

# Barmah Forest Ramsar Site Boundary Description

Technical report



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Cover photo: Moira Grass, Barmah Forest Ramsar Site (Kay Morris 2013).

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# Introduction

Ramsar wetlands are wetlands of international importance listed under the Convention on Wetlands (Ramsar, Iran 1971). Victoria has 11 wetlands listed under this convention including the Barmah Forest Ramsar Site.

It is a requirement of the Convention on Wetlands that a suitable map or maps are provided for each Ramsar wetland. The Australian Government Department of the Environment requires that both the written description and the spatial data of the Ramsar site boundaries are accurate. This information is used to gazette the boundary of the declared Ramsar wetland in accordance with Section 327 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Under the EPBC Act there are requirements for approval of activities which have, or are likely to have a significant impact on the ecological character of a declared Ramsar wetland. Precise identification of site boundaries helps to ensure that the exact boundaries of the Ramsar site can be easily identified, which can facilitate compliance with the EPBC Act as well as its effective enforcement.

The RAMSAR100 spatial dataset is a polygon layer that identifies each Victorian Ramsar area individually. RAMSAR100 was produced in conjunction with a report describing each Ramsar site (DCNR 1995). The Department of Environment and Primary Industries (DEPI) is the custodian of RAMSAR100. Most of the line work in RAMSAR100 was initially derived from 1:100,000 reference data. Because of its broader scale, this data was not always consistent with the cadastre and other more accurate features that have now been used to better define the majority of the Barmah Forest Ramsar Site. The updated spatial definition of Barmah Forest Ramsar Site is identified in a new RAMSAR25 spatial dataset.

This report details the written description of the Barmah Forest Ramsar Site to explicitly define the Ramsar boundaries, along with accompanying maps.

# Methodology of RAMSAR 100 GIS layer boundary realignment

An expert panel was convened to provide advice on the original intent of the Ramsar site boundaries based on the description in DCNR (1995) and the RAMSAR100 spatial dataset.

Certificates of Title were obtained by the Office of the Surveyor-General, Victoria, to further clarify the intent of the Ramsar boundary.

DEPI manages the RAMSAR 100 spatial dataset. The RAMSAR100 boundary of the Ramsar area was used as a guide to select appropriate features from the following 1:25,000 datasets:

- Vicmap Transport Road (1 February 2011)
- Vicmap Property (26 October 2010)
- Vicmap Hydro (1 January 2011)
- Vicmap Shared (for the state boundary) (11 November 2010)
- Public Land Management (PLM25) (8 December 2010).

High quality digital aerial photography was used where it was necessary to further clarify the original intent of the Ramsar boundary. The following images held by Land Victoria, DSE were used:

- landcover54\_2010feb23\_air\_vis\_50cm\_mga54; and
- moira-shepparton\_2009dec14\_air\_vis\_30cm\_mga55.

These datasets are represented in spatial products available through Vicmap<sup>1</sup> - <http://www.land.vic.gov.au>. Alternatively the Ramsar site boundaries can be viewed through the Department of Sustainability and Environments website, at Interactive Maps - <http://www.dse.vic.gov.au/about-dse/interactive-maps>.

The geographical coordinates (latitude, longitude) used in this report are based on Geographic Datum of Australia 1994 (GDA94) and the areas are calculated using Albers Equal Area projection. The hectares of the site presented in the body of the report have been calculated using Albers Equal Area projection and rounded to the nearest whole number (see Appendix 1 for the site's area calculated to two decimal places).

<sup>1</sup> Terms and conditions do apply.

## Location

The Barmah Forest Ramsar Site is situated approximately 225 kilometres north of Melbourne, on the Victorian side of the Murray River floodplain. The Barmah Forest Ramsar Site covers an area of 29,305 ha.

The Barmah Forest Ramsar Site includes public land from Barmah National Park, Murray River Park, and Barmah State Forest. The site excludes the Yielima block (1\TP812662) of freehold land.

