bank erosion and water turbidity. The provision of several additional constructed boat ramps, along with education and enforcement will help to reduce this problem.



Outdoor education group. (Photo: Tracey O'Keefe)

## 10.6 CAMPING, CAMPFIRES AND CAMPING FEES

Camping is currently permitted anywhere in the National Park except Reference Areas, but almost all camping occurs at Barmah Lakes and immediately adjacent to Dhungalla (Murray River) between the river and River Road. Camping areas along the river are difficult to access during flooding due to access tracks becoming impassable.

The Barmah Lakes Camping Area has good facilities and access, but the area is large and the camping sites and traffic circulation are poorly defined. Camping and vehicle use on the water's edge and its marsh vegetation is common.

Dispersed camping is highly valued by many Barmah visitors. This form of camping was described by VEAC as 'camping along the river frontage accessible by vehicle, at a site of one's choosing, and where there are generally no toilets, drinking water or fireplaces' (VEAC 2008). Continuing to allow dispersed camping throughout the entire park is not appropriate, based on demonstrated visitor preferences, and the very high conservation values of the marshes that are susceptible to trampling and waterway contamination. A small number of campers, particularly those who do not fish or boat on Dhungalla, have previously preferred to camp in quieter, dispersed locations in the southern section of the park. Continuing to allow dispersed camping in the southern forested areas of the park would require a high level of ranger patrol to ensure compliance with fire and general park regulations.

Managing Barmah Lakes and some other areas of the park as 'designated camping' areas with toilets and other facilities, and bookable sites, will increase the attractiveness of camping in the park for first-time visitors and those not wanting a fully self-reliant, dispersed camping experience. Campground bookings can be an effective way of controlling the impact on the environment and ensuring the quality of the visitor experience. Throughout the Victorian national park system, fees are charged to book and stay in designated camping areas, based on the level of facilities and services provided. Revenue from camping fees would provide funds to support the maintenance of facilities and the National Park in general. The camping fee structure should provide appropriate concessions and in common with other Victorian national parks, general entry to the park should remain free of charge.

The 1992 Management Plan, covering the former Barmah State Park and State Forest, identified the need to rest and also define camping areas where they have an impact on the environment and cultural heritage (DCE 1992). This approach has been only partially implemented.

The introduction of a prohibition on campfires during the declared-fire danger period each year has previously been considered, given that campfire escapes are the primary cause of bushfires in the

park. A similar prohibition currently applies in the adjacent Murray Valley National Park in New South Wales. Constructed fireplaces reduce the environmental and cultural heritage impacts caused by campers digging their own fire-pits, and also contain fires more safely. It is not feasible to provide fireplaces in all dispersed camping locations, but they can be provided in designated camping areas and in dispersed locations that are popular or susceptible to impacts.

The use of noise-generating equipment including generators and chainsaws (but not vehicles) is regulated under the National Parks Act to enable visitors to enjoy natural peace and quiet without nuisance, and to avoid disturbance to wildlife. Generators have been traditionally used by campers in Barmah Forest. Alternatives such as solar panels are increasingly available but have limitations at some times of the year. Allowing the use of chainsaws to cut firewood enables campers to have smaller, safer campfires. Designating areas in which generators and chainsaws can be used allows separation of visitors wishing to use this equipment and those wanting peace and quiet, and also restricts use from areas with high conservation values.

## 10.7 HORSERIDING

Horseriding is not permitted in Victorian national parks except where areas are specifically set aside to allow horseriding, in transit or under a permit. In Barmah National Park, in the absence of a management plan since the park's proclamation in 2010, horseriding has occurred as the continuation of a pre-existing activity. Recreational riding of horses off-track has the potential to cause significant environmental damage, especially in the floodplain marsh areas of the park. Intensive programs to control the impacts of feral horses on the marshes is proposed as part of the SAP (Parks Victoria 2020). Limiting recreational horseriding to roads and tracks in the National Park may reduce impacts but would be difficult to enforce. The Barmah Island and Ulupna Island sections of the Murray River Reserve (proposed Murray River Park), and the Community Use Area, provide readily accessible alternatives for horseriding adjacent to the National Park. Horseriding in the Murray River Reserve has been assessed as part of the recent River Red Gum Parks Management Plan (Parks Victoria 2018a) and that plan provides for horseriding access to tracks in the Reserve to be maintained.

## 10.8 VISITOR SAFETY, COMPLIANCE AND ENFORCEMENT

Issues affecting visitor safety and impacts on the park require ongoing education, controls and enforcement. Visitors need to be advised of several risks to visitor safety that are particularly relevant to Barmah National Park so they can take appropriate precautions: the potential for drowning and diving accidents, falling tree limbs in River Red Gum areas of the forest, blue-green algal blooms causing skin irritation and potable water risks, and mosquito-borne viruses such as Barmah Forest Virus and Ross River Virus.

Parks Victoria, as the park manager, maintains an emergency management plan for the park which sets out procedures and responsibilities for dealing with emergency situations including bushfire, flood, storm and lost persons. DELWP and CFA jointly manage the public warning system in relation to bushfire danger. On declared Total Fire Ban days fires in the open air, the use of some types of machinery, and some other activities are prohibited. On declared 'Code Red' days the park will be closed to the public through a combination of signs and/or announcements through public information channels.

Some current compliance issues and impacts are persistent and were identified in the 1992 management plan for Barmah State Park and State Forest as requiring action. These include cutting of firewood for domestic use, off-road vehicle use, digging for Bardi grubs, discarded rubbish, bank erosion, and unattended and illegal campfires. Illegal hunting, sometimes with dogs, is also a significant issue. A key objective of joint management is to increase the level of respect for Country on the part of park visitors. There is a need to establish a dump point for Recreational Vehicle wastewater close to the park. The park has a 'carry-in carry out' policy for rubbish. It is recognised that visitors who have long journeys to home may deposit rubbish in adjacent townships, posing an amenity problem for residents and local government services, unless proper

provision is made. There are challenges and costs in siting and servicing waste facilities that will require close co-operation with Moira Shire and other stakeholders.

The National Parks Regulations 2013 prohibit dogs (except for assistance dogs), and the use of generators, chainsaws and other noisy or disturbing devices in Victorian national parks except in designated areas or under permit. Dogs are allowed in the Murray River Reserve (proposed Murray River Park) to the east and west of the National Park. The Community Use Area is currently not covered by any National Park regulations as it is outside the park boundary, making it difficult to manage visitor impacts or anti-social behaviour.

Mountain biking is an emerging recreational activity in Victorian parks which can be well provided for on Barmah's existing road and track network. In some parks, mountain bike users have created illegal tracks and structures. Compliance programs need to monitor any emerging illegal mountain bike activity.

## 10.9 TOURISM

The Murray Regional Tourism Board has identified Barmah Forest as a key nature-based asset within the Murray Region, which presents the opportunity for further enhancement as a leading icon of the Murray. The Murray Region Destination Plan proposes a tourism development plan for Barmah National Park that identifies opportunities for nature-based and Indigenous tourism, private investment, and ongoing models to ensure maintenance of the park. The Murray River Adventure Trail, which is currently in development, is a multi-sport adventure trail which extends along the length of the Murray River within the Murray tourism region in Victoria and NSW, using land and water to incorporate walking, cycling, kayaking/canoeing and other forms of water transport. The trail extends from Lake Hume, near Albury Wodonga in the east to Mildura/Wentworth in the West. There is also an opportunity to promote 'geo-tourism' attractions associated with the Cadell Fault/Tilt and its role in shaping the geomorphology of the area and the evolution of the Barmah-Millewa River Red Gum Forest. Proposals to develop accommodation on private land around the park are under consideration, ranging from resort style accommodation to 'glamping' and conference facilities.

## 10.10 INFORMATION, INTERPRETATION AND EDUCATION

Visitor centres and local townships provide visitors with information about the parks through park visitor guides and brochures, such as touring and activity guides. The Echuca – Moama Visitor Information Centre and the Barmah Forest Heritage and Education Centre in Nathalia are major regional facilities for visitor orientation and information. Visitor information and maps are also included on information boards at popular visitor sites. Parks Victoria also maintains online information ([www.parkweb.vic.gov.au](http://www.parkweb.vic.gov.au)) and a free-call telephone information service (131963) to help visitors plan their trip. Signs on access roads help to orientate visitors. Rangers are an important face of the organisation and irreplaceable in delivering some aspects of education and interpretation authentically, through informal interactions as part of their duties or through structured programs such as the Junior Ranger program or formal tours. Innovative digital technologies such as mobile apps, podcasts and videos that support self-guided exploration and discovery of parks would improve the visitor experience.

*'We need everyone who comes here to respect this place.'*

*— Aunty Greta Morgan*

### ROAD AND TRACK ACCESS

#### Goal

Effective access is provided for visitors, joint management and emergency operations while reducing the impact of the road and track network on natural and cultural values.

## Strategies

- |     |  |
|-----|--|
| VE1 | Develop a plan for managing and maintaining the park road and vehicle track network to designate the main public access routes to visitor areas, and close unnecessary park entry points and tracks to public use, and integrate the network with adjacent Shire roads. Ensure vehicle access for bushfire and other emergency management is not compromised. Engage closely with relevant stakeholders and management agencies in the detailed development of the plan. |
| VE2 | Investigate the legal requirements in consultation with the Moira Shire to revoke the present road reservation on sections of the National Park's southern boundary, and revoke if practical.  |
| VE3 | Re-align retained public and management-vehicle-only roads and tracks where necessary to reduce impacts on cultural sites and significant native vegetation.   |
| VE4 | Improve the maintenance of walking tracks and investigate the scope to raise the height of the main public access roads and tracks at key points where they are impassable during low-level floods, while not impeding water flows.  |
| VE5 | Establish a cultural driving route through the park, located primarily in the Biyala Zone, and provide interpretation of cultural, natural and historic features (see VE25).   |
| VE6 | Investigate the need for additional toilets in key visitor locations to reduce environmental impacts and/or improve visitor amenity.   |

## CAMPING

### Goal

Opportunities and quality services are provided for camping while reducing impacts on the health of Country and cultural heritage.

### Strategies

- |      |   |
|------|---|
| VE7  | Provide access and opportunities for designated and dispersed camping in accordance with Table 3. Manage Barmah Lakes as a designated camping area and maintain opportunities for dispersed camping in the Dhungalla Zone.  |
| VE8  | Develop a new designated camping area with appropriate facilities in the Biyala Zone to enable camping when lower parts of the park are in flood (see VE50). Ensure the camping area layout provides separated, quiet camping opportunities, as an alternative for those campers wishing to camp away from the designated camping area at Barmah Lakes and the popular dispersed camping in the Dhungalla Zone. |
| VE9  | Designate and manage camping areas at The Cutting and War Creek on The Narrows as overnight canoeing camps.   |
| VE10 | Define and re-site campsites in the Dhungalla Zone where necessary to control encroachment on cultural sites (based on expanded cultural mapping) and impacts on vegetation. Periodically rest parts of camping areas to allow revegetation. Ensure any significant changes to dispersed camping opportunities are communicated to visitors through information channels.                                       |
| VE11 | Improve the facilities for campers to deposit rubbish on their exit from the park, in collaboration with Moira Shire, and educate visitors on the need to remove rubbish from the park.   |
| VE12 | Establish a dump point for recreational vehicle wastewater, outside but close to the National Park, in collaboration with Moira Shire.  |
| VE13 | Introduce a booking system and fees for overnight camping in designated camping areas with facilities, comparable to fees in other Victorian national parks. Investigate  |



---

arrangements to provide community fee concessions and re-invest fees in the maintenance of visitor facilities and services.

---

- VE14 Allow the use of camping generators only in designated sections of the Dhungalla Zone and Gulpa Gaka Zone, between sunrise and sunset and within reasonable noise levels that do not cause nuisance. Ensure designated areas and time restrictions are clearly communicated and mapped in visitor information.

## CAMPFIRES AND BARBECUES

### Goal

Campers can have campfires when and where it is safe to do so and the impacts on Country can be avoided or minimised.

