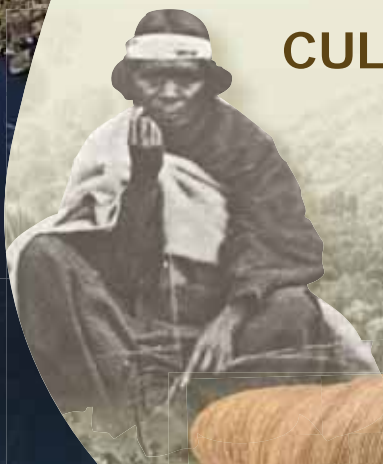


# Budj Bim

CULTURAL LANDSCAPE



WORLD HERITAGE  
NOMINATION

Aboriginal and Torres Strait Islander people are advised that this document contains images, names, quotes and other references to people who have passed away.



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Front Cover. Composite image; including Gunditjmara ancestor Jennie Green circa 1865 weaving grass basket.

AUSTRALIA'S NOMINATION OF



**Budj Bim**

Cultural Landscape

**WORLD HERITAGE NOMINATION  
FOR INSCRIPTION IN THE UNESCO WORLD HERITAGE LIST**

DECEMBER 2017

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# WELCOME TO COUNTRY

mayapa wangan ngootyoong wanyoo Pernmeeyal, alam meen  
kooorooke, ngapoon mangnooroo watanoo gunditjmara  
ngatanwarr wooka ngootoowan ngathoo-ngat mangnooroo  
watanoo gunditjmara kooorooke ba ngarrakeetong  
teen ngeeye meerreeng  
makatepa ngootyoong nanoong wanyoo gunditjmara

ngeeye meerreeng  
peeneeyt teenay  
laka meerreeng  
leerpeen meerreeng  
karweeyn meerreeng  
karman kanoo meerreeng  
yana poorrpa meerreeng  
mayapa meerreeng peeneeyt  
mayapa maar peeneeyt

## **Vicki Couzens**

spoken in Dhauwurd Wurrung  
30 March 2007

### **Translation**

make/pay respects for the Great Spirit, ancestors  
grandmothers, grandfathers from the Gunditjmara  
welcome to you (all) (I give)  
from the Gunditjmara grandmothers, grandfathers and families  
here is our country  
today is a good day for the Gunditjmara  
our country is strong here

talk the country  
sing the country  
dance the country  
paint up the country  
travel through the country  
make the country strong  
make the people strong



# STATEMENT BY THE GUNDITJMARA TRADITIONAL OWNERS

Over the past 15 years Gunditjmara Traditional Owners and members of the Winda-Mara Aboriginal Corporation have worked together to develop a World Heritage nomination for the Budj Bim Cultural Landscape. A World Heritage nomination for the Budj Bim Cultural Landscape was first proposed in 1989; and in 2002 was a key objective of the Lake Condah Sustainable Development Project, an initiative of the Gunditjmara. In January 2017 the Budj Bim Cultural Landscape was included on Australia's Tentative World Heritage List.

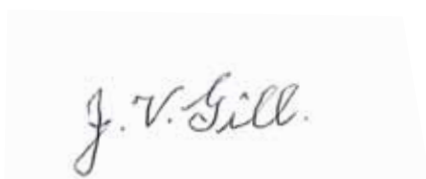
With the support of both the Commonwealth and State governments, Gunditjmara Traditional Owners have acquired a number of land parcels over the years and have actively managed them for the protection of their interconnected cultural and natural values. Currently we manage 3,000 hectares of land declared as Indigenous Protected Areas, and also have a co-management agreement with the State government over the Budj Bim (formerly Mount Eccles) National Park.

Gunditjmara have a cultural responsibility to protect what is one of the world's oldest freshwater aquaculture systems that is still in existence today; a system that was first constructed by our ancestors at least 6,600 years ago.

In 2007, the Australian Federal Court recognised the native title rights of the Gunditjmara and noted;

“The Gunditjmara were able to prove their strong and unrelenting connection to this area where their ancestors farmed eels for food and trade at the time of European settlement and back through millennia”

Gunditjmara have enjoyed strong community support in our pursuit of the nomination of the Budj Bim Cultural Landscape to the UNESCO World Heritage List.



**June Gill**

On behalf of all  
Gunditjmara Traditional Owners



**Roslyn Pevitt**

Chair  
Winda-Mara Aboriginal Corporation



# MINISTERS' MESSAGE

**The Budj Bim Cultural Landscape** is located within the traditional Country of the Gunditjmara in south-eastern Australia. It has been maintained through the continuity of Gunditjmara cultural and social practices and active management; and contains evidence of one of the world's largest and oldest aquaculture systems. It is a rare, intact and representative example of a continuing cultural landscape. The scale and complexity of the Gunditjmara aquaculture system makes the **Budj Bim Cultural Landscape** an exceptional representative example of a landscape constructed through Indigenous modification and use of wetlands and aquatic resources.

We acknowledge and commend the Gunditj Mirring Traditional Owners Aboriginal Corporation and Winda-Mara Aboriginal Corporation for initiating and leading the World Heritage nomination and working closely with governments and scientific experts in the preparation of this Nomination Dossier.

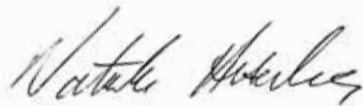
The Gunditjmara Traditional Owners are committed to the ongoing management of the **Budj Bim Cultural Landscape** in partnership with the Australian and Victorian Governments and in cooperation with local government and community partners. Australia's robust legislative framework also supports the obligations that come with being recognised as a World Heritage place.

The Australian Government, together with the Government of Victoria, works in partnership with the Gunditj Mirring Traditional Owners Aboriginal Corporation and the Winda-Mara Aboriginal Corporation to ensure the **Budj Bim Cultural Landscape** heritage values are protected and conserved for the use and enjoyment of future generations.



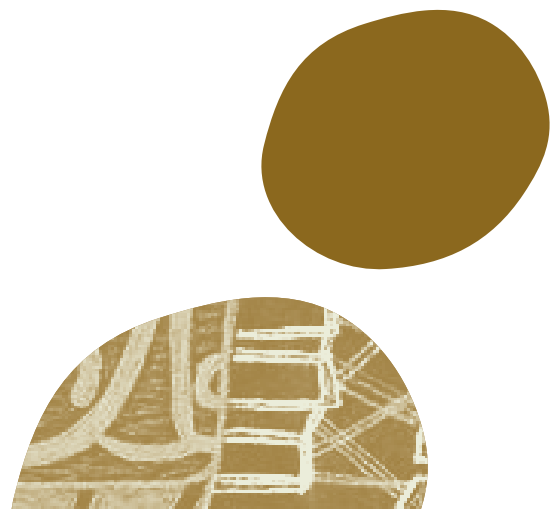
**The Hon Josh Frydenberg MP**

Australian Government Minister for the Environment and Energy on behalf of the Australian Government

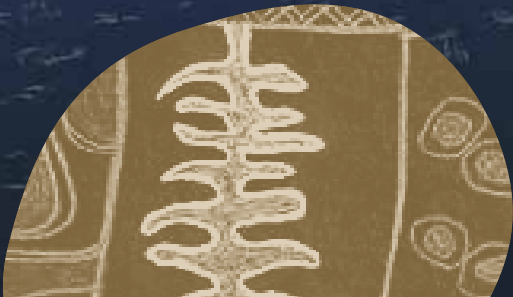


**The Hon Natalie Hutchins MP**

Victorian Minister for Aboriginal Affairs on behalf of the Victorian Government







# EXECUTIVE SUMMARY

## STATE PARTY

Australia

## STATE, PROVINCE OR REGION

Victoria

## NAME OF PROPERTY

Budj Bim Cultural Landscape

## GEOGRAPHICAL COORDINATES TO THE NEAREST SECOND

S 38° 03' 44", E 141° 49' 58", being the centroid of Tae Rak (Lake Condah)

## TEXTUAL DESCRIPTION OF THE BOUNDARIES OF THE NOMINATED PROPERTY

The boundaries of the serial nominated property are those of Budj Bim National Park, Budj Bim Indigenous Protected Area, Tyrendarra Indigenous Protected Area and Lake Condah Mission.

## MAPS OF THE NOMINATED PROPERTY, SHOWING BOUNDARIES

- ES.1 **Budj Bim Cultural Landscape:** Nominated property boundary (Annex C)
- ES.2 **Budj Bim Cultural Landscape:** Budj Bim (northern) component – nominated property boundary
- ES.3 **Budj Bim Cultural Landscape:** Kurtonitj (central) component – nominated property boundary
- ES.4 **Budj Bim Cultural Landscape:** Tyrendarra (southern) component – nominated property boundary

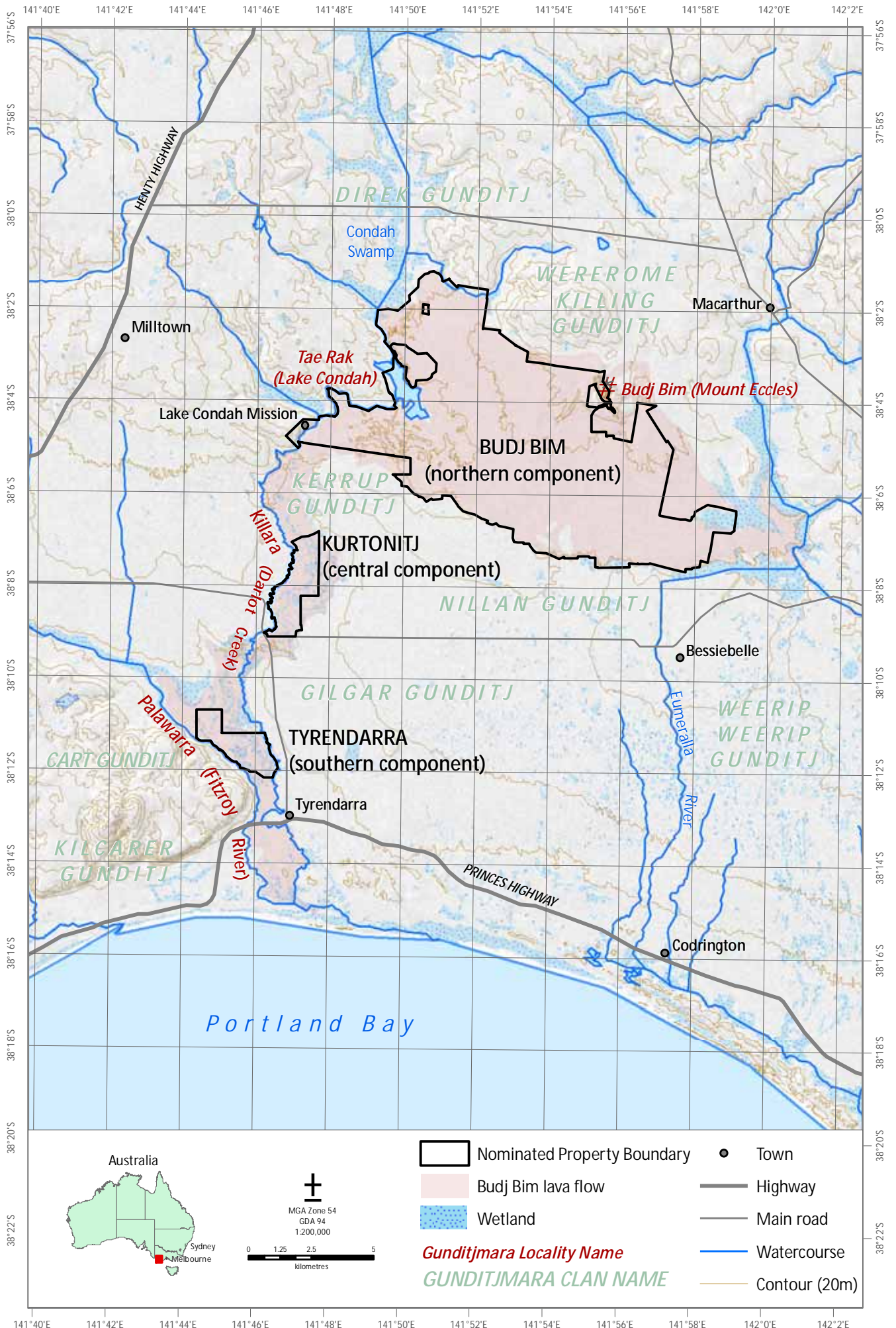
## CRITERIA UNDER WHICH PROPERTY IS NOMINATED

**Criterion (iii).** *Bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared.*

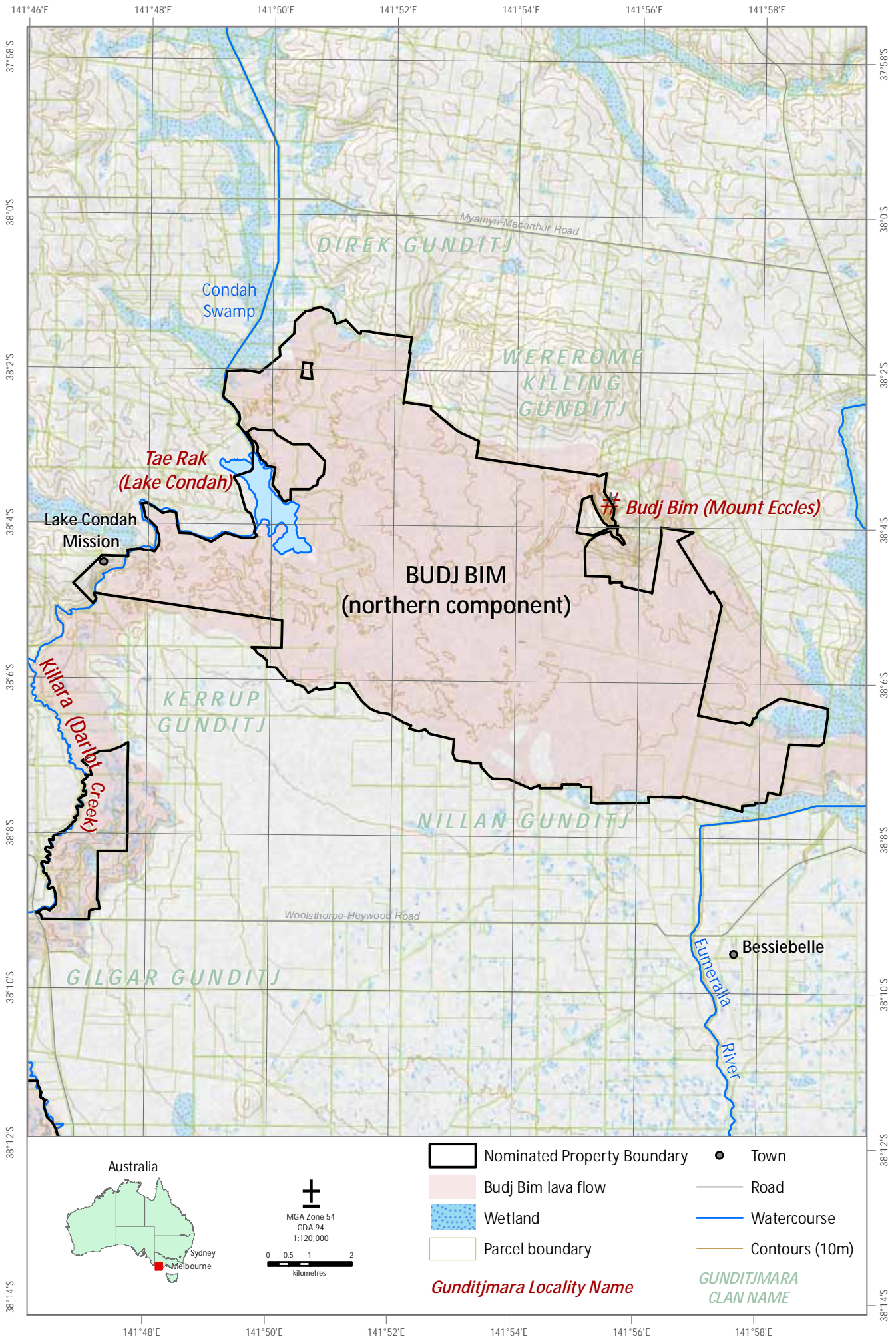
The **Budj Bim Cultural Landscape** bears an exceptional testimony to the cultural traditions, knowledge, practices and ingenuity of the Gunditjmarra.

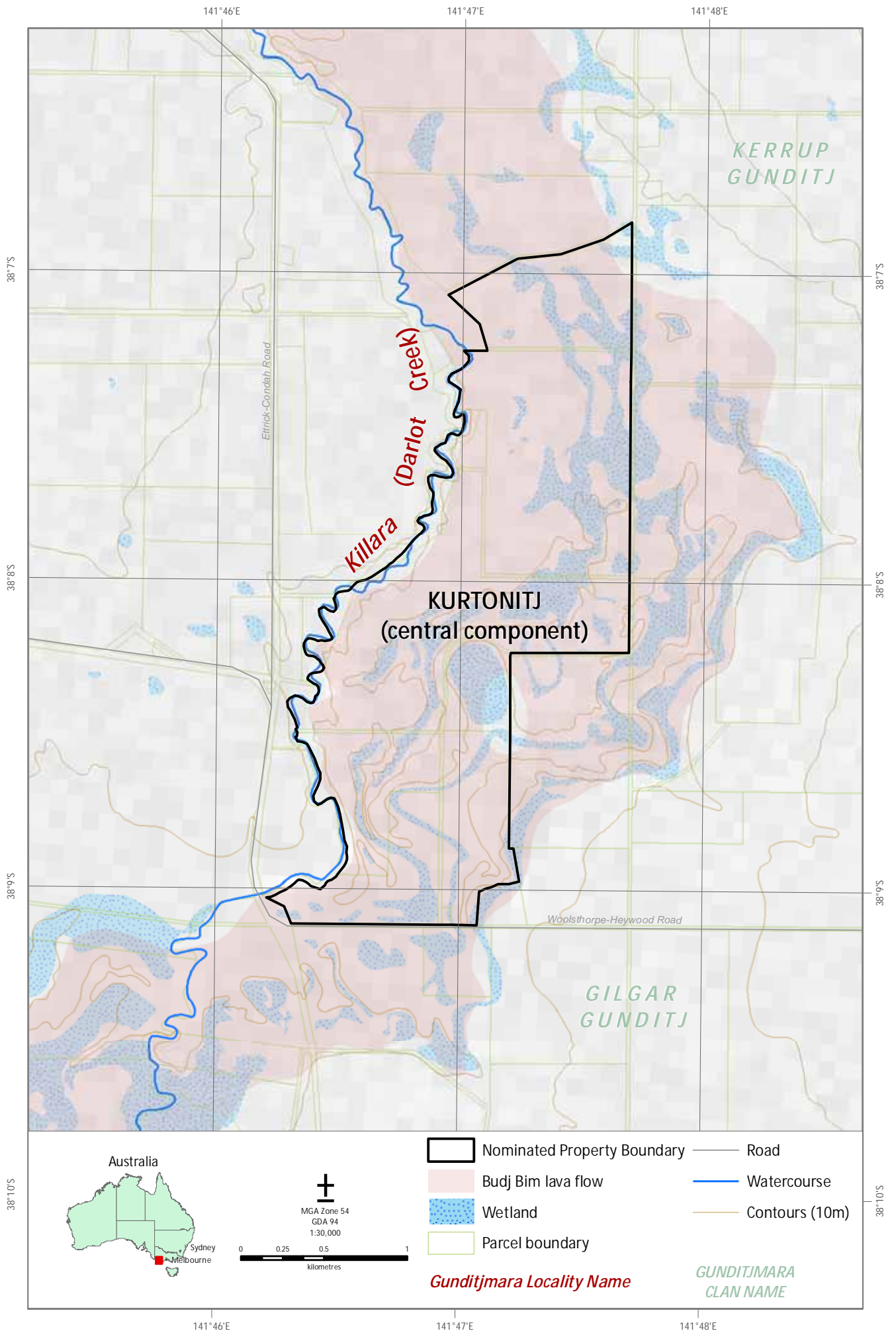
**Criterion (v).** *Be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change.*

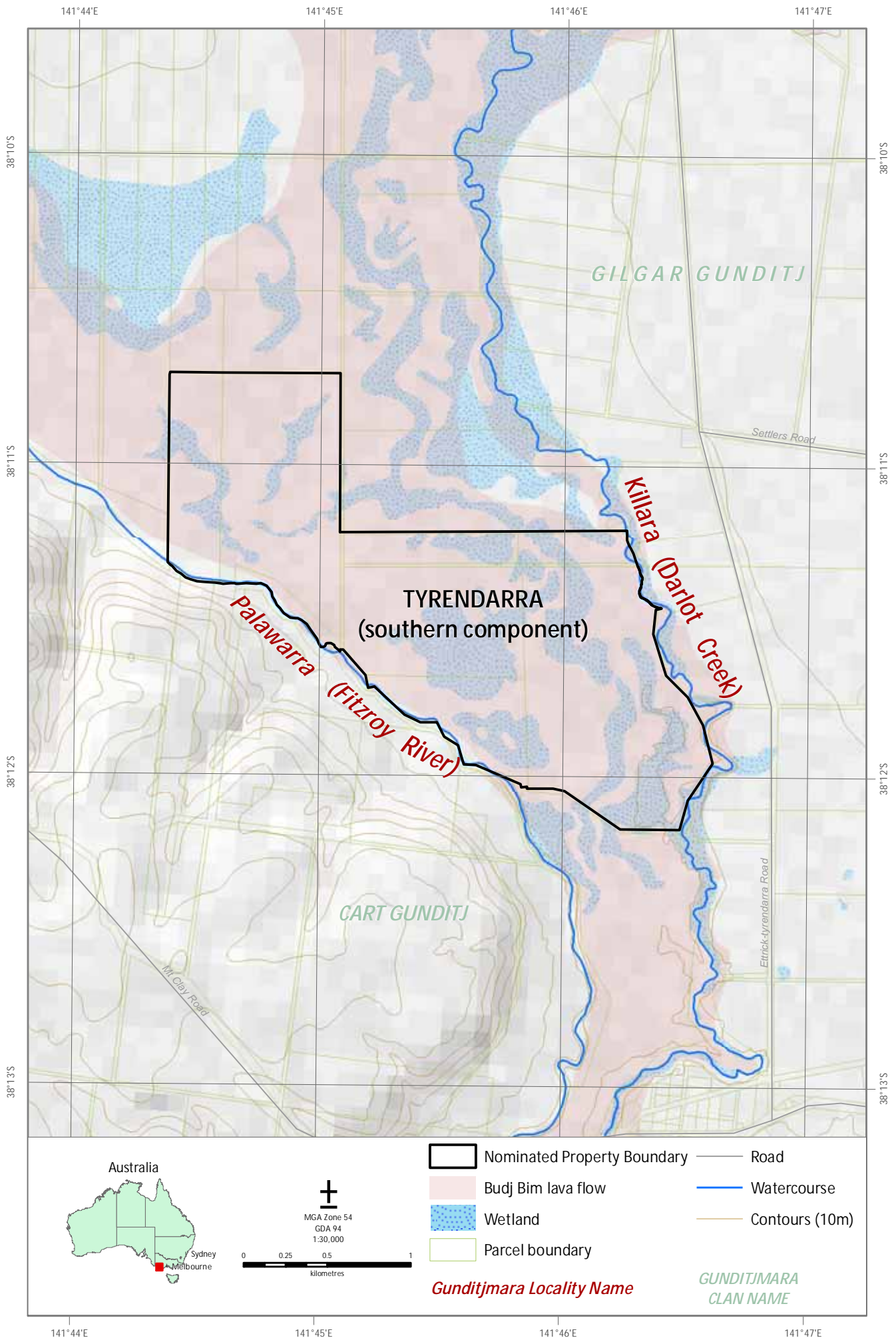
The continuing cultural landscape of the **Budj Bim Cultural Landscape** is an outstanding representative example of human interaction with the environment and testimony to the lives of the Gunditjmarra.



ES.1 Budj Bim Cultural Landscape: Nominated property boundary (See Annex C for 1:30,000 version)







# DRAFT STATEMENT OF OUTSTANDING UNIVERSAL VALUE

## BRIEF SYNTHESIS

The **Budj Bim Cultural Landscape** is located in the traditional Country of the Gunditjmarra Aboriginal people in south-eastern Australia. The three serial components of the property contain one of the world's most extensive and oldest aquaculture systems. Over a period of at least 6,600 years the Gunditjmarra created, manipulated and modified local hydrological regimes and ecological systems. They utilised the abundant local volcanic rock to construct channels, weirs and dams and manage water flows in order to systematically trap, store and harvest kooyang (short-finned eel – *Anguilla australis*) and support enhancement of other food resources. The highly productive aquaculture system provided a six millennia-long economic and social base for Gunditjmarra society. This deep time interrelationship of Gunditjmarra cultural and environmental systems is documented through present-day Gunditjmarra cultural knowledge, practices, material culture, scientific research and historical documents. It is evidenced in the aquaculture system itself and in the inter-related geological, hydrological and ecological systems.

## JUSTIFICATION FOR CRITERIA

**Criterion (iii): *The Budj Bim Cultural Landscape bears an exceptional testimony to the cultural traditions, knowledge, practices and ingenuity of the Gunditjmarra.***

The extensive networks and antiquity of the constructed and modified aquaculture system of the **Budj Bim Cultural Landscape** bears testimony to the Gunditjmarra as engineers and kooyang fishers. For at least the past 6,600 years the Gunditjmarra created and adapted a system of aquaculture based on deliberate manipulation, modification and management of wetlands and waterways. Gunditjmarra knowledge and practices have endured and continue to be passed down through their Elders and are recognisable across the wetlands of the **Budj Bim Cultural Landscape** in the form of ancient and elaborate systems of stone-walled kooyang husbandry (or aquaculture) facilities. Gunditjmarra cultural traditions, including associated storytelling, dance and basket weaving, continue to be maintained by their collective multigenerational knowledge.

**Criterion (v): *The continuing cultural landscape of the Budj Bim Cultural Landscape is an outstanding representative example of human interaction with the environment and testimony to the lives of the Gunditjmarra.***

The **Budj Bim Cultural Landscape** was created by the Gunditjmarra who purposefully harnessed the productive potential of the patchwork of wetlands on the Budj Bim lava flow. They achieved this by creating, modifying and maintaining an extensive hydrological engineering system that manipulated water flow in order to trap, store and harvest kooyang that migrate seasonally through the system. The key

elements of this system are the interconnected clusters of constructed and modified water channels, weirs, dams, ponds and sinkholes in combination with the lava flow, water flow and ecology and life-cycle of kooyang. The **Budj Bim Cultural Landscape** exemplifies the dynamic ecological-cultural relationships evidenced in the Gunditjmarra's deliberate manipulation and management of the environment.

## STATEMENT OF INTEGRITY

The **Budj Bim Cultural Landscape** has a high level of integrity. The serial property incorporates intact and outstanding examples of aquaculture complexes at Tae Rak (Lake Condah), Tyrendarra and Kurtonitj. Each complex includes all the physical elements of the system (that is, channels, weirs, dams and ponds) that demonstrate the operation of Gunditjmarra aquaculture. The property also includes Budj Bim, a Gunditjmarra Ancestral Being and volcano that is the source of the lava flow on which the aquaculture system is constructed. The 9,935-hectare property is sufficient in size to incorporate the cultural features and ecological processes that illustrate the ways multiple systems – social, spiritual, geological, hydrological and ecological – interact and function. The reinstatement of traditional water flows into Tae Rak through the construction of a cultural weir in 2010, following extensive draining of the lake in the 1950s, has returned and enhanced the water flow across the aquaculture system. This restoration, the rugged environment, the use of stone, the relatively intact vegetation and the lack of major development within the **Budj Bim Cultural Landscape** mean that the extensive aquaculture system has survived, is in good condition and can be readily identified in the landscape.

## STATEMENT OF AUTHENTICITY

The **Budj Bim Cultural Landscape** has a high degree of authenticity. Gunditjmarra traditional knowledge is demonstrated by millennia of oral transmission, through continuity of practice and is supported by documented Gunditjmarra cultural traditions and exceptionally well-preserved archaeological, environmental and historical evidence. The authenticity of the **Budj Bim Cultural Landscape** is evident in the continuing connection of the Gunditjmarra to their landscape and their traditional and historical knowledge of the life cycle of kooyang. Authenticity is also evident in the practices associated with the trapping, storage and harvesting of kooyang; including the construction of stone weirs and weaving of fibre baskets. In 2007, the Australian Federal Court recognised the native title rights of the Gunditjmarra for their “strong and unrelenting connection to this area where their ancestors farmed eels for food and trade, at the time of European settlement and back through millennia.”

## REQUIREMENTS FOR PROTECTION AND MANAGEMENT

All of the **Budj Bim Cultural Landscape** is Aboriginal-owned and/or managed and is managed to respect the customary and legal rights and obligations of the Gunditjmara Traditional Owners. The nominated property is protected and managed through an adaptive and participatory management framework of overlapping and integrated customary, governance, legislative and policy approaches.

The Gunditjmara Traditional Owners apply customary knowledge and scientific approaches through two management regimes; a co-operative arrangement with the Victorian Government for Budj Bim National Park; and Indigenous ownership of the Budj Bim and Tyrendarra Indigenous Protected Areas. The **Budj Bim Cultural Landscape** management system is established through the 2015 *Ngootyoong Gunditj, Ngootyoong Mara South West Management Plan*. A team of Budj Bim Rangers, funded through the Australian Government's Indigenous Advancement Strategy program, manage, conserve and protect the heritage values of the nominated property in accordance with property management plans.

The majority of the **Budj Bim Cultural Landscape** is included on Australia's National Heritage List, and is protected by the *Environment Protection and Biodiversity Conservation Act 1999*. Once included on the World Heritage List, the entire property will be recognised as a 'Matter of National Environmental Significance' and protected by the Act. All Gunditjmara cultural heritage on **Budj Bim Cultural Landscape** is protected by Victoria's *Aboriginal Heritage Act 2006*.

There are no major threats to either the aquaculture system or to the maintenance of associated Gunditjmara cultural traditions, knowledge and practices. Nevertheless there are pressures on the nominated property associated with pest plants and animals, water flow and quality, sustaining kooyang populations, unauthorised access of cattle and regrowth of trees within some aquaculture features. The restoration of Tae Rak in 2010 has contributed to maintaining and rejuvenating water flows through the aquaculture system; thereby ensured the ongoing viability of living Gunditjmara cultural traditions and practices.

The 2014 *Budj Bim (Tourism) Master Plan* establishes requirements for sustainable tourism and visitation, as well as educational opportunities, for the **Budj Bim Cultural Landscape**.

## NAME AND CONTACT INFORMATION OF OFFICIAL LOCAL INSTITUTIONAL AGENCY

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Australia

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Web address: [www.environment.gov.au](http://www.environment.gov.au)



# KEY TERMS



**Aboriginal** Descendants of the original inhabitants of Australia.

**aquaculture** The rearing of aquatic animals or the cultivation of aquatic plants for food. For the purpose of this Nomination Dossier, 'Gunditjmara aquaculture' refers to the Gunditjmara system of constructing and utilising channels, weirs, dams, ponds and sinkholes to manage water and water flows and systematically trap, harvest and farm kooyang (eel).

**Budj Bim** Gunditjmara name for Mount Eccles, a volcano located within the Western Victorian Volcanic Plains, Australia. The volcano is inactive.

**Budj Bim lava flow** The lava flow resulting from the eruption of Budj Bim between 30,000 and 39,000 years ago.

**Budj Bim National Park** The National Park, as defined in the *National Parks Act 1975*, that lies within the **Budj Bim Cultural Landscape**. The park was, until December 2017, named Mount Eccles National Park.

**Country** Aboriginal-English word that refers to a knowledge system and concept with a whole-of-landscape meaning. For contemporary Australian Aboriginal people, the concept of '**caring for Country**' is a complex notion related to both personal and group belonging and to maintaining and looking after the ecological and spiritual wellbeing of the land and of oneself.

**Cultural weir** Weir constructed in 2010 to reinstate traditional water flows to Tae Rak.

**eco-cultural landscape** A landscape that is the product of human interaction with, and deliberate manipulation of, the environment (that is, ecology and culture). The phrase is used in this Nomination Dossier in preference to, for example biocultural landscape, since eco-cultural refers to all dimensions of ecosystems, rather than solely biodiversity.

**Elder** An Aboriginal person who has gained recognition as a custodian of knowledge and law, and who has permission to disclose knowledge and beliefs. Aboriginal people typically refer to an Elder as 'Aunty' or 'Uncle', which are used as respectful terms of address.

**Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC)** Prescribed Body Corporate (established 2005) that formally represents the native title holders and manages the native title consent determination of the Gunditjmara. GMTOAC is vested with control of the Budj Bim Indigenous Protected Area and Lake Condah Mission within the **Budj Bim Cultural Landscape** and implements the Cooperative Management Agreement with regard to Budj Bim National Park together with the Victorian Government.

**Gunditjmara 1.** The traditional Country of the Gunditjmara (and corresponding Dhauwurd Wurrung language area) that lies east of the Glenelg River, south of the Wannon River and west of the Hopkins River in Victoria, south-eastern Australia.  
**2.** The Traditional Owners use 'Gunditjmara' in preference to Aboriginal, Indigenous, Gunditjmara people or Gunditjmara community.

**Indigenous** (capital 'I') Term used to refer to Australian Aboriginal and Torres Strait Islander peoples.

**indigenous** (lower case 'i') Collective term used for first nations peoples in all parts of the world.

**Indigenous Protected Area (IPA)** Community-conserved Protected Area in Australia voluntarily dedicated to conservation by Indigenous groups on Indigenous owned and/or managed land. Two IPAs lie wholly within the **Budj Bim Cultural Landscape**: Budj Bim IPA (owned and managed by the GMTOAC) and Tyrendarra IPA (owned and managed by the Winda-Mara Aboriginal Corporation).

**Native title** Recognises the traditional rights and interests to land and waters of Aboriginal and Torres Strait Islander peoples. Under the Australian Government *Native Title Act 1993*, native title claimants can make an application to the Federal Court to have their native title recognised by Australian law. The Gunditjmara native title consent determination for the area incorporating the **Budj Bim Cultural Landscape** was reached by the Federal Court of Australia in 2007.

**Pastoralism** An economic system or way of life based on the raising and herding of livestock. In Australia, pastoralism is primarily concerned with the management of sheep and cattle.

**Registered Aboriginal Party (RAP)** Organisation that holds decision-making responsibilities under the State of Victoria's *Aboriginal Heritage Act 2006* for protecting Aboriginal cultural heritage in a specified geographical area. The GMTOAC is the appointed RAP for an area that includes the **Budj Bim Cultural Landscape**.

**Traditional Knowledge** A living body of knowledge passed on from generation to generation within a community. It often forms part of a people's cultural and spiritual identity. Includes **Indigenous traditional ecological knowledge**.

**Traditional Owner** Indigenous person with particular knowledge about traditions, observances, customs or beliefs associated with an area; and who is a member of a family or clan group that is recognised as having responsibility under Aboriginal tradition for significant Aboriginal places located in – or significant Aboriginal objects originating from, that area. (*Aboriginal Heritage Act 2006*, s.7)

**Visitor Experience Area** Key location identified by Parks Victoria that provides opportunities for visitors to experience the cultural and/or natural landscape. There are seven identified Visitor Experience Areas within the **Budj Bim Cultural Landscape**.

**Welcome to Country** A formal welcome – typically delivered by Australian Traditional Owners, at the beginning of a formal event. A Welcome to Country can take many forms; including singing, dancing, smoking ceremonies and/or a speech in traditional language or English.

**Winda-Mara Aboriginal Corporation** Community organisation that provides services to local Aboriginal communities in south-western Victoria, Australia. Winda-Mara Aboriginal Corporation is vested with ownership and control of the Tyrendarra Indigenous Protected Area.

## GUNDITJMARA WORDS AND PHRASES

**Budj Bim 1.** 'high head' – the head of a Gunditjmara Creation Ancestor **2.** Place name for 'Budj Bim (formerly Mount Eccles) volcano.'

**Bunjil** Spiritual Creator of the Gunditjmara people who gave life to the first people and their Country.

**gnarraban** Woven, elongated basket (or funnel) used to capture eels (kooyang) and control their movement.

**gunditj** Means 'belonging to', and refers to the whole of the environment including nature and culture and material and spiritual components.

**Gunditjmara** 'gunditj' means 'belonging to' and 'mara' is the word for 'people'.

**Gunditj Mirring** Name used to refer to Gunditjmara Traditional Owners. Gunditj means 'belonging to' and Mirring means 'Country'.

**Killara** Place name for Darlot Creek. Literal meaning 'always there' – that is, there is always water in Killara to sustain kooyang and other aquatic resources.

**kooyang** Short-finned eel (*Anguilla australis*).

**kurtonitj** Means 'crossing place'.

**linger / liangle** Stick or wood rod onto which eels are threaded and transported.

**mara** Means 'people'.

**Mirring** The word for Country. 'Mirring' is interchangeable with the word for birthplace.

**Ngootyoong Gunditj, Ngootyoong Mara 1.** Healthy Country, Healthy People. The phrase recognises that the environmental, cultural, economic and social benefits of being on, and caring for, Country leads to healthy people and communities. **2.** Title of the Parks Victoria 2015 South West Management Plan.

**Palawarra** Place name for Fitzroy River.

**puunyaart** Grass (*Carex* spp.) gathered and used to weave gnarraban.

**Tae Rak** Place name for Lake Condah.

**Tappoc** Place name for Mount Napier; an inactive volcano located to the north of Budj Bim volcano.

**Tungatt Mirring** Stone Country, centred on volcanoes and lava flows, including Budj Bim volcano and the Budj Bim lava flow.

**weeok** Means 'place of fish'. Place name for Lake Condah Mission.

**yereoc 1.** Modified or constructed water channel  
**2.** A wood structure built to form a weir (or barrier) across a channel or narrow waterway.



**PART 1**

**IDENTIFICATION  
OF PROPERTY**

# PART 1

## IDENTIFICATION OF THE PROPERTY

### 1.A COUNTRY

The nominated property is located within the country of Australia.

### 1.B STATE, PROVINCE OR REGION

The nominated property is located in the State of Victoria.

### 1.C NAME OF PROPERTY

The name of the property is **Budj Bim Cultural Landscape**.

### 1.D GEOGRAPHICAL COORDINATES

The nominated property is a serial nomination comprising three components.

NAME OF COMPONENT PART	REGION / DISTRICT	COORDINATES OF CENTRAL POINT	AREA	BUFFER ZONE	TOTAL	MAP NO.
			TO NEAREST HECTARE			
Budj Bim (northern) component	Victoria	S 38° 04' 52", E 141° 53' 07"	9,039	0	9,039	Map 1.2
Kurtonitj (central) component	Victoria	S 38° 08' 03", E 141° 47' 04"	482	0	482	Map 1.3
Tyrendarra (southern) component	Victoria	S 38° 11' 24", E 141° 45' 23"	414	0	414	Map 1.4
TOTAL			9,935	0	9,935	

TABLE 1.1 **Budj Bim Cultural Landscape**: Serial components

### 1.E MAPS SHOWING THE BOUNDARIES OF THE PROPERTY

- 1.1 **Budj Bim Cultural Landscape**: Nominated property boundary (Annex C)
- 1.2 **Budj Bim Cultural Landscape**: Budj Bim (northern) component – nominated property boundary
- 1.3 **Budj Bim Cultural Landscape**: Kurtonitj (central) component – nominated property boundary
- 1.4 **Budj Bim Cultural Landscape**: Tyrendarra (southern) component – nominated property boundary
- 1.5 **Budj Bim Cultural Landscape**: Land tenure
- 1.6 **Budj Bim Cultural Landscape**: Location

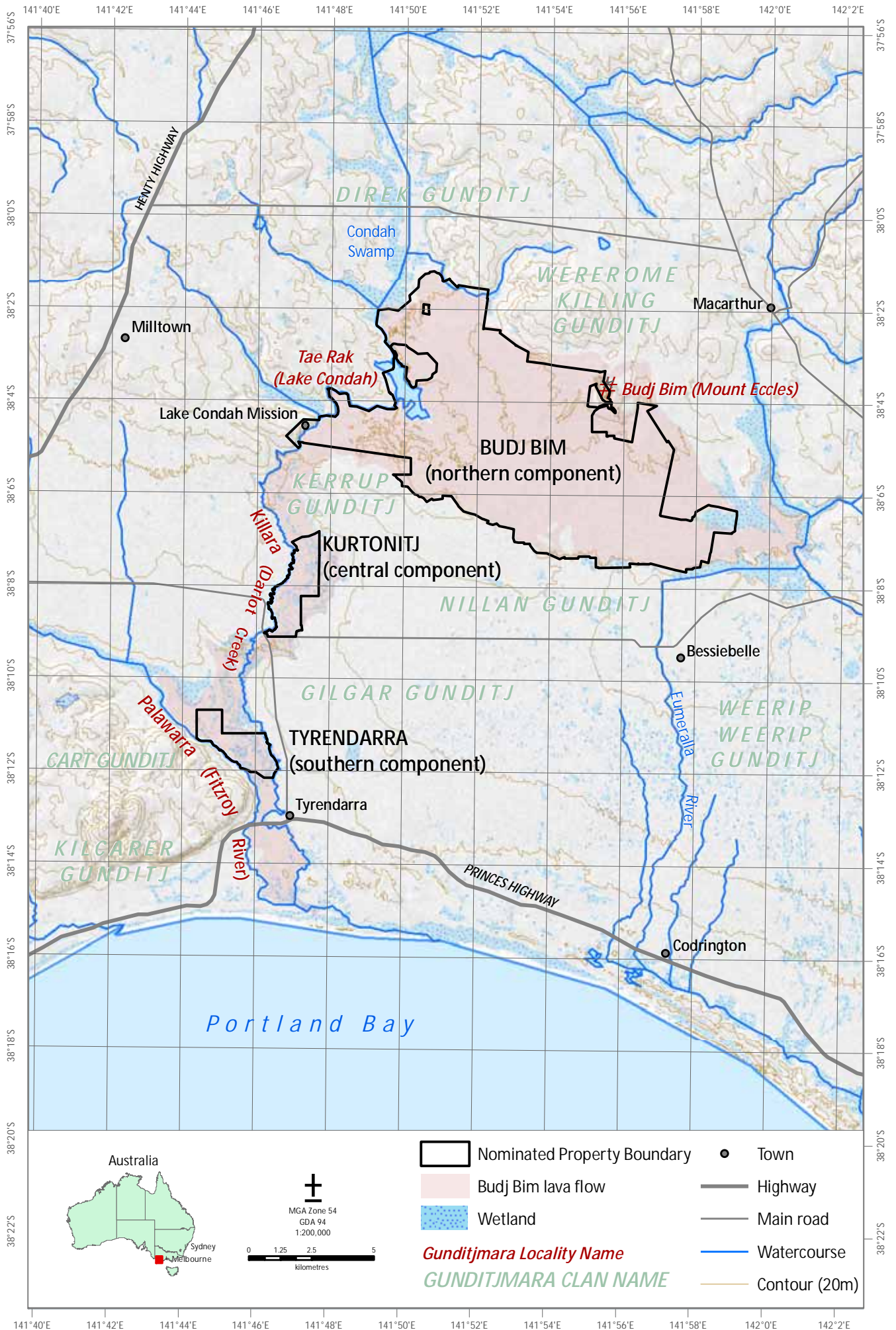
### 1.F AREA OF NOMINATED PROPERTY

Area of nominated property = 9,935 hectares (Table 1.1)

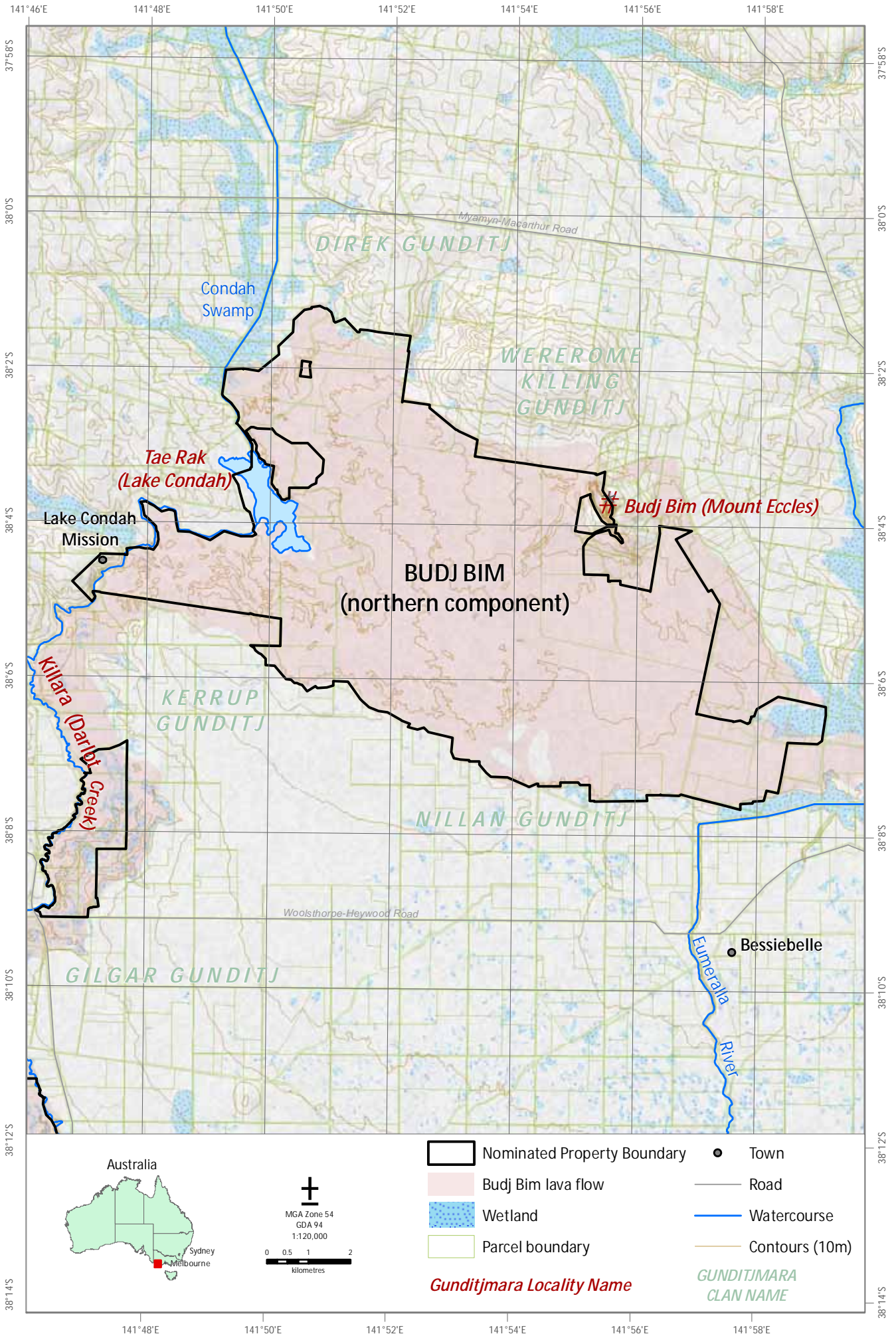
Buffer zone = 0 hectares

Total = 9,935 hectares

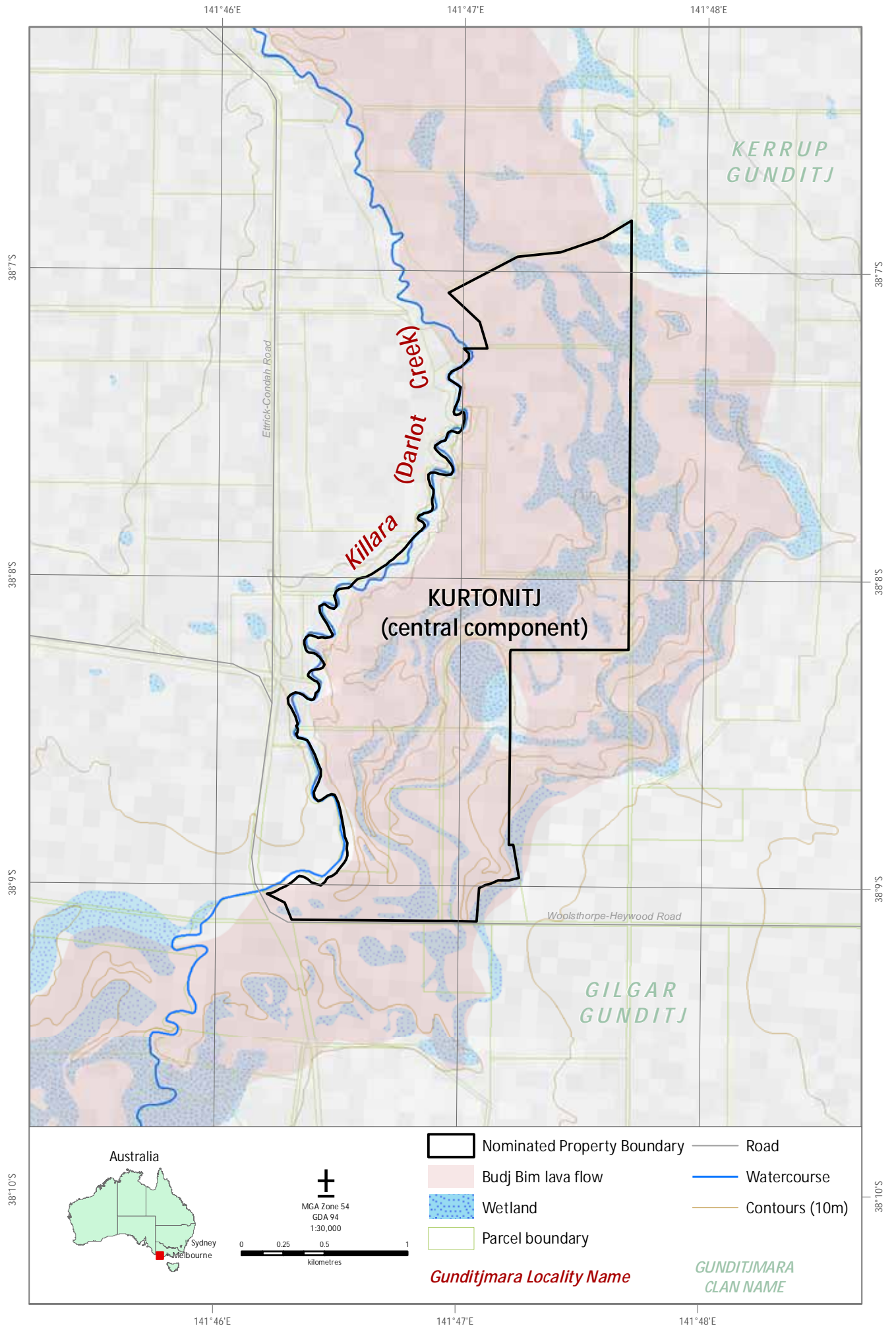
**Buffer Zone.** Once included on the World Heritage List, the entire **Budj Bim Cultural Landscape** will be recognised as a 'Matter of National Environmental Significance' and protected by the Australian Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) from actions occurring within or outside the World Heritage property that have, will have, or are likely to have, a significant impact on the values of the property. For this reason a buffer zone is not required for the proper conservation of the nominated property.



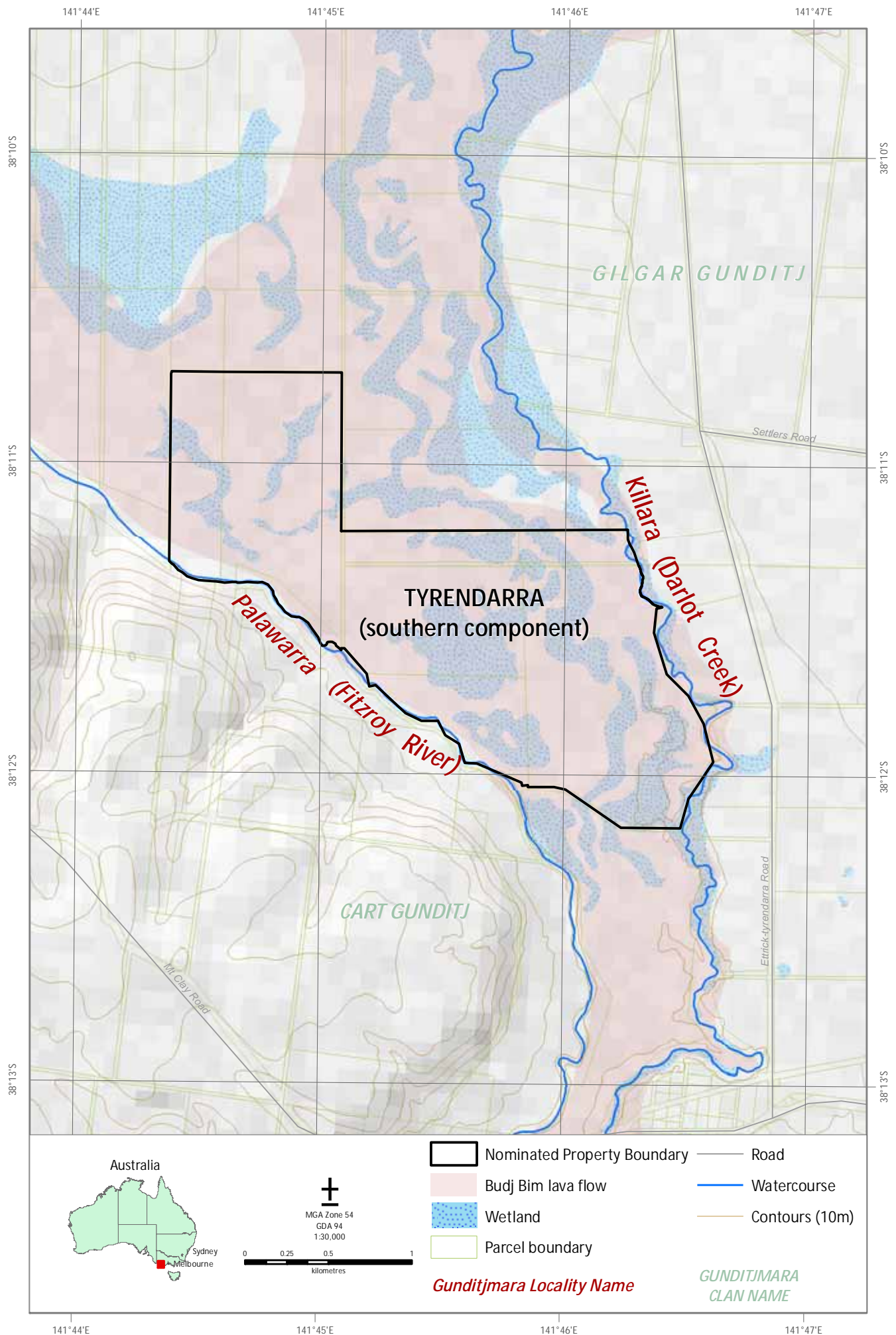
MAP 1.1 Budj Bim Cultural Landscape: Nominated property boundary (See Annex C for 1:30,000 version)



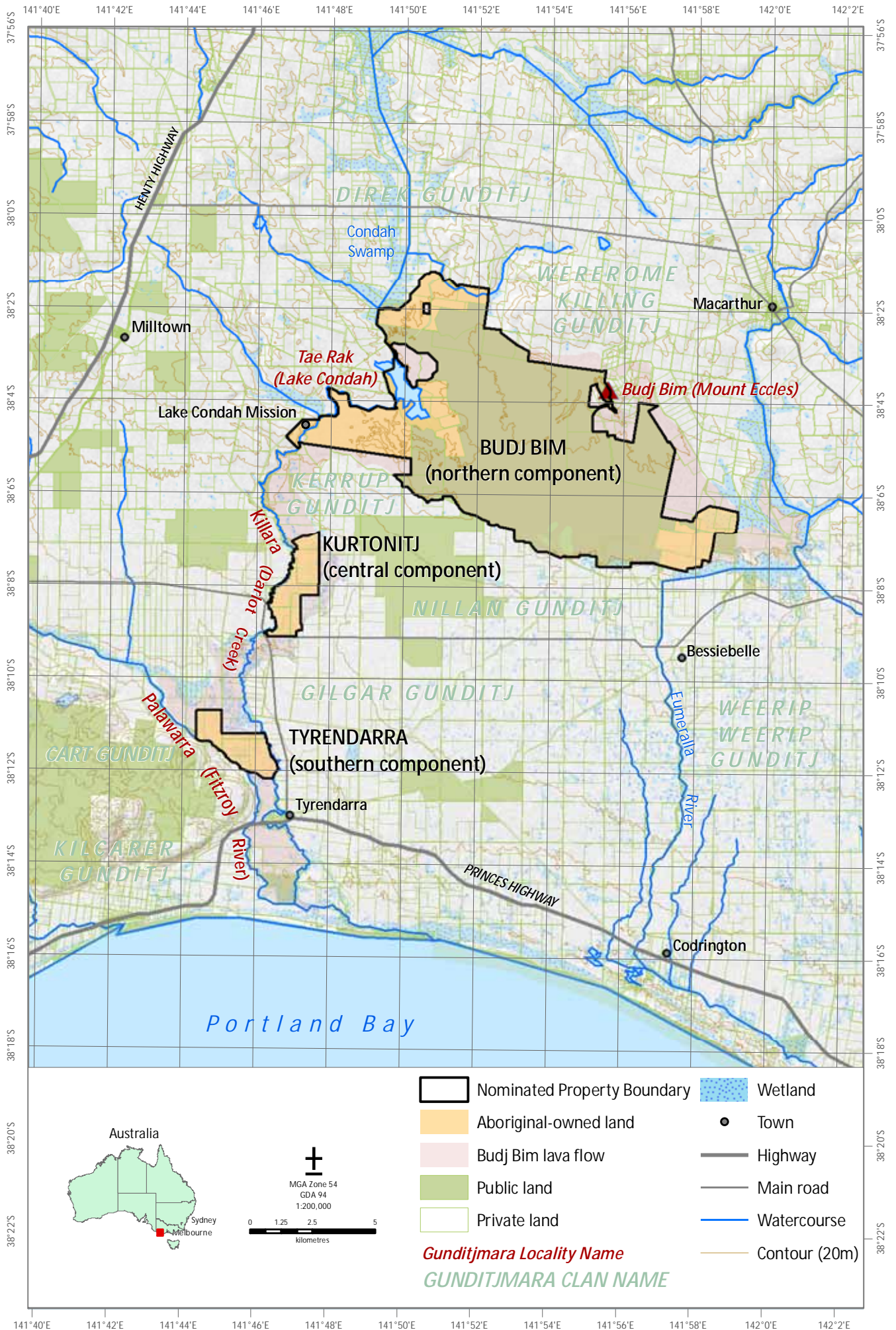
MAP 1.2 Budj Bim Cultural Landscape: Budj Bim (northern) component – nominated property boundary



MAP 1.3 Budj Bim Cultural Landscape: Kurtonitj (central) component – nominated property boundary

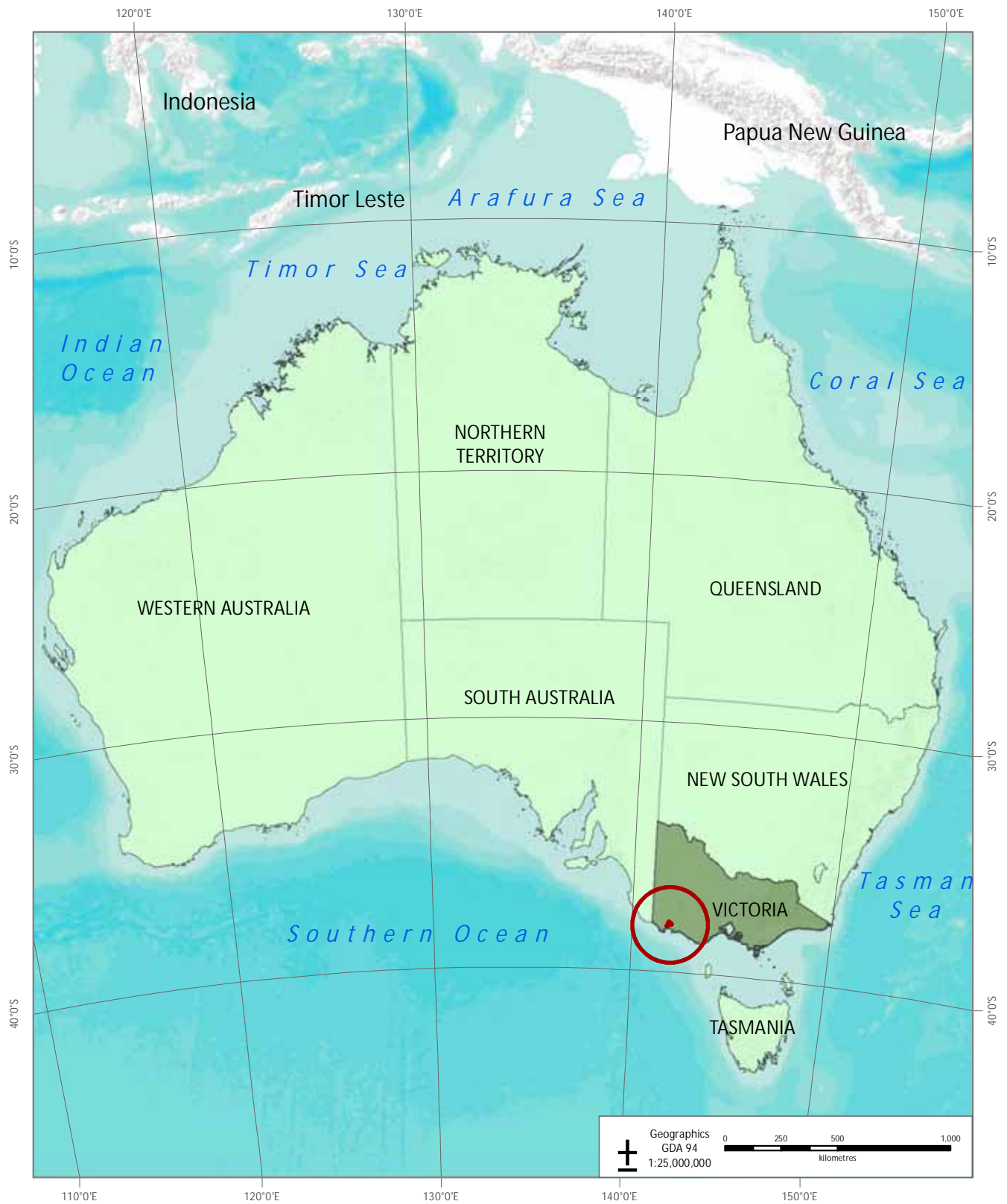






- Nominated Property Boundary
  - Aboriginal-owned land
  - Budj Bim lava flow
  - Public land
  - Private land
  - Wetland
  - Town
  - Highway
  - Main road
  - Watercourse
  - Contour (20m)
- Gunditjmarra Locality Name*  
*GUNDITJMARA CLAN NAME*

MAP 1.5 Budj Bim Cultural Landscape: Land tenure 7



MAP 1.6 Budj Bim Cultural Landscape: Location



**PART 2A**

**DESCRIPTION OF  
PROPERTY**

## PART 2.A

# DESCRIPTION OF PROPERTY

During the time of creation, Gunditjmara Country was inhabited by beings that were sometimes human, sometimes animal, sometimes neither, and these beings brought the Country into life. Their movements are written across Gunditjmara Country and give meaning to the contemporary landscape. From at least 6,600 years ago, the Gunditjmara created an extensive and complex aquaculture network where modified channels diverted water and kooyang (short-finned eel) into holding ponds. Here kooyang grew fat and were harvested with woven baskets set in weirs built from volcanic rocks and wood lattice structures.

The **Budj Bim Cultural Landscape**, located within Gunditjmara Country in south-eastern Australia, is a serial property comprised of three components; Budj Bim (northern) component, Kurtonitj (central) component and Tyrendarra (southern) component (Map 1.1). Each component contains extensive evidence of the Gunditjmara's aquaculture system. The Gunditjmara have customary rights and obligations to their traditional Country and a continuing and evolving relationship with the **Budj Bim Cultural Landscape**.

The **Budj Bim Cultural Landscape** incorporates significant components of an area that the Gunditjmara call Tungatt Mirring (Stone Country); an area centred on dramatic volcanoes and lava flows. The area encompasses Budj Bim volcano, the Budj Bim lava flow, extensive wetlands and lakes, including Tae Rak (Lake Condah), and Killara (Darlot Creek). Tungatt Mirring today is marked by rugged stony landscapes cloaked with Manna Gum woodland; interspersed with species-rich, wetland environments.