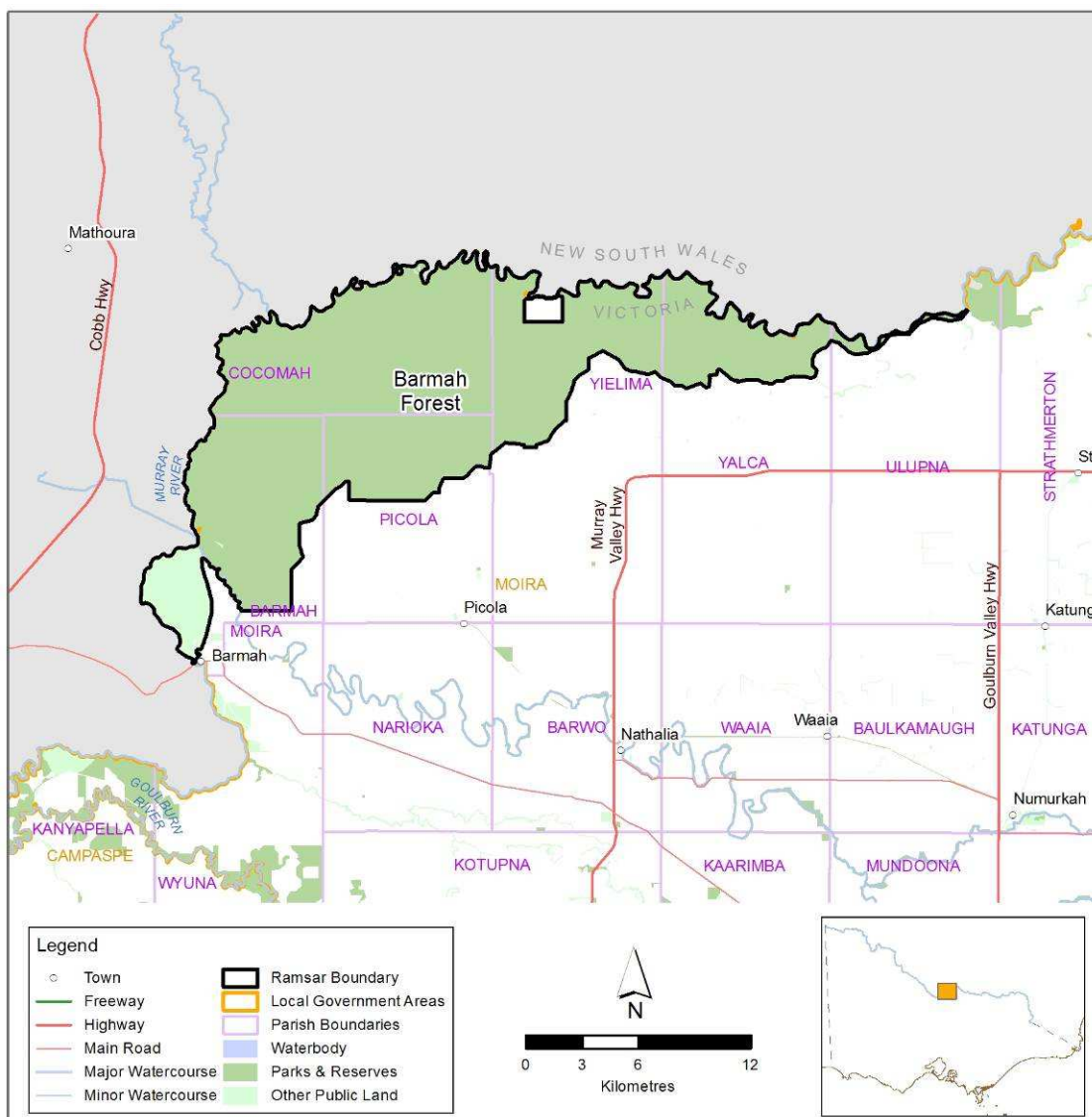


Figure 1: Barmah Forest Ramsar Site location.

# Written description of the Barmah Forest Ramsar Site boundary

The generated boundary of the Ramsar site described below is represented by the spatial data in RAMSAR25 held in the DEPI Corporate Spatial Data Library. The datum used is Geographic Datum of Australia 1994(GDA94). Points referred to in the description are shown on the maps in Appendix 2.

The boundary begins south of the Barmah township at the point closest to 144°57'18.661"E 36°1'7.51"S (labelled as point A on the Map 2, Appendix 2) on the State border (Murray River southern shoreline). The boundary starts in a north-westerly direction along the State border (Murray River southern shoreline), then continues in a generally northerly direction and then in an easterly direction along the State border. The boundary continues along the State border to 35°50'53.112"S 145°24'40.554"E (point B, Map 3, Appendix 2) which is northwest of Ulupna West.