### Strategies

- VE15 Ensure constructed fireplaces are provided in a) all designated camping areas and b) those dispersed camping locations in the Dhungalla Zone where environmental and cultural values are identified as at risk.
- VE16 Allow campfires all year round within authorised constructed fireplaces where they are provided, in accordance with fire regulations. Allow dispersed campfires (ie outside authorised public fireplaces) in the Dhungalla Zone in accordance with fire regulations, except within 50 metres of any authorised public fireplace provided. Do not allow any dispersed campfires during a declared fire danger period. Establish additional constructed fireplaces in the Dhungalla Zone. Educate visitors on the need to use constructed fireplaces where provided, and enforce their use.
- VE17 Allow firewood collection within the park, except in areas closed for rehabilitation or protection of environmental or cultural values. Restrict firewood use to campfires in the park and prohibit removal from the park. Encourage visitors to bring clean firewood for their campfire use. Allow the use of chainsaws for cutting firewood for park campfires in areas 10 metres either side of Gulf Track and 10 metres either side of tracks in the Biyala Zone, except at Ulupna Island.
- VE18 Work with the New South Wales agencies to ensure co-ordinated enforcement of fire regulations, and seek authorisation of Parks Victoria staff to allow enforcement of NSW fire regulations in areas of New South Wales on the south side of Dhungalla (Murray River).

## BOATING

### Goal

Bank erosion and other impacts are reduced while improving boating access.

### Strategies

- VE19 Increase resourcing and focus on education and enforcement to prevent visitors creating informal boat launching points on the banks of Dhungalla, and the lakes and creeks in the National Park.
- VE20 Allow passive boating<sup>8</sup> on Barmah Lake and throughout the park when in flood, ensuring it is conducted safely and does not create disturbances to colonial bird nesting sites.
- VE21 Pursue a change to vessel operating rules under the Marine Safety Act to prohibit the use of personal watercraft on Barmah Lake.
- VE22 Work with Better Boating Victoria to investigate the establishment of additional boat ramps at appropriate locations between The Gulf and Sand Ridge Track, and at Ulupna Island, and upgrade boat access at Crawford's Road (see VE48 and VE58).

---

<sup>8</sup> Unmotorised craft such as canoes and kayaks, and motorised craft operating at a maximum speed of 5 knots. Higher speeds may be authorised for licensed tour operations, research and management personnel. Passive boating area does not apply to the Murray River waters.

---

VE23 Work with NSW agencies to manage boating on the Murray River to minimise impacts on Barmah National Park, the lower southern bank, and licensed tour operators (see CCP14).

---

## INFORMATION, INTERPRETATION, EDUCATION AND TOURISM

### Goal

The quality of the National Park visitor experience is improved, and the range of interpretation, education and tourism services is expanded, with benefits for Yorta Yorta, local communities and regional tourism.

### Strategies

---

VE24 Liaise with licensed tour operators to communicate changes to horseriding in the park, and other changes in allowable activities and access.

---

VE25 Develop and implement a plan for increasing the presentation and interpretation of Yorta Yorta culture, Country and shared history of the park to visitors and education groups, through information, signage and programs. Integrate with the Barmah Master Plan directions for the Dharnya Centre and other areas, and with operations at Yenbena Training Centre and Yielima (see VE39).

---

VE26 Collaborate with Murray Regional Tourism to jointly progress the Barmah National Park Tourism Development Plan, with a focus on nature-based and Indigenous tourism, and on the development and promotion of the Murray Valley Adventure Trail (see CCP10).

---

VE27 Implement protocols for licensed tour operations to ensure that the interpretation of Yorta Yorta cultural heritage is endorsed by Yorta Yorta, or alternatively delivered by Yorta Yorta under a service agreement.

---

VE28 Work with visitor information centres in Echuca and Nathalia to promote the park to regional visitors including circular touring opportunities.

---

VE29 Liaise with tourism and recreational bodies to promote the National Park as a destination for appropriate new or expanded activities. Work with the Moira Shire in relation to proposals for tourist accommodation and facilities on private land to optimise tourism benefits and resolve any potential development impacts.

---

VE30 Undertake baseline and follow-up surveys of visitors to measure visitor numbers, and satisfaction and the effectiveness of joint management actions relating to visitors.

---

VE31 Liaise with VicRoads to improve regional tourism signage on key turn-off points for the National Park on the Murray Valley Highway, and Barmah-Shepparton Road, and with NSW road authorities for the Cobb Highway. Work with mobile map providers to update and correct spatial data on the National Park.

---



Students from the Academy of Sports, Health and Education program. (Photo: YYNAC)

## VISITOR SAFETY, COMPLIANCE AND ENFORCEMENT

### Goal

Visitors understand and respect the park's natural and cultural values and its safety risks, and the impacts of illegal, unsafe and anti-social behavior are minimised.

### Strategies

VE32	Collaborate with Victoria Police, DELWP Wildlife, Victorian Fisheries Authority, the Game Management Authority, New South Wales Maritime Service, New South Wales Fisheries, Moira Shire and other partners to conduct periodic enforcement operations in the National Park targeting illegal activities and anti-social behavior.
VE33	Ensure pre-visit information and park entry signage provides clear advice to visitors about restrictions on campfires, generators, chainsaws, dogs, and off-road mountain bike use.
VE34	Ensure campers and day visitors are informed in pre-visit information and onsite signage about significant risks, including drowning and diving accidents, falling tree limbs, blue-green algal blooms, and mosquito-borne viruses. Implement active risk controls for these risks as necessary.
VE35	Establish ESTA emergency markers and signage in the park to assist with emergency management.
VE36	Implement the strategy under 'Community connections and partnerships' relating to the enforcement of regulations by joint management Rangers on the Native Dog area of Ulupna Island, and other areas of New South Wales on the south side of Dhungalla (Murray River) below the high bank mark (see CCP13).
VE37	Educate visitors and enforce regulations to prevent damage to the environment and cultural heritage caused by digging for Bardi grubs, and the need to observe Victorian fishing regulations in regard to collection of shrimp, yabbies, and other live bait.
VE38	Define the boundaries of the Dharnya Community Use Area and establish regulations under the provisions of the Parks Victoria Act.

## BARMAH LAKES VISITOR EXPERIENCE AREA — GULPA GAKA ZONE

### Goals

Barmah Lakes and the Dharnya Community Use Area provide a gateway to the park in which visitors are welcomed, oriented and learn about Yorta Yorta Country and the environmental and cultural significance of the National Park. Good access and formalised facilities are provided for day visits and designated camping.

The re-vitalised Dharnya Centre is the main focus in the Barmah Forest for cultural tourism, education and events.

### Strategies

VE39	Undertake improvements, through the Barmah Master Plan, to establish the Gulpa Gaka Zone as the accessible gateway to the park through a revitalisation of the Dharnya Centre and other visitor services in the VEA including: <ul style="list-style-type: none"><li>• visitor information and orientation (see VE25)</li><li>• cultural education and interpretation, with links to Yenbena Training Centre in Barmah</li><li>• gateway point for tours into the park and the start of the Cultural Trail</li><li>• potential commercial services</li><li>• focus for events and festivals.</li></ul>
------	--

VE40	Maintain Sand Ridge Track in good condition for general visitor access, including recreational vehicles.
VE41	Improve signage and information to inform visitors about Yorta Yorta contemporary connection to Country and interpret historical occupation and traditional culture.
VE42	Collaborate on the development and implementation of the Barmah Master Plan to improve interpretation, education and tourism services including facility upgrades. Consider provision for traditional arts and crafts activities, commercial services such as a café, guided tours, commercial hub, and cultural and tourism events.
VE43	Implement designated fee-based camping at Barmah Lakes Camping Area and allow campfires in constructed fireplaces only. Improve the definition of roads and tracks to prevent visitor vehicles driving off-road.
VE44	Review the extent to which facilities and services in the VEA provide access for all abilities and implement accessibility improvements where required.
VE45	Investigate the upgrading of boat access at Rices Bridge, consider provision of a toilet and improvement of parking to cope with boat-trailers during peak fishing periods.
VE46	Work with Parks Victoria to manage the impacts of horse camps along Broken Creek on the boundary of the National Park and investigate development of horse yards away from the Creek on Barmah Island.

## PICOLA VISITOR EXPERIENCE AREA

### Goal

Visitors enjoy camping beside Dhungalla (Murray River), while appreciating and exploring the broader National Park, and respecting its environmental and cultural values.

### Strategies

VE47	Develop a toilet at The Gulf.
VE48	Develop up to two additional boat ramps between The Gulf and Sand Ridge Track and educate visitors throughout the Picola VEA to use ramps instead of creating informal launch points.
VE49	Define campsites where necessary to control encroachment on cultural sites (based on expanded cultural mapping) and impacts on vegetation. Periodically rest parts of camping areas to allow revegetation.
VE50	Investigate locations in the Biyala Zone to develop designated car-based camping area(s) with appropriate facilities to enable camping when lower parts of the park are flooded, including a potential canoe trail and bird hide(s).
VE51	Develop signposted and promoted short walks into the park for campers based in the Dhungalla Zone.
VE52	Realign Sand Ridge Track near Hut Lake and Garidiwerda as part of the park-wide road and track plan (see VE1).
VE53	Amend the boundary of the Picola VEA overlay on Parks Victoria databases, to exclude the Top Island Reference Area.

## YALCA VISITOR EXPERIENCE AREA

### Goal

Access and low-key services are provided for day visits to beaches along Dhungalla (Murray River), as well as opportunities for dispersed camping, while minimising impacts on natural and cultural values.

### Strategies

- |      |   |
|------|---|
| VE54 | Define campsites where necessary to control encroachment on cultural sites and impacts on vegetation. Periodically rest parts of camping areas to allow revegetation. |
| VE55 | Liaise with caravan park and resort owners on visitor information and services and park management issues.  |
| VE56 | Amend the boundary of the Yalca VEA overlay on Parks Victoria databases, to exclude the Top End Reference Area.   |

## ULUPNA ISLAND VISITOR EXPERIENCE AREA

### Goal

Visitors enjoy the beaches of Ulupna Island for day visits and camping including use of generators, while respecting and conserving the park environment and cultural heritage.

### Strategies

- |      |   |
|------|---|
| VE57 | Develop an additional toilet at Ulupna Island.  |
| VE58 | Investigate the provision of an additional boat ramp on Ulupna Island and educate visitors to use ramps instead of creating informal launch points. |
| VE59 | Assess the results of cultural mapping and re-align tracks or re-site other facilities where necessary to reduce impacts.                           |



Camping at Barmah Lakes. (Photo: Brian Doolan)

**Table 3. Allowable recreation activities.**

**Note: All access and activities are subject to the emergency closure of the National Park under legislation.**

Activity	Gulpa Gaka Zone	Walla Zone	Dhungalla Zone	Biyala Zone	Reference Area Zone
Boating	Yes, 5 knot speed limit unless authorised	Yes, 5 knot speed limit unless authorised	Yes, 5 knot speed limit unless authorised	Yes, 5 knot speed limit unless authorised	No
	Boating on the Murray River is outside Barmah National Park and subject to NSW regulations.				
	Personal watercraft not allowed on Barmah Lake.				
Camping – designated area	Yes	Yes	Not applicable	Yes	No
Camping – dispersed	No	No, except for research or other authorised purposes	Yes	No, except for research or other authorised purposes	No
Campfires (within authorised constructed fireplaces provided)	Yes, all year round in accordance with fire regulations	Not applicable	Yes, all year round in accordance with fire regulations	Yes, all year round in accordance with fire regulations	No
Campfires (dispersed)	Yes, in accordance with fire regulations (except within 50 metres of any authorised fireplace). Not allowed during declared fire danger period.	Not applicable	Yes, in accordance with fire regulations (except within 50 metres of any authorised fireplace). Not allowed during declared fire danger period.	Not applicable	No
Chainsaw use to cut firewood for park campfires	No	Yes, within 10 metres of Gulf Track	No	Yes, within 10 metres of vehicle tracks open to the public	
Cycling and mountain biking	Yes	Yes	Yes	Yes	No
	Allowed on open vehicle tracks and roads including management - only tracks. Subject to seasonal closures.				
Dogs and dog walking	No	No	No	No	No

Activity	Gulpa Gaka Zone	Walla Zone	Dhungalla Zone	Biyala Zone	Reference Area Zone
Education activities	Yes	Yes	Yes	Yes	No
Fishing	Yes	Yes	Yes	Yes	No
	Subject to Victorian fishing regulations. Digging for Bardi grubs not allowed. Murray River subject to NSW fishing regulations.				
Fossicking – prospecting	No	No	No	No	No
Generator use	Yes, in designated areas between sunrise and sunset	No	Yes, in designated areas between sunrise and sunset	No	No
	May be authorised in other areas under licence or event permit.				
Geocaching	Yes	Yes	Yes	Yes	No
	No excavation allowed.				
Guided activities	Yes	Yes	Yes	Yes	No
Horseriding	No*	No	No	No	No
Orienteering	Yes	Yes	Yes	Yes	No
Recreational hunting	No	No	No	No	No
Vehicles (2-wheel and 4-wheel drive, and trailbikes)	Yes	Yes	Yes	Yes	No
	Permitted only on open tracks and roads. Subject to seasonal/emergency closures.				
Walking/hiking	Yes	Yes	Yes	Yes	No

\* Except on Sand Ridge Track from Rices Bridge to access the Community Use Area during permitted events.