Budj Bim volcano is the source of the Budj Bim lava flow. More than 30,000 years ago, lava spewed across a distance of over 50 kilometres west and south towards the sea, dramatically altering the local waterways and wetlands. The lava flow provided the environments necessary for the Gunditjmara to develop an extensive and complex aquaculture network. The quantities of food produced allowed for and supported semi-permanent settlements. The success of the aquaculture system was such that excess kooyang (short-finned eel) supported large-scale ceremonial events and trade with neighbouring groups (Part 2.B).

This section describes the Gunditjmara with regard to their rights and obligations to their traditional Country and their continuing and evolving relationship with the **Budj Bim Cultural Landscape**. It also describes the broader geography of the nominated property as well as its cultural and environmental attributes. Detailed descriptions are provided of the serial components of the **Budj Bim Cultural Landscape** with regard to their topography, geology, hydrology and ecology; as well as the Gunditjmara cultural heritage elements within them – including those features that comprise the aquaculture system.

### LOCATION

The **Budj Bim Cultural Landscape** is located within Australia (Map 1.6). It is situated in the south-eastern part of mainland Australia and within the State of Victoria (Victoria), one of seven states, together with federated territories, which comprise the Commonwealth of Australia.

Victoria covers an area of 227,416 square kilometres and has a population of over six million people.<sup>1</sup> The State's capital, Melbourne, contains approximately 70 percent of the State's population. Victoria shares a political border with New South Wales to the north and with South Australia to the west (Map 1.6). Victoria is topographically, geologically and climatically diverse; with areas ranging from the wet, temperate climate region in the south-east, to the snow-covered Victorian alpine areas (which rise to almost 2,000 metres) in the north, and extensive semi-arid plains to the west and north-west. Outside the manufacturing and service centre of Melbourne, agriculture dominates the Victorian economy, particularly in those areas of rich soils, a Mediterranean climate and reliable winter rainfall.<sup>2</sup>

1 Australian Bureau of Statistics. 'Australian Demographic Statistics, Dec 2016', <http://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/3101.0>

2 Victoria. 'Geography', <http://www.victoria.org.au/Geography.htm>



MAP 2.1 Budj Bim Cultural Landscape: Location within Gunditjmarra Country, south-western Victoria

The **Budj Bim Cultural Landscape** is situated in the south-western part of Victoria, 300 kilometres west of Melbourne. It lies approximately 50 kilometres north-east of the coastal city of Portland (10,700 residents) and 15 kilometres east and south-east of the township of Heywood (1,800 residents). The nearest towns to the nominated property are small in size and include Tyrendarra (266 residents), Macarthur (238 residents) and Bessiebelle (176 residents).

The **Budj Bim Cultural Landscape** is situated within the local government areas of Glenelg and Moyne. The Glenelg Shire Council covers an area of 6,212 square kilometres and has a population of 19,575. Its administrative centre is Portland.<sup>3</sup> The Moyne Shire Council extends over an area of 5,478 square kilometres and has a population of 15,958. Its administrative centre is Port Fairy.<sup>4</sup>

## GUNDITJMARA COUNTRY

The **Budj Bim Cultural Landscape** lies within the traditional Country of the Gunditjmarra, an Australian Aboriginal nation. The Gunditjmarra are one of more than 500 Indigenous nations, each with distinctive languages, cultures and beliefs; whose Country collectively covers the whole of the Australian continent.<sup>5</sup> Today there are many thousands of Gunditjmarra who live mainly on their traditional Country; but also in Melbourne and various regional centres in Victoria and South Australia.

Gunditjmarra Country covers an estimated area of 7,000 square kilometres and occupies the south-western corner of Victoria. It extends over an area east of the Glenelg River, west of the Hopkins River and south of the Wannon River – approximately 150 kilometres from east to west and up to 100 kilometres inland from the coast. In addition to these major rivers, Gunditjmarra Country includes volcanic plains, a dramatic coastline and adjacent seas, limestone caves, a range of forest types and extensive wetland environments.



2.1 Extent of Gunditjmarra Country showing the location of Budj Bim volcano <sup>6</sup>

<sup>3</sup> Glenelg Shire. 'About the Shire', [https://www.glenelg.vic.gov.au/About\\_the\\_Shire](https://www.glenelg.vic.gov.au/About_the_Shire)

<sup>4</sup> Moyne Shire. 'About Moyne Shire Council', <http://www.moyne.vic.gov.au/Your-Council/About-Moyne-Shire-Council>

<sup>5</sup> Australian Government. 'Our People', <http://www.australia.gov.au/about-australia/our-country/our-people>

<sup>6</sup> Clark 1990b, redrawn by The Designery.



Gunditjmara Elders describe Country in a way that conveys their deep sense of connectedness through cultural traditions, spirit and feeling, relationships, stories and landscape.

For Gunditjmara people, 'Country' includes all living things – none better than the other but equal in their importance in forming this diverse landscape that is Gunditjmara Country. Country means people, plants and animals alike. It embraces the seasons, stories and spirits of the creation. This flowing, connected cultural landscape possesses its own sacred places, languages, ceremonies, totems, art, clan groupings and law.

Our spirit is in this Country ... across the wetlands to Budj Bim and Tungatt Mirring. Our Country is a place of belonging and pride that comes with this belonging. We are proud to share many aspects of our land, art and culture with visitors/guests. It is a part of us and who we are, and we ask that you care for it when you visit.

It is our responsibility to look after Country, our children will continue to look after Country, because that's the way it is and will be.<sup>7</sup>

Throughout Gunditjmara Country there are many places that embody their history – places that evidence the creation and shaping of the landscape, their traditions of care and management, their determination to retain their rights to land following the arrival of European colonisers and the sad and joyful stories of Mission life and afterwards. All of these places express tangible and intangible connections to land, culture, family and community for the Gunditjmara.

There is a strong link between healthy Country and healthy people for the Gunditjmara. Through their legal ownership of parts of traditional Country and cooperative management agreements with the Victorian Government, the Gunditjmara are able to care for Country, be and work on Country and pass on cultural traditions, knowledge and practices concerning Country. Looking after Country involves caring for all aspects of Country – all living things, water, land and oneself.

## NATIVE TITLE AND GUNDITJMARA LAND OWNERSHIP

Native title is recognition under Australian law of Indigenous peoples' rights and interests to ancestral lands and waters based on laws and customs that have endured since colonisation. For native title to be determined, the onus of proof is on the Indigenous descendants to provide evidence that their traditional laws and customs endure.

The Gunditjmara achieved native title for an area which includes the **Budj Bim Cultural Landscape** in 2007. The Australian Government recognised the Gunditjmara's native title rights and interests over almost 133,000 hectares of vacant Crown land, National Parks, Reserves, rivers, creeks and sea, bounded on the west by the Glenelg River and to the north by the Wannon River. The area includes Budj Bim (formerly Mount Eccles) National Park. Following the recognition of native title, the Victorian Government and the Gunditjmara agreed to co-operative management of Budj Bim National Park (Part 3.1.E) and the transfer of the freehold title of Lake Condah Reserve to the Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC).<sup>8</sup>

Gunditjmara native title rights and interests are non-exclusive and sit alongside the broader community's right to enjoy these places.<sup>9</sup> The recognised Gunditjmara native title rights and interests include the right to:

- have access to or enter and remain on the land and waters
- camp on the land and waters landward of the high water mark of the sea
- use and enjoy the land and waters
- protect places and areas of importance on the land and waters
- take resources of the land and water.

7 Cited in Context 2012a:19

8 Parks Victoria 2015:6

9 GMTOAC 2015:6-7



2.2 Woorrowarook Mirring or Forest Country



2.3 Bocara Woorrowarook Mirring or River Forest Country



2.4 Koonang Mirring or Sea Country



2.5 Tungatt Mirring or Stone Country

## GUNDITJMARA CLASSIFICATION OF COUNTRY

The **Budj Bim Cultural Landscape** is a serial property located within Gunditjmara Country. There are four different types of landscape in Gunditjmara Country; the nominated property is situated wholly within one of these – Tungatt Mirring or Stone Country. Each of the four landscape types recognised by the Gunditjmara are briefly described below as they necessarily situate the **Budj Bim Cultural Landscape** in its broader cultural-environmental context.

**Woorrowarook Mirring**, or Forest Country, covers the forested plateaus in the north and inland areas of Gunditjmara Country. The swamps and forests that are characteristic of this landscape are rich in resources, but were also the areas where Gunditjmara were killed or displaced in the 19<sup>th</sup> century as colonists seized the best-watered and most productive farming lands of the region.

**Bocara Woorrowarook Mirring**, or River Forest Country, is centred on the lower Bocara (Glenelg River) and its tributaries, and on the bordering creeks and swamps, heaths and forests. The river, long a gathering and camping place, continues to be an important fishing ground for the Gunditjmara.

Defined by the meeting of fresh and salt water, **Koonang Mirring** or Sea Country, was a place of first contact between the Gunditjmara and colonists. It is an area of abundant fish, shellfish and birds. It has a history of conflict and violence between Gunditjmara and colonial settlers. Koonang Mirring is where kooyang (short-finned eels) come from to travel along inland waterways and wetlands and to where they return for breeding. Koonang Mirring includes the submerged lands that bear the footprints of Gunditjmara ancestors. It is a place where the spirits of Gunditjmara ancestors cross the sea to Deen Maar (Lady Julia Percy Island).

**Tungatt Mirring**, or Stone Country, is centred on dramatic volcanoes and lava flows. It stretches from Tappoc (Mount Napier) in the north to encompass Budj Bim volcano and the Budj Bim lava flow, and the extensive lakes and wetlands created as a result of volcanic eruptions, including Tae Rak (Lake Condah). Tungatt Mirring is characterised by rugged stony outcrops cloaked by Manna Gum woodland and cut through by waterways and interspersed with wetlands and swamps. Tungatt Mirring is central to the story of Gunditjmara aquaculture. The outstanding attributes of, and values expressed by, the **Budj Bim Cultural Landscape** are to be found within Tungatt Mirring.



## GUNDITJMARA AQUACULTURE SYSTEM

The **Budj Bim Cultural Landscape** contains extensive physical evidence of deliberate manipulation, modification and management of water flow and ecosystems by the Gunditjmarra in order to increase their available food resources. Manipulation of resources is evident in kooyang (eel) trapping, containment and live storage. This resource manipulation, which began at least 6,600 years ago, involved large-scale modification of local hydrological regimes to capture kooyang and artificially-constructed holding ponds to enhance kooyang containment and availability.<sup>10</sup> Anthropologist Ian Keen notes that “the complex system of eel canals in western Victoria”, within which the nominated property is situated, is “perhaps the most elaborate example of environmental control recorded” for Aboriginal Australia.<sup>11</sup>

### KOORYANG AQUACULTURE

Since the 1970s, the Gunditjmarra have worked with archaeologists to record and map numerous kooyang trapping and associated aquaculture facilities across the **Budj Bim Cultural Landscape**.<sup>12</sup> This work has revealed facilities comprising complex and intricate combinations of structures, such as excavated channels (cut through sediment and basalt lava) and constructed stone walls made from basalt lava. These features have been established at strategic points in the landscape to manipulate local waterways and flood regimes and thus to enable the capture and live storage of kooyang. Large-scale, multi-dimensional (that is, made to work at multiple water elevations or levels) and multi-component (comprising various configurations of structures such as channels, weirs and dams) facilities are referred to as trapping ‘complexes’. Collectively the complexes comprise the Gunditjmarra aquaculture system.

A range of terms have been used to describe the different structures that comprise the aquaculture complexes of the **Budj Bim Cultural Landscape**. This range of terms can be simplified to three basic structures – channels, weirs and dams (Table 2.1). Archaeologists and other researchers use these terms interchangeably to describe the various structures rather than their function. It is probable that the Gunditjmarra altered the functions of different structures, depending on situational needs.<sup>13</sup>

TABLE 2.1 **Budj Bim Cultural Landscape: Structural components of the Gunditjmarra aquaculture complexes**

STRUCTURE	DESCRIPTION
Channels (yereoc)	Type 1. Channels excavated through lava bedrock (by removal of basalt blocks) which may also be lined with a parallel row of low stone walls. Type 2. Channels (natural channels and drainage lines as well as channels excavated through sediment) lined with a parallel row of low stone walls. Artificially modified channels (types 1 and 2) are usually one metre wide and are up to 200 metres long and strategically direct water and kooyang between locations. <sup>14</sup> These channels are also referred to in the archaeological literature as ‘stone-lined channels’ and ‘modified channels’, <sup>15</sup> and ‘canals’ and ‘stone races’. <sup>16</sup>
Weirs	Low walls (less than one metre high) of basalt blocks constructed across natural waterways and drainage lines, and across artificially constructed channels; with gaps or apertures to accommodate insertion of gnarraban (woven kooyang baskets). <sup>17</sup> Some weir walls also incorporate natural outcrops of basalt lava. <sup>18</sup> Weirs are also referred to as ‘traps’. <sup>19</sup>
Dams	Low walls (less than one metre high) of basalt blocks constructed across low points of the lava flow and extending between high points to hold back flood waters. Most dam walls are less than 10 metres long. Many dams are associated with the creation of ponds for holding kooyang. <sup>20</sup> Dams are also referred to as ‘stone walls’, <sup>21</sup> ‘stone alignments’, <sup>22</sup> ‘barrages’, <sup>23</sup> ‘barricades’, <sup>24</sup> ‘barriers’ <sup>25</sup> and ‘low winged walls’. <sup>26</sup>

10 McNiven et al. 2015

11 Keen 2004:95

12 The Victorian Aboriginal Heritage Register lists over 100 features related to the Gunditjmarra aquaculture system that are located within the nominated property.

13 For example, archaeologist Heather Builth (2002:236) states that “the terms, weir, barrage and dam, are to a certain extent, interchangeable”.

14 Builth 2002, 2004, 2006; Clarke 1991:17

15 Clarke 1991:17

16 Coutts et al. 1978:12

17 Coutts et al. 1978; Builth 2002, 2004, 2006

18 Clarke 1991:16

19 Coutts et al. 1978:12; Clarke 1991:16

20 Builth 2002, 2004, 2006

21 Coutts et al. 1978:12

22 Clarke 1991:17

23 Builth 2004

24 Johns cited in Worsnop 1897; Richards 2011

25 Builth 2002; Richards 2011, 2013

26 Alexander Ingram, cited in Richards 2011:68, 74



2.6 Tae Rak (Lake Condah): Muldoons Trap Complex with archaeological excavation trench across a channel (arrowed). Although the upper sections of the channel are lined with basalt block walls, the lower (buried) sections of the channel have been excavated through lava bedrock. Radiocarbon dating of charcoal fragments within flood sediments burying the lower tiers of the stone walls reveal construction dates of 600-800 years ago. Radiocarbon dating of charcoal fragments within flood sediments that filled the lower sections of the buried bedrock channel reveal construction dates of at least 6,600 years ago.



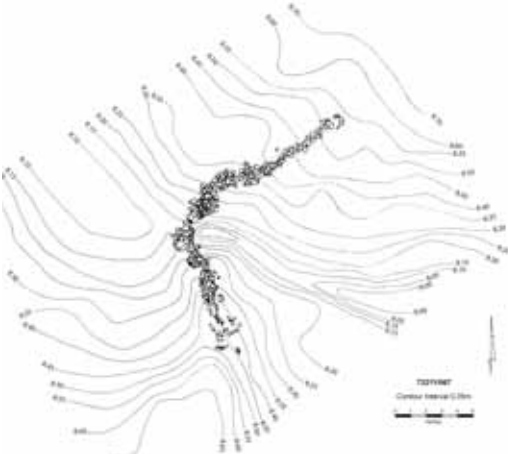
2.7 Tae Rak (Lake Condah): Large 180 metre long stone walled channel



2.8 Tae Rak (Lake Condah): Kooyang weir with characteristic gap to accommodate a woven basket trap



2.9 Tae Rak (Lake Condah): Kooyang weir with characteristic gap to accommodate a woven basket trap



2.10 Tae Rak (Lake Condah): Stone walled fishing weir



2.11 Tae Rak (Lake Condah): Muldoons Trap Complex with archaeological excavation of a dam. The dam held back flood waters to create a pond for holding kooyang (on left side of dam). The lower half (circa 30 centimetres) of the dam wall is buried by flood sediments that began accumulating around 500 years ago.

## KOOYANG GROWING PONDS AND LIVE STORAGE

Each of the most extensive kooyang trapping complexes – located at Tae Rak, Kurtonitj, and Tyrendarra – feature constructed channels, weirs and dams used to contain flood waters and create holding and growing ponds for kooyang. The key function of these ponds was the live storage of kooyang and to keep them within a confined area for consumption through the different seasons.<sup>27</sup>

## KOOYANG HARVESTING AND PROCESSING

Based on Gunditjmara knowledge - and supported by information documented in 19th century ethnographic observations from south-west Victoria, the Gunditjmara used gnarraban (woven baskets) set within weirs to capture kooyang across the **Budj Bim Cultural Landscape**.<sup>28</sup> Kooyang in artificially-constructed holding ponds were able to be speared during different seasons.<sup>29</sup> Additionally, it is “possible that the weirs are also positioned to double-up as traps during the mature eel migration runs by incorporating the *arrabines* [gnarraban] or woven traps into their structure”.<sup>30</sup> Although smoking and preservation of kooyang for trade has been hypothesised,<sup>31</sup> ethnographic and archaeological evidence for such activities is ambiguous.<sup>32</sup>

## BUDJ BIM CULTURAL LANDSCAPE: SERIAL COMPONENTS AND AQUACULTURE COMPLEXES

The **Budj Bim Cultural Landscape** is a serial property comprised of three components (Table 1.1). Each component is described here and includes details of the aquaculture facilities that occurs within the separate components. Each component contains one or more large and well-preserved Gunditjmara aquaculture complex (Table 2.2), although they vary in scale and form in response to specific local topographies, water flows and environmental conditions. Additionally, the nominated property is comprised wholly of land owned or co-operatively managed by Gunditjmara Traditional Owners and Winda-Mara Aboriginal Corporation. Land tenure, the environment and the ecological-cultural attributes of each of the three components of the **Budj Bim Cultural Landscape** are described below.

NAME OF COMPLEX	LOCATION	SIZE (APPROXIMATE)	NO. OF CHANNELS	NO. OF WEIRS/ DAMS	REFERENCE
Tae Rak 1	Budj Bim (northern) component. South-western margins of Tae Rak (Lake Condah)	420 m x 150 m	4	11	Coutts et al. 1978:Figures 7, 8, 17, 19; Victorian Aboriginal Heritage Register
Tae Rak 2		500 m x 150 m	7	14	Coutts et al. 1978:Figures 14, 15, 18, 19; Victorian Aboriginal Heritage Register
Tae Rak 3		500 m x 250 m	12	13	Coutts et al. 1978:Figures 9, 10, 11, 19; Victorian Aboriginal Heritage Register
Tae Rak 4		350 m x 250 m	8	18	Victorian Aboriginal Heritage Register
Tae Rak 5		250 m x 50 m	0	4	Victorian Aboriginal Heritage Register
Muldoons Trap Complex		160 m x 70 m	21	16	Richards 2013:Figures 3.8, 3.9, 3.11, 3.13-3.27; McNiven et al. 2015:Figure 2
Kurtonitj	Kurtonitj (central) component	300 m x 150 m	3	3	Builth 2002:Figure 5.29; Victorian Aboriginal Heritage Register
Tyrendarra	Tyrendarra (southern) component	1,400 m x 300 m	7	18	Builth 2002:Figure 5.15, 5.16; Victorian Aboriginal Heritage Register

**TABLE 2.2 Budj Bim Cultural Landscape: Number of structures associated with each Gunditjmara aquaculture complex. The numbers given are minimum numbers; as separating some elements (particularly channels and dams from weirs) can be subjective.**

27 Builth 2002:268, 307; Lane 2008:89; Richards 2013:195  
 28 Robinson 1841 cited in McNiven and Bell 2010; Dawson 1881:44, 75, 94-95  
 29 Builth 2002:253  
 30 Builth 2002:253  
 31 Builth 2004, 2014  
 32 Keen 2006:27; Lane 2008:89; Richards 2013:211

## BUDJ BIM (NORTHERN) COMPONENT

The largest and northern-most component of the **Budj Bim Cultural Landscape** comprises Budj Bim (formerly Mount Eccles) National Park, Lake Condah Mission and parts of the Budj Bim Indigenous Protected Area. The Gunditjmara wholly own the latter two areas (freehold title) and co-manage Budj Bim National Park with the Victorian Government.

The Budj Bim (northern) component lies within Tungatt Mirring (Stone Country) and incorporates the Budj Bim volcano, including Lake Surprise, and a large and extensive part of the Budj Bim lava flow. Dry Forest and Woodlands Natural Ecosystem (Manna Gum forest and heathland) is predominant across the basaltic lava surface, though there are significant areas of Inland Waters and Wetlands Natural Ecosystem across the Budj Bim Indigenous Protected Area.

There are six Gunditjmara aquaculture complexes located on the south-west margins of Tae Rak (Lake Condah). Four were documented by archaeologists and Gunditjmara in the 1970s (Tae Rak 1-4), one in the 1990s (Tae Rak 5) and one in the early 2000s (Muldoons Trap Complex). Collectively, these systems comprise numerous kooyang (eel) aquaculture structures (channels, dams and weirs) (Map 2.2; Table 2.2).

In the 1970s, archaeologist Dr Peter Coutts, Director of the Victoria Archaeological Survey, led research that documented and mapped four kooyang trapping complexes on the south-west margin of Tae Rak.<sup>33</sup> The differing orientations of V-shaped weirs indicates they were used during the rising and falling of waters: “The fish could be caught both as the lake rose and as it fell”.<sup>34</sup> Coutts and archaeologist Dan Witter added that the Tae Rak kooyang facilities indicate that the Gunditjmara “had a very refined knowledge of hydrodynamics, and were able to make use of flood levels to optimise their fishing strategies”.<sup>35</sup> The scale of these constructed fishing facilities is indicated by the fact that “many hundreds of tonnes of basalt boulders have been shifted at Lake Condah to build the intricate network of dams and weirs found there”.<sup>36</sup> In the 1990s, further archaeological site survey and innovative Geographic Information Systems modelling of water levels revealed an additional trapping complex on the south-west shores of Tae Rak.<sup>37</sup>



- |                             |                    |
|-----------------------------|--------------------|
| >>> Direction of water flow | ☉ Sink hole        |
| ≡≡≡ Channel                 | ● Raised lava flow |
| ≡≡ Dam/weir                 | ☼ Pond             |

2.12 Tae Rak 2 aquaculture complex: Sketch plan showing water flow and aquaculture features<sup>38</sup>

33 Coutts et al. 1978

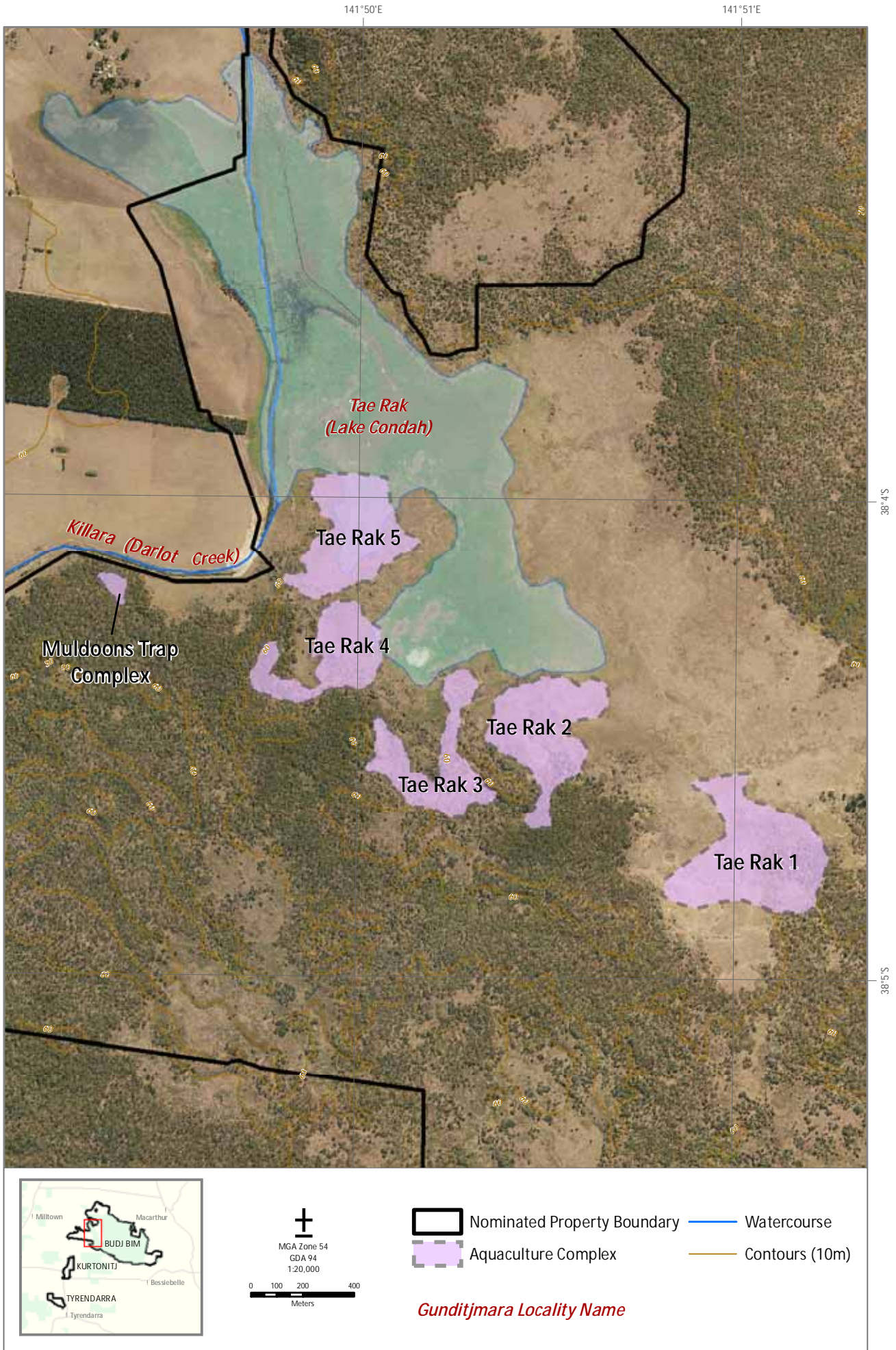
34 Coutts et al. 1978:25

35 Coutts and Witter 1977:47

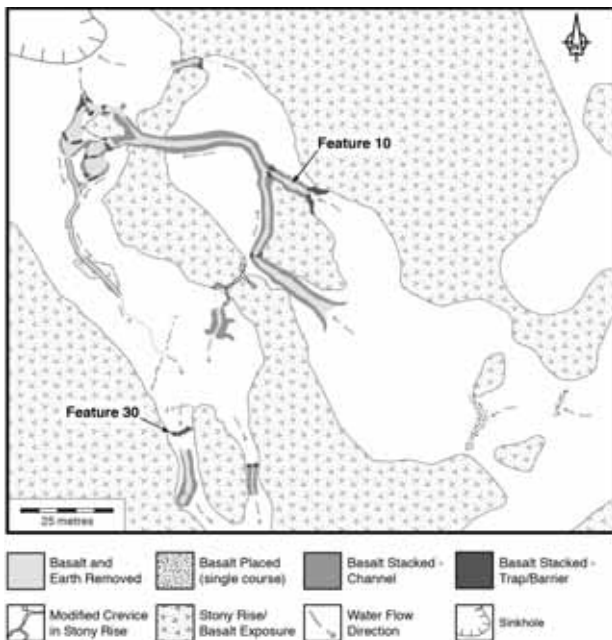
36 Coutts et al. 1977:197

37 Clarke 1991; van Waarden and Wilson 1994

38 Coutts et al. 1978:Figure 18, redrawn by The Designery



MAP 2.2 Budj Bim (northern) component: Aquaculture complexes of the margins of Tae Rak (Lake Condah)



2.13 Tae Rak (Lake Condah): Muldoons Trap Complex located on the south-west margins of the Tae Rak flood plain. Mapping undertaken by archaeologist Tom Richards and members of the Gunditjmarra community in 2004-2006 revealed 350 metres of constructed channels. Excavations directed by Ian McNiven reveal that one of the channels was created at least 6,600 years ago and that one of the dam walls was constructed around 500 years ago.

### 6,600 year old stone-walled fish trap

Approximately 700 metres west of the five trapping complexes is the Muldoons Trap Complex. This complex was recorded and mapped in the late-19<sup>th</sup> century as an operational fishing facility used by the Gunditjmarra living at the nearby Lake Condah Mission.<sup>39</sup> It was described in the late-19<sup>th</sup> century as “one of the largest and most remarkable Aboriginal fisheries in the western district of Victoria”.<sup>40</sup> Detailed mapping and Geographic Information Systems modelling undertaken to simulate different flood water depths demonstrates that the trap complex is approximately 350 metres in length with different channels, weirs and dams designed and strategically placed to come into operation at a range of flood heights.<sup>41</sup> Archaeological excavation of one of the artificial channels at the site revealed it was constructed at least 6,600 years ago.<sup>42</sup> This date makes Muldoons Trap Complex the oldest known stone-walled fish trap in the world.<sup>43</sup>

39 Richards 2011

40 Ingram 1893 cited in Richards 2011:74

41 Richards 2013

42 McNiven et al. 2012

43 McNiven et al. 2015



2.14 Tae Rak (Lake Condah): Excavating a section of channel, Muldoons Trap Complex, February 2008. Back row (L to R): Ian McNiven, Rob Skelly and Joe Crouch (Monash University), front row: Peter Saunders (Winda-Mara Aboriginal Corporation).

## KURTONITJ (CENTRAL) COMPONENT

The Kurtonitj (central) component of the **Budj Bim Cultural Landscape** is comprised of a part of the Budj Bim Indigenous Protected Area. The Gunditjmarra name Kurtonitj means ‘crossing place’. The Gunditjmarra hold freehold title to the Kurtonitj (central) component. The area is located approximately 12 kilometres east of the town of Heywood (Map 2.1) and is situated entirely within the Budj Bim lava flow and the Eccles Land System.

The Kurtonitj (central) component extends over an area approximately 3.7 kilometres north-south with a maximum east-west width of 1.8 kilometres; although in places the width of the property is as narrow as 200 metres (Map 1.3). Killara (Darlot Creek), which flows south along the western side of the lava flow, marks the western boundary of the Kurtonitj (central) component. The central part of this component is relatively flat and is interspersed with small wetland-swamp depressions. The number and size of the low lying depressions increase across the eastern side of the property. At the southern end of the Kurtonitj (central) component are a series of shallow, north-south running valleys formed by the Budj Bim lava flow. A small (approximately 15 hectares) part of the area has been cleared of surface stone and some of the original open forest vegetation has been cleared of trees.<sup>44</sup> Kurtonitj (central) component has been used for sheep and cattle grazing since European occupation of the region in the 1830s.

44 On an early survey plan of part of Darlot Creek, the general area of the Kurtonitj (central) component is described as “open forest of eucalypt, land strewn with fragments of trap.” LIC Historical plan collection, Glenelg 6A, cited in Lane 2006:5

Within the Kurtonitj (central) component is a 300 metre by 150 metre area of lava flow featuring two weirs and a dam associated with trapping and holding kooyang (Map 2.3).<sup>45</sup> In addition there are a series of large channels which feed water (and kooyang) into swampy depressions. One of these constructed channels, connecting two large swamps, is 70 metres in length and is lined in places with basalt block walls.<sup>46</sup> A detailed Digital Elevation Model illustrates how a stone dam/weir functioned to contain flood waters to enable a large (150 metres by 250 metres) swampy depression at Kurtonitj to fill up and contain kooyang.<sup>47</sup>

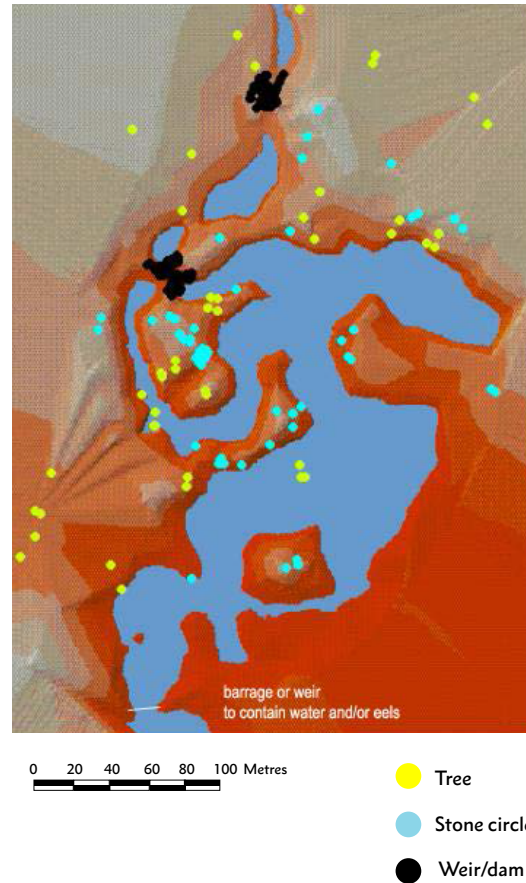
It is likely that further channels, weirs, dams and associated cultural features will be identified in the Kurtonitj (central) component through future archaeological field survey.<sup>48</sup> However, as a result of stone clearing in the past, it is also likely that some features have been disturbed and/or destroyed.