From point B the boundary heads in a straight line in a south-easterly direction to the point closest to coordinate 35°50'54.414"S 145°24'44.232"E (point C, Map 3, Appendix 2) at the edge of Barmah National Park. From point C the boundary continues along the Barmah National Park boundary in a south-westerly and then generally westerly direction. The boundary continues along the Barmah National Park boundary until it reaches the west bank of the Broken Creek at the point closest to 35°59'35.621"S 144°58'59.178"E (point D, Map 4, Appendix 2). From point D the boundary continues in a northerly direction along the Barmah National Park boundary to the corner at the point closest to 35°58'5.457"S 144°57'35.773"E (point E, Map 4, Appendix 2).

The boundary then continues in a westerly direction along the southern edge of parcels 2006\PP2075 and 2007\PP2075 to the point closest to 35°58'5.771"S 144°57'34.212"E (point F, Map 4, Appendix 2).

From point F the boundary continues in a generally southerly direction along the public land boundary (parcels 2007\PP2075, 2003\PP2075, 2004\PP2075) to the point closest to 36°0'28.238"S 144°57'40.645"E (point G, Map 2, Appendix 2) on the corner of parcel 2004\PP2075. The boundary continues in a straight line in a south westerly direction to the point closest to 36°0'29.203"S 144°57'40.201"E (point H, Map 2, Appendix 2) on the corner of parcel 9A~A\PP5045.

From point H the boundary continues in a generally south westerly direction along the edge of parcel 9A~A\PP5045 to the south west corner at the point closest to 36°0'49.569"S 144°57'24.489"E (point I, Map 2, Appendix 2). The boundary continues in a straight line (i.e. line extended) to the edge of parcel 5A~4\PP5045 at the point closest to 36°0'50.596"S 144°57'24.494"E (point J, Map 2, Appendix 2).

The boundary continues in an easterly direction along the northern edge of parcel 5A~4\PP5045 to the corner at the point closest to 36°0'50.579"S 144°57'27"E (point K, Map 2, Appendix 2). The boundary continues in a straight line (i.e. line extended) to the corner of parcel 5B~4\PP5045 at the point closest to 36°0'50.571"S 144°57'28.149"E (point L, Map 2, Appendix 2). The boundary follows the northern, eastern and then southern edge of parcel 5B~4\PP5045 to the corner at the point closest to 36°0'53.804"S 144°57'28.184"E (point M, Map 2, Appendix 2). The boundary continues in a straight line (i.e. line extended) to the corner of parcel 5A~4\PP5045 and continues to 36°0'53.82"S 144°57'26.92"E (point N, Map 2, Appendix 2).

The boundary continues in a straight line in a southerly direction to the corner of parcel 1A~5\PP5045 at the point closest to 36°0'54.837"S 144°57'26.925"E (point O, Map 2, Appendix 2). The boundary continues along the eastern and then southern edge of parcel 1A~5\PP5045 to the point nearest to 36°0'58.094"S 144°57'22.912"E (point P, Map 2, Appendix 2). The boundary heads in a straight line in a southerly direction to the point closest to 36°0'59.067"S 144°57'22.912"E (point Q, Map 2, Appendix 2) on the north east corner of parcel 6C~1\PP5045. The boundary continues in a southerly direction along the eastern edge of parcels 6C~1\PP5045, 6A~1\PP5045, and 6C~14\PP5045 to the point closest to 36°1'6.174"S 144°57'20.267"E (point R, Map 2, Appendix 2) on the corner of parcel 6C~14\PP5045.

From point R (the south east corner of parcel 6C~14\PP5045) the boundary continues in a straight line (i.e. line extended) across parcel 6B~14\PP5045 and returning to the starting point (point A, Map 2, Appendix 2) on the State border.

## References

DEWHA (2011). Additional guidelines for written boundary descriptions for Australian Ramsar wetlands, September 2011, Department of the Environment, Water, Heritage and the Arts. Canberra.

DEWHA (2010). Guidelines for Written Boundary Descriptions for Australian Ramsar Wetlands, Version 1, 27 August 2010. Department of the Environment, Water, Heritage and the Arts. Canberra.

DEWHA (2008). Mapping Specifications for Australian Ramsar Wetlands. Module 1 of the National Guidelines for Ramsar Wetlands – Implementing the Ramsar Convention in Australia. Department of the Environment, Water, Heritage and the Arts. Canberra.