# 11 AUTHORISED USES AND OCCUPANCIES

Various third-party uses of the land now included in Barmah National Park have been established in the past, including apiculture, tour operations, water regulation, and levee banks. The authorisation and management of these private and public uses is undertaken in accordance with relevant legislation. Initial approvals for most proposed uses by third parties within parks and reserves are required under the *Planning and Environment Act 1987* (Vic.). Unless specifically exempted, such proposals require consent from the land manager as a prerequisite to applying for a planning permit from the relevant municipal council. Some uses will also require a Cultural Heritage Management Plan in accordance with the Aboriginal Heritage Regulations 2007 and may trigger additional approvals under other legislation.

Approximately 40 apiary sites have been licensed in the park in recent years at any given time. Some licensed sites are known to be in locations that are difficult to access, flood prone or unusable due to thick undergrowth. DELWP is responsible for the administration of apiary sites on public land and the development of public land apiculture (beekeeping) policy. The 2013 'Apiculture (beekeeping) on public land policy' aims to encourage apiculture on public land. Apiculture or beekeeping under licence or permit has been a longstanding use in the Barmah Forest. In view of the role of honeybees in assuring food security and agricultural exports via crop pollination services, the Victorian Government is actively seeking to expand beekeeping activities on public land.

There are approximately 42 water management structures in the National Park. These are opened or closed to facilitate or prevent water entering the floodplain from Dhungalla (Murray River), including regulators, gated culverts, drains, weirs and embankments. About one third of these are owned and managed by the Murray–Darling Basin Authority. Because of historical changes in organisational responsibilities, the ownership and management of the remaining structures is unclear (Jacobs 2018). Some additional structures such as fishways may need to be developed in future where their environmental benefit has been demonstrated. There are also a number of privately owned water extraction pumps and pipelines located on the banks of Dhungalla, which supply adjoining landholders. Some of the older structures are not licensed and there is no current provision for issuing pre-existing structures with licences.



**Levees and other structures control water entering the floodplain from Dhungalla. (Photo: Keith Ward)**

A levee was constructed on the southern boundary of the park many years ago to protect private property from flooding and is not considered to have any benefit to the park. The JMP adopts the same principles as the Victorian Floodplain Management Strategy (DELWP 2016): that waterways should, wherever possible, be allowed to flood naturally, maintaining connectivity to floodplains and



their associated wetlands; and that any maintenance or repair of flood mitigation infrastructure such as levees should be managed under a 'beneficiary pays' model. The levee will be allowed to weather away unless those parties benefiting from it (eg adjacent landholders) seek authority to repair or maintain it under the Levee Maintenance Permit system administered by the GBCMA. Private vehicles are currently driven on the levee illegally where traffic bollards have decayed, and this provides an illegal off-road route into the park.

## AUTHORISED USES

### Goal

Authorised uses of the park are well managed and regulated, and operate without impacts on Country, cultural heritage and visitor enjoyment.

### Strategies

AU1	Identify all public sector and commercial uses in the park. Establish licences, consents or other legal arrangements to authorise the continuation of appropriate uses through joint management decision processes. Discontinue any inappropriate uses, through negotiated agreement where possible.
AU2	Develop guidelines through the joint management decision-making process for authorising and managing events in the Dharnya Community Use Area that require use of or access through the National Park, including appropriate types of events and associated activities and services, and standard conditions.
AU3	Review the system of drains, levees, weirs, regulators and other water infrastructure in the park with Goulburn–Murray Water, in consultation with GBCMA and DELWP, to confirm current needs. Determine ownership, their measurement capabilities, safety compliance, and the functional responsibilities for operation and maintenance. License the required structures under Section 27 of the National Parks Act or other provisions, subject to any necessary compliance upgrades. Decommission and rehabilitate any redundant structures.
AU4	Continue to permit the use of existing and licensed water pump and pipeline sites and work with Goulburn–Murray Water and other partners on applications for new pumps and pipeline sites.
AU5	Install traffic control measures to prevent unauthorised vehicle passage along the levee on the southern boundary of the National Park. Allow the levee to weather away unless parties benefiting from it seek authority to repair or maintain it under a Levee Maintenance Permit.
AU6	Ensure that recreational and other events on Dhungalla (Murray River) that make use of the park for camping or other purposes are authorised and properly managed.
AU7	Update the apiary site plan for the park, in consultation with apiculture groups and other stakeholders, to ensure that sites are effectively located, licensed and managed in accordance with Victorian Government policy and regulations. Ensure sites are located well away from the Reference Area Zone and take account of research into native bee populations as it becomes available.
AU8	Provide staff and contractors associated with authorised uses with advice and/or induction about the need to protect the environmental, cultural and recreational values of the park.
AU9	Review existing tour operator licences and other permits that may be affected by the proposed changes to access or allowable activities (see Table 3, Section 10). Do not renew tour operator licences that conflict with the Joint Management Plan.

# 12 RESEARCH AND IMPROVING OUR KNOWLEDGE

Continual monitoring is essential to evaluate, adapt and improve management of the National Park and to progress the goals of joint management. Research is critical for filling gaps in knowledge. Monitoring and research need to be partly targeted to assessing the effectiveness of the Joint Management Plan strategies, but also allow for investigation of innovative areas of inquiry. The Protection of Floodplain Marshes Strategic Action Plan 2020–2023 sets out specific monitoring measures and targets (Parks Victoria 2020).

Some scientific research has involved little or no engagement with Yorta Yorta, but some projects have been strong examples of collaboration (YYNAC 2012).

## RESEARCH AND IMPROVING KNOWLEDGE

### Goal

Joint management is informed by improved knowledge and understanding of Country and its environmental, cultural and social values, condition and uses.

### Strategies

R1	Provide support and resources to research, map and document: <ul style="list-style-type: none"> <li>• Yorta Yorta cultural values, including sites, places, stories, travel routes and practices</li> <li>• cultural knowledge and skills in caring for Country.</li> </ul>
R2	Implement the monitoring priorities set out in the Protection of Floodplain Marshes Strategic Action Plan 2020–2023 for maintaining and improving current water regimes, removing feral horses, reducing grazing pressure on marshes by other feral animals, controlling invasive wetland plants, and regenerating Moira Grass.
R3	Upgrade the monitoring plan for the Barmah National Park and Ramsar Site Pest Plant and Animal Strategy to incorporate the goals and strategies in this plan and the Protection of Floodplain Marshes Strategic Action Plan. (see E7).
R4	Establish or maintain partnerships with research institutions and individual researchers. Ensure all research programs in the park are subject to Yorta Yorta approval through the joint management process, and that Yorta Yorta are fully and actively engaged in the design and implementation of research programs.
R5	Obtain baseline information about visitor use and visitor and community attitudes to the National Park and joint management. Periodically monitor to understand support and need for further action.
R6	Report annually to the Minister for Energy, Environment and Climate Change on progress in implementing the JMP and provide a summary to the community and stakeholders.
R7	Measure progress and effectiveness in achieving the objectives of the Joint Management Plan using the measures and targets set out in Table 4.



# GOVERNANCE, IMPLEMENTATION AND MONITORING OF THE JOINT MANAGEMENT PLAN

Wetland, Barmah National Park. (Photo: J. Patrick Pigott)

Effective, shared implementation of the Joint Management Plan is essential to genuinely achieve the objectives of the joint management approach. There is a need to establish lower-level management and operational arrangements between the primary partners, and where, relevant, other partners identified in Section 9. Functions that require these decision-making and liaison arrangements include: water management, fire management, park works and operations, and the issuing of licences, consents and permits for authorised uses. Arrangements need to be efficient, using or adapting existing forums where practical.

The Yorta Yorta Traditional Owner Land Management Agreement sets out governance arrangements between the YYNAC and DELWP for the development of this Joint Management Plan. With the publication of the approved JMP these arrangements will be reviewed. Responsibilities for JMP implementation and management functions in the park are likely to evolve over time to take account of changes across the whole of Yorta Yorta Country, and broader negotiations between the Victorian Government and Traditional Owners.

Yorta Yorta’s vision for the future is that YYNAC will progressively assume greater responsibilities for managing the Barmah National Park and other public land on Country, and that Yorta Yorta will become more numerous and visible as Rangers and managers.

This plan has a 10-year timeframe. It will be periodically reviewed and will be updated after 5 years to take account of changes in the Plan’s context.

A key function of the Joint Management Plan is to provide the agreed platform of strategies for Barmah National Park in which Government and partners can invest resources and funds. It is essential that a staged implementation plan be developed for the Joint Management Plan that addresses the priority actions for a manageable investment horizon of 3 to 5 years.

**GOVERNANCE AND IMPLEMENTATION OF THE JOINT MANAGEMENT PLAN**  
**Goal**

Governance and resourcing enable implementation of the Joint Management Plan that is effective, collaborative and widely supported.

**Strategies**

IG1	Transition into JMP implementation governance through negotiation between YYNAC and the State either through Co-Management Agreement and/or TOLMA arrangements.
IG2	Progress and report on the implementation of the JMP through the negotiated governance mechanism.
IG3	Enact negotiated measures to enable sole management within the transition plan.
IG4	Develop a 5-year implementation schedule for the Joint Management Plan within 12 months of final plan approval, identifying actions and projects to deliver the strategies, timing, and lead and support responsibilities for projects.
IG5	Develop business cases for submission to Government and other funders for implementation of specific projects.
IG6	Monitor success in meeting JMP objectives and 5-year targets (see Table 4).

## Strategies

IG7	<p>Establish operational joint management groups through new or existing forums which meet regularly to progress the following aspects of the plan:</p> <ul style="list-style-type: none"> <li>• co-ordinated management of the park and the Community Use Area (including the Dharnya Centre), and Yielima</li> <li>• management of significant licences, consents and permits for authorised uses</li> <li>• water management operations in the park</li> <li>• fire management in the park, including the development of cultural burning practices and capabilities.</li> </ul>
IG8	<p>Provide periodic updates to the local and broader community and partners about progress on the plan implementation (see CCP1).</p>

In addition to monitoring the implementation and effectiveness of specific strategies and projects, it is important that the overall success of the Joint Management Plan is monitored and evaluated. This is best achieved by setting measures and targets for the plan's objectives (Table 4).

*'Joint management means understanding more about the different ways we see Barmah and then working on improving things together.'* — Chris Halpin, Deputy Chair, YYTOLMB

**Table 4. Measures and targets for Joint Management Plan objectives.**

JMP Objective	Measures	Target after 5 years of JMP implementation
Recognise the Yorta Yorta as First Nation People for the Country of the Barmah National Park and enable them to enact their rights and cultural responsibilities.	Park management responsibility.	JMP implementation governance transitioned by negotiation between YYNAC and the State of Victoria, through a Co-Management Agreement or TOLMA arrangements, or both.  Negotiated measures to enable sole management enacted within transition plan.
Recognise the Yorta Yorta as First Nation People for the Country of the Barmah National Park and enable them to enact their rights and cultural responsibilities.	Ability to conduct cultural practices in the park.  Knowledge and management of cultural sites and values.	Yorta Yorta area on Top Island set aside.  Yorta Yorta cultural mapping complete and priority impacts controlled.
Develop and apply the combined skills and knowledge of Yorta Yorta and the State in caring for the park.	Participation in environmental and fire operations in the park.	Yorta Yorta actively employed in park environmental operations, and annual fire operations, including cultural burning within 2 years of JMP approval.