### TYRENDARRA (SOUTHERN) COMPONENT

The third and most southerly of the three components of the **Budj Bim Cultural Landscape** comprises the Tyrendarra Indigenous Protected Area (owned by Winda-Mara Aboriginal Corporation) and a part of the Budj Bim Indigenous Protected Area (owned by GMTOAC). The area is located two kilometres north of the township of Tyrendarra (Map 1.4) and 5.5 kilometres from the Victorian coastline. The Tyrendarra (southern) component is situated almost entirely within the Budj Bim lava flow.

The eastern boundary of the Tyrendarra (southern) component aligns with the course of Killara (Darlot Creek) and to the west is Palawarra (Fitzroy River) (Map 1.4). The landscape is largely flat with a gentle incline to the south. The dominant landscape features are a series of stony ridges created by the Budj Bim lava flow, between which occur natural channels. Three large swamps are situated on the western side of the southern component and lie adjacent to Palawarra.<sup>49</sup>

The ecology of these wetlands has been impacted by the creation of artificial drains that were constructed in the 20<sup>th</sup> century to improve grazing land for domestic stock and by the clearing of some of its open forest native vegetation to create grazing pastureland. However, small pockets of significant riparian and wetland vegetation survive. Pest plants species occur throughout the property (including sweet briar, elm, hawthorn, willow, hemlock, blackberry, thistle species, horehound and boxthorn); as well as pest animal species including rabbit, fox, cat, deer and pig.<sup>50</sup> Land conservation activities conducted by Traditional Owners through the Budj



2.15 Kurtonitj (central) component: Kurtonitj aquaculture complex and associated kooyang holding ponds created through construction of a weir. Based on archaeological site recordings, Digital Elevation Model and Geographic Information Systems simulation of water levels by H. Builth.

Bim Ranger program has led to a high-degree of control and containment of environmental weeds and pest animals; and extensive revegetation of native plant species, including *Eucalypt*, *Acacia*, *Bursaria* and other native trees, shrubs, sedges, groundcovers, herbs and grasses.

Located within the Tyrendarra Indigenous Protected Area is a 1,400 metre by 300 metre area of lava flow featuring an inter-connected complex of 18 stone wall dams/weirs, seven excavated channels and numerous swampy depressions associated with trapping and holding kooyang (Map 2.4).<sup>51</sup>

45 Massola 1968; Builth 2002:262, 264; 2004:172

46 Builth 2002:260

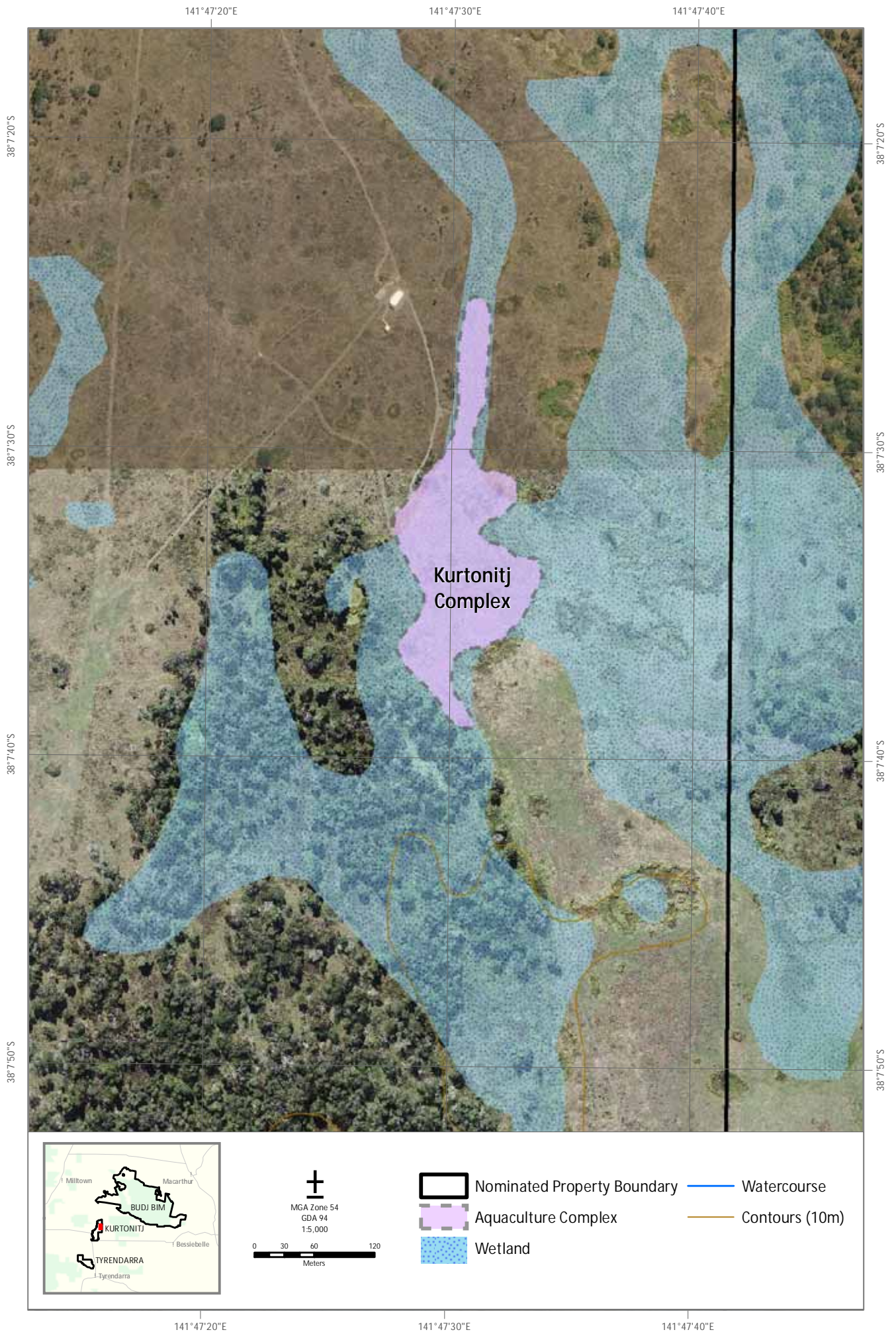
47 Builth 2002:262-263

48 Lane 2006:17-18

49 Winda-Mara Aboriginal Corporation 2015:14-17; Lane 2001:3-4

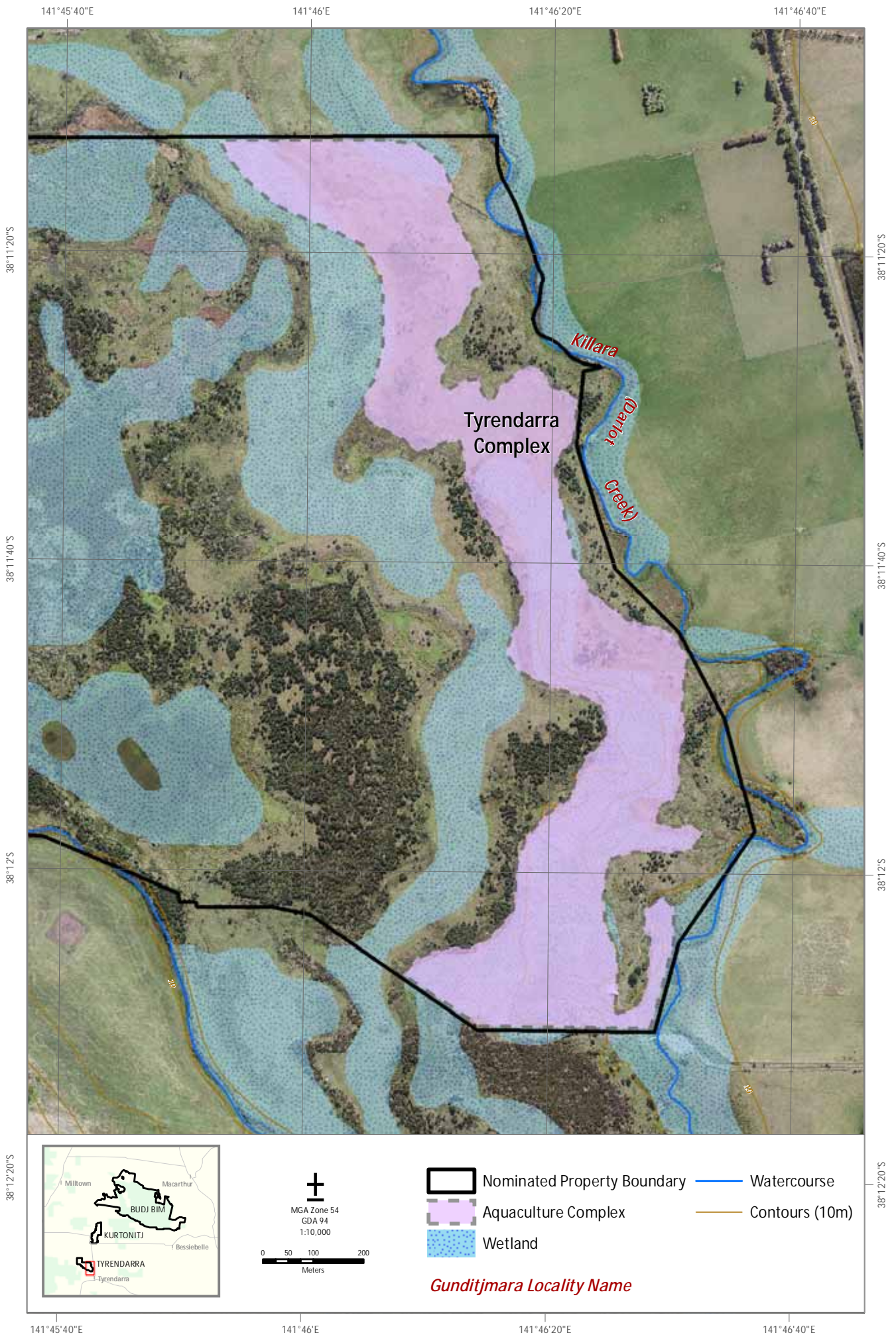
50 Winda-Mara Aboriginal Corporation 2015:18

51 Builth 2002:225-258; 2004:174-175



MAP 2.3 Kurtonitj (central) component: Aquaculture complex and wetland areas

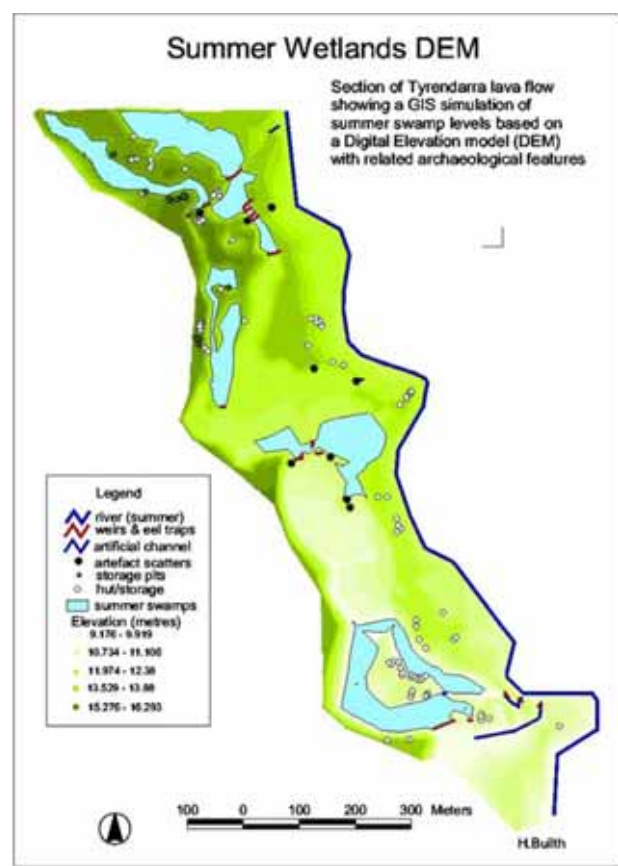
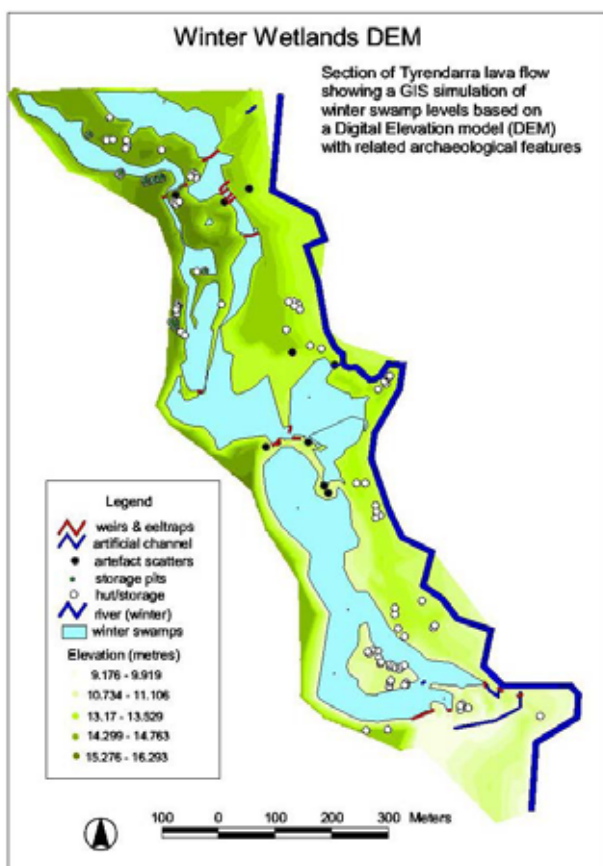




MAP 2.4 Tyrendarra (southern) component: Aquaculture complex and wetland areas

The Tyrendarra aquaculture complex features multiple swampy depressions that were artificially filled by flood waters (and kooyang) from Killara via a series of four excavated channels. Swampy depressions were also linked by a series of “natural, modified or artificial water channels that featured eel traps.”<sup>52</sup> A Digital Elevation Model illustrates two water level scenarios – one for the winter flood season and one of the summer dry season. Modelling reveals that the Cunditjmarra used a system of inter-connected excavated channels to allow winter flood waters from Killara to infill adjacent swamp

depressions to varying depths through installation of strategically placed dams. These same dams enabled the swamp depressions to retain water throughout the summer dry season, and thus function as sustainable holding ponds or ‘pens’ for kooyang. Builth concluded that “the construction of dams extended wetlands both spatially and temporally, creating ideal conditions for the long-term growth of *A. australis*.”<sup>53</sup>



2.16 Tyrendarra (southern) component: Tyrendarra aquaculture complex located adjacent to Killara showing location of weirs, channels and dams. Large ponds of winter flood waters and kooyang were held in by a series of constructed dams. Water fed into the complex from Killara via a series of artificially-constructed channels.

Based on archaeological site recordings, Digital Elevation Model and Geographic Information Systems simulation of water levels by H. Builth.

2.17 Tyrendarra fish trap complex located adjacent to Killara showing how dams artificially hold in winter flood waters and kooyang during periods of dry conditions.

Based on archaeological site recordings, Digital Elevation Model and Geographic Information Systems simulation of water levels by H. Builth.

52 Builth 2002:227; see also Lourandos 1976

53 Builth 2002:244

## SETTING

The **Budj Bim Cultural Landscape** is a serial property located within a broader landscape and environmental setting. This wider setting is described here in order to provide the context for the Gunditjmara aquaculture system. The natural heritage attributes of the nominated property include outstanding and representative exemplars of the geology (Budj Bim lava flow), hydrology (Tae Rak-Killara catchment water flows) and ecology (modified environment to support kooyang husbandry).

### A VOLCANIC LANDSCAPE

The **Budj Bim Cultural Landscape** is centred on a lava flow that was the result of dramatic volcanic eruptions that last occurred between 30,000 and 39,000 years ago.<sup>54</sup> The eruption of Budj Bim volcano and the consequent Budj Bim lava flow resulted in the gradual creation of a fluvial and wetland complex and gave new form to the geography of the Killara (Darlot Creek) catchment.<sup>55</sup> Today, the Budj Bim lava flow is one of the most distinctive in Australia and “includes an outstanding display of well-preserved features that illustrate the process of basaltic volcanism.”<sup>56</sup>

#### *Regional geology*

The eruption of the Budj Bim volcano took place in a landscape that includes older volcanic landforms.<sup>57</sup> These landforms are situated within the intraplate basaltic Western Victorian Volcanic Plains, which is the third largest volcanic plain in the world after the Deccan in western India, and the Snake River Plateau in Idaho, United States of America.<sup>58</sup> Volcanoes within the Western Victorian Volcanic Plains have been erupting intermittently for more than five million years. The eruption of the Budj Bim volcano, and the resulting lava flow, was one of the final eruptions.<sup>59</sup>

The main Budj Bim volcano has a deep, steep-walled and elongated crater that contains Lake Surprise. The crater wall has been breached at its north-western end by a large lava channel (or ‘canal’). A combination of lava fountains and more explosive eruptions built up a cone (rising to 179 metres above sea level) on the eastern side of the main crater. A line of smaller spatter and scoria cones and craters extends to the south-east from the main crater; indicative of a fissure eruption – the only such example in the region.<sup>60</sup>



2.18 The crater of Budj Bim volcano today has a crater lake, Lake Surprise. Lava tubes and other distinctive volcanic features are located nearby.



2.19 Crater of Budj Bim volcano as drawn by Eugène von Guérard in 1858

54 Crimes and Rosengren 2013:94

55 Context 1993:26-40; Crimes and Rosengren 2013:93-98. ‘Tyrendarra lava flow’ is the geological name given to this feature. However, ‘Budj Bim lava flow’ is used in this Nomination Dossier because it is the name preferred by the Gunditjmara since it relates to the Budj Bim Ancestral Being.

56 Context 1993:36

57 Holdgate and Gallagher 2003

58 Joyce and Webb 2003; Price et al. 2003

59 Builth et al. 2008; Crimes and Rosengren 2013

60 Crimes and Rosengren 2013:95. In contrast to the point-source, centralised eruptions that typify most volcanoes, fissure eruptions are generated at several contemporaneous sites along a linear fracture in the earth’s crust.



2.20 Aerial view showing wetlands and lava flow outcrops



2.21 The dramatic evidence of the Budj Bim lava flow, cloaked by Manna Gum woodland

### *The lava flow*

The Budj Bim lava flow is situated between latitudes 38° 01' and 38° 24' south (Map 2.5). It begins from its source at the Budj Bim volcano and extends more than 30 kilometres southwards to the present coast and continues offshore for a further 15 kilometres. However, this was not an undersea lava flow, as sea level was lower at the time of the eruption, around 30,000 to 39,000 years ago. The Budj Bim lava flow formed broad sheets as it spread out, filling low-lying areas and disrupting the existing drainage patterns (where the Eumeralla River and Killara [Darlot Creek] had previously joined, for example).

### *Land system*

The area covered by the Budj Bim lava flow is a separate and distinct land system known as the Eccles Land System.<sup>61</sup> The geology is typically comprised of moderately vesicular and blocky basalt; soils are commonly shallow, red-brown organic loams.

The terrain of the Eccles Land System is dominated by lava surfaces that, at its northern end, stand up to 20 metres higher than the adjoining wetlands. Apart from the Budj Bim volcano, the highest areas of lava flow are about 60 metres above sea level. Further south and nearer the coast, there is less variation in surface elevation. At the Tyrendarra township, for example, the lava-derived terrain is only eight metres above sea level.

Today the **Budj Bim Cultural Landscape** is dominated by cracked basalt surfaces and jumbles of jagged rocks that evidence the ancient lava flow. The lava flow shaped the topography of the landscape and provided the materials that came to underpin Gunditjmara aquaculture. The lava flow within the nominated property is a key attribute carrying the Outstanding Universal Value for the **Budj Bim Cultural Landscape** (Part 3).

### *Climate*

The **Budj Bim Cultural Landscape** is situated within a region that experiences a temperate climate and receives relatively high and regular rainfall. Although considered mild, there is a marked seasonality with high variance in temperature, light and rainfall. The rainfall is seasonal, predominantly during autumn, winter and spring months as a product of westerly winds and cold fronts. Over the area of the Budj Bim lava flow, annual rainfall ranges between 660 and 860 millimetres. Winters are cool to cold with average daily temperatures varying between 5° and 13° Celcius. Summers are warm to hot and typically dry; average daily temperature ranges between 12° and 26°, with days over 38° Celcius not uncommon.

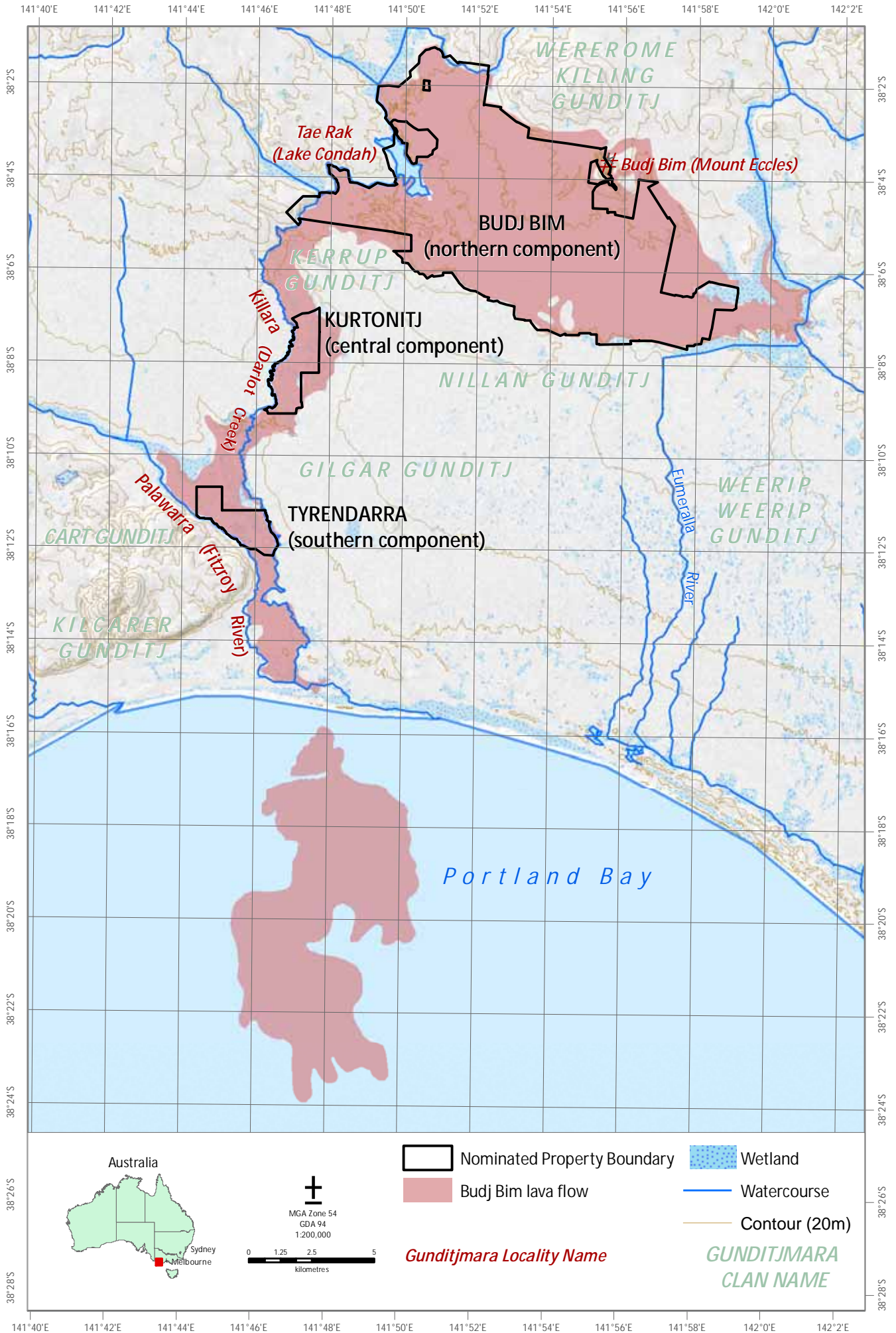
## **A LANDSCAPE OF WATERWAYS, WETLANDS AND SWAMPS**






Water flow is a key attribute carrying the Outstanding Universal Value for the **Budj Bim Cultural Landscape** (Part 3). Despite substantial changes in the late-19<sup>th</sup> and mid-20<sup>th</sup> centuries, the nominated property contains a relatively undisturbed hydrology. The Gunditjmara's vision and actions to restore sustainable water flows to Tae Rak (Lake Condah) have greatly enhanced the capacity of the system to achieve a water flow similar to that of the preceding thousands of years.<sup>62</sup>

Tungatt Mirring (Stone Country) is a landscape that includes a suite of wetlands, swamps and sinkholes that provide ideal habitat and conditions for kooyang (eel) and a range of fish and aquatic plant species. The system is dependent on the natural and culturally modified water flows, of which Tae Rak and Killara (Darlot Creek) are the most significant components.

61 Context 1993:12-15

62 Despite a drier-than present climate around 3,000 years ago, previous damming of Tae Rak by the Gunditjmara ensured sufficient water flow to enable the aquaculture system to operate. McNiven and Bell 2010:103



-  Nominated Property Boundary
-  Budj Bim lava flow
-  Wetland
-  Watercourse
-  Contour (20m)
- Gunditjmara Locality Name*
- GUNDITJMARA CLAN NAME*

MAP 2.5 Budj Bim lava flow: Extent



2.22 “The healing of Lake Condah within a generation is our vision for the future. It is a legacy from us today to future generations who we are asking to carry forward this important work.”<sup>63</sup>

Run-off from the Budj Bim lava flow drains south into the Southern Ocean. Killara is on the western boundary of the lava flow, while the Eumeralla River drains the area to the east. Both waterways become large water bodies during times of high rainfall and run-off and are also fed by waterways from the north. In the case of Killara, the catchment includes Condah Swamp, which lies to the north of Tae Rak, and in wet periods overflows to Killara and then to Tae Rak.<sup>63</sup> The nature of the lava flow ensures a continual underground drainage that feeds sinkholes and springs. Within and adjoining the Budj Bim lava flow are extensive wetlands consisting of permanent and seasonal swamps; including Gorrie Lake and Swamp, Tae Rak, Whittlebury Swamp and Homerton Swamp.

Tae Rak is one of the largest wetland system lakes created within the Budj Bim lava flow. Following its partial draining in the late-19<sup>th</sup> and mid-20<sup>th</sup> centuries (discussed in Part 2.B), Tae Rak was restored in 2010, and is now a permanent wetland with seasonally fluctuating water levels. In summer (December-March), water in Tae Rak feeds into Killara, while during winter Tae Rak and Condah Swamp can become one continuous water body.<sup>64</sup> Rises and falls in lake levels enable Gunditjmara channels, weirs, dams and ponds, built at different levels or elevations, to remain operational. The restoration of Tae Rak has enabled Gunditjmara aquaculture practices to continue and be revived, renewed and revitalised.<sup>65</sup> Tae Rak also supports Indigenous land management, tourism and economic development (Part 5.H).

## A HABITAT FOR KOOYANG (SHORT-FINNED EEL)

The **Budj Bim Cultural Landscape** is a major stronghold in southern Australia for the kooyang or short-finned eel (*Anguilla australis*).<sup>66</sup> An adult female kooyang can grow to 1.3 metres in length and weigh up to six kilograms. Kooyang was the key target species on which Gunditjmara aquaculture was founded.<sup>67</sup>

### *Distribution and life-cycle*

*Anguilla australis* is common from south-east Queensland to south-east South Australia, and throughout Tasmania. The species is also found in the South Pacific and occurs in New Caledonia, Norfolk Island and Lord Howe Island;<sup>68</sup> and is the basis for commercial and customary fisheries in New Zealand. In Victoria, *A. australis* is common and widespread throughout all coastal drainage systems.<sup>69</sup>

These eels are ‘catadromous’ – that is, they spend the majority of their life cycle in fresh water or estuaries, but return to the sea to spawn. *A. australis* are long-lived, generally reaching maturity at between 10 and 20 years.<sup>70</sup> From egg to adult, the *A. australis* goes through a five stage life-cycle (Table 2.4). With males preceding females,<sup>71</sup> adult *A. australis* migrate to the sea in summer and autumn<sup>72</sup> and glass eels return to the estuaries in winter and spring.<sup>73</sup>

63 Cippel et al. 2006

64 Cippel et al. 2006:29-35

65 Context 2008:38-39

66 McKinnon 2002

67 Other species harvested using the aquaculture system included, for example, Toupong (*Pseudaphritis urvilli*) and Freshwater Blackfish (*Gadopsis marmoratus*).

68 Jellyman 1987

69 McKinnon 2007:7; Victorian Fisheries Authority 2017:3

70 Beumer 1996; Pease 2004

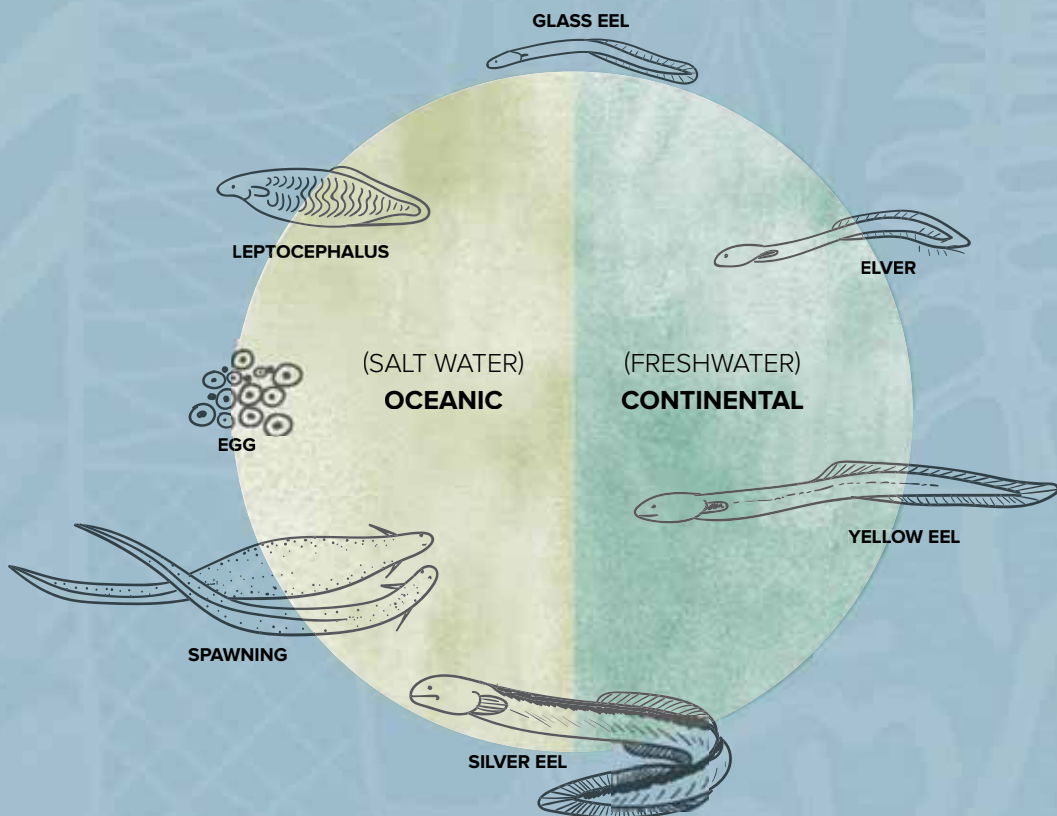
71 Jellyman 1987

72 Sloane 1984; Jellyman 1987

73 Beumer and Sloane 1990; McKinnon and Gooley 1998



2.23 Tyson Lovett-Murray holding a large kooyang (eel)



2.24 From egg to maturity, *A. australis* goes through five stages in its lifecycle

STAGE	DESCRIPTION	AGE	SIZE	HABITAT
Leptocephalus	Larval form	Metamorphose at 3.5 to 6 months (becoming glass eels)	Metamorphose at 55 to 60mm	Marine. Transported by currents to eastern Australian coastline
Glass eel	Transparent juvenile	4.5 to 7 months	55 to 60mm; 0.1-0.2g in weight	Marine and estuarine. Migrate to coastal waters
Elver	Fully pigmented juvenile	Less than 1 year to about 5 years	Up to 30cm	Predominantly freshwater
Yellow eel	Migratory phase complete. Sexual differentiation occurs	5 years+	Greater than 30cm	Predominantly freshwater. Restricted home range
Silver eel	Adult eel migrates to spawning grounds in Melanesia	10 to 20 years+	Males up to 50cm and 250g; females up to 1.3m and 6kg.	Marine

TABLE 2.4 Different stages of Kooyang (*A. australis*). Based on McKinnon 2007.