DCNR (1995). *Victorian Ramsar Sites: Definition and Boundary Clarification Project Report*. National Parks Service, Department of Conservation and Natural Resources. Victoria.

DSE (2003). *Barmah Forest Ramsar Site: Strategic Management Plan*. Department of Sustainability and Environment. Victoria.



# Appendix 1

Area in hectares

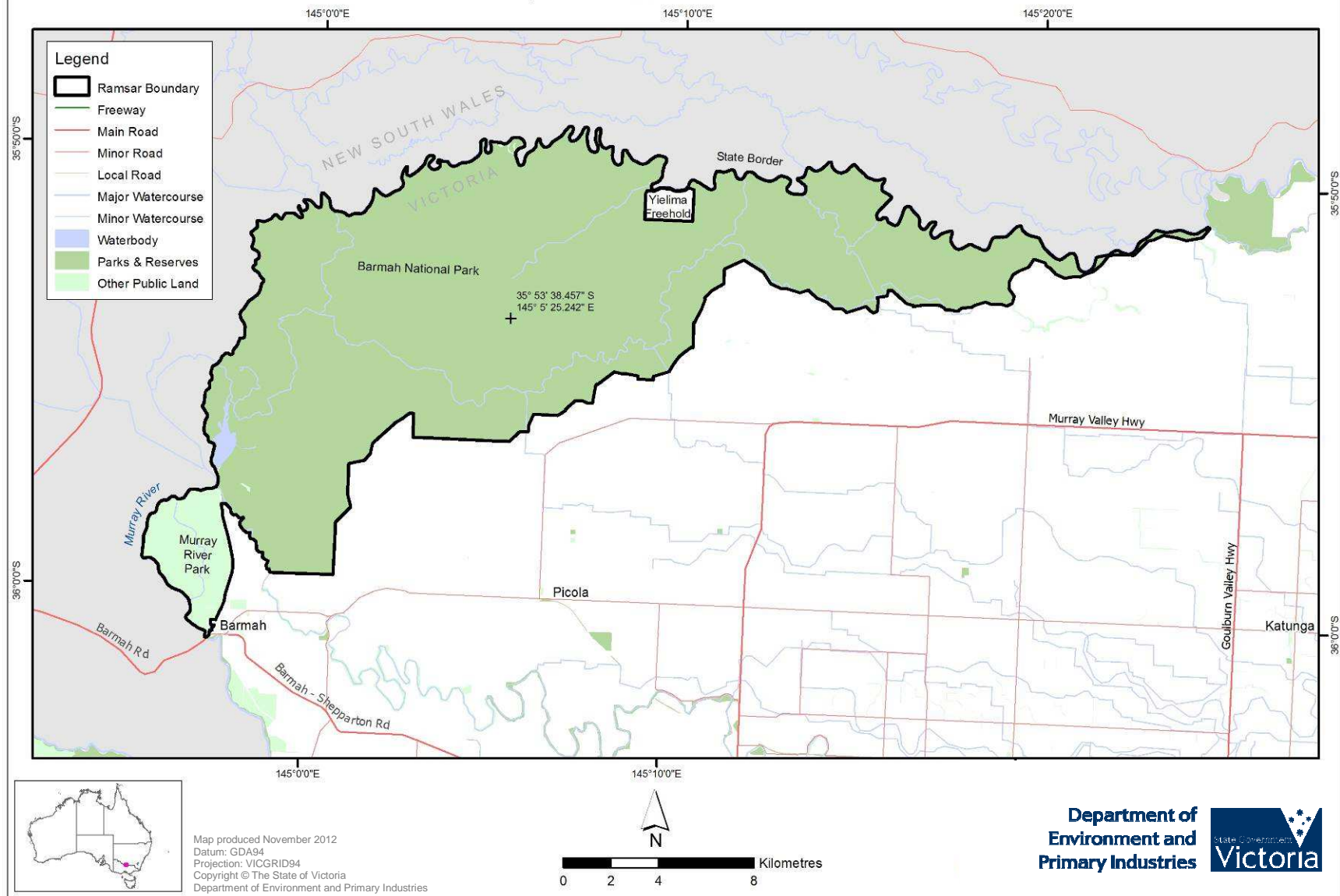
Ramsar site name	Albers equal area (hectares)
Barmah Forest	29305.36