JMP Objective	Measures	Target after 5 years of JMP implementation
Conserve, protect, restore and enhance the park's environmental and cultural values.	<p>Maintaining and improving water regimes, removal of feral horses, reduction in grazing pressure on marshes by other feral animals, invasive wetland plant control, and Moira Grass regeneration.</p> <p>Control of invasive plants and animals in forest and woodland areas of the park.</p> <p>Health and breeding success of significant animal and plant species.</p>	<p>Targets specified in the Protection of Floodplain Marshes Strategic Action Plan 2020–2023.</p> <p>Targets specified in a renewed monitoring plan for the Barmah National Park and Ramsar Site Pets Plant and Animal Strategy.</p> <p>Increased populations of significant species.</p>
Welcome and provide services for all Victorians and visitors to enjoy, understand and respect the park.	<p>Level of government investment and resourcing for revitalisation of Dharnya Centre.</p> <p>Level of visitor satisfaction.</p> <p>Level of visitor understanding of Healthy Country and perceptions of park values.</p>	<p>Implementation of at least 70% of scheduled Barmah Master Plan projects.</p> <p>Significant increase in satisfaction and appreciation between baseline and follow-up visitor surveys.</p>
Improve the well-being and prosperity of Yorta Yorta through employment and business opportunities associated with the management and use of the park.	Jobs and business opportunities established	At least ten additional Yorta Yorta employed in park management functions or engaged in businesses on a full or part-time basis (at least 5 full time equivalents) within 5 years of JMP approval.
Provide institutional support and capacity for Yorta Yorta to effectively deliver joint management.	<p>Yorta Yorta responsibility for implementation of the JMP.</p> <p>Skills and capacity of the Woka Walla Team.</p> <p>YYNAC project management capacity and resources.</p>	<p>JMP implementation governance transitioned through negotiation between YYNAC and the State either through Co-Management Agreement and/or TOLMA arrangements.</p> <p>Negotiated governance mechanism progresses and reports implementation of JMP.</p> <p>Negotiated measures to enable sole management enacted within transition plan.</p> <p>Annual training and development programs implemented for Woka Walla Team.</p> <p>At least 2 fulltime-equivalent additional positions resourced and created in YYNAC to deliver joint management within 18 months of JMP approval.</p>

# REFERENCES

- Altometer (2019). Consultation Summary: Draft Strategic Action Plan for the protection of floodplain marshes in Barmah National Park and Barmah Forest Ramsar Site. Report prepared for Parks Victoria. <https://engage.vic.gov.au/barmah-strategic-action-plan>.
- Atkinson, W. (1985) A Chronological History of Yorta Yorta People's Struggles for Land and Compensation, unpublished essay, LaTrobe University.
- Atkinson, W. (2002) Relationship between land, water and Yorta Yorta occupation. [<https://waynera.files.wordpress.com/2010/10/landwater.pdf>]
- Atkinson, W. (2005) 'Yorta Yorta occupation and 'the search for common ground' Proceedings of the Royal Society of Victoria, 117 (1).
- Atkinson, W. and A. Berryman (1983) Aboriginal association with the Murray Valley Study Area. Report to the Land Conservation Council: Melbourne.
- Belcher, C., Davidson, I., Borrell, A., and Webster, R. (2016). Australasian Bittern survey: Murray Valley and Barmah National Parks November 2015 – January 2016. Murray–Darling Basin Authority, Canberra.
- Bonhomme, T. (1990) An archaeological survey of the Barmah Forest. Department of Conservation and Environment: Melbourne
- Borrell, A. and Liefing, A. (2017) Waterbird Monitoring within Barmah–Millewa Forest 2016–17. Report as part of Living Murray Barmah–Millewa Forest Icon Site Condition Monitoring Program 2016–17. Office of Environment and Heritage, NSW: Sydney.
- Borrell, A. and Webster, R. (2016) Water bird monitoring within Barmah–Millewa Forest: Spring 2015. Report as part of Living Murray Barmah–Millewa Forest Icon Site Condition Monitoring Program 2015–16. Office of Environment and Heritage, NSW: Sydney.
- Bowe, H., Peeler, L. and Atkinson, S. (1998) Yorta Yorta Language Heritage. Department of Linguistics, Monash University: Clayton.
- Bren, L.J. (2005) The changing hydrology of the Barmah–Millewa Forests and its effect on vegetation. Proceedings of the Royal Society of Victoria, 117(1): 61–74.
- Cannon, M (1990) Who killed the Koories? Heinemann: Port Melbourne.
- Cato, N. (1976) Mister Maloga, University of Queensland Press, Brisbane.
- Chesterfield, E.A. (1986) Changes in the vegetation of the river red gum forest at Barmah, Victoria. Australian Forestry 49(1): 4–15.
- Chesterfield, E.A., Loyn R.H. & Macfarlane M.A. (1984) Flora and fauna of Barmah State Forest and their management. FCV Research Branch Report No. 240. Forests Commission Victoria: Melbourne.
- Clark, I.D. (ed.) (1998) The journals of George Augustus Robinson, Chief Protector, Port Phillip Aboriginal Protectorate, Volume four: 1 January 1844–24 October, 1845. Heritage Matters: Melbourne.
- Clode, D. (2006) As if for a thousand years: A history of Victoria's Land Conservation Council. Victorian Environmental Assessment Council: East Melbourne.
- Colloff, M.J. (2014) Flooded forest and desert creek: Ecology and history of the river red gum. CSIRO, Collingwood.
- Colloff, M.J., Ward, K.A., and Roberts, J. (2014) Ecology and conservation of grassy wetlands dominated by spiny mud grass (*Pseudoraphis spinescens*) in the southern Murray–Darling Basin, Australia. Aquatic Conservation: Marine and Freshwater Ecosystems 24(2): 238–255.
- Context (2014) History of wild horses in the Barmah National Park. Report to Parks Victoria. Context Pty Ltd: Brunswick.
- CSIRO and BOM (2015) Climate change in Australia: Projections for Australia's NRM regions: Murray Basin cluster report. CSIRO: Collingwood / Bureau of Meteorology: Melbourne.
- Curr, E.M. (1883) Recollections of squatting in Victoria, then called the Port Phillip District (from 1841 to 1851). George Robertson: Melbourne.
- DCE (1992) Management Plan for Barmah State Park and Barmah State Forest. Department of Conservation and Environment: East Melbourne.
- DELWP (2015a) Strategic bushfire management plan — Mallee and Murray Goulburn. Department of Environment, Land, Water and Planning: East Melbourne.

- DELWP (2015b) Climate Ready Victoria — Hume Region factsheet. Department of Environment, Land, Water and Planning: East Melbourne.
- DELWP (2016) Victorian Floodplain Management Strategy, Department of Environment, Land, Water and Planning: East Melbourne.
- DELWP (2017) Victoria's Environment — Biodiversity 2037. Department of Environment, Land, Water and Planning, East Melbourne.
- DELWP (2018) Northern Victoria Firewood and Home Heating Project — Final Recommendations. Department of Environment, Land, Water and Planning, East Melbourne.
- DELWP and Parks Victoria (2015) Valuing Victoria's Parks, East Melbourne.
- DEPI (2013b) Barmah Forest Ramsar Site Boundary Description. Department of Environment and Primary Industries: East Melbourne.
- Dexter, B.D., Rose, H.J. and Davis, N. (1986), River regulation and associated forest management problems in the River Murray red gum forests. *Australian Forestry* 49(1): 16–27.
- Dexter, B.D. (1978). Silviculture of the River Red Gum forests of the central Murray floodplain. *Proceedings of the Royal Society of Victoria* 90: 175–194.
- DSE (2003). Barmah Forest Ramsar Site strategic management plan. Department of Sustainability and Environment, Melbourne.
- DSE (2012) Code of practice for bushfire management on public land. Department of Sustainability and Environment: Melbourne.
- Dudley, N. (ed.) (2008) Guidelines for applying protected area management categories. International Union for the Conservation of Nature: Gland, Switzerland.
- Ecological Associates and SKM (2011) Environmental water delivery: Yarrawonga to Tocumwal and Barmah–Millewa. Report prepared for Department of Sustainability, Environment, Water, Population and Communities: Canberra.
- Ecology Australia (2013) Barmah National Park and Ramsar Site — Pest Plant and Animal Strategy. Report prepared for Parks Victoria: Fairfield.
- Ecology Australia (2014) Barmah National Park and Ramsar Site — Pest Plant and Animal Monitoring Program. Unpublished report prepared for Goulburn Broken Catchment Management Authority. Ecology Australia, Fairfield (unpublished).
- Ecology Australia (2015) Barmah National Park and Ramsar Site — Pest Plant and Animal Monitoring Implementation. Report prepared for Goulburn Broken Catchment Management Authority. Ecology Australia (unpublished).
- Ecology Australia (2016) Barmah National Park and Ramsar Site — Pest Plant and Animal Monitoring: Year 2 (2015/16). Report prepared for Goulburn Broken Catchment Management Authority. Ecology Australia, Fairfield (unpublished).
- Ecology Australia (2017) Barmah National Park and Ramsar Site — Pest Plant and Animal Monitoring: Year 3 (2016/17). Report prepared for Goulburn Broken Catchment Management Authority. Ecology Australia, Fairfield (unpublished).
- Ecology Australia (2018) Barmah National Park and Ramsar Site — Pest Plant and Animal Monitoring: Year 4 (2017/18). Report prepared for Goulburn Broken Catchment Management Authority. Ecology Australia, Fairfield (unpublished).
- Edney, G., McNeil, D. and Lawler, S. (2002) The swamp yabby (*Cherax* sp.) of the Murray catchment. *The Victorian Naturalist* 119(4): 200–204.
- Fahey, Charles (1986) Barmah Forest: A history. Department of Conservation, Forests and Lands, Melbourne.
- Federal Court (1998) *Members of the Yorta Yorta Aboriginal Community v Victoria & Ors* [1998] FAC 1606 (18 December 1998). Federal Court of Australia.
- Firesticks (2019) What is cultural burning? Firesticks Alliance Indigenous Corporation [<https://www.firesticks.org.au/about/cultural-burning/>] accessed 8 May 2019.
- GBCMA (2013) Goulburn Broken Regional Catchment Strategy 2013–2019. Goulburn Broken Catchment Management Authority, Shepparton: Victoria.
- GBCMA (2014) Goulburn Broken Waterway Strategy 2014–2022, Goulburn Broken Catchment Management Authority: Shepparton.
- GBCMA (2018) Goulburn Broken Regional Floodplain Management Strategy 2018–2028 Goulburn Broken Catchment Management Authority: Shepparton.
- Griggs, D., Lynch, A., Joachim, L., Zhu, X., Adler, C. Bischoff-Mattson, Z., Wang, P. and Kestin, T. (2014) Learning from Indigenous knowledge for improved natural resource management in the