### Habitat

In freshwater systems, the habitat preferences of eels include macrophytes (such as reeds and cumbungi - *Typha domingensis*), woody debris, under-cut banks, cobbles, gravel and mud and sand substrates.<sup>74</sup> Eels are opportunistic feeders whose diet includes a wide variety of invertebrates and fish; the latter comprising a greater proportion of the eel's diet as they increase in size.<sup>75</sup>

In lakes, juvenile short-finned eels are commonly found in the margins and shallow areas.<sup>76</sup> Lakes typically favour a high proportion of female eels in the population.<sup>77</sup> Aquatic macrophytes are an important eel habitat; particularly for rearing the juvenile eels. Eels typically use mud burrows, particularly during winter when little movement occurs. Large eels tend to be widely distributed, with little specific habitat association evident.<sup>78</sup> As eels become larger, their diet includes more fish, and a wider habitat selection by large eels may be related to the availability of prey.

Killara and its associated wetlands – including those at Tae Rak, Kurtonitj and Tyrendarra – form a connected network of habitat that provides conditions suitable for the growth of eels. These areas offer continuity of habitat and water of sufficient quality to attract and support large eel populations.<sup>79</sup>

### Traditional ecological knowledge

Gunditjmara people maintain substantial knowledge of the spatial and seasonal distributions, habitat requirements, behaviour and migratory patterns of kooyang, as well as a wide-variety of other resources. This knowledge is evidenced, for example, in the six-season calendar of the Gunditjmara



2.25 Richard Bamblett at Tae Rak (Lake Condah) using a traditional spear and puunyaart reed basket to capture kooyang

(Part 2.B). Cultural fishing for kooyang is important for community well-being, providing nutritious and reliable food obtained through intimate engagement with Country, as well as providing the opportunity to pass down ecological knowledge and cultural practices across and among generations.<sup>80</sup>

The biology and lifecycle of kooyang was conducive to Gunditjmara management and storage through modifications of the wetland landscape system. This was particularly the case in regard to the ecological-cultural environment of the wetland systems across the **Budj Bim Cultural Landscape**. The modified environment to support kooyang husbandry is a key attribute carrying the Outstanding Universal Value for the nominated property.

74 Glova 1999; Jellyman & Chisnall 1999

75 McKinnon 2005

76 Jellyman and Chisnall 1999

77 Oliveira et al. 2001

78 Jellyman and Chisnall 1999

79 David Crook 2012:100

80 Noble et al. 2016



## A DIVERSE ECOLOGICAL-CULTURAL ENVIRONMENT

The Budj Bim lava flow contains some of the most recent and best-preserved lava flow features in south-east Australia.<sup>81</sup> The area contains a suite of significant plant and animal species and ecosystems that collectively have a high conservation status and significance. Many of the species present in the **Budj Bim Cultural Landscape** have important uses and cultural associations for the Gunditjmarra.

### Vegetation

At its broadest level, the natural ecosystems of the Budj Bim lava flow are categorised in Western ecological terms as 'Dry Forests and Woodlands' and 'Inland Waters and Wetlands'.<sup>82</sup> Both systems are well represented in each of the three serial components of the **Budj Bim Cultural Landscape**.

Vegetation studies undertaken by Ecology Australia in 1991 and 2006, recognise two Ecological Vegetation Classes within the Dry Forests and Woodlands Natural Ecosystem (or dryland vegetation) and 17 Ecological Vegetation Classes within the Inland Waters and Wetlands Natural Ecosystem (wetland vegetation); the latter representing a huge and diverse range of plant species (Table 2.5).<sup>83</sup> In all, 551 botanical taxa (species, subspecies, varieties and cultivars) have been recorded as occurring across the Budj Bim lava flow.<sup>84</sup> Of these, 335 are native taxa comprised of mosses, liverworts, ferns and fern allies, monocotyledons and dicotyledons and 216 are exotic (or introduced) naturalised conifers, monocotyledons and dicotyledons. Despite the number and coverage of introduced plant species, the moderately to highly intact indigenous vegetation of the Eccles Land System has been assessed to be of National conservation significance.<sup>85</sup>

The condition of the vegetation within the **Budj Bim Cultural Landscape** is variable. The dryland vegetation is vulnerable to invasive plant species, introduced feral (or wild) animal species and cattle grazing; but the condition of the wetland vegetation is relatively good. This has especially been the case with increased water flow following the restoration of Tae Rak in 2010 and higher-than-average rainfall in subsequent and recent years.

### Fauna<sup>86</sup>

The native fauna of the Eccles Land System is considered distinctive with a high level of species diversity. Mammals found in the area include the Eastern Grey Kangaroo (*Macropus giganteus*), two species each of wallaby and possum, Koala (*Phascolarctus cinereus*), Short-beaked echidna (*Tachyglossus aculeatus*), Spot-tailed Quoll (*Dasyurus maculatus maculatus*), Southern Brown Bandicoot (*Isodon obesulus obesulus*), Common Dunnart (*Sminthopsis murina murina*), three species of glider and four species of antechinus. Introduced feral (or wild) animal species include European Rabbit (*Oryctolagus cuniculus*), goat (*Capra aegagrus hircus*), fox (*Vulpes vulpes*), pig (*Sus domesticus*), deer (*Cervus* spp.), dog (*Canis lupus familiaris*), cat (*Felis catus*), House Mouse (*Mus musculus*) and bees (*Apis mellifera*).

Five species of bats, as well as the nationally endangered Southern Bent-wing Bat (*Miniopterus schreibersii*), inhabit some of the lava flow caves and voids as well as forested environments. A number of venomous snakes are found in the area and include the Tiger Snake (*Notechis scutatus*), Eastern Brown (*Pseudonaja textilis*), Red-bellied Black (*Pseudechis porphyriacus*) and Lowland Copperhead (*Austrelaps superbus*). Other reptiles include a range of lizards and skinks. A wide range of insects is known from the area – including the spectacular, but rare, Mountain Grasshopper or Katydid (*Acripeza reticulata*).

The area provides habitat for at least 105 native and six non-native bird species.<sup>87</sup> These species include a variety of birds of prey, black swan, brolga, egrets, owls, parrots, wrens, ducks and coots; as well as bird species classified as threatened such as the South-eastern Red-tailed Black Cockatoo (*Calyptorhynchus banksii graptogyne*), Pied Cormorant (*Phalacrocorax varius*), Whiskered Tern (*Chilodrias hybrida*), Great Egret (*Egretta alba*) and Grey Goshawk (*Accipiter novaehollandiae*).

Surveys of Killara and Tae Rak have identified 12 native fish species, which include Kooyang (Short-finned Eel – *Anguilla australis*), Toupong (*Pseudaphrites urvilli*) and Freshwater Blackfish (*Gadopsis marmoratus*).<sup>88</sup> Four introduced species have been recorded, including Tench (*Tinca tinca*), all of which occurs in low abundance in Killara.<sup>89</sup> The Eastern Snake-necked Tortoise (*Chelodina longicollis*) and native crayfish (*Geocharax* sp.) can be found in local swamps, lakes and creeks;<sup>90</sup> as well as Common Freshwater Shrimp (*Paratya australiensis*) and Freshwater Spider Crab (*Amarinus lacustris*). Eight species of frog have been documented, as well as two species of freshwater mussel.

81 Context 1993:28

82 Parks Victoria 2015:29-40. In Victoria, 14 broad Natural Ecosystems are recognised. These are derived from Ecological Vegetation Classes, which categorise Victoria's native (indigenous) vegetation.

83 Carr et al. 2006; Context 1993:41-69, 340-371; Ecology Australia 2007

84 Ecology Australia 2007:56-68, Appendix 1

85 Ecology Australia 2007:56

86 Species list for nominated property provided by Gary Peterson, Program Manager Biodiversity, Department of Environment, Land, Water and Planning, 30 October 2017.

87 Context 1993:7

88 Context 1993:72; Gippel et al. 2007

89 Crook et al. 2008:30

90 McKinnon 2007:69

### Cultural associations

Many plant and animal species found within the **Budj Bim Cultural Landscape** are of particular cultural importance to the Gunditjmara. Their significance relates to their use as foods and medicines, for use in the production of material culture items (such as cloaks, spears and baskets) and for their associations as totems or forms of 'kinship with the natural world'.<sup>91</sup> A sample is presented in Table 2.6 to indicate the range of plant and animal species utilised and/or associated with Gunditjmara culture.



2.26 Budj Bim (northern) component: High quality Stony Rises Woodland with Manna Gum (*Eucalyptus viminalis*), Blackwood (*Acacia melanoxylon*) and Shiny Cassinia (*Cassinia longifolia*). The Manna Gums have particularly healthy canopies. Foreground vegetation is substantially exotic.



2.28 Tyrendarra (southern) component: The 14 hectare wetland is one of the largest and most significant in the Budj Bim lava flow. The Aquatic Herbfield is dominated here by Running Marsh-flower (*Villarsia reniformis*), Southern Water-ribbons (*Triglochin alcockiae*) and Floating Dock (*Rumex bidens*). Patches of open water mark sites of former Black Swan nests.

From an ecological perspective, the **Budj Bim Cultural Landscape** is distinctive for its extensive and productive network of wetlands extending across the Budj Bim lava flow. The intersection of the extensive lava flow with Killara allowed for the formation of a mosaic of natural depressions and dams that subsequently developed into diverse and productive wetlands. These wetlands have been colonised by a large range of native aquatic plants, which, in turn, support a diverse range of aquatic macroinvertebrates. It is these wetlands that have driven the productivity of the Gunditjmara kooyang aquaculture over millennia.



2.27 Kurtonitj (central) component: Extensive wetland on the southern boundary; an aggregate of wetland Ecological Vegetation Classes



2.29 Tyrendarra (southern) component: The near-to-dry bed of Palawarra (Fitzroy River), with Plains Swampy Woodland and Riparian Wetland Aggregate.

91 Rose et al. 2003. The phrase 'kinship with the natural world' is used here in preference to 'totem' or 'totem species'.

VEGETATION	VEGETATION	ENVIRONMENT	DISTRIBUTION
Dryland (Woodland) Complex	Grassy open woodland with trees to 15 m or more high. Dominant tree species are Blackwood ( <i>Acacia melanoxydon</i> ) and Manna Gum ( <i>Eucalyptus viminalis</i> )	Highly dissected/or contorted topography and more gentle relief characterised by vesicular and blocky basalt. Soils are shallow, stony, red-brown organic loams	Widespread across the nominated property
Wetland Complex	A wide variety of wetland environments associated with lakes, water channels and swamps. These environments have been classified into 16 floristic groups	Alluvial terraces of Killara (Darlot Creek – at the edge of the lava flow) and alluvial soils of internally drained or dammed basins in the lava flow. Dark brown cracking clay (alluvial terraces) and dark brown clay-rich or peaty loams of swamp deposits	Abundant and well represented within the nominated property

TABLE 2.5 Budj Bim Cultural Landscape: vegetation complexes<sup>92</sup>

SCIENTIFIC NAME	COMMON NAME	GUNDITJMARA NAME	GUNDITJMARA USE OR ASSOCIATION
<b>Animals (wetland)</b>			
<i>Anguilla australis</i>	Short-finned Eel	Kooyang	Keystone species for Gunditjmarra aquaculture
<i>Gadopsis marmoratus</i>	Freshwater Blackfish		Fish species eaten
<i>Pseudaphrites urvilli</i>	Toupong	Toupong	Fish species eaten
<b>Animals (dryland)</b>			
<i>Calyptorhynchus banksii graptogyne</i>	South-eastern Red-tailed Black Cockatoo	Bonbontaeraemot ('eater of she-oak cones')	A totemic (moiety) species for Gunditjmarra
<i>Calyptorhynchus funereus</i>	Yellow-tailed Black Cockatoo	Wilan	A totemic (moiety) species for Gunditjmarra
<i>Cygnus atratus</i>	Black Swan		Birds and eggs eaten
<i>Macropus giganteus</i>	Eastern Grey Kangaroo		Hunted and eaten. Skin used for clothing and ornaments. Sinews used to bind prongs to spear shafts.
<i>Pseudocheirus peregrinus</i>	Common Ringtail Possum	Weearn	Hunted and eaten. Skin used to make cloaks.
<i>Trichosurus vulpecular</i>	Common Brushtail Possum	Garamuk	Hunted and eaten. Skin used to make cloaks.
<b>Plants (wetland)</b>			
<i>Phragmites australis</i>	Common Reed	Tarrk	Young rhizomes and shoots eaten. Spear shafts and ornaments made from stems. Sharpened stems made into knife-like tools. Leaves woven into baskets.
<i>Triglochin procera</i>	Water-ribbons		Tubers eaten raw or roasted
<i>Typha domingensis</i> ; <i>Typha orientalis</i>	Cumbungi	Poorteetch	Underground rhizomes and new summer shoots roasted or steamed for eating
<b>Plants (dryland)</b>			
<i>Acacia mearnsii</i>	Black Wattle	Currong	Gum eaten, used to make drinks and used to make an adhesive when mixed with ash. Bark used for indigestion. Weapons made from wood.
<i>Acacia melanoxydon</i>	Blackwood		Bark used to treat rheumatism. Clubs, shields and spear throwers made from wood.
<i>Carex appressa</i>	Tall Sedge	Puunyaart, Poongort	Leaves used to weave baskets
<i>Carex tereticaulis</i>	Poongort		Green culms used for fibre (baskets and string). Grass used to weave gnarraban (eel-traps).
<i>Dianella</i> spp.	Flax-lilies		Leaves used to make string
<i>Exocarpus cupressiformis</i>	Native Cherry		Fruit eaten. Leaves used for smoking ceremonies and to protect new-born babies from physical and spiritual harm. Wood used for tools such as shields.
<i>Eucalyptus viminalis</i>	Manna Gum		Manna or gum eaten. Wood used to make shields and drinking vessels. Leaves smoked over fire and inhaled for fever.
<i>Lomandra longifolia</i>	Spiny-headed Mat-rush; Native Rice		Leaves used for weaving baskets and gnarraban (eel-traps). Green seeds pounded into flour for cakes and breads.
<i>Microseris</i> sp.	Yam Daisy	Muurang, Keerang	Tubers eaten cooked or raw; a highly nutritious and important food
<i>Poa labillardierei</i> var.	Common Tussock-grass		Used to make string and in basket making. Seeds ground for baking.
<i>Pteridium esculentum</i>	Austral Bracken	Makkitch (root = Murkine)	Underground rhizomes staple food; prepared and eaten in a bread-like form. Sap from stems used to treat insect bites.
<i>Solanum laciniatum</i>	Large Kangaroo Apple	Mookitch or Mayakitch	Fruits eaten when very ripe

TABLE 2.6 Budj Bim Cultural Landscape: Selected plant and animal species utilised and/or associated with Gunditjmarra culture<sup>92</sup>

92 Information based on Ecology Australia 2007:19ff



2.30 The tubers of all three local forms of Water Ribbons (*Triglochin procera* (2 forms) and *T. alcockiae*) can be eaten raw or roasted (Killara [Darlot Creek], 2006)



2.31 Collecting rushes and grass to make baskets. (L-R) Jody Agnew, Eileen Alberts and Colleen Hamilton

## SUMMARY

The description of the **Budj Bim Cultural Landscape** provided here draws on two distinct, though intersecting, knowledge systems and cosmologies: Gunditjmara traditional ecological knowledge, cultural traditions and practices; and Western knowledge traditions dominated by scientific empirical data (via the disciplines of geology, geography, hydrology, ecology and archaeology, for example). Both Indigenous and Western scientific knowledge systems shape the way in which the nominated property is perceived and thus described and valued.

The **Budj Bim Cultural Landscape** lies within a larger area (Country) for which the Gunditjmara are legally recognised native title holders. Country is part of Gunditjmara identity as a people. It contains places with deep cultural and spiritual meanings. Country itself, as a living landscape, is Gunditjmara heritage and identity.

The **Budj Bim Cultural Landscape** is a serial property comprised of three components (Table 1.1). Each component contains one or more large and well-preserved Gunditjmara aquaculture complexes: each varies in scale and form in response to specific local topographies, water flows and environmental conditions demonstrating Gunditjmara intimate knowledge of Country, water flows and the kooyang lifecycle. While these aquaculture complexes and their settings have been documented in considerable detail, there are likely to be additional structures that remain to be investigated within the nominated property. Any additional features will be complementary to the Gunditjmara aquaculture complexes that are documented and preserved.

The **Budj Bim Cultural Landscape** contains attributes and encompasses values of Gunditjmara aquaculture that are the product of a series of interrelated and inter-dependent cultural and environmental systems. Each of these systems has specific tangible evidence and associated Gunditjmara and Western knowledge; but it is the interrelationships of these systems, the tangible and intangible, that give rise to the distinctive cultural landscape of the nominated property. The interrelated systems comprise:

- Gunditjmara social, spiritual, and settlement system
- Gunditjmara aquaculture system
- physical systems including volcanic and hydrological systems
- ecological systems, and in particular the modified environment that supports kooyang husbandry.

Each of these interrelated, dynamic systems has both a spatial and temporal dimension. Some parts of the system – the Budj Bim lava flow and Gunditjmara history – have a time depth of more than 30,000 years, while the 6,600 year old aquaculture system has been shaped by changing social systems and responses to fluctuating climate; as well as naturally evolving ecosystems and Gunditjmara manipulating and modifying of local environments. This six millennia-long history and development of the **Budj Bim Cultural Landscape** is detailed in the next section (Part 2.B).



2.32 South-eastern Red-tailed Black Cockatoo: A totemic (moiety) species for Gunditjmarra



**PART 2B**

**HISTORY AND  
DEVELOPMENT**

## PART 2.B

# HISTORY AND DEVELOPMENT

*Gunditjmara Country has many stories stretching back more than 30,000 years. Over time, Gunditjmara Elders and people have told stories of Ancestral Creation Beings revealing themselves in the landscape; erupting volcanoes; tsunamis; mountains forming; sea Country creeping up onto the land; rivers changing; the relationship between people, animals and plants; abundant natural resources; settlement and aquaculture; the arrival of other people to Gunditjmara Country; and of our ongoing spirituality and well being.*  
(Damein Bell, 2009)<sup>93</sup>

The Budj Bim Cultural Landscape is central to the story of the Gunditjmara. It is a landscape in which Gunditjmara aquaculture developed and continued over more than 6,600 years. It is also a landscape of plenty, of refuge, of loss, of family and community, of inequity and justice, of the Lake Condah Mission and nearby family settlements: a place where wars were fought and wetlands drained and then restored. From a Western science perspective, the **Budj Bim Cultural Landscape** may appear to be a natural landscape; but in reality it is intensely cultural. The **Budj Bim Cultural Landscape** is a remarkable area because it has a powerful deep time, colonial and recent history; which is characterised by the continuing connection and adaptation by the Gunditjmara to their Country and to their aquaculture practices.

Over the past 40 years, the lands comprising the three serial components (Budj Bim, Kurtonitj and Tyrendarra) of the **Budj Bim Cultural Landscape** have been acquired by or returned to the Gunditjmara. This situation is a consequence of Gunditjmara activism, social justice, advocacy, and the eventual legal recognition by governments of Gunditjmara rights and obligations to their Country through native title.

The history and development of the **Budj Bim Cultural Landscape** is a 'deep time' story. For the Gunditjmara, deep time refers to the idea that they have always been here. From an archaeological perspective, deep time refers to the more than 32,000 years that Aboriginal people have occupied and lived on the Western Victorian Volcanic Plains. Archaeological and environmental evidence demonstrates that aquaculture – as evidenced in the manipulation, modification and management of water flows, commenced at least 6,600 years ago. Over this time period, and up to the present day, the Gunditjmara developed, maintained and adapted their knowledge and practices of aquaculture. That is, Gunditjmara traditional knowledge and aquaculture practice endured and actively adapted to new circumstances; despite the profound impacts of colonisation from the early 19<sup>th</sup> century.

### CREATION

At the dawn of time, it was the Ancestral Beings – part human, part beast – who brought what was previously barren land to life. At the end of the Dreaming journeys, the Ancestral Being left aspects of themselves behind transformed into part of the landscape. To the Gunditjmara people, Budj Bim's domed hill represents the forehead of one such Being, with the lava that spat out as the head burst through the earth forming his teeth. In the Dhauwurd wurrung language, *budj bim* means "high head," and *tung att* means "teeth belonging to it", referring to the scattered red scoria... In the absence of law men, Budj Bim's site is guarded by the *gneering* – or weeping she-oaks that stand like sentinels close to the summit. When the wind blows, you can hear the trees whispering softly to you.<sup>94</sup>

The southward journey of the lava flow created by the Budj Bim Ancestral Being expressed the creative powers of Dreaming spirits. This spirit-scape also extends out to sea with the sacred site of Deen Maar (Lady Julia Percy Island) located 8 kilometres off the coast to the immediate east of the lava flow. "The forbidding cliffs of Deen Maar ... guard the final resting place of the spirits of Gunditjmara people when they die."<sup>95</sup> The Gunditjmara buried their dead with their heads facing Deen Maar.<sup>96</sup> This spirit resting place is as much a part of contemporary Gunditjmara culture as it was in the past.<sup>97</sup>

93 Damein Bell in Weir 2009: 3

94 Gunditjmara 2010:7. In Australia, the 'Dreaming' is linked to the creation process and spiritual ancestors. It refers to the past, present and future. Dreaming stories pass on important knowledge, cultural values and belief systems to later generations.

95 Gill and West 1971; Gunditjmara 2010:7

96 Read 2007:69

97 Dawson 1881:51

All of the Dreaming creator spirit beings who gave form, meaning and purpose to Gunditjmarra Country “were all subservient to the chief Creator Being, Bunjil”.<sup>98</sup> Bunjil, who is often depicted as a wedge-tailed eagle, is widely recognised by contemporary Aboriginal groups in south-eastern Australia as the principal Ancestral Being.

Gunditjmarra Elder, Aunty Eileen Alberts, explains:

In the Dreaming, the Ancestral Creators gave the Gunditjmarra people the resources to live a settled lifestyle. They diverted the waterways, and gave us the stones and rocks to help us build the aquaculture system. They gave us the wetlands where the reeds grew so that we could make the eel baskets, and they gave us the food-enriched landscape for us to survive.<sup>99</sup>

Gunditjmarra Elder, Aunty Iris Lovett-Gardiner, adds:

My people lived with the spirituality that's there; a spirit of place that's sacred to my people. The stone from the mountain was put there for a purpose. There's always a purpose for something, unless people destroy it. The stone came from the earth; it connected the people to the earth.<sup>100</sup>

It is in this spiritual sense that the Gunditjmarra people see the **Budj Bim Cultural Landscape** as “imbued with meaning and a sense of purpose”.<sup>101</sup>

Gunditjmarra Elder, Uncle Kenny Saunders, also speaks of the ancestors and their ‘great knowledge’ that imbues the **Budj Bim Cultural Landscape** with vitality and a “cultural spiritual footprint that is still here on this Country and so very, very much alive”.<sup>102</sup> The spiritual essence and vitality of Gunditjmarra Country is universally acknowledged by the Gunditjmarra and is central to Gunditjmarra identity and sense of place and belonging.

Walking the land is important to us because we love the land. The land talks to us; it sings songs and talks to us. Even the birds tell us things ... Each animal's got a story to tell. We've still got those things. They're still here. They're very important. This is the spirituality we've got. We walk this land and we listen and we see and hear them all. Because we love the land we get messages from this and that. (Aunty Iris Lovett-Gardiner)<sup>103</sup>

We as Aboriginal people feel that without land you don't have a spirit. Our connection to the land is that the land is our mother, it gave birth to us, it created all the things that are there for us as a people. This connection to the land is so strong that spiritually, religiously, culturally, it contains

all the dreaming that we believe in as Aboriginal people. (Uncle John Lovett)<sup>104</sup>

Gunditjmarra artist Thomas Day, the grandson of Aunty Euphemia Day, makes the important point that to the Gunditjmarra, “Our ancestors are interpreted through our art, song and dance.” Art, song and dance are significant to contemporary Gunditjmarra as a means to transmit spirituality and connection to Country across generations. That is, these forms of creative expression, which can be symbolically and emotionally charged, give tangible expression to Gunditjmarra cultural traditions, knowledge and practices (discussed further at the end of Part 2.B).

## DEEP TIME HISTORY

By 40,000 years ago, all parts of the Australian mainland and Tasmania had been occupied; evidenced for example in the World Heritage listed properties of Kakadu National Park<sup>105</sup> and Willandra Lakes Region.<sup>106</sup> At the time of European colonisation of Australia in 1788, there were approximately 500 different Aboriginal nations or groups made up of people who spoke different languages – each having a diversity of cultural beliefs, practices and traditions.

Archaeological evidence indicates that Aboriginal people have been in western Victoria for at least 32,000 years.<sup>107</sup> However, this is likely to be a minimum age, given the evidence for Aboriginal peoples' presence at least 40,000 years ago in other parts of southern Australia.<sup>108</sup>

## ENVIRONMENTAL CHANGE

The last major eruption of the Budj Bim volcano – which is understood by Gunditjmarra to be when the Ancestral Creator revealed himself – occurred between 30,000 and 39,000 years ago.<sup>109</sup> It resulted in the Budj Bim lava flow, which began from its source point at the Budj Bim volcano and extended almost 50 kilometres southward; today part of the lava flow is below sea level as a consequence of sea level rise after 18,000, and before 6,000, years ago. The Budj Bim lava flow formed broad sheets spreading out; filling the low-lying areas, damming pre-existing valleys and disrupting prior streams (Part 2.A).<sup>110</sup>

Diversion and ponding eventually lead to the development of new streams, lakes and swamps – determined initially by the gradients and topography of the primary lava surface. Underground drainage also occurred through horizontal

98 Mathew 1905:95; Read 2007:66

99 Gunditjmarra 2010:7

100 Winda-Mara Aboriginal Corporation cultural display information panel, Heywood

101 Gunditjmarra 2010:7

102 Dean and Martin 2013

103 Winda-Mara Aboriginal Corporation cultural display information panel, Heywood

104 Winda-Mara Aboriginal Corporation cultural display information panel, Heywood

105 UNESCO World Heritage List. 'Kakadu National Park', <http://whc.unesco.org/en/list/147>

106 UNESCO World Heritage List. 'Willandra Lakes Region', <http://whc.unesco.org/en/list/167>

107 Richards et al. 2007

108 Hiscock 2008

109 Builth et al. 2008; Grimes and Rosengren 2012

110 Joyce and Webb 2003





2.33 Muldoons Fish Trap Excavation, 2008. Foreground (L to R): Peter Saunders and Nahtia Saunders.

porous zones within the lava flow – feeding water to or from the lakes and swamps.<sup>111</sup> Ultimately new stream channels formed, sediments built up and valley profiles changed; the result of an inverted topography whereby the lava is an elevated ridge higher than both the original and new valley floors.

Tae Rak (Lake Condah), Killara (Darlot Creek) and their associated wetlands did not fully establish until after the sea reached its present level.<sup>112</sup> Palaeobotanist Peter Kershaw, drawing on pollen records from Tae Rak and Lake Surprise, suggests that it was not until after 12,000 – and most likely around 7,500 years ago, with increasing annual rainfall and changes in water quality and vegetation, that conditions were right for “the major exploitation of Budj Bim resources”.<sup>113</sup> Kershaw’s argument is supported by findings from archaeological excavations undertaken at the Muldoons Trap Complex. Led by archaeologist Professor Ian McNiven, and in partnership with the Gunditjmarra, the investigations revealed evidence of water channel construction dating to at least 6,600 years ago.<sup>114</sup> Thus, the archaeological evidence suggests that Gunditjmarra aquaculture is at least this age. Based on the evidence from environmental studies, it is potentially more than a thousand years older.

### EARLIEST EVIDENCE FOR GUNDITJMARRA AQUACULTURE – MORE THAN 6,600 YEARS OLD

Evidence for the earliest practice of Gunditjmarra aquaculture is based on archaeological investigations, undertaken in 2008 at the Muldoons Trap Complex. The Muldoons Trap Complex is located on the central western margins of Tae Rak and along the edge of the Budj Bim lava flow; and within the Budj Bim (northern) component of the **Budj Bim Cultural Landscape**.

The Muldoons Trap Complex is one of six kooyang (eel) trapping complexes located across the west and south-western margins of the lake (Part 2.A).<sup>115</sup>

Excavations identified an early phase of basalt bedrock removal to create a bifurcated – or divided channel; which was subsequently in-filled with flood sediments incorporating stone artefacts and charcoal dated to at least 6,600 years ago. Many thousands of years later, basalt blocks were added to the sides of the channel to create multi-tiered walls within the past 800 to 600 years ago.<sup>116</sup> Archaeological investigation at the Muldoons Trap Complex provided the first direct insights into the antiquity of the elaborate fish-trapping and aquaculture system developed by the Gunditjmarra within the **Budj Bim Cultural Landscape**.

## GLOBAL HISTORICAL CONTEXT

### NEW UNDERSTANDINGS ABOUT CULTURAL LANDSCAPES

Many Indigenous and other societies across the globe pattern and ‘make’ their landscapes through the active and sustainable management of their environments and the resources they contain. Previous research has described the **Budj Bim Cultural Landscape** as an ‘eco-cultural landscape’ in which the ecology has been intensively manipulated to enhance the availability of natural resources. ‘Eco-cultural landscape’ is the phrase and concept used here in preference to bio-cultural landscape; because the latter references only ‘biodiversity’, while the former includes the broader concept of ‘ecology’.<sup>117</sup>

Eco-cultural landscapes are natural environments that have been manipulated by people to modify local ecologies such that they increase production of certain plant and animal

111 Grimes 2004

112 Head 1989; Kershaw 2013

113 Kershaw 2013:100-101

114 McNiven et al. 2012, 2015

115 Clarke 1991; Coutts et al. 1978; Van Waarden and Wilson 1994

116 McNiven et al. 2012, 2015

117 Context 2013a

resources. Such manipulations contrast with more extreme modifications involving radical transformation of local ecologies; including replacing endemic plant and animal communities with domesticated crops and animals, and terraforming landscapes to transform local hydrology for water storage (dams and reservoirs, for example) and water movement (irrigation channels, for example). In marked contrast, a key dimension of eco-cultural landscapes is that local ecologies are not necessarily radically altered but selectively and strategically enhanced. As such, eco-cultural landscapes bear the cultural imprint not just of human agency, but of individual societies strategically manipulating environments into culturally relevant and meaningful 'constructed landscapes'<sup>118</sup> and even 'domesticated landscapes'.<sup>119</sup>

The deliberate enhancement and maintenance of extant ecological processes means that management practices associated with these landscapes are likely to be sustainable and reversible.

## GLOBAL CONTEXT

All human societies are sustained by modifications of the 'natural' environment. For subsistence regimes, the degree and intensity of modification ranges widely across the world. At one end of the gradient of modification is the subtle manipulation of 'natural' ecosystems by small-scale societies – especially those living in tropical rainforests or Arctic tundras. At the other end of the gradient is the dramatic and large-scale removal of natural vegetation and its replacement with cultivated fields of domesticated crops irrigated by artificially constructed water channels, that underpins large-scale, state-based urban societies.