## Appendix 2

### Maps

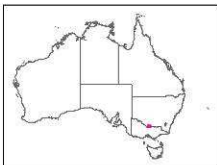
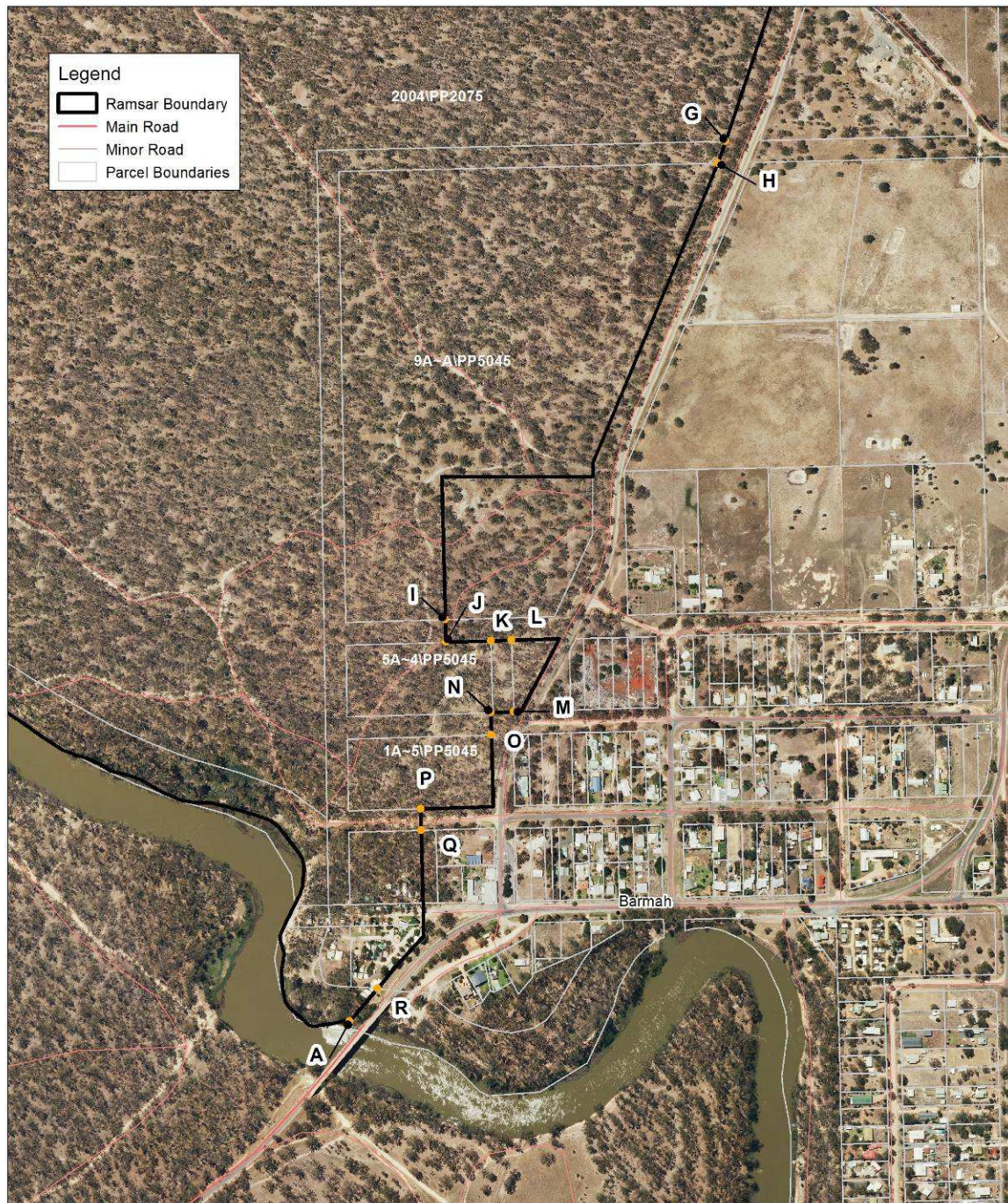
Map Number	Description
1	Overview.
2	Point A and points G to R.
3	Points B and C.
4	Points D to F.