- Barmah–Millewa in a changing and variable climate. Final Report to VCCCAR. Victorian Centre for Climate Change Adaptation Research: Melbourne.
- Hale, J. and Butcher, R. (2011) Ecological Character Description for the Barmah Forest Ramsar Site. Department of Sustainability, Environment, Water, Population and Communities: Canberra.
- HCV (2019) The Victorian Heritage Database. [<https://vhd.heritagecouncil.vic.gov.au>]
- Hibbins, G.M. (1991) Barmah Chronicles. Lynedoch Publications, Richmond.
- High Court (2002) Members of the Yorta Yorta Aboriginal Community v Victoria HCA 58 (12 December 2002). High Court of Australia.
- Howard, K., Beesley, L., Joachim, L. and King, A. (2011) Cultural conservation of freshwater turtles in Barmah–Millewa Forest 2010–11. Arthur Rylah Institute for Environmental Research Technical Report No. 223. Department of Sustainability and Environment: Heidelberg.
- Howard, K., Beesley, L., Ward, K. and Stokeld, K. (2016) Preliminary evidence suggests freshwater turtles respond positively to an environmental water delivery during drought. *Australian Journal of Zoology*, 64: 370–373.
- ICOMOS Australia (2013) The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013. Australia ICOMOS: Burwood, Victoria.
- La Nauze, J. (2009) The History of the Barmah–Millewa Campaign. *Chain Reaction* 105: 22–25.
- Legg, S.M. (1995) Debating forestry: An historical geography of forestry policy in Victoria and South Australia, 1870–1939. PhD Thesis (unpublished). Matheson Library, Monash University: Clayton.
- Loyn, R.H., Lumsden, L.F. and Ward, K. A. (2002) Vertebrate fauna of Barmah Forest, a large forest of River Red Gum *Eucalyptus camaldulensis* on the floodplain of the Murray River. *The Victorian Naturalist* 119 (3):
- MDBA (2012) Barmah–Millewa Forest Environmental Water Management Plan. MDBA Publication No. 219/11. Murray–Darling Basin Authority, Canberra.
- MDBA (2013) Constraints Management Strategy 2013 to 2024. Murray–Darling Basin Authority, Canberra.
- MDBA (2018a) Objectives and outcomes for river operations in the River Murray System. 23/17. Murray–Darling Basin Authority, Canberra.
- MDBA (2018b) Icon site condition: The Living Murray, MDBA publication no: 06/18. Murray–Darling Basin Authority, Canberra.
- MDBC (2008) Barmah Choke study, Fact Sheet 1: Project Background. Murray–Darling Basin Authority, Canberra.
- OEH (2014) Statement of Management Intent — Murray Valley National Park and Murray Valley Regional Park. Office of Environment and Heritage NSW, Sydney.
- Parks Victoria (2018a) River Red Gum Parks Management Plan. Parks Victoria, Melbourne.
- Parks Victoria (2018b) Draft conservation action plan assessment. Parks Victoria, Melbourne (unpublished).
- Parks Victoria (2020) Strategic Action Plan: Protection of Floodplain Marshes in Barmah National Park and Barmah Forest Ramsar Site 2020–2023. Parks Victoria, Melbourne.
- Raymond, S., Duncan, M., Tonkin, Z., and Robinson, W. (2016) Barmah–Millewa Fish Condition Monitoring: 2006 to 2016, Arthur Rylah Institute for Environmental Research, Unpublished Client Report for the Murray–Darling Basin Authority, Heidelberg, Victoria.
- Raymond, S., Tonkin, Z., Duncan, M., and Robinson, W. (2017) Barmah–Millewa Fish Condition Monitoring: 2006 to 2017, Arthur Rylah Institute for Environmental Research, Unpublished Client Report for the Murray–Darling Basin Authority, Heidelberg, Victoria.
- Raymond, S., Duncan, M., Tonkin, Z., and Robinson, W. (2018) Barmah–Millewa Fish Condition Monitoring, Arthur Rylah Institute for Environmental Research, Unpublished Client Report for the Murray–Darling Basin Authority, Heidelberg, Victoria.
- Ryan, L., Richards, J., Pascoe, W., Debenham, J., Anders, R.J., Brown, M., Smith, R., Price, D., Newley, J. (2018) Colonial Frontier Massacres in Eastern Australia 1788–1930, v2.1, University of Newcastle, Newcastle.
- Teese, N. & Wright, L. (2008) The Barmah Forest in our blood: 150 years of family history from people who have lived, worked and played in the beautiful Barmah Forest, Echuca, Victoria.
- VEAC (2006) River Red Gum Forests Investigation Discussion Paper. Part A. Victorian Environmental Assessment Council: East Melbourne.
- VEAC (2008) River Red Gum Forests Investigation – Final Report. Victorian Environmental Assessment Council: East Melbourne.

- Victorian Government (2009) Victorian Government Response to the Victorian Environmental Assessment Council's River Red Gum Forests Investigation Final Report, Department of Sustainability and Environment, East Melbourne.
- VTOCCFKG (2019) The Victorian Traditional Owner Cultural Fire Strategy, The Victorian Traditional Owner Cultural Fire Knowledge Group, Melbourne.
- Ward, P.A. (2016) Monitoring understory vegetation response to flooding in Barmah–Millewa Forest: 2015–16. Final Report. Report prepared as part of The Living Murray Condition Monitoring Program for the Barmah–Millewa Icon Site, managed by the NSW Office of Environment & Heritage, Moama, on behalf of the Murray-Darling Basin Authority, Canberra.
- Water Technology (2009) Barmah–Millewa Hydrodynamic Modelling Model Re-calibration. Water Technology: Notting Hill.
- YYNAC (2010) Lessons in jointly managing the land. Yorta Yorta Nation Aboriginal Corporation: Shepparton.
- YYNAC (2012) Yorta Yorta Nation Caring for Country and Culture. Whole of Country plan 2012–2017. Yorta Yorta Nation Aboriginal Corporation: Shepparton.

### Sources for highlighted quotations

- Aunty Monica Morgan, page 29 — Evidence given to the Yorta Yorta Native Title Claim 1998.
- Deborah Cheetham, page 35 — 'Aboriginal opera singer Deborah Cheetham: "Not everyone was as lucky as me" '. *The Guardian Australia*, 23 October 2013.



# APPENDICES

Creepline, Barmah National Park. (Photo: J. Patrick Pigott)

## Appendix 1: Abbreviations and glossary

- Aboriginal cultural heritage** Aboriginal places, Aboriginal artefacts and Aboriginal ancestral remains (Aboriginal Heritage Act)
- Aboriginal intangible heritage** Any knowledge of or expression of Aboriginal tradition, other than Aboriginal cultural heritage, and includes oral traditions, performing arts, stories, rituals, festivals, social practices, craft, visual arts, and environmental and ecological knowledge, but does not include anything that is widely known to the public. (Aboriginal Heritage Act)
- Barmah Forest** The area within both the Barmah Forest Ramsar Site and Barmah National Park boundaries. The Ramsar boundary differs from the National Park by excluding Ulupna Island (which is within the National Park) but including Barmah Island (which is outside the National Park).
- CAMBA** China–Australia Migratory Bird Agreement.
- DELWP** Victorian Department of Environment, Land, Water and Planning.
- environmental flow** Water that is delivered to achieve ecological outcomes.
- environmental and cultural values (or assets)** Things that are valued in the natural environment or cultural landscape including plant and animal species, landforms, waterways, cultural artefacts, sites and places.
- EPBC** Refers to the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) and the species or processes listed within the Act.
- ESTA** Emergency Services Telecommunication Authority
- EVC** Ecological Vegetation Class, the standard unit for classifying vegetation types in Victoria, described by a combination of floristics, life forms and ecological characteristics.
- floodplain marshes** A collective of freshwater wetland vegetation communities that occur in low lying areas, subject to frequent inundation, with periods of drying. The extent and composition of these vegetation communities fluctuates relative to the flooding regime.
- GBCMA** Goulburn Broken Catchment Management Authority.
- irrigation rejection** The rejection by an irrigator of previously allocated irrigation water, usually because of unanticipated rainfall on their property.
- IUCN** International Union for the Conservation of Nature, an international organisation whose functions include maintaining an international listing of threatened species.
- JMP** Joint Management Plan.
- JAMBA** Japan–Australia Migratory Bird Agreement.
- MDBA** Murray–Darling Basin Authority.
- Moira Grass plains** Freshwater wetlands dominated by Moira Grass (*Pseudoraphis spinescens*).
- passive boating** Boating in watercraft that are unmotorised or powered by a motor of up to 3 hp.
- Ramsar** Refers to the Ramsar Convention Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention). This is an international treaty adopted in the Iranian city of Ramsar in 1971 that focuses on the conservation and sustainable use of wetlands.
- RAP** A Registered Aboriginal Party under the *Aboriginal Heritage Act 2006* (Vic.). RAPs have statutory functions for heritage protection in a given area of Victoria.
- Reference Area** An area of public land proclaimed under the *Reference Areas Act 1978* (Vic.), to be managed to remain undisturbed by human interference for comparison against other areas where use occurs.
- regulated flow** A stream flow that is managed to achieve a specified flow rate.
- regulator** Infrastructure used to deliver regulated flows such as environmental water to wetlands.
- ROKAMBA** Republic of Korea–Australia Migratory Bird Agreement.
- SAP** Strategic Action Plan: Protection of Floodplain Marshes in Barmah National Park and Barmah Forest Ramsar Site 2020–2023.
- shared history** Historical events and accounts in the period since British colonisation when both Yorta Yorta and other people have occupied the Barmah area.
- TOLMA** Traditional Owner Land Management Agreement
- unregulated flow** Flow in a stream system that is not part of a controlled release to service an allocation. This includes releases from upstream storages that have filled to capacity and overflowed because of high rainfall, and flows that enter stream systems below storages.

**VEA** Visitor experience area: an area of a park with a grouping of attractions, access and sites that form a logical destination and experience for visitors.

**YTOTLMB** Yorta Yorta Traditional Owner Land Management Board.

**YYNAC** Yorta Yorta Nation Aboriginal Corporation.

## Appendix 2: Ramsar site ecological character measures

The table below lists the critical components, processes and services (CPS) of the Barmah Forest Ramsar Site as identified in the Ramsar Site Ecological Character Description (Hale and Butcher 2011).

Critical CPS	Description
<b>Hydrology</b>	The hydrology of the Barmah Forest Ramsar Site is defined by flow in the Murray River and, below certain flow levels, by regulators which control both movement of water into the forest and within it. As flows increase, the ability to control water movement diminishes with progressively more of the forest inundated as flow volumes increase. Large floods which inundate most of the forest are largely driven by large rainfall events in the catchment.
<b>Wetland vegetation</b>	Two vegetation types are considered critical to the ecological character of the Barmah Forest Ramsar Site:  ‘Floodplain forests’ dominated by river red gum forests and open woodlands, which cover 75% of the site, with a small components of black box woodland. The combined extent of floodplain forests and woodland is 24 000 hectares.  ‘Floodplain marshes’ comprising Moira grass plains (regionally significant), giant rush beds, common reed beds, moist grasslands, aquatic herblands and semi-permanent marshes.
<b>Fish</b>	Seventeen species of native fish have been recorded within the Barmah Forest Ramsar Site, including three native threatened fish species: Silver Perch, Murray Cod and Trout Cod.
<b>Waterbirds</b>	Sixty species of wetland-dependent bird have been recorded from the site, including seven species listed under international migratory agreements and two threatened species: Superb Parrot and Australasian bittern. During significant flood events the site supports very high abundances of waterbirds (maximum counts exceed 100 000 birds) and significant breeding of colonial nesting species. The site also supports a significant breeding population of the superb parrot.
<b>Diversity of wetland types</b>	The site supports part of the largest remaining river red gum forest and provides a mosaic of vegetated wetland habitats.
<b>Biodiversity</b>	The site supports the regionally significant Moira grass vegetation community and a significant number of plant and animal species.
<b>Physical habitat</b>	Barmah Forest provides habitat for feeding and breeding of wetland birds.
<b>Threatened species</b>	The site supports seven wetland-dependent flora and fauna species listed under the EPBC Act and/or the IUCN Red List.
<b>Ecological connectivity</b>	The site provides important migratory routes between riverine, wetland and floodplain habitats for fish spawning and recruitment.
<b>Organic carbon</b>	As part of a major floodplain system, the site is important for the cycling of nutrients, particularly carbon both on the floodplain and as a source of organic carbon to receiving waterways.