Traditionally, discussions of scales of human landscape modifications have been couched in terms of 'hunter-gatherers' versus 'agriculturalists'.<sup>120</sup> Over recent decades, the purported dichotomy between 'hunter-gatherers' and 'agricultural societies' has been challenged by anthropological and archaeological scholarship demonstrating that previous representations of both groups have been constructed to emphasise polarised cultural differences.

New understandings have emerged; revealing major cultural overlaps between so-called 'hunter-gatherer' and 'agricultural' societies in four key areas:<sup>121</sup>

- First, the social complexity of many 'hunter-gatherers' not only overlaps with, but in some cases rivals, that of many small-scale agricultural societies<sup>122</sup>
- Second, most if not all 'hunter-gatherer' societies manipulated the environment to some degree, and in some cases to such an extent that plants and animals were intensively managed in ways more commonly associated with small-scale agricultural societies. As such, the boundary between 'hunter-gatherers' and 'agriculturalists' is blurred<sup>123</sup>
- Third, 'hunter-gatherer' manipulations also include hydrological engineering
- Fourth, the movement to agriculture and the use and development of domesticated plants by many societies includes plant manipulation practices well known to many 'hunter-gatherers'.

An important outcome of the development of these new understandings of 'hunter-gatherer' social and ecological complexity is that agriculture no longer is seen as a natural progression from a hunting and gathering way of life. A more fruitful and meaningful approach to comparative studies is the selection of a particular set of cultural practices, such as manipulation of the environment, to explore the form and scale of such manipulations and transformations by different societies. Of particular interest is how humans have adapted to differing geographical contexts, variable resources and a constantly changing climate; reflected in the accumulated remains of human behaviour and continuing cultural traditions of interaction with the natural environment.

In this global context, the **Budj Bim Cultural Landscape** is an outstanding exemplar of a cultural landscape in which human interaction with the environment is an eco-cultural relationship of dynamic manipulation and management of natural resources. It is illustrative of the creation, modification and maintenance of an extensive hydrological engineering system that manipulated water flow in order to trap, store and harvest kooyang (eel) that migrate seasonally through the system. A comparative analysis of the nominated property with other sites on the World Heritage List and Tentative Lists; as well as sites in Australia and elsewhere, is provided in Part 3.2.

118 McNiven 2008

119 Erickson 2006; Yen 1989

120 Erickson 2006; Lightfoot et al. 2013

121 McNiven in Context 2013a:26-28

122 Keeley 1995:268; Price and Brown 1985; Roscoe 2002:159

123 Harris 1989; Smith 1998, 2001; Terrell et al. 2003:328



## GUNDITJMARA SOCIAL SYSTEM

At the time of arrival of the Europeans into the region in the early 19<sup>th</sup> century, the Gunditjmara aquaculture system was functioning and well-maintained. The system was an integral part of the Gunditjmara way of living. To understand the context of this system, the early-19<sup>th</sup> century Gunditjmara social and settlement systems are briefly outlined here.

### TERRITORY, LANGUAGE AND SOCIAL STRUCTURE

In the 19<sup>th</sup> century, as now, Gunditjmara Country covered a large area extending approximately 150 kilometres from east-to-west and up to 100 kilometres inland from the coast. They were speakers of a distinctive language (Dhauwurd wurrung) with four to five different dialects.<sup>124</sup> The Gunditjmara people comprised around 60 family-based clans spaced around 10-to-20 kilometres apart; and focused on resource rich areas along the coast and along inland creeks, lakes and swamps.<sup>125</sup> Based on the 1840s observations and recordings of George Augustus Robinson, Chief Protector of Aborigines in the Port Phillip District (Victoria) from 1839 to 1849, archaeologist Harry Lourandos argues that interactions between Gunditjmara clans tended to be on a coastal-inland (north-south) axis more than an east-west axis.<sup>126</sup> Movement of individuals between clan groups and clan territories took place for a range of social (including marriage) and economic (reciprocal access to resources, for example) reasons.<sup>127</sup> According to local pastoralist and amateur ethnographer James Dawson writing in 1881, but recalling the 1860s, families possessed an 'exclusive right' to particular tracts of land and associated resources through inheritance enforced by strict rules against trespassing.<sup>128</sup> Today, the Gunditjmara continue to associate and identify families with clan groups and territories.

### POPULATION SIZE

According to Chief Protector George Augustus Robinson, the population of an individual Gunditjmara clan was estimated to be minimally 40-60 people, with some clans numbering over 100 people.<sup>129</sup> As such, the Gunditjmara likely numbered 3,000-to-4,000 people in the 1830s.<sup>130</sup> This figure may be doubled if the impacts of disease from initial contact with Europeans are taken into account.<sup>131</sup> Lourandos points out that Gunditjmara population densities are atypical for Aboriginal Australia and are "at the highest end of the Australian Aboriginal scale."<sup>132</sup> He also suggests that while the

high population density probably reflects "the high resource potential of the region (especially the wetland and coastal environments)", it is also likely that "elaborate procurement systems and technologies", especially those associated with kooyang (eel) aquaculture, "also were contributing factors."<sup>133</sup>

### 'GREAT MEETINGS'

The mid- to late-19<sup>th</sup> century ethnographic records of Robinson and Dawson demonstrate clearly that the Gunditjmara participated in an elaborate system of inter- and intra-regional gatherings.<sup>134</sup> Intra-regional gatherings were between various Gunditjmara clans with attendees sometimes numbering in the hundreds. Inter-regional gatherings (referred to as 'great meetings' by Dawson)<sup>135</sup> were attended by hundreds and up to a thousand people from different groups across south-west Victoria. These gatherings were for a broad range of social, political, economic, trade/exchange and ceremonial reasons. They were scheduled to coincide with seasonal and localised abundances of food resources, such as the kooyang season in autumn and winter.<sup>136</sup> One such inter-regional gathering was hosted by the Gunditjmara and took place at the 'great swamp', which is most likely Condah Swamp – located to the immediate north of Tae Rak (Lake Condah).<sup>137</sup>

### HEREDITARY CHIEFS

Hereditary chiefs were a feature of Gunditjmara society; an expression of high population densities, the associated complex organisational structures required to regulate various scales of interactions between people and resources, to manage inter-regional gatherings, and operate large-scale kooyang facilities.<sup>138</sup> Archaeologist Thomas Richards points out that the heads of lineages in Gunditjmara society were termed 'Wung'it' and 'Gnern neetch' which Dawson translated as 'chief'.<sup>139</sup> Although chiefs were generally not a feature of Australian Aboriginal societies,<sup>140</sup> anthropologists and archaeologists with expertise in Gunditjmara ethnography agree that the Gunditjmara possessed an atypical social organisational structure for Australia and did indeed have hereditary male chiefs who were heads of corporate lineages and managers of clan assets (that is, resources and associated infrastructure such as kooyang aquaculture facilities), and who exercised considerable social, political, and economic power.<sup>141</sup>

124 Clark 1990a; Gunditjmara 2010; Lourandos 1977; Tindale 1974

125 Clark 1990a; Dawson 1881; Lourandos 1977

126 Lourandos 1977

127 Lourandos 1977

128 Dawson 1881:7

129 Lourandos 1977

130 Clarke 1990a; Lourandos 1977

131 Butlin 1983

132 Lourandos 1976:181

133 Lourandos 1976:181

134 Clark 1998a, 2000; Dawson 1881

135 Dawson 1881

136 Lourandos 1976, 1977

137 McBryde 1986

138 Lourandos 1977

139 Dawson 1881:vii; Richards 2013:175

140 Keen 2006

141 For example, ethnographers Dawson 1881 and Fison and Howitt 1880:277; and archaeologists Builth 2006, 2014; Lourandos 1977; and Richards 2013:196-199

## MARRIAGE SYSTEM

The Gunditjmara, like other Aboriginal groups in southwest Victoria, were polygamous – with chiefs having up to 10 wives.<sup>142</sup> Richards argues that Gunditjmara chiefs supported multiple wives through “wealth, based on the surplus food resources they produced, primarily from the substantial eel harvest”.<sup>143</sup> More broadly, Richards concludes that, as “Heads of corporate groups, Wung’it and Gnern neetch, were certainly powerful individuals, who had a considerable degree of control over the resources of their group, and in this region, the surpluses produced through kooyang aquaculture made these groups wealthy”.<sup>144</sup> It is in this context that much prestige was accrued by Gunditjmara chiefs, who hosted gatherings supported by eel surpluses – made possible by kooyang aquaculture. Both Lourandos and Richards suggest that such prestige would have fostered a competitive aspect to such gatherings and provided an impetus for the enhancement of kooyang aquaculture facilities through time.<sup>145</sup>

## GUNDITJMARA SETTLEMENT SYSTEM

The settlement system of the Gunditjmara immediately prior to British colonisation features stone-based domestic structures – often clustered; suggesting a degree of sedentism that is atypical for Aboriginal Australia. To a large extent, these atypical patterns reflect the high natural productivity of the region – especially wetlands and associated aquaculture facilities, which were artificially augmented by the sophisticated manipulation of local waterways and a landscape-scale system of kooyang (eel) aquaculture. Many stone house structures are located in close proximity to kooyang aquaculture facilities.<sup>146</sup>

### STONE HOUSE STRUCTURES

Within the **Budj Bim Cultural Landscape**, over 300 stone house structures have been documented.<sup>147</sup> The majority of these stone house structures are located in the surrounds of Tae Rak (Lake Condah)<sup>148</sup> and at least 10 have been recorded at Gorrie Swamp,<sup>149</sup> in the Budj Bim (northern) component of the nominated property. Over 50 stone house structures have been documented within the Tyrendarra (southern) and Kurtonitj (central) components – adjacent to Killara (Darlot Creek).<sup>150</sup>



2.34 Budj Bim (northern) component: Stone house after archaeological test excavation. Located immediately north of Muldoons Trap Complex, Tae Rak (Lake Condah). This house is one of over 25 stone houses in a 50-by-20 metre area that suggests a village site.



2.35 Budj Bim (northern) component: Digital reconstruction based on remains of stone houses

Stone houses are built with a low wall of basalt blocks of two-to-three courses (approximately 50 centimetres high) at the base, and U-shaped or C-shaped with a diameter of three-to-four metres. While the Gunditjmara and most archaeologists refer to these structures as ‘stone houses’,<sup>151</sup> they have also been termed ‘stone-walled huts’ and ‘stone huts’,<sup>152</sup> ‘stone-based huts’,<sup>153</sup> ‘dwellings’<sup>154</sup> and ‘stone circles’.<sup>155</sup> It is generally agreed that these stone structures are the bases of domed houses; with the stones used to support a wooden structure which was covered with branches and other vegetation as a ‘thatch’ and at times sealed (or surfaced) with clay. Most 19<sup>th</sup> century ethnographic sources associate these circular

142 Richards 2013:202-204

143 Richards 2013:203

144 Richards 2013:207

145 Lourandos 1988:159; Richards 2013:208

146 Coutts et al. 1978:33; Builth 2002:78-80, 246-252, 262-272

147 Victorian Aboriginal Heritage Register (Aboriginal Victoria)

148 Clarke 1991:31, 33

149 Johns cited in Westrop 1897:106; Williams 1988; Lane 2010

150 Victorian Aboriginal Heritage Register (Aboriginal Victoria)

151 Gunditjmara 2010; Bird and Frankel 1991; Builth 2014; Coutts et al. 1977; Richards 2013; Wesson 1981,

152 Williams 1988

153 Lane 2008

154 Builth 2014

155 Clarke 1994:4

stone structures with domestic occupation and refer to them as ‘stone houses’,<sup>156</sup> ‘shelters’,<sup>157</sup> ‘wuurns’ (‘dwellings’ and ‘habitations’)<sup>158</sup> and ‘mia-mia’ (huts).<sup>159</sup>

Seventeen stone houses have been excavated archaeologically across south-west Victoria. All excavated stone houses are within Gunditjmara Country; and thirteen are located within the **Budj Bim Cultural Landscape**.<sup>160</sup> Excavations have revealed features such as charcoal concentrations in the form of hearths and ground ovens (cooking features), and a range of artefacts such as flaked implements (scrapers, for example) made from flint or bottle glass. Bone fragments are rare in most stone houses. Some houses also contain a range of other objects obtained from Europeans, such as clay tobacco pipes and iron nails. As such, it is apparent that some stone houses were constructed and used after the arrival of European colonists. The **Budj Bim Cultural Landscape** contains numerous such post-European settlement houses, as the Budj Bim lava flow was used as a refuge by the Gunditjmara during the frontier war of the 1840s. Dated non-Indigenous objects from a stone house on Kurtonitj also indicate possible continuing use of stone houses in the 1850s and 1860s.<sup>161</sup>

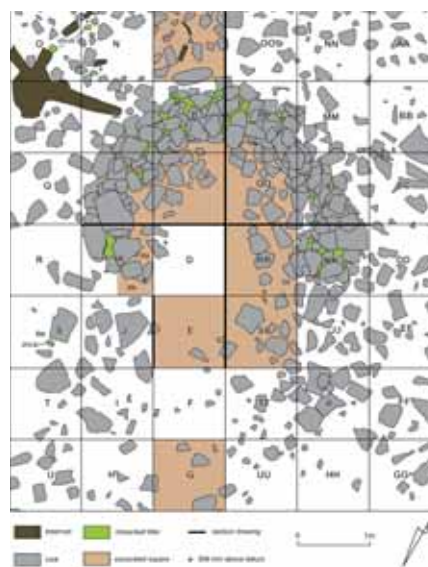
Two stone houses, both within the **Budj Bim Cultural Landscape**, have charcoal-based associated radiocarbon dates. One house produced ‘modern’ dates which probably indicate 19<sup>th</sup> century occupation. Archaeologist Elizabeth Williams obtained a radiocarbon date from the base of another stone house on the margins of Corrie Swamp – within the Budj Bim (northern) component, which calibrates to around 1,600 CE.<sup>162</sup> This site provides the best available evidence for pre-European settlement use of a stone house by the Gunditjmara. Archaeologist Sharon Lane, who undertook doctoral research on these stone houses, concluded that – in the absence of non-modern radiocarbon dates on charcoal from hearths/ovens, “no reliable pre-contact dates have been obtained from the stone-based hut sites and ... there is as yet no unequivocal evidence of pre-contact hut occupation.”<sup>163</sup> Despite this, archaeologists generally agree with Peter Coutts’s comment that “Archaeological investigations indicate that this form of site had its origins in the pre-contact period”.<sup>164</sup>



2.36 Kurtonitj (central) component: Stone house prior to archaeological excavation with Gunditjmara Indigenous Protected Area manager Levi Lovett, 2012



2.37 Kurtonitj (central) component: Stone house after completion of archaeological excavation, 2013



2.38 Kurtonitj (central) component: Archaeological excavation plan for stone house

156 Robinson, cited in Clark 2000:42

157 Chauncy 1878:234

158 Dawson 1881:10–11

159 Worsnop 1897:105

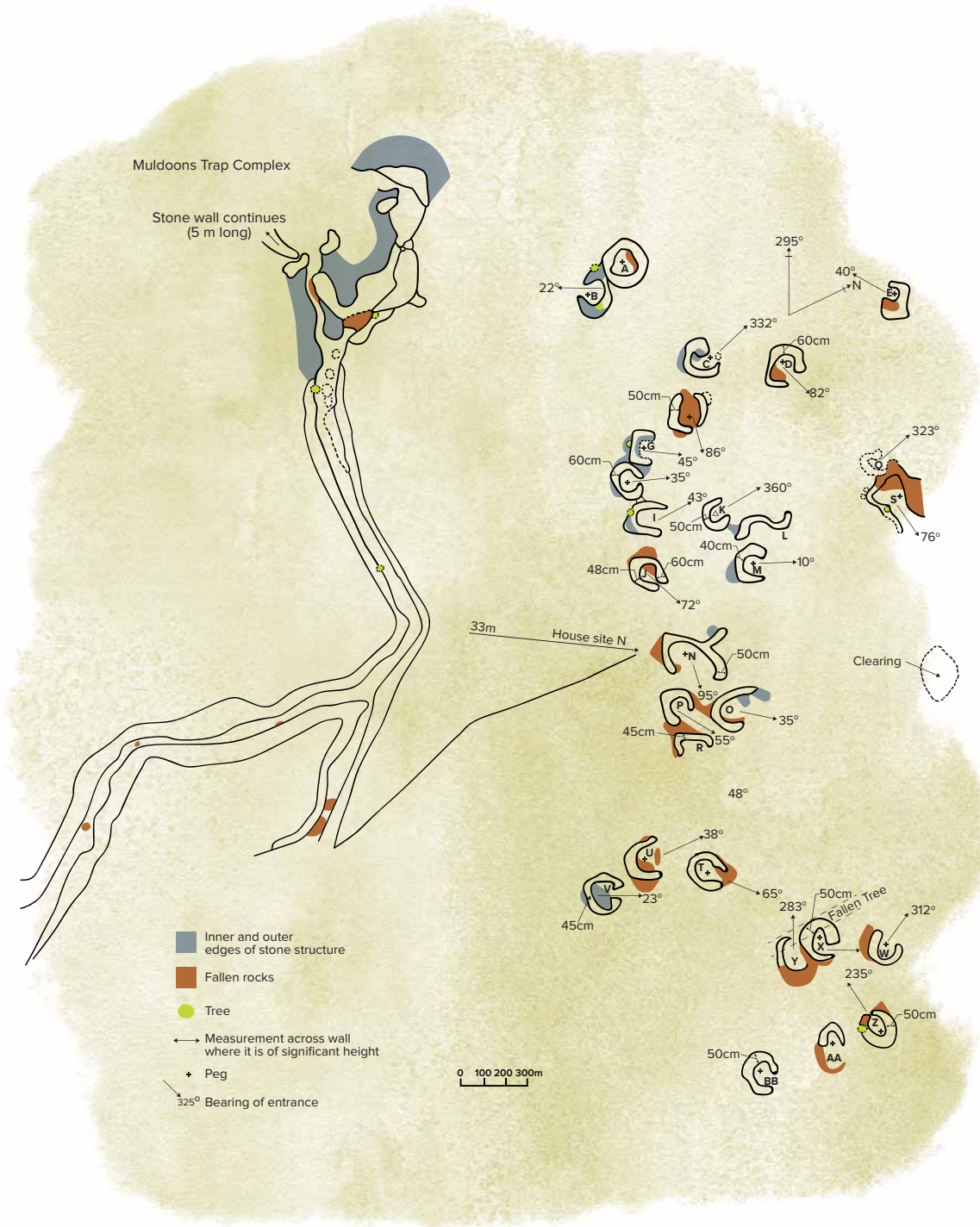
160 Coutts 1982; Coutts et al. 1977; Frankel 1991:Chap 7; Lane 2008; Wesson 1981; Williams 1988:139–151. See McNiven et al. 2017:2–5 for overview of stone house excavations.

161 McNiven et al. 2017

162 Williams 1988:145. CE = Common Era

163 Lane 2008:234; see also Bird and Frankel 1991:8; Wesson 1981:96

164 Coutts 1985:42, 62



2.39 Budj Bim (northern) component: Stone house site complex, possibly representing the remains of a village, located immediately north of Muldoons Trap Complex (partly shown on left of map)



Many stone houses occur in clusters, giving rise to questions of contemporaneity and the possibility of villages. For example, most (68%) stone houses recorded at Tae Rak (Lake Condah) occur in clusters of five or more sites with only 11 (14%) occurring as single sites.<sup>165</sup> One cluster at Tae Rak features 16 stone houses.<sup>166</sup> Another cluster adjacent to the Muldoons Trap Complex, features over 25 stone houses within a 50-by-20 metre area. Due to the limited dating available for stone houses, archaeologists have tended to take a conservative approach to interpreting stone house clusters as villages; and the contemporaneity issue remains unresolved.<sup>167</sup> However, Coutts and colleagues hypothesised that the large stone house clusters at Kinghorn to the immediate north of the nominated property represent 'hamlets' and that "it is tempting to argue that ... all structures were occupied contemporaneously" by hundreds of people.<sup>168</sup> Similarly, McNiven and colleagues stated that "from a theoretical perspective, the possibility of stone house clusters representing villages (that is, contemporaneous occupation of multiple houses within a confined area) is plausible given numerous nineteenth century ethnographic recordings of Aboriginal 'village' sites in southwest Victoria".<sup>169</sup> For example, in May 1841 Robinson recorded a 'village' on the edge of Condah Swamp immediately north of the **Budj Bim Cultural Landscape**:

The natives are still the undisputed occupants, no white man having been there to dispossess them. The people who occupy the country have fixed residences. At one village were thirteen large huts. They are warm and well-constructed. In the shape of a cupola or kraal, a strong frame of wood is first made, and the whole covered with thick turf with the grass inwards. There are several varieties. Those like a kraal are sometimes double, having two entrances; others are semi-circular. Some are made with boughs and grass, and last are the temporary screens. One hut measured 10 feet in diameter by 5 feet high, and sufficiently strong for a man on horseback to ride over.<sup>170</sup>

## SEASONALITY AND SEDENTISM

Stone houses are the primary domestic occupation site-type known in the **Budj Bim Cultural Landscape**. While permanent occupation of stone houses has entered popular discourse;<sup>171</sup> all available ethnographic and archaeological evidence points to short-term (possibly seasonal) occupation.<sup>172</sup> McNiven considers short-term usage over a period of weeks or months does not discount repeated use of houses and villages during the course of a single year, or over a series of years.<sup>173</sup> Lourandos concludes that for the Guditjmarra and south-west Victoria more generally, "These 'villages' formed part of a permanent network of base camps between which the population redistributed itself throughout the year."<sup>174</sup>

Lourandos, and more recently Builtth, conclude that the large-scale network of kooyang aquaculture facilities artificially increased food availability to support relatively permanent and sedentary occupation of the **Budj Bim Cultural Landscape** by the Guditjmarra.<sup>175</sup> In particular, penned kooyang "were available throughout all seasons and over many years".<sup>176</sup> As Builtth notes, the landscape was deliberately manipulated and engineered by the Guditjmarra as a 'landform for all seasons'.<sup>177</sup> Thus "there were no large scale seasonal movements" of people beyond inter-regional gatherings.<sup>178</sup> No evidence exists for broad-scale coastal-inland population movement and seasonal abandonment of areas. The Guditjmarra settlement system was about moving foci of activity; as opposed to large-scale population movements. In this regard, "Coastal areas were more productive in spring and early summer, and would have supported higher population densities during these seasons."<sup>179</sup> It is also probable that the **Budj Bim Cultural Landscape** supported higher population densities during the kooyang migration periods associated with autumn (the start of adult kooyang downstream migration), winter and spring rains.<sup>180</sup>

165 Clarke 1994:7

166 Clarke 1991:28

167 Bird and Frankel 1991; Clarke 1994; Lane 2008; Wesson 1981

168 Coutts et al. 1977:38

169 McNiven et al. 2017; see also Williams 1984 and Lane 2008:Chapter 4

170 Robinson 1841 cited in Kenyon 1928:150

171 Clarke 1994:11-12

172 Coutts 1985:52; Coutts et al. 1977:38; Gerritsen 2000:35; Lane 2008:Chapter 4; Wesson 1981:76

173 McNiven et al. 2017

174 Lourandos 1980:249

175 Builtth 2004; Lourandos 1980

176 Builtth 2002:253

177 Builtth 2004

178 Lourandos 1977:220

179 Lourandos 1977:220; see also Builtth 2004:178; Godfrey 1994; Richards and Johnston 2004

180 Builtth 2002:40, 83; 2004; Coutts et al. 1978:8-11



2.40 Titled 'The last gathering of the Portland tribe', this posed photo depicts a group of Gunditjmara in the late-1850s



2.41 Gunditjmara men dressed for a ceremony in 1859. The men have bones through their noses, body paint and leaves around their ankles that would rustle as they danced

## INVASION, DEFIANCE AND ENDURANCE

The continuity of connection to Country is a notable feature of early-colonial era Gunditjmara history. This connection was characterised by active opposition to the process of colonisation – initially through violent conflict, and subsequently via political and legal means.

First contact between the Gunditjmara and the European colonists occurred after 1810, initially between the Gunditjmara and whalers operating along the southern coastline and, after 1830, between Gunditjmara and newly-arrived settlers. It was not until more than 150 years later, in 1984, that the first portions of traditional Country were returned to the Gunditjmara under Australian law. Throughout this time – the period of Gunditjmara resistance to colonisation and of the Lake Condah Aboriginal Mission Station and its aftermath, Gunditjmara knowledge and practices of aquaculture and associated skills – including fibre weaving and basket making, endured.

### COLONISATION AND RESISTANCE (1830s – 1860s)

The first Gunditjmara to experience the presence of Europeans would have been coastal clans in the late-18<sup>th</sup> and early-19<sup>th</sup> centuries. Initial responses show Gunditjmara incorporating radically new concepts into their existing world view. According to James Dawson, the first Aboriginal groups – including Gunditjmara, in western Victoria to see a European ship interpreted it as a bird or a tree growing out of the sea.<sup>181</sup>

From the late-18<sup>th</sup> century, sealing and whaling vessels began sporadically visiting the Gunditjmara coastline. By 1838, there were at least seven whaling operations based in Portland Bay and a hundred men worked in the industry along Victoria's south-west coast.<sup>182</sup> The early sealing and whaling industry resulted in some level of conflict with Aboriginal coastal clans and the abduction and/or sexual assault of women.<sup>183</sup> The whaler William Dutton, for example, had settled permanently at Portland Bay by 1828 where he lived with his 'Aboriginal wife'. In 1834, Edward Henty arrived and established a large whaling

station in 1835. A place associated with this early whaling history is the Convincing Ground near Portland; at which the massacre of an estimated 60 members of the Kilcarer gundidj clan of the Gunditjmara took place in 1833-1834.<sup>184</sup>

Officially, the occupation of Gunditjmara Country commenced in 1836 when the Port Phillip District, a large area west of Melbourne, was opened up for settlement. Occupation of Gunditjmara Country occurred on two fronts. Initially, many of the area's first settlers – led by the Henty family, arrived by ship from Van Diemen's Land (Tasmania) and came into the area from the coast, bringing with them sheep and cattle. They were soon occupying large areas of Crown land – known as pastoral runs, for which they were charged a licence fee. Soon after arriving in the District in 1834, Edward Henty and his party were exploring inland and encountered some 'native huts' on the Palawarra (Fitzroy River), north-east of Tyrendarra, but here they only met with one Aboriginal man. Henty records in his journal that "the Men set the Dogs on" the man.<sup>185</sup> By 1840, a second front was opening up as settlers began arriving from Melbourne, Geelong, and New South Wales. Parties travelling the overland route could comprise 20 or so people, thousands of sheep, hundreds of cattle and numerous horses. It was common for such parties to be accompanied by Aboriginal guides. Many of these parties passed through Gunditjmara Country on their way to Portland and further west.<sup>186</sup>

Following the Convincing Ground massacre and the arrival of the Hentys, there was a period of almost 15 years of violent conflict between the Gunditjmara and settlers.<sup>187</sup> The conflict escalated to such an extreme that by 1842 it was dubbed the 'Eumeralla War'. The name arose from the persistent raids on James Hunter's Eumeralla Station by the Nillan gundidj, who were at the time living as a community of 500 people at Lake Gorrie.<sup>188</sup> The Nillan gundidj and other Gunditjmara clans were fighting a highly organised resistance campaign against the occupation of their Country. Gunditjmara used the Budj Bim lava flow or 'the Stones' (still largely inaccessible to Europeans, and especially those on horseback) as a place from which to launch attacks.

181 Dawson 1881, cited in Heritage Matters 2006:46

182 Wiltshire 1976:22

183 Heritage Matters 2006:45. A specific example of attacks on Aboriginal women in 1835 is given in Critchett 1990: 121 – two of Henty's men left the whaling establishment without permission "for the supposed Purpose of getting Native women".

184 Journals of George Augustus Robinson, cited in Clark 1995 and Critchett 1992, 1995

185 Critchett 1990: 121, citing Edward Henty, Daily Journal, Portland Bay, entry for 2 December 1834, MS 13472, State Library of Victoria. In December 1834, Henty recorded finding "a few Eel baskets" near the Fitzroy River – cited in Bassett 1962:303.

186 Kiddle 1962:36

187 Clark 1995; Context 2012a:20-23; Critchett 1992, 1995; Heritage Matters 2006

188 Gunditjmara 2010:34



Attacks by Gunditjmara appear to have been directed against settlers who occupied traditional meeting places and culturally significant sites, including Tae Rak (Lake Condah), or against settlers who had previously committed acts of violence against Aboriginal people.<sup>189</sup> Along with violence against settlers, tactics of the Gunditjmara included the theft and slaughter of sheep.<sup>190</sup> The settlers' response was to undertake mass reprisal raids, which were at times carried out against people who were innocent of any action themselves. It is estimated that there were approximately 300-350 Gunditjmara casualties during the War.<sup>191</sup>

There are two locations within the **Budj Bim Cultural Landscape** that are associated with massacres – one at Kurtonitj<sup>192</sup> and one at Killara (Darlot Creek), near Tae Rak, where 20 people died after being given flour laced with arsenic.<sup>193</sup> Such massacres continue to hold an important place in Gunditjmara history. In her book *Lady of the Lake*, Iris Lovett-Gardiner wrote of the sadness she felt to hear her family tell stories of massacre places and how she would not go to those places because of the sadness she felt and “because the blood of our old people was still on the ground there and we couldn't walk over that.”<sup>194</sup>

In 1843, barracks for a division of Native Police Corps were built at Mt Eckersley, located to the north of Heywood and 10 kilometres west of the **Budj Bim Cultural Landscape**.<sup>195</sup> The Corps initially comprised mostly men of Boonwurrung and Woiwurrung descent (whose Country lay in the area occupied by present-day Melbourne).<sup>196</sup> It was the stationing of these Aboriginal troopers under the command of a white officer(s) in the area that finally ended hostilities. The Corps were highly effective in quelling the violence and the worst of the hostilities – which had peaked in the mid-1840s, and which were over within a few years of their arrival.

By the end of the 1840s, Gunditjmara population numbers had decreased dramatically. This was not only a consequence of warfare; there were significant numbers of deaths resulting from venereal and respiratory disease, and low birth rates were contributing to the decline in population.<sup>197</sup> Nevertheless, the Gunditjmara remained defiant and continued to speak their language, hold ceremonies and live on Country.

## REMAINING ON COUNTRY

During the period of frontier violence and the Eumeralla War, many Gunditjmara continued to live on their Country – particular on Tungatt Mirring (Stone Country). This area was considered a safe place or haven, because the rugged, stony nature of the landscape made it difficult for outsiders to move through – either on foot or on horseback. As noted by historian William Westgarth in 1846, “these wild and rugged districts served as a secure retreat for the numerous aborigines who occupied that part of the country on the first approach of the depasturing colonists.”<sup>198</sup>



2.42 Cold Morning and his family camped at Portland. He was to become a Cart Gunditj clan leader during the Eumeralla War

Evidence for continued Gunditjmara occupation of Tungatt Mirring is found in the remains of ‘stone houses’.<sup>199</sup> They demonstrate continued occupation during the 1840s; as evidenced by the presence of European materials, such as glass and clay pipe, found within them. The most recent of these excavations – a stone house on Kurtonitj (central) component, contains material (flaked flint and bottle glass artefacts, as well as a cache of 34 iron nails) that points to occupation during the period of violent resistance to European pastoral invasion in the 1840s and possibly during the subsequent period of negotiated resistance during the 1850s and 1860s – and prior to the establishment of Lake Condah Mission in 1867.<sup>200</sup> As a consequence, there was likely to have been a heavy reliance on the aquaculture system to provide food for the Gunditjmara living in a confined part of their traditional Country and where they had limited access to other food resources.

189 Clark 1990a:238; Critchett 1992:90-108

190 Gunditjmara 2010:34

191 Critchett 1992:90

192 McNiven et al. 2017:190; Savill 1976:136

193 Gunditjmara oral history passed down from Hannah McDonald, cited in Heritage Matters 2006

194 Lovett-Gardiner 1997:17

195 Learmonth 1934:137

196 Fels 1988:120

197 Reports by medical doctor John Watton, cited in Clark 1990b:98. Watton's reports for the Mount Rouse Aboriginal Station are held in the Aboriginal Protectorate Weekly, Monthly, Quarterly and Annual Reports and Journals, 1839-1849 VPRS 4410, PROV.