Map 1 Barmah Forest Ramsar Site

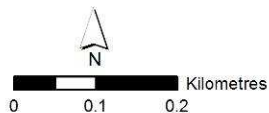




Map 2 Barmah Forest Ramsar Site



Map produced November 2012  
 Datum: GDA94  
 Projection: VICGRID94  
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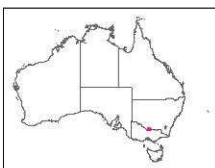
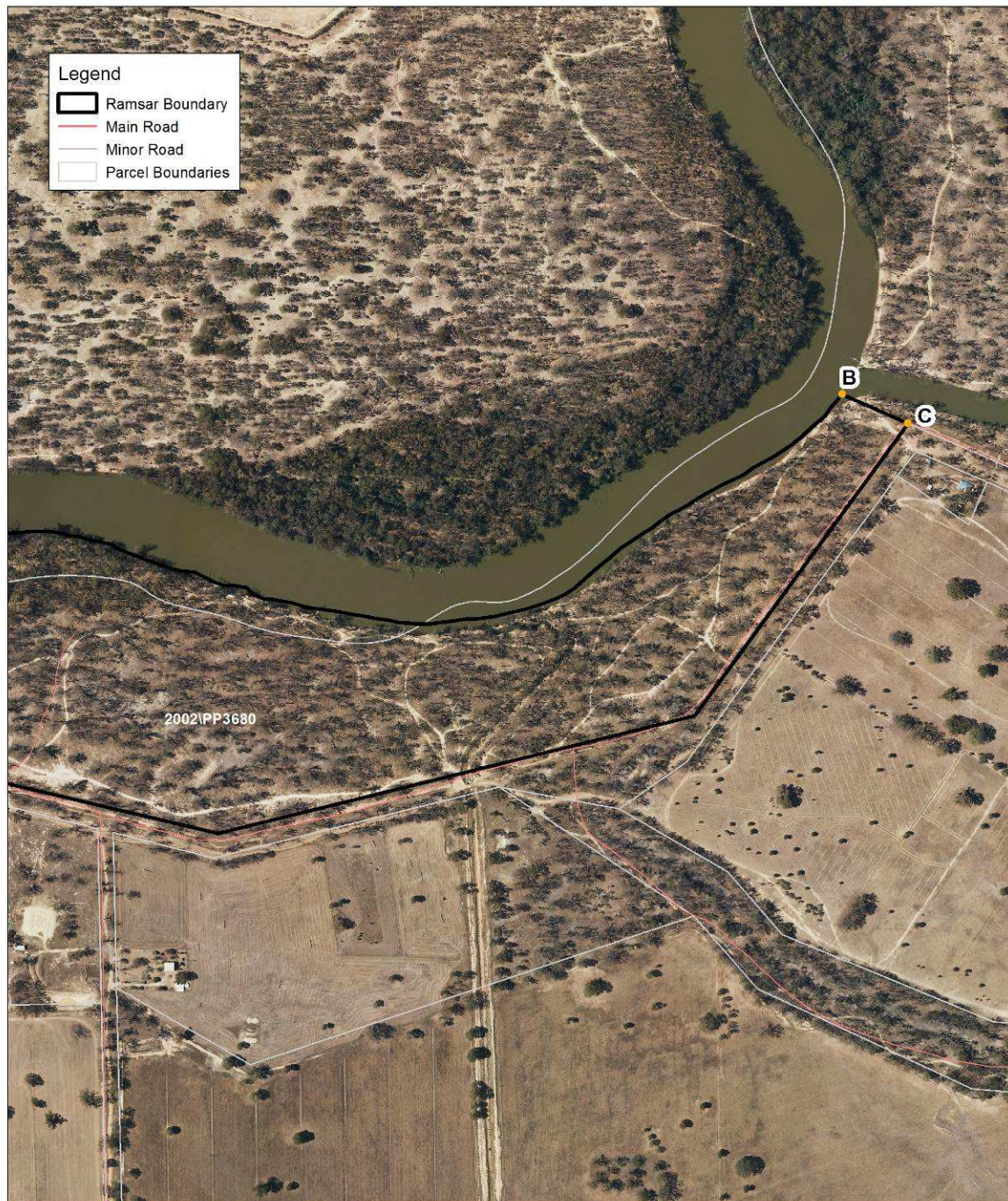


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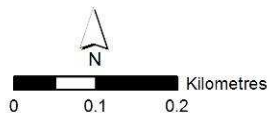