## Appendix 3: Legislation, agreements and conventions

Document	Geographic scope
<b>Victorian legislation</b>	
<i>Aboriginal Heritage Act 2006</i> and Regulations	Victoria
<i>Advancing the Treaty Process with Aboriginal Victorians Act 2018</i>	
<i>Catchment and Land Protection Act 1994</i>	
<i>Charter of Human Rights and Responsibilities Act 2006</i>	
<i>Conservation, Forests and Lands Act 1987</i> and Regulations	
<i>Country Fire Authority Act 1958</i>	
<i>Emergency Management Act 1986</i>	
<i>Firearms Act 1996</i>	
<i>Fisheries Act 1995</i> and Regulations	
<i>Flora and Fauna Guarantee Act 1988</i>	
<i>Forests Act 1957</i>	
<i>Heritage Act 2017</i> and Regulations	
<i>Land Act 1958</i>	
<i>Land Conservation (Vehicle Control) Act 1972</i> and Regulations	
<i>National Parks Act 1975</i>	
<i>Parks Victoria Act 2018</i>	
<i>Planning and Environment Act 1987</i>	
<i>Reference Areas Act 1978</i>	
<i>Road Management Act 2004</i>	
<i>Water Act 1989</i>	
<i>Wildlife Act 1975</i> and Wildlife (Game) Regulations 2012	
<b>Commonwealth legislation</b>	
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Australia
<i>Water Act 2007</i>	
<b>Agreements and conventions (authors)</b>	
Ramsar Convention on Wetlands of International Importance (UNESCO 1975)	International
Declaration on the Rights of Indigenous Peoples (United Nations 2007)	International
Japan–Australia Migratory Birds Agreement (JAMBA) (Japan and Australia 1974)	International
China–Australia Migratory Birds Agreement (CAMBA) (China and Australia 1986)	International
Republic of Korea – Australia Migratory Bird Agreement (ROKAMBA) (Korea and Australia 2007)	International
Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) (United Nations Environment Program 1983)	International
Co-operative Management Agreement — Yorta Yorta Nation Aboriginal Corporation and State of Victoria (YYNAC and State of Victoria 2004)	Regional
Traditional Owner Land Management Agreement — Yorta Yorta Nation Aboriginal Corporation and State of Victoria (YYNAC and State of Victoria 2010)	Local

## Appendix 4: Threatened species in Barmah National Park

### FAUNA

Scientific name	Common name	EPBC	FFG	Status in Victoria	Taxon type
<i>Maccullochella macquariensis</i>	Bluenose Cod (Trout Cod)	Endangered	listed	critically endangered	fish
<i>Botaurus poiciloptilus</i>	Australasian Bittern	Endangered	listed	endangered	non-passerine bird
<i>Macquaria australasica</i>	Macquarie Perch	Endangered	listed	endangered	fish
<i>Calidris ferruginea</i>	Curlew Sandpiper	Critically endangered		endangered	non-passerine bird
<i>Polytelis swainsonii</i>	Superb Parrot	Vulnerable	listed	endangered	non-passerine bird
<i>Maccullochella peelii</i>	Murray Cod	Vulnerable	listed	threatened	fish
<i>Ardea intermedia</i>	Intermediate Egret	—	listed	endangered	non-passerine bird
<i>Egretta garzetta nigripes</i>	Little Egret	—	listed	endangered	non-passerine bird
<i>Ixobrychus minutus dubius</i>	Little Bittern	—	listed	endangered	non-passerine bird
<i>Morelia spilota metcalfei</i>	Carpet Python	—	listed	endangered	reptile
<i>Ninox connivens connivens</i>	Barking Owl	—	listed	endangered	non-passerine bird
<i>Oxyura australis</i>	Blue-billed Duck	—	listed	endangered	non-passerine bird
<i>Petaurus norfolcensis</i>	Squirrel Glider	—	listed	endangered	mammal
<i>Pomatostomus temporalis temporalis</i>	Grey-crowned Babbler	—	listed	endangered	passerine bird
<i>Stictonetta naevosa</i>	Freckled Duck	—	listed	endangered	non-passerine bird
<i>Tandanus tandanus</i>	Freshwater Catfish	—	listed	endangered	fish
<i>Tyto novaehollandiae novaehollandiae</i>	Masked Owl	—	listed	endangered	non-passerine bird
<i>Ardea modesta</i>	Eastern Great Egret	CAMBA, JAMBA	listed	vulnerable	non-passerine bird
<i>Grantiella picta</i>	Painted Honeyeater	Vulnerable	listed	vulnerable	passerine bird
<i>Grus rubicunda</i>	Brolga	—	listed	vulnerable	non-passerine bird



Scientific name	Common name	EPBC	FFG	Status in Victoria	Taxon type
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	Marine	listed	vulnerable	non-passerine bird
<i>Lophoictinia isura</i>	Square-tailed Kite	—	listed	vulnerable	non-passerine bird
<i>Melanotaenia fluviatilis</i>	Murray-Darling Rainbowfish	—	listed	vulnerable	fish
<i>Phascogale tapoatafa</i>	Brush-tailed Phascogale	—	listed	vulnerable	mammals
<i>Geopelia cuneate</i>	Diamond Dove	—	listed	near threatened	non-passerine birds
<i>Melanodryas cucullata cucullata</i>	Hooded Robin	—	listed	near threatened	passerine birds
<i>Stagonopleura guttata</i>	Diamond Firetail	—	listed	near threatened	passerine birds
fam. Terapontidae gen. <i>Bidyanus</i>	Silver Perch	—	listed	—	fish
<i>Varanus varius</i>	Lace Monitor	—	—	endangered	reptiles
<i>Galaxias rostratus</i>	Flat-headed Galaxias	—	rejected	vulnerable	fish
<i>Anas rhynchotis</i>	Australasian Shoveler	—	—	vulnerable	non-passerine birds
<i>Aythya australis</i>	Hardhead	—	—	vulnerable	non-passerine birds
<i>Biziura lobate</i>	Musk Duck	—	—	vulnerable	non-passerine birds
<i>Hirundapus caudacutus</i>	White-throated Needletail	migratory – terrestrial	—	vulnerable	non-passerine birds
<i>Nannoperca australis</i> (Murray–Darling lineage)	Southern Pygmy Perch	—	—	vulnerable	fish
<i>Pogona barbata</i>	Bearded Dragon	—	—	vulnerable	reptiles
<i>Tringa nebularia</i>	Common Greenshank	migratory – wetland	—	vulnerable	waders
<i>Macquaria ambigua</i>	Golden Perch	—	rejected	near threatened	fish
<i>Alcedo azurea</i>	Azure Kingfisher	—	—	near threatened	non-passerine birds
<i>Chlidonias hybridus javanicus</i>	Whiskered Tern	—	—	near threatened	waders
<i>Circus assimilis</i>	Spotted Harrier	—	—	near threatened	non-passerine birds
<i>Climacteris picumnus victoriae</i>	Brown Treecreeper (south-eastern subspecies)	—	—	near threatened	passerine birds
<i>Dromaius novaehollandiae</i>	Emu	—	—	near threatened	non-passerine birds
<i>Gallinago hardwickii</i>	Latham's Snipe	migratory – wetland-	—	near threatened	non-passerine birds

Scientific name	Common name	EPBC	FFG	Status in Victoria	Taxon type
<i>Myotis macropus</i>	Southern Myotis	—	—	near threatened	mammals
<i>Nycticorax caledonicus hillii</i>	Nankeen Night Heron	—	—	near threatened	non-passerine birds
<i>Phalacrocorax varius</i>	Pied Cormorant	—	—	near threatened	non-passerine birds
<i>Platalea regia</i>	Royal Spoonbill	—	—	near threatened	non-passerine birds
<i>Plegadis falcinellus</i>	Glossy Ibis	—	—	near threatened	non-passerine birds

## FLORA

Scientific name	Common name	EPBC	FFG	Status in Victoria	Taxon type
<i>Lepidium monoplocoides</i>	Winged Peppergrass	Endangered	listed	endangered	forb
<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass	Vulnerable	rejected	—	other grass
<i>Brachyscome muelleroides</i>	Mueller Daisy	Vulnerable	listed	endangered	forb
<i>Cullen parvum</i>	Small Scurf-pea	—	listed	endangered	forb
<i>Menkea crassa</i>	Fat Spectacles	—	listed	endangered	forb
<i>Rhodanthe stricta</i>	Slender Sunray	—	listed	endangered	forb
<i>Swainsona adenophylla</i>	Violet Swainson-pea	—	listed	endangered	forb
<i>Brachyscome chrysoglossa</i>	Yellow-tongue Daisy	—	listed	vulnerable	forb
<i>Nymphoides crenata</i>	Wavy Marshwort	—	listed	vulnerable	forb
<i>Allocasuarina luehmannii</i>	Buloke	—	listed	—	tree
<i>Calotis cuneifolia</i>	Blue Burr-daisy	—	—	rare	forb
<i>Cardamine moirensis</i>	Riverina Bitter-cress	—	—	rare	forb
<i>Centipeda nidiformis</i>	Cotton Sneezeweed	—	—	rare	forb
<i>Cymbonotus lawsonianus</i>	Bear's-ear	—	—	rare	forb
<i>Gratiola pumilo</i>	Dwarf Brooklime	—	—	rare	forb
<i>Minuria integerrima</i>	Smooth Minuria	—	—	rare	forb

Scientific name	Common name	EPBC	FFG	Status in Victoria	Taxon type
<i>Myoporum montanum</i>	Waterbush	—	—	rare	tree
<i>Picris squarrosa</i>	Squat Picris	—	—	rare	forb
<i>Rorippa eustylis</i>	Dwarf Bitter-cress	—	—	rare	forb
<i>Rytidosperma setaceum</i> var. <i>brevisetum</i>	Short-bristle Wallaby-grass	—	—	rare	tussock grass
<i>Tripogon loliiformis</i>	Rye Beetle-grass	—	—	rare	tussock grass
<i>Wahlenbergia tumidifructa</i>	Mallee Annual-bluebell	—	—	rare	forb
<i>Atriplex spinibractea</i>	Spiny-fruit Saltbush	—	—	endangered	forb
<i>Eragrostis exigua</i>	Slender Love-grass	—	—	endangered	tussock grass
<i>Ammannia multiflora</i>	Jerry-jerry	—	—	vulnerable	forb
<i>Amyema linophylla</i> subsp. <i>orientale</i>	Buloke Mistletoe	—	—	vulnerable	epiphyte
<i>Brachyscome</i> sp. aff. <i>readeri</i>	Riverina Daisy	—	—	vulnerable	forb
<i>Coronidium scorpioides</i> aff. <i>rutidolepis</i> (Lowland Swamps)	Pale Swamp Everlasting	—	—	vulnerable	forb
<i>Cyperus bifax</i>	Downs Nutgrass	—	—	vulnerable	other grass
<i>Cyperus flaccidus</i>	Lax Flat-sedge	—	—	vulnerable	tussock grass
<i>Dianella</i> sp. aff. <i>longifolia</i> (Riverina)	Pale Flax-lily	—	—	vulnerable	forb
<i>Digitaria ammophila</i>	Silky Umbrella-grass	—	—	vulnerable	tussock grass
<i>Lipocarpha microcephala</i>	Button Rush	—	—	vulnerable	tussock grass
<i>Sida intricata</i>	Twiggy Sida	—	—	vulnerable	forb
<i>Cynodon dactylon</i> var. <i>pulchellus</i>	Native Couch	—	—	poorly known	other grass
<i>Sclerolaena muricata</i> var. <i>semiglabra</i>	Dark Roly-poly	—	—	poorly known	shrub
<i>Ranunculus pumilio</i> var. <i>politus</i>	Ferny Small-flower Buttercup	—	—	poorly known	forb
<i>Cyperus victoriensis</i>	Yelka	—	—	poorly known	other grass
<i>Alternanthera nodiflora</i>	Common Joyweed	—	—	poorly known	forb
<i>Fimbristylis aestivalis</i>	Summer Fringe-sedge	—	—	poorly known	tussock grass

Scientific name	Common name	EPBC	FFG	Status in Victoria	Taxon type
<i>Haloragis glauca</i> f. <i>glauca</i>	Bluish Raspwort	—	—	poorly known	forb
<i>Lepidium pseudohyssopifolium</i>	Native Peppercress	—	—	poorly known	forb
<i>Hypsela tridens</i>	Hypsela	—	—	poorly known	forb
<i>Alternanthera</i> sp. 1 (Plains)	Plains Joyweed	—	—	poorly known	forb
<i>Lotus australis</i> var. <i>australis</i>	Austral Trefoil	—	—	poorly known	forb
<i>Cardamine tenuifolia</i>	Slender Bitter-cress	—	—	poorly known	forb
<i>Eleocharis pallens</i>	Pale Spike-sedge	—	—	poorly known	tussock grass
<i>Desmodium varians</i>	Slender Tick-trefoil	—	—	poorly known	forb