198 Westgarth 1846:100, cited in McNiven et al 2017:20

199 McNiven et al. 2017

200 McNiven et al. 2017



2. 43 Stake-and-branch fishing weir, tributary of the Hopkins River (Robinson journal, 24 April 1841)

Throughout the 1840s, the Gunditjmara aquaculture system continued to operate. This is evidenced, for example, when in 1841 George Augustus Robinson described the operation of a kooyang (eel) weir and channels on the Hopkins and Moyne Rivers – locations within Gunditjmara Country and in close proximity to the **Budj Bim Cultural Landscape**.<sup>201</sup> For example, on 24 April 1841, near present-day Hexham, Robinson noted:

Crossed a creek connecting with the Hopkins. Here I observed a large were [weir] at least 100 yards in length and though the first I had seen, I was assured by its structure and its situation before I reached it that it was the work of the Aboriginal natives. I called to Pevay, my V[an] D[ieman's] L[and] attendant, who had passed it with one of the Tcharcote natives and pointed it out to him. He evinced surprise of it and the natives said it was made by black fellows for catching eels when the big water came and was by them called yere.roc. He said they got plenty eels and then showed us how they did it by biting their heads and throwing them on shore. This were [weir] was made of stout sticks, from 2 – 3 inches thick drove in to the ground and vertically fixed, and other sticks interlaced in an horizontal manner. A hole is left in the centre and a long eel pot made of basket or matting is placed before it and into which the eels gather and are thus taken. It is probable that 2 or 3 such pots are set in large weres [weirs]. This were [weir] must have been 100 yards long, at least, and made with wings or corner pieces at the ends thus, or similar to it.<sup>202</sup>

A few days later on 30 April 1841, Robinson recorded another large stake and branch weir in the district of the 'Port Fairy river' (Moyne River) that "was the property of a family":

From conversations I had with the natives it appears that this was a favourite spot. It was the home of several families. [blank] took me to several spots where he had resided and had worns or huts. He also took me to a very fine and large weir and went through, with several other of the natives, the process of taking eels and the particular spot where he himself stood and took them. I measured this weir with a tape, 200 feet; 5 feet high. It was turned back at each end and 2 or 3 holes in the middle was left for placing the eel pots as also one at each end. The eel pots are placed over the holes and the fisher stands behind the yere.roc or weir and lays hold of the small end of the arrabine [gnarraban] or eel pot. And when the eel makes its appearance he bites it on the head and puts it on the lingeer or small stick with a knob at the end, ... or, if near the bank, he throws them out. The fishing is carried on in the rainy season. Arrabine or eel pot made of bark or plaited rushes with a willow round mouth and having a small end to prevent the eel from rapidly getting away.<sup>203</sup>

Elsewhere, Robinson reported that eel baskets were 'from 9 to 12 feet [2.7-to-3.7 metres] in length'.<sup>204</sup> More generally, Robinson noted that:

These yere.roc or were [wiers] are built with some attention to the principles of mechanics. Those erected on a rocky bottom have the sticks inserted in a grove<sup>205</sup> made by removing the small stones so as to form a grove. The were [wier] is kept in a straightline. The small stones are laid against the bottom of the stick. The upright sticks are supported by transverse sticks, resting on forked sticks... These sticks are 3, 4 or 5 inches [5 cm to 13 cm] in diameter. Some of the smaller were [wiers] are in the form of a segment of a circle. The convex side against the current.<sup>206</sup>

201 McNiven and Bell 2010: 87-88, 92-97

202 Clark 1998a:145, cited in McNiven and Bell 2010:94

203 Clarke 1998a:162-163; Kenyon 1928:147, cited in McNiven and Bell 2010:94

204 Kenyon 1928 :157, cited in McNiven and Bell 2010:95

205 Robinson originally wrote 'hollow' but crossed it out and replaced it with 'grove'. McNiven and Bell 2010:195

206 Clark 1998a:163, cited in McNiven and Bell 2010:94-95



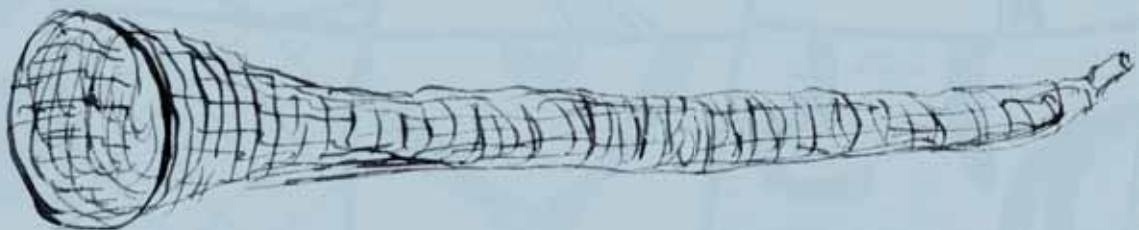
2.44 Section of a large stake, branch and basket fishing weir, Moyne River, during use. Note eels (kooyang) being removed from baskets (gnarraban) and strung on a nearby holding stick (lengeer) (Robinson journal, 30 April 1841)



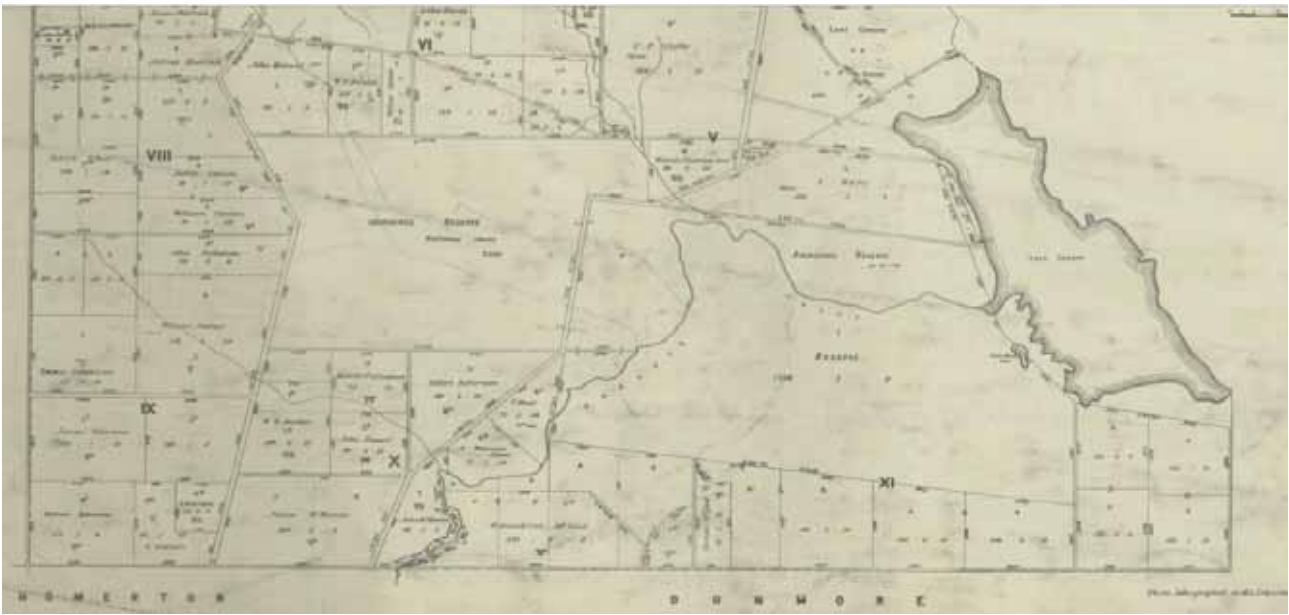
2.45 Detail of front of a large stake, branch and basket fishing weir, Moyne River (Robinson journal, 30 April 1841)



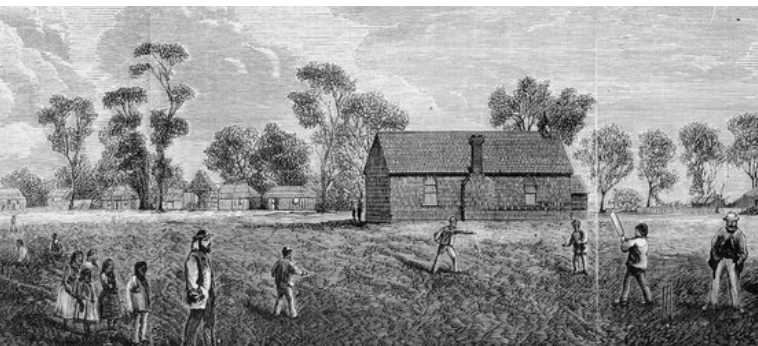
2.46 Detail of back of a large stake, branch and basket fishing weir, Moyne River (Robinson journal, 30 April 1841)



2.47 Eel basket (gnarraban), a series of which were used in association with a stake and branch fishing weir, Moyne River (Robinson journal, 30 April 1841)



2.48 Plan of the Parish of Condah (circa 1889) showing the additional land of 1,710 acres set aside in 1885 to safeguard Guditjmara hunting grounds



2.49 Budj Bim (northern) component: Lake Condah Aboriginal Mission Station, circa 1874

### THE MISSION (1867 – 1918)

The Lake Condah Aboriginal Mission Station (the Mission) was established in the 1860s. The creation of a mission system was a response to the conflicts over land and resources between the European settlers and Aboriginal people over the preceding decades. Following an official inquiry by the Victorian Government in 1858 into the injustices to Aboriginal people, the Victorian colonial government invited missionaries to form reserves where Aboriginal people could be protected and provided with an education.<sup>207</sup>

The decision to establish the Mission at Lake Condah followed the refusal by the Guditjmara from the area to leave their Country. The Guditjmara name for the site of the Mission is 'weeok' (place of fish), which was a traditional camping place of the Kerrupjmara clan.<sup>208</sup> Weeok and Tae Rak were part of the Condah Hills 'run' taken up in 1850 by Cecil Pybus Cooke.

Cooke had allowed Guditjmara to continue to camp at Tae Rak (Lake Condah) and employed them on his station.<sup>209</sup>

In 1866, 2,043 acres (827 hectares) were excised from Cooke's station and set aside as an Aboriginal Reserve. The reserved land included the extensive aquaculture facilities on the south-western margins of Tae Rak (Part 2.A). The following year the reserve was gazetted and building commenced. The Anglican Mission to Aborigines managed the Mission until 1875, followed by the Moravian Mission until 1913 – after which the Victorian Government's Board for the Protection of Aborigines assumed control. In 1885, a further 1,710 acres (692 hectares) of Tungatt Mirring (Stone Country) were added to the Mission lands with the intent of safeguarding Guditjmara hunting grounds.<sup>210</sup> An additional 38 acres was reserved in 1886, adjoining the margins of Tae Rak.<sup>211</sup>

During its early years the Mission was home to approximately 70 Guditjmara, reaching its maximum number of 117 people in 1889. At the height of the Mission's development in the 1880s, there were 26 stone or timber cottages, a mission house, storeroom, school and church. Both Guditjmara and non-Aboriginal children attended the school, and the local community worshipped at St Mary's Church (located on the Mission), which had opened in 1885.<sup>212</sup> In 1918, the Victorian Government closed the Mission, though Guditjmara people continued to visit or live there, occupying the buildings until the late-1950s and worshipping at the church until 1957.

207 Report of the Select Committee on the Aborigines (Vic.) 1858-59

208 Evidence of this occupation site was revealed in the 1980s during archaeological excavations beneath the former Mission Dormitory Building. Rhodes and Stocks 1985

209 Cole 1984:14; Heritage Matters 2006:91, citing Kiddle 1961:123

210 Cole 1984: 26. The original reservation, described as a 'Site for the use of the Aborigines' appears in the *Victorian Government Gazette*. 25 March 1885, p.936. The rationale for this additional land reservation in 1885, noted in the annual report of the Board for the Protection of the Aborigines in 1885, was to increase the area available to the .Aborigines as hunting grounds (BPA Annual Report 1885, Government Printer, Melbourne, p.9)

211 *Victorian Government Gazette*, 12 November 1886:3172

212 Guditjmara 2010:43

While the Mission was established by Europeans to provide accommodation and impose their culture on the Gunditjmara living there; it also provided a means by which the Gunditjmara could both retain ties with their traditional land and culture – including aquaculture practices, and adapt to conditions created by European settlement.<sup>213</sup>

For the Gunditjmara, life on the Mission was subject to restrictive rules, including Government regulations such as the requirement to apply for a permit to travel off the reserve, to obtain work and to marry. It was commonplace for these permits not to be granted. Some children were removed from their parents' home and housed within a separate children's dormitory for 'education' purposes. At the Mission, education included the teaching of Christianity, English and basic numeracy. Gunditjmara cultural practice and language were forbidden. Physical violence and withholding of rations were regularly exercised as punishment for breaking the rules of the Mission.<sup>214</sup>

For men such as Ernest Mobourne, who had been evicted from the Lake Condah Mission to Lake Tyers Mission in south-eastern Victoria, the conditions for Aboriginal people on the Victorian missions were comparable to slavery.<sup>215</sup> In 1907, Mobourne wrote to the Victorian Government on behalf of the Aboriginal people at the Lake Condah Mission, requesting that plans for their removal be reconsidered. He wrote:

Our fathers were brought here some forty years back to form a mission station here and were then informed that if they built houses, fenced in and cleared the reserve, the mission station would remain theirs for them and their children's children ... our fathers have passed peacefully to rest and we would wish to live and work and be buried beside them.<sup>216</sup>

Aunty Iris Lovett-Gardiner, writing of the history of her family, has described how little traditional knowledge was passed down as a result of the Mission period in Gunditjmara history, and how much was lost. She wrote:

I never heard them speak the language when I was young, even in the bush. It was more or less gone by that time. We never had that when we grew up. So it was sort of a different era by the time I was born [1926]. But in our hearts we knew who we were and where we came from.<sup>217</sup>

Similarly, Aunty Euphemia Day recalled:

On the mission they weren't allowed – you lost your song and dance, the language that was taken away from us so we weren't allowed to speak your language ... My grandmothers were both in their nineties and I never ever heard them speak any language because they knew the consequences of that action.<sup>218</sup>



2.50 Lake Condah Mission: School (left), church (centre) and mission house (right)



2.51 Lake Condah Mission: Houses built by the Gunditjmara



2.52 Residents at St Mary's Church

213 Context 1993:16

214 Gunditjmara 2010:39-41

215 Ernest Mobourne to His Excellency Sir Arthur Stanley, Governor of Victoria, 6 March 1916, Australian Archives (Victoria), Series B337, 507, 1996T/2448, cited in Critchett 1998:178

216 The Aboriginals of Lake Condah to Members of the Cabinet, 2 July 1907, Chief Secretary's Incoming Correspondence, A5318/1907, VPRS 3992, Unit 1457, PROV, cited in Critchett 1980:211 and Weir 2009:10

217 Lovett-Gardiner 1997:17

218 Cited in Weir 2009:10



2.53 Possum skin cloak made at Lake Condah Mission in 1872. The design of 50 panels is resonant of a swamp viewed from above, including details of rushes, eel traps and other features of the Budj Bim Cultural Landscape.



2.54 Aunty Iris Lovett-Gardiner wearing a possum skin cloak

### CONTINUING GUNDITJMARA AQUACULTURE (1860s – 1920s)

Despite the restrictions on freedom that were part of Mission life, the Gunditjmara continued to access and use the aquaculture system. This continuing practice is evidenced, for example, in the Mission records provided to the Board for the Protection of Aborigines, that show that Gunditjmara occupants, in the late 1860s and 1870s, spent a day or two a week hunting or fishing for eels and blackfish.<sup>219</sup> For the Mission's purposes, this was to supplement food supplies, but for the Gunditjmara it was an opportunity to continue their aquaculture traditions (and probably other cultural practices) away from the gaze of the missionaries.

Gunditjmara knowledge of the aquaculture system is also evidenced in the designs made on traditional possum skin cloaks. Such cloaks served a utilitarian purpose (protection from cold) as well as being used in ceremonies. A cloak produced at the Mission in 1872 (and now held by the Museum of Victoria) is made up of 50 possum skin panels – each of which has been decorated with designs etched into the skin, coloured using ochres and sealed with kangaroo fat.<sup>220</sup> The designs themselves illustrate aspects of Gunditjmara Country, including representations of kooyang (eel) aquaculture.<sup>221</sup>

In March 1878, and at the end of an exceptionally dry Australian summer, a correspondent for the *Portland Guardian* newspaper wrote about coming across a camp of “half a dozen” Gunditjmara at Tae Rak (Lake Condah). At that time, the lake was the driest it had been in over 30 years. The author writes that the Gunditjmara spoke of:

...the unfairness of white people coming and taking the fish without giving them something in this way, they said we get our living by catching the fish and they are on our reserve and you have no right to them, if we went into a whitefellows paddock and took his sheep, as many as we wanted, you soon put us in gaol. ...[The eels] were in thousands and as you put your foot down you felt you were up to the knees in a living moving mass... [The Gunditjmara] in half an hour had two flour bags full to the brim. The quantity of fish must be seen to be appreciated, they are there in the thousands...<sup>222</sup>

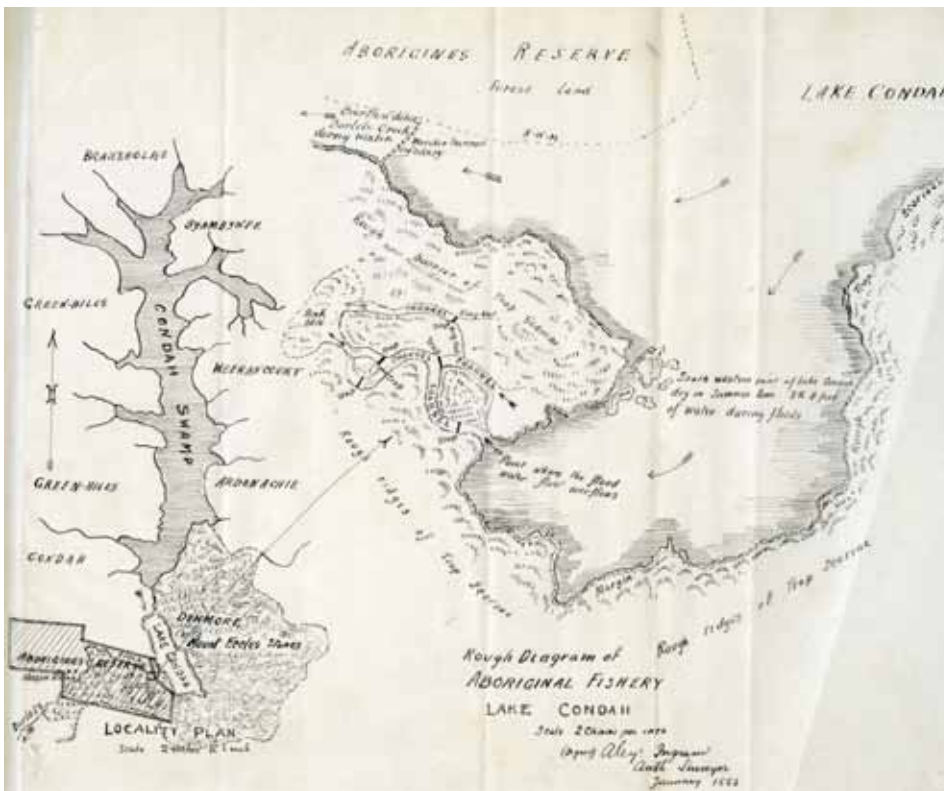
It is also clear that there were Aboriginal people living on Country – beyond the confines of the Mission, who continued to harvest kooyang. For example, Thomas (Tommy) White (circa 1832-1892), a Gunditjmara man who was born and lived in the area of Condah Swamp, “made a living by catching eels, which he kept in wooden cages in the river until he had

219 Brazier 1874; Shaw 1871a, 1871b, 1873 – cited in Richards 2011:77 and Gunditjmara 2010:40

220 The cloak was made by five men, including James Lovett. Thomas Day, cited in Gibbins 2010:140

221 Gunditjmara 2010:12-13.

222 *Portland Guardian* 1878



2.55 Map of 'Lake Condah Aboriginal Fishery' produced by Alexander Ingram in 1893. Ingram describes four different structures used to control water flow and capture kooyang. These comprise: 'large barricades' or 'barriers' constructed 'with strong forked sticks, horizontal spars and vertical stakes strengthened with piles of stones'; 'stone barricade' or 'traps' constructed along the channels and have 'timber built in so as to form openings of 1 to 2 feet wide'; 'channels' made 'by removing loose stones and portions of the more solid rocks between the ridges and the lowest places'; and 'low wing walls' that functioned 'to concentrate the streams' associated with the channels.<sup>227</sup>

sufficient for a trip to Branxholme<sup>223</sup> where he would sell them. The use of wooden cages was likely an adaptation of a traditional Gunditjmara practice of holding live kooyang in ponds.<sup>224</sup>

The Gunditjmara aquaculture system on Tae Rak continued to be actively utilised into the 1890s as documented in the visits by Government Surveyor Alexander Ingram (1841-1913) between 1887 and 1893. Gunditjmara Elders, including Tommy White, accompanied Ingram on some of these visits. In a document titled 'Aboriginal Fishery, Lake Condah' dated 24 May 1893, Ingram and antiquarian RE Johns described the aquaculture facility which is located less than three kilometres west of the Mission (known today as the Muldoons Trap Complex) and within the Mission reserve lands.<sup>225</sup> They wrote:

At the south western point of Lake Condah, near where it overflows down the valley of Darlots' Creek, along the margin of the rough stony ground until it joins the permanent stream at the Condah Mission Station, is situated one of the largest and most remarkable aboriginal fisheries in the western district of Victoria.

The position has been very well chosen, as the small bay shown on accompanying plan is the lowest point on the western side of the Lake. Owing to the peculiar formation (open trap scoriae) along the eastern, southern and part of the western sides of the Lake the water sinks very rapidly and becomes very low during summer months but as it receives the drainage of a large extent of Country the water rises very quickly during winter, and first overflows into the scoriae at the point named, which has been facilitated to some extent by the channels formed by the

aborigines for trapping eels trout &c., these channels have been made by removing loose stones and portions of the more solid rocks between the ridges and lowest places, also by constructing low wing walls to concentrate the streams.

At suitable places are erected stone barricades with timber built in so as to form openings of from 1 to 2 feet wide, behind these openings were secured, long narrow bag nets made of strong rushes, the mouths of these nets were from 2 to 3 feet wide secured to a hoop, these were of various lengths some 10 feet long the principal portion being about 4 or 5 inches in diameter, the smallest ends were made to open so that the eels &c could be easily extracted.

There are numerous smaller fisheries constructed in suitable places in small bays and outlets where the water sinks into the trap scoriae down along the margin of the Valley of Darlots' Creek. Across this valley at suitable places were erected large barricades, constructed with strong forked stakes, horizontal spars, and vertical stakes strengthened with piles of stones, openings were also left in these.

Many of the aborigines residing at the Lake Condah Mission Station still construct similar barricades for trapping purposes, and large quantities of fish are secured during winter, more particularly since an outlet drain has been made in connection with the drainage of Condah Swamp.

Alex. Ingram Authorised Surveyor 24-5-1893  
R.E. Johns Esq. P.M. Hamilton<sup>226</sup>

223 *Hamilton Spectator* 1892 cited in Richards 2011:72

224 Richards 2011:81

225 Richards 2011:78

226 Alex. Ingram and R.E. Johns, 'Aboriginal Fishery, Lake Condah', 24 May 1892, m.s., Worsnop Papers, South Australian Museum Archives, cited in Richards 2011:68-69, 74.

227 Richards 2011:77

The continuation of kooyang aquaculture is also demonstrated by the maintenance of knowledge and skills associated with the weaving of baskets. An early Mission period photograph shows a Gunditjmara woman – Jennie Green – weaving in front of the entrance to a wood-slab house. These Gunditjmara craft skills continued to be practised until at least 1910; evidenced by a kooyang basket made at this time and now held in the collections of the South Australian Museum. Gunditjmara Elder, basket weaver and teacher Aunty Eileen Albert traces a direct line of descent to Jennie Green.

It is clear that throughout the more than 50 years that the Mission operated, the Gunditjmara living there continued to harvest and eat kooyang. These activities were possible to a large extent because the Tae Rak (Lake Condah) aquaculture complexes lay within the boundaries of the Mission reserve. In addition, related craft skills, such as kooyang basket making and possum skin cloak making and decoration, continued to be practiced – despite the restrictions imposed by Mission authorities. It is clear that some Gunditjmara, such as Tommy White, did not live on the Mission during this time and continued to harvest kooyang and established a small-scale commercial enterprise by selling the kooyang to local non-Indigenous people.

### AFTER THE MISSION (1920s – 1950s)

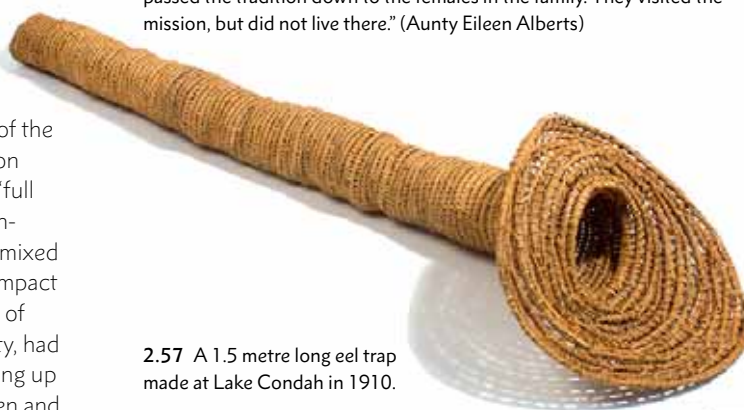
Prior to the Mission closing in 1918, many Gunditjmara people had been forced to leave following the passage of the Colony of Victoria's *Aborigines Act 1886*. This legislation distinguished between Aboriginal people described as 'full blood' and 'half caste' (that is, mixed Aboriginal and non-Aboriginal parentage), and required all Gunditjmara of mixed descent under the age of 35 to leave the Mission. The impact of this action, intended by the government as a process of assimilating Aboriginal people into the wider community, had profound impacts on Gunditjmara; including the breaking up of families, the forced removal of mixed-descent children and the viability of the Mission. Reflecting on the effect of the Act, Damein Bell says:

Being graded as half-caste is one of the most demoralising and dehumanising acts that government and society can do.<sup>228</sup>

Most of the evicted Gunditjmara lived in tents or humpies (basic huts or shelters) on vacant land close to the Mission, or on nearby properties where they found employment as farm labourers, timber cutters or domestics. A few families moved to the settlement of Little Dunmore – several kilometres south-east of the Mission, where a Gunditjmara man, Angus King, the eldest son of 'King William', had briefly occupied a land selection around 1905, but had been forced to forfeit the site due to failure to make the required payments. Gunditjmara men such as Alfred McDonald, Harry Connolly, James



2.56 "This is my great, great, great Grandmother Jennie who married Thomas Green ... Circa 1865/70 ... This hut was at Wallacedale where she lived with her husband and two sons. Jennie was a basket maker who passed the tradition down to the females in the family. They visited the mission, but did not live there." (Aunty Eileen Alberts)



2.57 A 1.5 metre long eel trap made at Lake Condah in 1910.

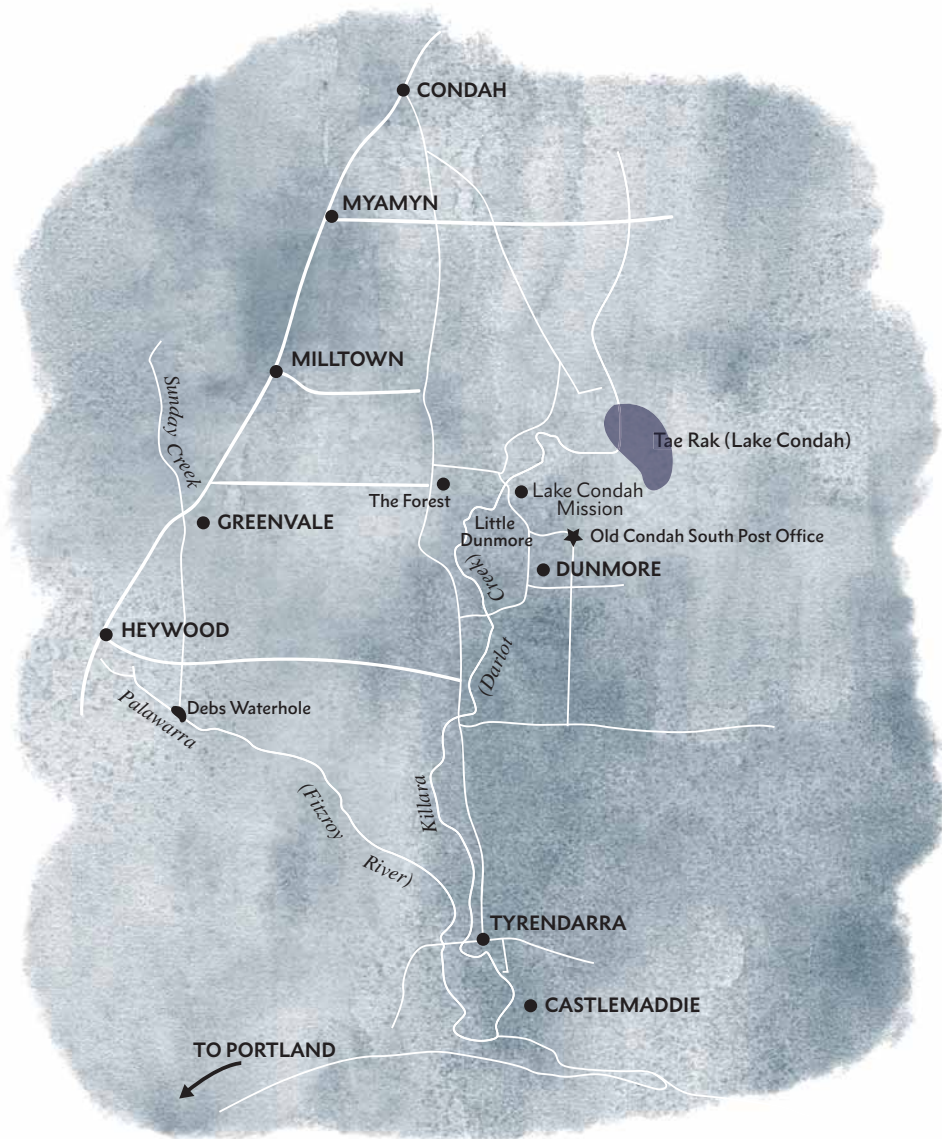
Lovett, Alex Taylor and John King petitioned the Victorian Government for land grants (in particular, calling for a subdivision of the Mission's 300 acre 'Lake paddock'), but their petition was turned down.<sup>229</sup> Again in 1918, the Gunditjmara unsuccessfully petitioned the Government – this time seeking the return of the Mission reserve lands for use as a farming co-operative.<sup>230</sup>

The forced removal of people from the Mission after 1886, and following its closure in 1918, resulted in the establishment of a number of satellite settlements in the vicinity. According

229 Builth 2009; Gunditjmara 2010:44-45; Savill 1976. See also letter of Ann Bon to the Portland Guardian, 18 October 1923:3

230 Weir 2009:10, citing the archived website: [www.abc.net.au/misionvoices/lake\\_condah/mission\\_history/default.htm](http://www.abc.net.au/misionvoices/lake_condah/mission_history/default.htm) accessed 20 October 2005





**2.58** Locations where Gunditjmara lived following the closure of Lake Condah Mission. Daryl Rose 1988, redrawn by The Designery

to Iris Lovett-Gardiner,<sup>231</sup> the Hart, Albert and Carter families lived at Little Dunmore,<sup>232</sup> Jim Arden at Heatherleigh, the Clark family at Woodlands, the King family were at The Forest and the Lovett family at Greenvale. However, by the 1920s, some people also began returning to live in the former Mission buildings and hold services in St Mary's Church.<sup>233</sup> In 1939, there were 70 people in residence at the former Mission, some remaining there until 1957 when they were finally forced out by the Government.<sup>234</sup>

Along with the continued occupation of the former Mission, the satellite settlements that sprung up around the Mission are an important part of 20<sup>th</sup> century Gunditjmara history. They tell the story of both removal from – and ongoing connection to – the Mission. Many of the settlements were formed around houses relocated from the Mission and such houses became

centres of home and family life for generations. Memories of family and social life during this time tell of visiting families at the Mission and the different settlements, as well as camping, picnicking or travelling through Country. A number of families also moved far away from their Country after the Mission closed – including into Melbourne, due to fears of having their children taken from them.<sup>235</sup>

Although each local settlement produced its own food, and shared it with other family and friends, there was never enough food.<sup>236</sup> As Barry Fary stated: "We still had to hunt for survival."<sup>237</sup> In addition to hunting rabbits, robbing beehives, shooting kangaroo or black swan, the Gunditjmara continued to fish and harvest kooyang (eels). Following winter floods

231 Lovett-Gardiner 1997:29

232 Eileen Alberts recalls, "Little Dunmore was where the Alberts family lived. After the marriage of Angus Alberts and Frances Carter, the Carter family moved to Little Dunmore as well. The Kings moved close by."