Map 3 Barmah Forest Ramsar Site



Map produced November 2012  
 Datum: GDA94  
 Projection: MGA Zone 55  
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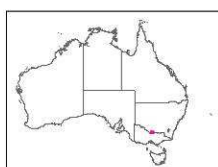
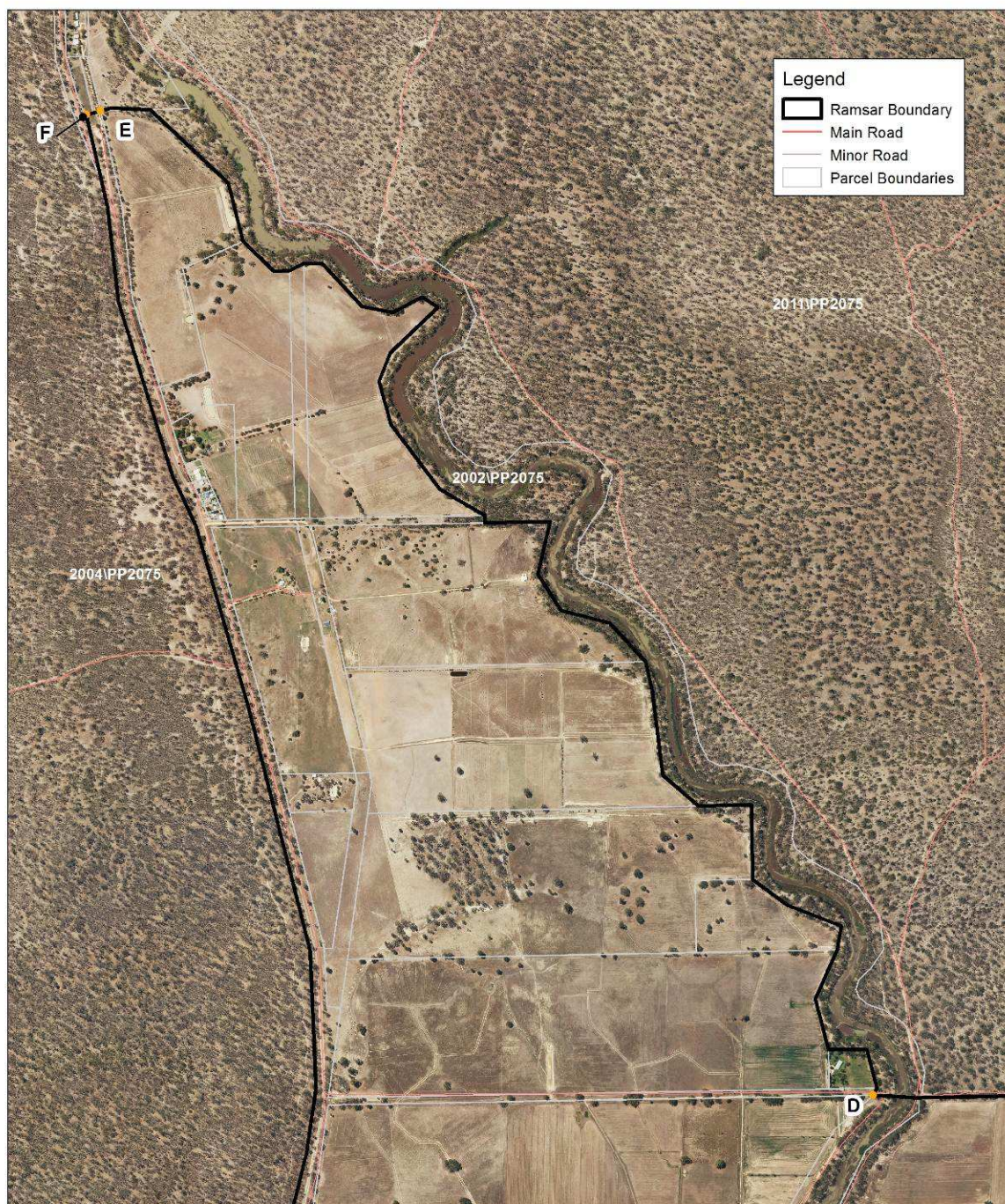


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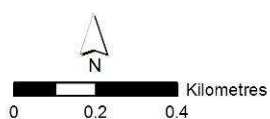




Map 4 Barmah Forest Ramsar Site



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