## Appendix 5: Key threats and levels of risk to conservation assets and values

(Source: Parks Victoria 2018b)

Threat	Mitigation measures	CONSERVATION ASSET					YORTA YORTA CULTURAL HERITAGE VALUES Culturally significant plants, animals and sites.	RECREATION VALUES Amenity for visitors
		River red gum forest and woodland: extent and condition	Floodplain marshes Moira Grass extent; Mueller Daisy and Swamp [Wallaby-grass	Wetland birds; Colonial nesting waterbirds: successful breeding events and abundance; Superb Parrot, Australasian Bittern	Native fish. Murray Cod, Trout Cod and Silver Perch	Other water-dependent species; Swamp Yabby and Murray Crayfish; species richness of frogs; abundance and body condition of Broad-shelled, Murray River and Common Long-necked Turtles		
Inappropriate water regimes	Provision for environmental water deliveries to maintain ecological character. Diverting irrigation rejection.	Low	High	Medium	Low	Medium	Medium	Low
Inappropriate fire regimes	Maintaining tolerable fire intervals through the exclusion of fire, plus preparedness and effective response,	Medium	Low	Negligible	Negligible	Low	Medium	Medium
Predation by foxes and cats	Fox control (baiting) of the park boundary and turtle nest sites.	Negligible	Negligible	Medium	Negligible	High	High	Low
Grazing, browsing and trampling pressure on wetlands and cultural sites from feral horses, feral pigs and goats, feral deer, rabbits, kangaroos	Feral pig trapping and shooting. Horse exclusion fence trial (one wetland). Rabbit baiting and night-shooting. Site protection.	Medium	Extreme	Low	Negligible	Medium	Extreme	Medium
Exotic fish (e.g. carp)	No current mitigation measures.	Negligible	Low	Negligible	High	Medium	Medium	High

Threat	Mitigation measures	CONSERVATION ASSET					YORTA YORTA CULTURAL HERITAGE VALUES	RECREATION VALUES
		River red gum forest and woodland: extent and condition	Floodplain marshes Moira Grass extent; Mueller Daisy and Swamp [Wallaby-grass	Wetland birds; Colonial nesting waterbirds: successful breeding events and abundance; Superb Parrot, Australasian Bittern	Native fish. Murray Cod, Trout Cod and Silver Perch	Other water-dependent species; Swamp Yabby and Murray Crayfish; species richness of frogs; abundance and body condition of Broad-shelled, Murray River and Common Long-necked Turtles	Culturally significant plants, animals and sites.	Amenity for visitors
Invasive plants (e.g. arrowhead, incursion by giant rush and river red gum saplings)	Environmental watering. Herbicides registered for use in aquatic situations. Cutting/burning for rush/saplings.	Low	High	Medium	Low	Low	Medium	Medium
Illegal recreation activity (off road, damage to vegetation)	Enforced compliance on illegal activities, education.	Medium	Low	Low	Low	Low	Medium	Medium
Legal recreation activity (generating erosion, sedimentation, disturbance)	Maintenance activities e.g. roads, boat ramps.	Medium	Medium	Medium	Medium	Low	Medium	Low

## Appendix 6: List of submissions made on the Draft JMP

Submission No.	Type	Submitter Name	Organisation
1	Email	Jane Schermer	Adelaide Trail Horse Riders Club
2	Email	Simon Green	
3	Email	Keith Muir	The Colong Foundation for Wilderness Ltd
4	Email	Jennifer Mather	
5	Email	Isa Menzies	
6	Email	Richard Swain	Alpine River Adventures
7	Email	Alison Swain	Reclaim Kosci Campaign
8	Email	Larissa Woods	
9	Email	Resident of Weston ACT	
10	Email	Gary Sanderson	
11	Email	Amanda Souter	
12	Email	Zoe Keele	
13	Email	Patricia Hoelmer	Friends of Wild Horses
14	Email	Talia Liney	
15	Email	Michelle Moulden	
16	Email	Victoria Sutton	
17	Email	Peter Jones	
18	Email	Ruth Harris	
19	Email	Jo Simms	
20	Email	Jill Pickering	Australian Brumby Alliance Inc.
21	Email	Mary Long	
22	Email	Alison Seeley	
23	Email	Wendy Holland	
24	Email	Kevin & Zoe Barbetti	
25	Email	Resident of Latham ACT	
26	Email	Marcus Engelbrecht	
27	Email	Graeme Padgett	Murray River Horse Trails
28	Email	Cathy Giles	Australian Trail Horse Riders Association
29	Email	MN no address	
30	Email	John Scott	
31	Email	H Schermer	
32	Email	Renee Neubauer	
33	Email	Jennifer Bruinier	
34	Email	Natasha Blaker	
35	Email	Kerry Bruce	
36	Email	Maureen Blair	
37	Email	Claire Gore	Echuca & District Trail Horse Riders Assoc
38	Email	Unnamed	
39	Email	Louise Coster	

<b>Submission No.</b>	<b>Type</b>	<b>Submitter Name</b>	<b>Organisation</b>
40	Email	Melissa Stagg	
41	Email	Catherine Merchant	
42	Email	Darcy	
43	Email	Pauline Ferguson	
44	Email	Cathy Guinness	
45	Email	Sarina Loo & Beth Ashworth	Victorian Environmental Water Holder
46	Email	Aidan Brache	
47	Email	Helen Boak	
48	Email	Les Pelle	
49	Email	Jay Walker	Goulburn-Murray Water
50	Email	Wayne Hevey	Four Wheel Drive Victoria
51	Email	D Peoples	
52	Email	G Pell	
53	Email	Laura Stephens	
54	Email	Benita Cox	Kingfisher Cruises
55	Email	John Laing	
56	Email	Bill Probst	
57	Email	Chris Norman	Goulburn-Broken Catchment Management Authority
58	Email	Jono La Nauze	Environment Victoria
59	Email	Wayne Atkinson	
60	Email	Jodi Swirepik	Commonwealth Environmental Water Holder
61	Email	Annemarie Norman	Echuca & District Trail Horse Riders Assoc
62	Email	Asitha Katupitiya	Murray Darling Basin Authority
63	Email	Sue Daws	
64	Email	Bryce Tobias	Nathalia Angling Club
65	Email	Melissa Eastham	
66	Email	Brendan Robinson	
67	Email	John Pettigrew	
68	Email	Del Piasri	
69	Email	Robin Pettigrew	
70	Email	Darcie Bentley	
71	Email	Chris McDowell	Murray River Hideaway Holiday Park
72	Email	John Salter	
73	Email	John Pettigrew	Goulburn Valley Environment Group
74	Email	James Mason	
75	Email	Kaye Moor	
76	Email	John Paterson	Barmah Forest Cattleman's Association
77	Email	Sue Rodgie	
78	Email	Rod Humphrey	
79	Email	Claire Jones	
80	Email	Melanie Thewlis	
81	Email	John Paterson	



<b>Submission No.</b>	<b>Type</b>	<b>Submitter Name</b>	<b>Organisation</b>
82	Email	Phil Ingamells	Victorian National Parks Association
83	Email	Nicholas Verginis	
84	Email	M J Caldwell	
	Openhouse		
84a	Form	M J Caldwell	
85	Email	Ian Lubke	
	Openhouse		
85a	Form	Ian Lubke	
86	Email	Sue Lubke	
87	Email	Sharon and Russell Terry	
88	Email	Jill, Trevor and Sharon Gallaway	
89	Email	David Nugent	
90	Email	Elizabeth O'Dea	
91	Email	Kevin Bourke	
92	Email	Gillian Schoenborn	
93	Email	Kerri Acquisto	Billabong Ranch
94	Email	Rob Loats	Victorian Recreational Fishing Peak Body
95	Email	Peter Newman	Barmah Forest Preservation League
96	Email	Juliet Le Feuvre	
	Openhouse		
97	Form	Spencer Nicholson	
	Openhouse		
98	Form	Rob Slee	Shepparton Adult Riding Club
	Openhouse		
99	Form	Charlie Walsh	
	Openhouse		
100	Form	Christina Jackson	
	Openhouse		
101	Form	Jack Nicholson	
102	Email	Terry Court	
103	Email	Ruth Hamilton	
104	Post	Ellen Miller	
105	Post	Heather Cooke	
106	Post	Wendy Holland	
107	Post	Mark Henderson	Shire of Moira Council
108	Post	Country Citizen - Victoria	
109	Post	Sonia Cooper	

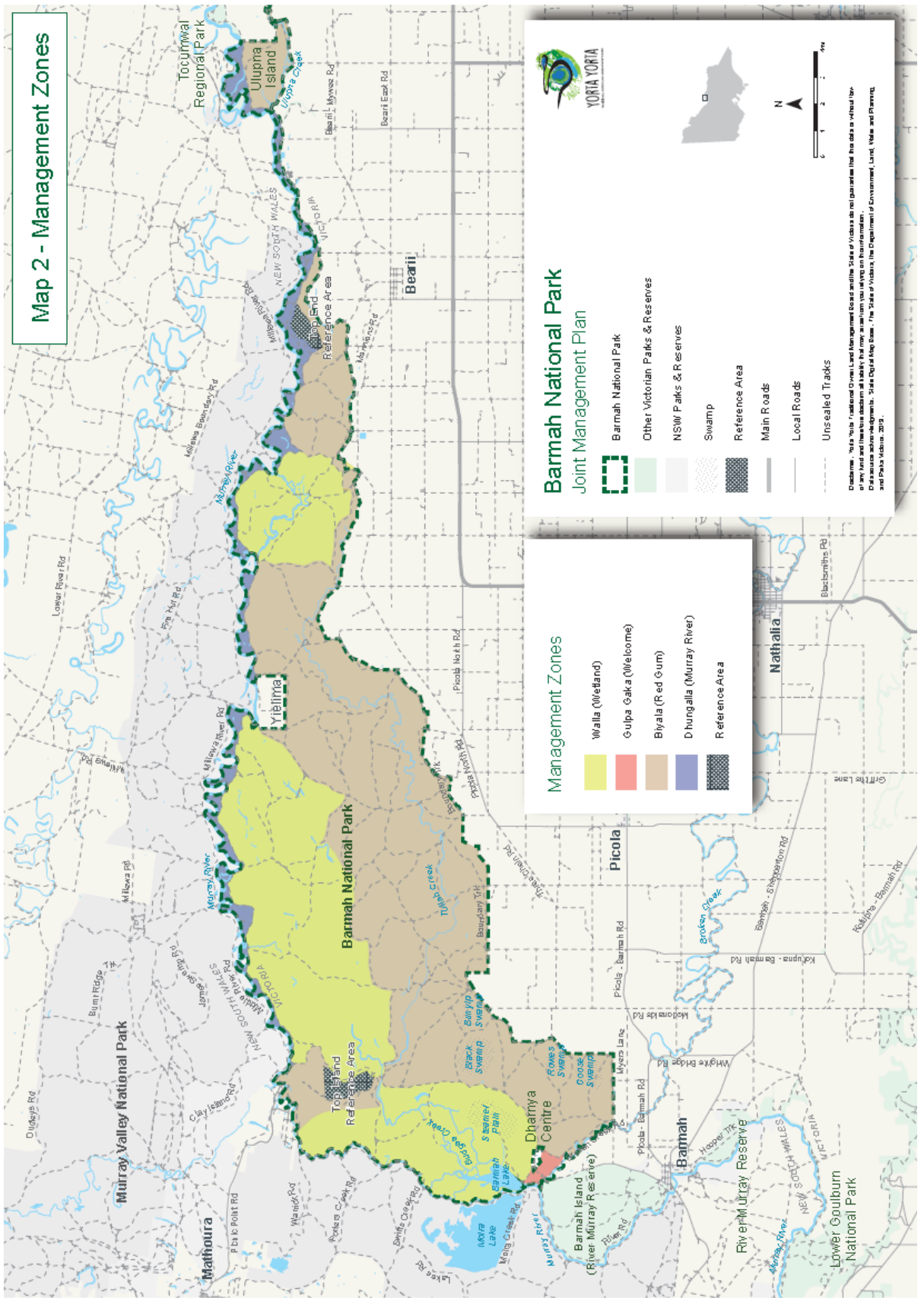
Note: submitters 9, 25 and 29 requested confidentiality.

# MAPS 2 TO 5

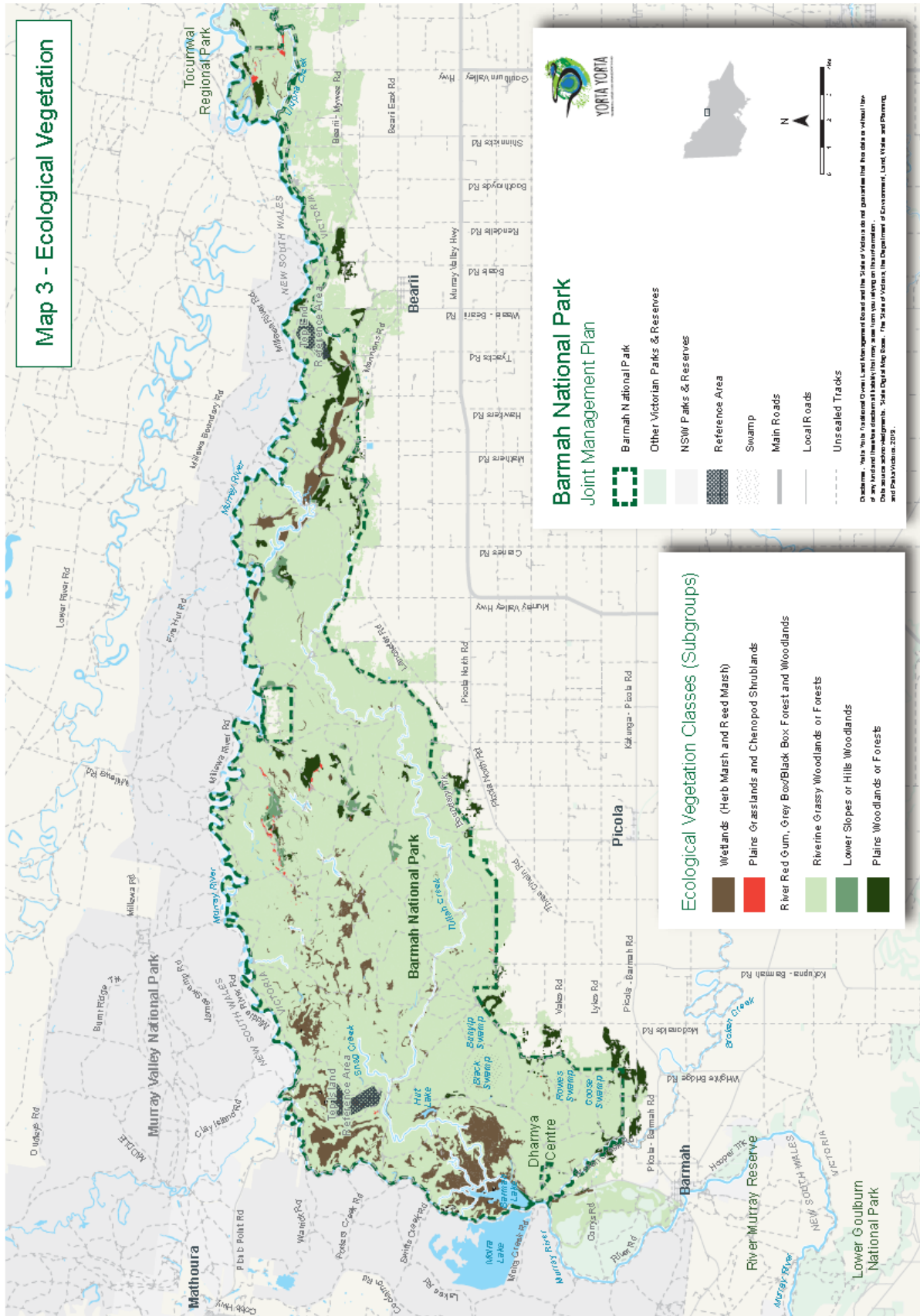


Barmah Lake in flood. (Photo: J. Patrick Pigott)

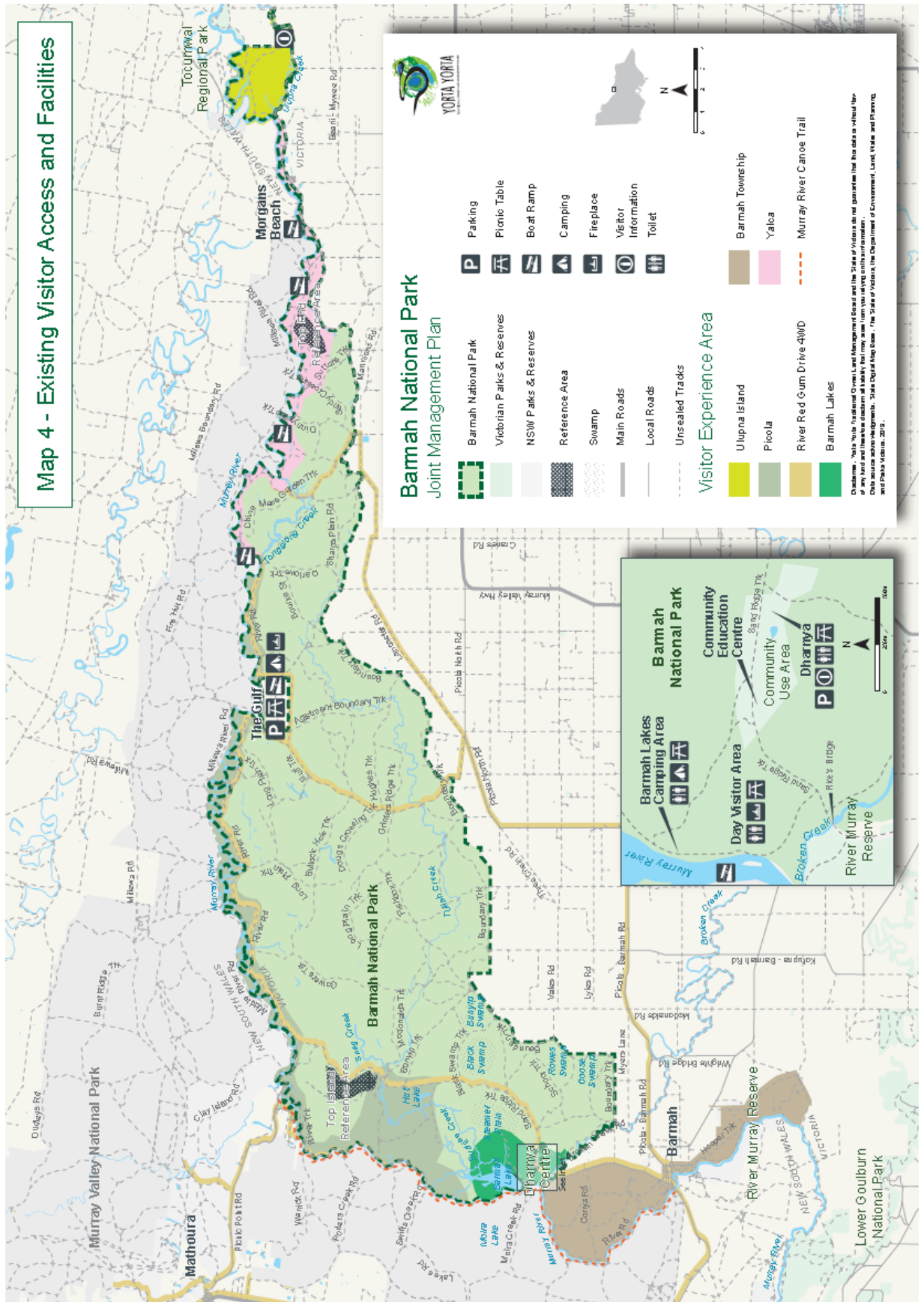
Map 2 - Management Zones



Map 3 - Ecological Vegetation



Map 4 - Existing Visitor Access and Facilities



# Map 5 - Key Strategies for Access, Cultural Heritage and Visitors

**Murray River Adventure Trail**  
Work with Murray Regional Tourism and other partners to develop a long-distance multi-sport trail.

**Promote Yorla Yorla Culture**  
Update mapping of cultural heritage throughout the Park. Increase visitor awareness and understanding of Yorla Yorla culture through information, interpretation and appropriate remaining of features and tracks.

**Murray River Canoe Trail**  
Improve launch access and promote.

**Yorla Yorla area on Top Island**  
Set aside an area on Top Island for Yorla Yorla gatherings.

**Overnight Canoe Camps**  
Designate camping areas at Wat Creek and The Cuttings as overnight canoe camps.

**Barmah Lakes**  
Establish designated fee-based camping at Barmah Lakes and passive boating.

**Reinvigorate Dhamrya Centre**  
Collaborate on the development of the Dhamrya Master Plan to reinvigorate the area as a gateway to the park and a focus for Yorla Yorla cultural interpretation, tourism information and services, education and events.

**Tourism**  
Improve regional signage to the park on the Murray Valley Highway. Increase links between the park and Barmah township services. Work with Murray Regional Tourism to develop and implement the Barmah Tourism Development Plan.

**Better Waste Management**  
Work with Mobra Shire to develop a dump point outside the park for Recreational Vehicle wastewater.

**Sustainable Camping Areas**  
Best camping areas along the River on a rotating basis to allow revegetation. Define sites where required to prevent encroachment on to cultural heritage sites and sensitive vegetation.

**Generator use for Camping**  
Allow generator use only in defined areas at Ulupna Island, Mogens (Mill), Longsight Beach, Browns and Charles Camps, and Thistle Bed.

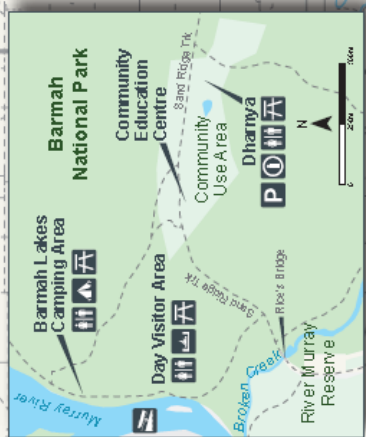
**New Cultural and Historic Trail**  
Develop a cultural trail that promotes and interprets Yorla Yorla culture, stories and historic sites such as old mills and landings.

**New Camping Area**  
Develop a new designated camping area in the southern part of the park to enable camping during flooding and investigate the scope for a canoe trail and bird hides.

**Boat Ramps**  
Develop several additional boat ramps along the Murray River - between Sand Ridge Track and The Gulf and at Ulupna Island. Improve vehicle access to the existing ramp at The Gulf.

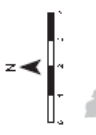
**Compliance and Enforcement**  
Use education and enforcement to reduce the incidence of rubbish dumping, illegal fires, water contamination, bank erosion and digging for Red Grouse.

**Access Roads and Tracks**  
Reduce number of park entry points on southern boundary. Review road network in consultation with user groups to rationalise unnecessary tracks. Re-align tracks where they impact on cultural heritage sites. Improve access during low-level floods by raising main tracks at key points.



## Barmah National Park Joint Management Plan

- Barmah National Park
  - Other Victorian Parks & Reserves
  - NSW Parks & Reserves
  - Reference Area
  - Swamp
  - Main Roads
  - Local Roads
  - Unsailed Tracks
- P Parking
  - A Picnic Table
  - B Boat Ramp
  - C Camping
  - F Fireplace
  - I Visitor Information
  - T Toilet



Disclaimer: While the State of Victoria, Local Government Councils and the State of Victoria do not guarantee the data or without liability of any kind and the user of the data shall remain liable for any errors or omissions. Data source: Australian Hydrographic Service, State Digital Map Store, The State of Victoria, the Department of Environment, Land, Water and Planning and Parks Victoria, 2019.