233 Weir 2009:10

234 Context 2012b:29

235 The 'Stolen Generations' refers to the phenomenon of the government-sponsored removal of children from Aboriginal families. The children were institutionalised and/or fostered or adopted by non-Indigenous people. See Gunditjmara 2010:56-58

236 Gunditjmara 2010:50

237 Gunditjmara 2010:50

along Killara (Darlot Creek), they spent time repairing the aquaculture complexes at Tae Rak (Lake Condah), harvesting kooyang and sharing the catch among the community.<sup>238</sup>

Many people who continued to live on the former Mission or at the nearby settlements have strong memories of catching and eating kooyang. For many Gunditjmara, attending the Sunday service in St Mary's Church (at Lake Condah Mission) was an important occasion. After the service, the families would typically sit down to a cooked Sunday dinner – often with roast rabbit or kooyang acting as the centrepiece. Great Aunty Lyall Foster said that kooyang could be either baked in the oven or fried in a pan on the stove.<sup>239</sup>

Aunty Tina Saunders recalled how catching kooyang was important for providing her family's food, but also for making an income.

Dad [Chris Saunders] used to just get the fish – the eels and the toupon from the fishtraps because they were still working then. Mainly the eels. He sold them at the pub, up at Hamilton, Portland.<sup>240</sup>

Aunty Rene Onus also recalled, "For food we had the lovely fish from the Mission. Creek Eels and Toupon. That's Mountain Trout."<sup>241</sup> Aunty Tina Saunders said that her family would catch fish and kooyang – "we'd eat eels". She also observed that in the 1980s the kooyang were "still there".<sup>242</sup> Similarly, Aunty Rene Onus said, "we used to catch eels".<sup>243</sup> Aunty June Gill tells a story of her father [Samuel Alexander Peacock Lovett], who liked to eat kooyang, catching a huge kooyang at the traps near to the Mission.<sup>244</sup>

Aunty Phemie (Euphemia) Day gave the following account of the hard times experienced by her family, and of a method used to catch kooyang.

Well, it was survival at its utmost and at its best. The men there all went fishing – there was no work there. If it looked like a storm coming up you'd see them with their worms and every man – Uncle Bobby Carter, Dad [Herbert Lovett], Uncle Jacko and Uncle George Fary, Uncle Monty, the Dunmore Mob – they'd all come over to the old Mission and they'd fish and at that time they'd make what is called a bob. They'd have cotton, they'd thread it with worms and it became a clump, like a fish and they'd put it in the water and the eel would grab it and they would throw him up on the bank – he couldn't get away from it. There would be one fellow there catching the eels and



2.59 Picnic at Tae Rak (Lake Condah), circa 1920. Bessie Carter is at the right of the photograph



2.60 (L-R) Uncle Norman Lovett, Aunty Connie Hart and Uncle Roderick (Mookeye) Alberts with their catch of kooyang, circa 1930s



2.61 Donald Alberts as a boy catching eels with a spear made from reed, circa 1950. At rear are (L-R): Angus Alberts, Andy Arden, unknown, Moya Harrison, Rita Wilson, Lorna Cousins and Frances Carter.

238 Gunditjmara 2010: 51

239 Aboriginal History Programme 1988:29. Demolition of St Mary's Church in 1957 by the State government was intended to finally force Gunditjmara off the Mission land.

240 Oral testimony in Aboriginal History Programme 1988:31. 'Toupon' is the name for Mountain trout.

241 Oral testimony in Aboriginal History Programme 1988:31

242 Oral testimony in Aboriginal History Programme 1988:31

243 Oral testimony transcript 1983

244 Oral testimony in Aboriginal History Programme 1988:39



another putting them in a bag. They made this big box and they bored holes in it and sunk it with stones in the Willows down the Mission and they'd keep all these fish in there. The next day they divide the fish up and they'd sell eels for 2/- and toupon for 3/- and they'd all have enough to sell and share and that's the way it was with them. In those days, bread and butter was very cheap and they'd buy it with those 2/- selling the eels and fish.

Aunty Maude Pepper also talked about a place where kooyang were caught.

I'd like to say something about the Mission, Uncle Jim Arden, he used to have his fishery down near the bridge and during the winter the first flood would come down the Lake and the toupon used to come down well he'd had his net there. The Ardens, the Fosters, and all the Kings families and all from Dunmore and all my family, they'd go up on top, there's a drain that connects the creek running around by the Stones and there was natural fishing traps up there, and they used to set their nets up there, and after the second flooding the eels used to come down. And that was their living. They used to catch all the fish and share it around.<sup>245</sup>

Aunty Iris Lovett-Gardiner spoke of a technique for catching eels that was an adaptation of the traditional puungyaart (grass) woven kooyang baskets.

Some of the men would use the old stone weirs at the lake [Tae Rak]. They'd make a fish trap out of wire and set it between the stones where the waters kept running. They'd get eels like that.<sup>246</sup>

Uncle Theo Saunders described the practice of sharing food in the following way.

It was all share, share, share, tucker, everything. If somebody had a feed up the road and they knew you or somebody down the road was battling, they'd be down.<sup>247</sup>

## SUMMARY

The early to mid-20<sup>th</sup> century was a challenging time for the Gunditjmara. It was the time when children were forcibly removed from their families; when Gunditjmara men fought for Australia in the two World Wars – where they were recognised as equals on the battlefield, but non-citizens when they returned to their Country; when families established lives for themselves away from the confines of the Mission; and when land become increasingly privatised and as a consequence restricted Gunditjmara access to their Country. Throughout this time many, but not all, Gunditjmara continued to live on their Country. The maintenance of the Gunditjmara aquaculture system continued, in particular the Tae Rak complexes, enabling the continued harvesting of kooyang – a food source that was particularly important for Gunditjmara families during times of scarcity.

## LOSS OF COUNTRY (1960s-1970s)

Me and dad, old Uncle Wally, when they used to fish, they used to use the fish traps up the top, up there near the old lakes. Then they got too old. So they started rebuilding the ones down the bottom of the mission there ... and we fished that. Probably me and Donny Alberts would have been the last two who actually worked those. I was the last one to work them, you know, I was working them right up to the early sixties [1960s]. We'd go down and build them up, me and Donny, during the summer when there was no water. Make our nets, set everything up. (Theo Saunders)<sup>248</sup>

The 1960s and 1970s continued to be challenging times for the Gunditjmara. The last of the Mission reserve had been subdivided and sold to non-Gunditjmara people, which meant that all of the Gunditjmara aquaculture facilities on the margins of Tae Rak (Lake Condah) were located on private land. The Gunditjmara were for the most part unable to access these aquaculture complexes. To catch kooyang (eels), they were dependent on the use of small areas of public or Crown land along Killara (Darlot Creek) and Palawarra (Fitzroy River) and the good will of non-Indigenous land owners. Uncle Denis Rose describes his experience of catching kooyang during this period.

As a teenager (late 1960s and early 70s) I spent lots of time catching eels and to a lesser extent, Toupon and Blackfish. We lived in Heywood, 100 metres from the Fitzroy River and usually fished just behind the house. When the eels were running we (cousins and friends) also used to camp at Debs Waterhole at the junction of the Fitzroy and the Sunday Creek. We would usually take sleeping bags or blankets and camp the night at Debs, then bring home a good feed of eels.

245 Oral testimony in Aboriginal History Programme 1988:75. Australia's currency until 1966 comprised pounds, shillings and pence: 2/- stands for two shillings.

246 Lovett-Gardiner 1997: 131

247 Gunditjmara 2010:51

248 Theo Saunders, cited in Lovett-Gardiner 1997: 129

Generally we used fishing rods with worms, snails or rabbit for bait. Occasionally someone might bring a wire net (made from chicken wire), which we would drop in a rabbit or hare for bait.

We had extremely limited access to fishing spots along the lava flow because most was on private property. We fished Killara (Darlot Creek) usually in the warmer months (late summer and early autumn) and we would get dropped off at the bridge over Coustley's Road (north of Kurtonitj) or the Homerton Bridge (south of Kurtonitj) and fish beside the bridge/s, which was Crown land – a water reserve or similar. Fishing was usually very good and we usually used fishing rods with worms, snails, rabbit for bait.

I never went fishing around Tae Rak mainly because the water levels were non-existent due to the drainage in the Lake. Although the lake was Crown land (a Game Reserve then a Nature Reserve) we never felt we could access this area and it was also surrounded by private property. For example, the Muldoon's aquaculture system was on private property. We rarely wandered around the aquaculture systems.

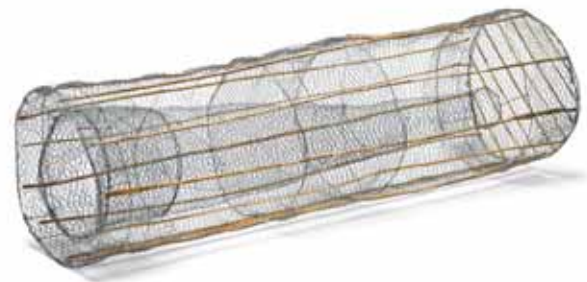
The most productive eel fishing occurred when we went 'bobbing' for eels. This usually happened in early autumn and from memory we used to fish when the moon was full and the weather warm. I assume that this was when the majority of eels started to head down the river to the estuary. There was a spot just north of the Homerton Bridge which was on private property that we did most of this fishing. We would go with my father [George Rose] and his brothers/brothers-in-law and we did this a few times each year, I reckon they must have got permission to access the property.

Bobbing was a fairly straightforward method of catching eels. The Uncles would fill the foot of a stocking with worms or snails and tie it with a piece of string about two or three metres in length and attach it to a long stick (not a fishing rod). They would then drop the stocking into the water and the eel would latch on to the stocking with its teeth and they would then flick the eel over their shoulder where two or three of the cousins would run around and pick them up. From memory I reckon on a good night we could easily catch 30 or 40 good size eels. The eels would be distributed to family and friends who wanted a feed, I don't recall anyone catching then selling them. It was also a good social occasion as we didn't get to sit around with the men very often, and they would tell stories of catching plenty of eels and other fish when they lived at the Lake Condah Mission and talked of selling rabbits and eels to supplement income during those days.

Around the mid-1970s we used to occasionally go eeling on the Fitzroy River south of the Tyrendarra Indigenous Protected Area on private property. My brother-in-law was a friend of the owner and we only used fishing rods. (Denis Rose, 5 September 2017)



2.62 Uncle Denis Rose fishing near Homerton Bridge – a location where he used to catch kooyang (eel) as a young man



2.63 "This is the first big-size one I have ever made. We used to watch my father and older brothers make them. When we were kids, we'd make little ones about a foot long, we'd put them in the water and sometimes we'd catch things, eels and fish. Making them from wire was quicker and the wire didn't rot away". (Ivan Couzens)

Aunty Iris Lovett-Gardiner said of eating kooyang,

Good old feed, eel. You'd clean it, cut it into rings and fry it. It's got a very fine bone so you've got to be careful. We used to pick the bones out with our fingers for the babies to have a feed of eel. They loved it.<sup>249</sup>

Despite the difficulties of access to Country, the 1960s and 1970s were also times of activism by Aboriginal people across Australia. It was during this period that Aboriginal people were first allowed to vote in State elections (1962) and included in the Commonwealth Census (1967, following a National Referendum).<sup>250</sup> It was also the period when calls for social justice and land rights strengthened.

249 Culture Victoria. 'Eel trap', <http://www.culturevictoria.com/stories/aboriginal-culture/meerreeng-an-here-is-my-country/eel-trap/>

250 Australian Electoral Commission. 'Electoral milestones for Indigenous Australians', <http://www.aec.gov.au/indigenous/milestones.htm>

## DOCUMENTING AQUACULTURE THROUGH ARCHAEOLOGY (1970s ONWARD)

From the mid-1970s, archaeologists began to undertake field surveys and research on the physical remains of Gunditjmara aquaculture and settlement across the Budj Bim lava flow. The increasing involvement in this work by Gunditjmara, as expert knowledge holders and field survey assistants, enabled them to revisit and reconnect with the aquaculture system on private, non-Gunditjmara owned land.

### *Budj Bim (northern) component*

In 1976-1977, the Victoria Archaeological Survey (now Aboriginal Victoria) began detailed mapping of kooyang (eel) trapping structures at Tae Rak (Lake Condah) as part of its summer field school season under the direction of archaeologist Peter Coutts.<sup>251</sup> This work followed on from earlier publications on eel traps in the region by ethnologist and historian Alfred Kenyon and museum curator Aldo Massola; expanding on the pioneering research of archaeologist Harry Lourandos.<sup>252</sup> It resulted in the recording and partial mapping of four aquaculture complexes. In 1980-1981, the Victoria Archaeological Survey work continued during the summer field school season directed by archaeologist Mike McIntyre, with additional fish traps recorded Tae Rak and Killara (Darlot Creek).<sup>253</sup> In 1985, the Victorian Archaeological Survey mapped the southern shore of Tae Rak using aerial photographs.<sup>254</sup>

In 1989, the Victoria Archaeological Survey established the Lake Condah Project as a special Aboriginal Cultural Heritage Program funded by the Victorian Government. The project was a direct response to: "The significance of these sites nationally and to the local Kerrup-Jmara Aboriginal community, along with the establishment of cultural tours run by the Aboriginal community from nearby Lake Condah Mission complex." The heritage and tourism value of the sites "placed pressure on the Victoria Archaeological Survey to assist in the development of a management plan, assess its significance internationally, and provide better interpretive material."<sup>255</sup>

The program had four key outcomes.

- First, production of two 1:5,000 topographic maps to allow detailed mapping of sites in relation to topographic (lava) features and water level
- Second, publication of a comprehensive management plan<sup>256</sup>
- Third, innovative use of Geographical Information Systems combining the 1985 photogrammetry topographic

mapping with site record data to create a digital elevation model as a basis for 3-Dimensional hydrological modelling of one of the five fish trap complexes (Tae Rak 1) on the southwest margins of the lake (Part 2.A)<sup>257</sup>

- Fourth, archaeologist Anne Clarke undertook a detailed re-survey of sites in the region in 1989-1990, resulting in an inventory of 78 aquaculture structures.<sup>258</sup> Clarke's field survey work was undertaken with Gunditjmara representatives Linda Saunders and Christina Saunders.<sup>259</sup>

In 2002, Geographical Information Systems modelling of water levels and site functioning was undertaken for another aquaculture complex (Tae Rak 3).<sup>260</sup> In 2004 and 2006, the then Aboriginal Affairs Victoria archaeologist Tom Richards carried out detailed mapping of the Muldoons Trap Complex – located on the central western margins of the Tae Rak flood zone.<sup>261</sup> This mapping included the creation of a detailed digital elevation model as the basis of 3-Dimensional modelling of water levels and site function. Richards' research was undertaken collaboratively with the Gunditjmara.<sup>262</sup> In 2006 and 2008, archaeologist Ian McNiven from Monash University, in partnership with the Gunditjmara, carried out detailed mapping and excavation of selected parts of the Muldoons Trap Complex.<sup>263</sup> This research, undertaken as a summer school field unit for undergraduate students at Monash University, represented the first attempt to date one of the Tae Rak aquaculture complexes through excavation and radiocarbon dating.



**2.64** Damein Bell (left) and archaeologist Ian McNiven (right) discuss progress on excavations at the Muldoons Trap Complex with Monash University students

251 Coutts et al. 1978

252 Coutts et al. 1978:1; Kenyon 1912; Massola 1968; Lourandos 1976

253 Coutts 1982:39-40

254 Van Waarden and Wilson 1994

255 Van Waarden and Wilson 1994:83

256 Context 1993

257 Van Waarden and Wilson 1994

258 Clarke 1991, 1994

259 Clarke 1991:Acknowledgements

260 Skabe 2002

261 Richards 2011, 2013:129, 131

262 This work eventually formed part of Richards' PhD thesis – Richards 2013

263 McNiven et al. 2012, 2015; McNiven and Bell 2010



2.65 Budj Bim (northern) component: Uncle John King showing John Evans, right, and Rex Morgan, left, Aboriginal fish traps, April 1985

2.66 Budj Bim (northern) component: Tae Rak (Lake Condah), circa 1978

2.67 Budj Bim (northern) component: Field survey of channel, Tae Rak (Lake Condah), 1989

2.68 Budj Bim (northern) component: Andrea Warren at stone house structure, Tae Rak (Lake Condah), 1989

2.69 Budj Bim (northern) component: Christina Saunders at stone house structure, Tae Rak (Lake Condah), 1989

2.70 Budj Bim (northern) component: Linda Saunders at stone house structure, Tae Rak (Lake Condah), 1989



### ***Kurtonitj (central) component***

In the mid-1970s, the Ettrick fish trap, which is located adjacent to the boundary of the Budj Bim Indigenous Protected Area, was visited and researched by Lourandos.<sup>264</sup> This site was revisited and mapped by the Victorian Archaeological Survey summer school in 1976-1977.<sup>265</sup> In the late 1990s, archaeologist Heather Builth, as part of her doctoral research, documented 'eel trap complexes' and used digital elevation models and Geographic Information Systems to model water levels in order to understand the functioning of the aquaculture complex (Part 2.A).<sup>266</sup> In 2006, archaeologist Sharon Lane undertook site survey work on the Kurtonitj property which by then was owned by the Gunditjmara. Denise Lovett (a senior Gunditjmara woman with Aboriginal Affairs Victoria's South West and Wimmera Cultural Heritage Program) and Matt Butt (Land Management Co-ordinator, Winda-Mara Aboriginal Corporation) worked with Lane to record the aquaculture features.<sup>267</sup>

### ***Tyrendarra (southern) component***

In 1988, the Victorian Archaeological Survey carried out site surveys directed by archaeologist Nora van Waarden of what subsequently formed the Tyrendarra Indigenous Protected Area.<sup>268</sup> Four fish traps features were recorded; with a further seven reported by the property owner. In 1996, the Victorian Archaeological Survey archaeologist Petra Schell carried out further surveys of the property and recorded eight fish traps and one channel feature.<sup>269</sup> In the late 1990s, Builth undertook site surveys in the northern parts of the Tyrendarra (southern) component.<sup>270</sup> Builth's research resulted in hydrological modelling of 17 stone wall dams/weirs and seven channels (Part 2.A). In 2001, and after purchase of the property by the Winda-Mara Aboriginal Corporation, archaeological survey work by Lane was aimed at "the future development of a tourism concept plan" by the Gunditjmara.<sup>271</sup>



**2.71** Sandra Onus and Christina Frankland at the protest site in Portland, 1980

## **RECLAIMING COUNTRY: RETURN OF TRADITIONAL LANDS**

The 1960s to the 1980s in Australia was a period of intense activism by Aboriginal people; aimed at achieving recognition, respect and 'land rights' – the return of traditional lands or Country.<sup>272</sup> For their part, the Gunditjmara Traditional Owners started on an ultimately successful path of political advocacy and legal action, the result of which was the return of parts of the former Lake Condah Mission lands in 1984 and, following Gunditjmara native title determinations in 2007 and 2011, the return of additional significant areas of Country. On those lands returned to the Gunditjmara, their right of access to and use of areas of land and water were recognised,<sup>273</sup> including the margins of Tae Rak (Lake Condah) where Gunditjmara aquaculture complexes are located.

Political action commenced against the mining company Alcoa in 1980 after the company proposed construction of an aluminium smelter in the town of Portland. The proposed smelter would have resulted in the destruction of numerous Gunditjmara cultural heritage places and sacred sites. Among these sites were a burial ground and a path for Gunditjmara spirits to reach Deen Maar (Lady Julia Percy Island). A protest was led by Sandra Onus and Christina Frankland, who established a protest camp and blockade at the site. Alcoa unsuccessfully tried to prosecute the protestors for trespassing. After six months, the camp was broken up by police and construction of the smelter commenced. The fight for Gunditjmara heritage moved to the courts when Frankland and Onus took legal action against Alcoa for breaches of the *Victorian Archaeological and Aboriginal Relics Preservation Act 1972*. This action was eventually settled out of court.<sup>274</sup>

264 Lourandos 1976; see also Massola 1968

265 Van Waarden and Simmons 1992:18

266 Builth 2002

267 Lane 2006

268 Van Waarden 1990

269 Schell 1996

270 Builth 2002

271 Lane 2001:1

272 Weir 2009:11

273 Weir 2009:21

274 A detailed account of the Onus v Alcoa case is presented in Weir 2009:13-18





2.72 Laura Bell, Frederick Lovett's daughter, walks through the ruins at Lake Condah Mission. The Mission has been in the ownership of the Gunditjmara Traditional Owners since 1984.

Part of the settlement package was proposed to be the return of the three remaining parcels of land at Lake Condah to the Gunditjmara.<sup>275</sup> However the Bill drafted to enable this was blocked in the Victorian Legislative Council.<sup>276</sup> The Victorian Government then requested that the Australian Federal Government utilise its powers to make laws in relation to Aboriginal people (an outcome of the 1967 National Referendum). As a result, the Australian Government passed the *Aboriginal Land (Lake Condah and Framlingham Forest) Act 1987*. The Preamble of the Act include the following statements:

- iii the traditional Aboriginal rights of ownership, occupation, use and enjoyment concerning that part of Condah land are deemed never to have been extinguished;
- iv that part of Condah land has been taken by force from the Kerrup-Jmara Clan without consideration as to compensation under common law or without regard to Kerrup-Jmara Law;
- vi that part of Condah land is of spiritual, social, historical, cultural and economic importance to the Kerrup-Jmara Community and to local and other Aboriginals.<sup>277</sup>

275 The land parcels comprised the Mission cemetery, the road providing access to it, and an area of 43 hectares where the mission buildings were located. Weir 2009:10-11

276 The Legislative Council, or Upper House, blocked the proposed legislation. The Liberal and National parties did not support the bill and as they controlled the votes in the Legislative Council, the bill could not pass.

277 Extract from *Aboriginal Land (Lake Condah and Framlingham Forest) Act 1987*, Preamble. Tae Rak (Lake Condah) was part of the Kerrup-jmara clan estate. The Kerrup Jmara Elders Aboriginal Corporation was established to manage the returned lands. The organisation was dissolved circa 1999 and management passed to the Winda-Mara Aboriginal Corporation.

Sandra Onus reflected on the highs and lows of the early days in *Onus v. Alcoa*, and how that action helped develop the Gunditjmara's confidence in their efforts for recognition of native title a decade later:

*We ended up with having to go to the High Court, because we lost every case in Victoria. We didn't have a hope. And we were advised actually not to go to the High Court, by our own legal representatives. They'd thought we'd make it three judges out of seven, well we ended up with seven out of seven, which was a total surprise to us.*<sup>278</sup>  
(Aunty Sandra Onus)

The land was officially returned to the Gunditjmara at a handover ceremony at the Lake Condah Mission in 1988.<sup>279</sup> Denise Lovett talked about the 1988 return of the Mission and cemetery. For Denise, it was,

*...recognition of traditional ownership, connection to Country, the importance of cultural heritage ... everyone was just so happy. I guess a lot of the Elders they were just over the moon about the settlement, the recognition, but the hand back of the Mission that a lot of them were raised on, that's where their childhood was.*<sup>280</sup>

The 1988 return of traditional Country was an important step in recognising the collectively held rights of the Gunditjmara. As Damein Bell stated,

*[The settlement that was reached with the State of Victoria and Alcoa] really did a lot for our community in terms of developing things. We bought some farms and had tourism at the Mission.*<sup>281</sup> (Damein Bell)

278 *A Will to Fight, Message Stick*, ABC1 TV, Sydney, 27 April 2008. Cited in Weir 2009:17

279 Weir 2009:12-14

280 Weir 2009:14

281 Cited in Weir 2009:15

The agreement was to have lasting significance for the Gunditjmara. A Victorian Government funding package associated with the return of lands enabled the purchase of nearby farming properties and money for feasibility studies associated with, for example, the restoration of water to Tae Rak and the viability of a tourism enterprise. The State and Federal governments also purchased culturally significant properties in the area and returned them to the Gunditjmara over the following two decades (Table 2.7; Map 2.6).

In 2003, Tyrendarra was gazetted as an Indigenous Protected Area in recognition of its cultural and natural heritage significance. This was followed by the declaration of two further Indigenous Protected Areas – Kurtonitj in 2009 and Lake Condah in 2013 which, with the addition of other land parcels, have been consolidated into the Budj Bim Indigenous Protected Area in 2017. In 2004, the Budj Bim National Heritage Landscape was one of the first places to be included on Australia's National Heritage List.<sup>282</sup> The listing incorporates Tyrendarra, Budj Bim National Park, Muldoons, Vaughns, Allambie and the Lake Condah Mission.

In 1996, Gunditjmara lodged a native title claim in accordance with the Australian Government *Native Title Act 1993*. Rather than litigation, the parties to the claim agreed to a process of mediation. In 2005, evidence was heard on Country and the process included visits to important places in Gunditjmara Country, including: the Convincing Ground, Little Dunmore, Greenvale and Tae Rak (Lake Condah). The (Federal) Court sat at the offices of the Winda-Mara Aboriginal Corporation in the town of Heywood, where it was announced that a consent determination would be pursued. It took eleven years before a determination was reached.



2.73 Kurtonitj (central) component: Official declaration of the Kurtonitj (now part of Budj Bim) Indigenous Protected Area, November 2009. From left – Gunditjmara Traditional Owners Damein Bell, Aunty Amy Saunders and Aunty Eileen Alberts with Bruce Rose, Director Indigenous Policy, Australian Government.



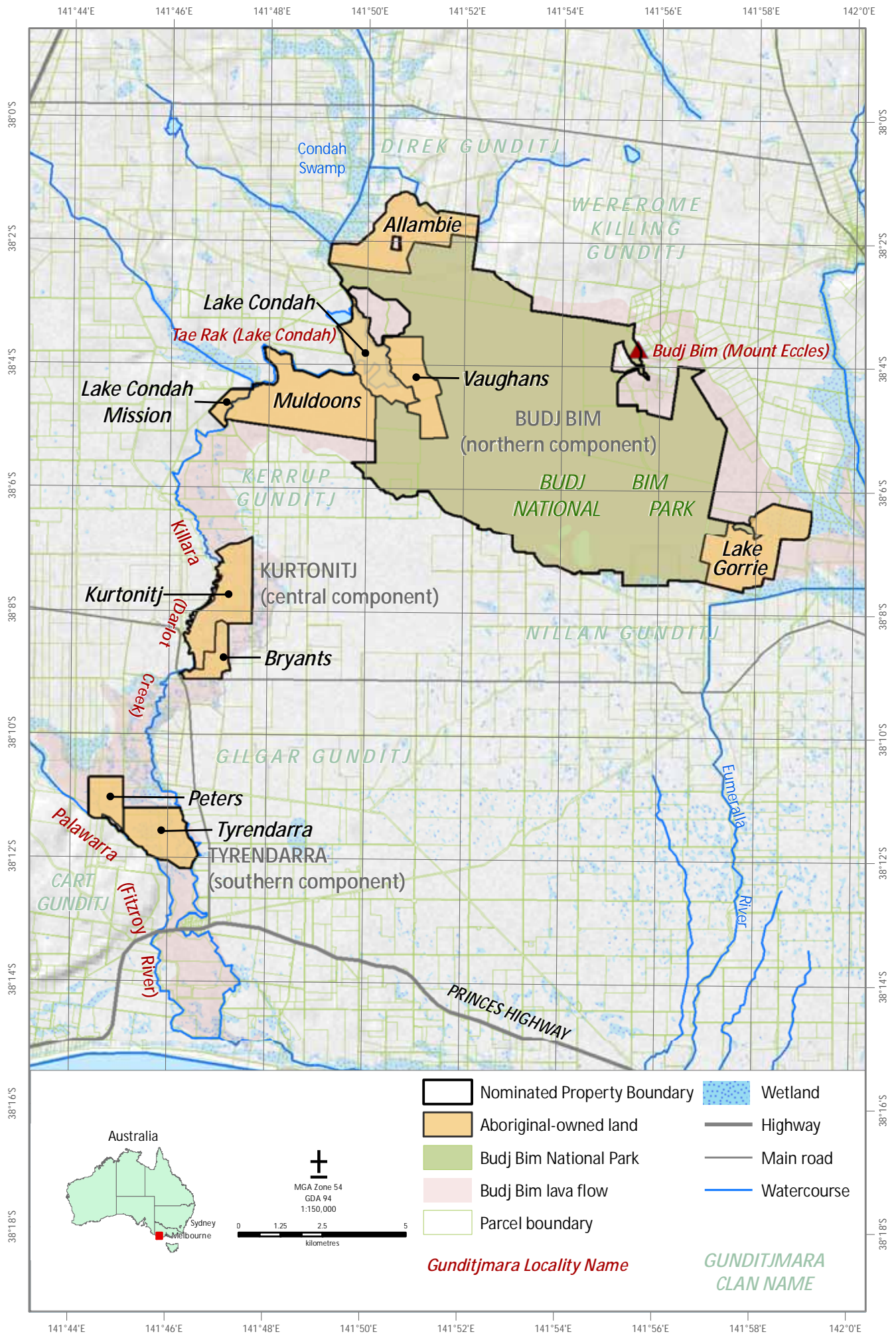
2.74 Kurtonitj (central) component: Community celebration to mark the official declaration of the Kurtonitj (now part of Budj Bim) Indigenous Protected Area, November 2009

NAME OF PROPERTY	DATE	AREA (HA)	CURRENT OWNER/ MANAGER	PARISH / SHIRE
<b>Budj Bim (northern) component</b>				
Lake Condah Mission	1988	40	GMTOAC*	Parish of Condah / Glenelg Shire
Allambie	1988	480	GMTOAC	Parish of Ardonachie / Moyne Shire
Muldoons	1994	660	GMTOAC	Parish of Condah / Glenelg Shire
Vaughans	1995	270	GMTOAC	Parish of Dunmore / Moyne Shire
Lake Condah	2008	290	GMTOAC	Parish of Condah / part Glenelg and Moyne Shires
Lake Gorrie	2010	503	GMTOAC	Parish of Macarthur / Moyne Shire
<b>Kurtonitj (central) component</b>				
Kurtonitj	2006	353	GMTOAC	Parish of Homerton / Glenelg Shire
Bryants	2013	103	GMTOAC	Parish of Homerton / Glenelg Shire
<b>Tyrendarra (southern) component</b>				
Tyrendarra	1999	248	Winda-Mara**	Parish of Homerton / Glenelg Shire
Peters	2008	129	GMTOAC	Parish of Homerton / Glenelg Shire
		TOTAL	3,085 (approximate)	

\* Gunditj Mirring Traditional Owners Aboriginal Corporation \*\* Winda-Mara Aboriginal Corporation

**TABLE 2.7 Budj Bim Cultural Landscape:** Ownership, approximate size, management and location of the Aboriginal-owned land parcels (Source: GMTOAC 2011). Owning title to these lands means that Gunditj Mirring Traditional Owners Aboriginal Corporation and Winda-Mara Aboriginal Corporation are able to direct the cultural, economic and natural resource management of their land and control access.

282 Australian Government. 'National Heritage Places - Budj Bim National Heritage Landscape', <http://www.environment.gov.au/heritage/places/national/budj-bim>



MAP 2.6 Budj Bim Cultural Landscape: Aboriginal-owned land parcels



2.75 The Australian Federal Court convened in March 2007 at the base of Budj Bim for the Gunditjmara native title consent determination. (L-R) Georgina Redfern, Eugene Lovett, Justice Tony North, Christina Saunders, John Lovett

2.76 (Right) Elder Eileen Alberts giving evidence to Justice North. "It has been a long hard battle and in some instances it set family against family but the one and the most important of all things that it did for us as Gunditjmara people was to really want to know more about our Country, about where we're from. So we have a lot of people walking around now that can list their ancestors and that's been the great part of it. To know who they are, to know where they belong, which particular part of the Gunditjmara Country they belong to: it has been a really positive process."<sup>283</sup> (Aunty Eileen Alberts)



The formal determination was held at the foot of Budj Bim volcano on 30 March 2007. The event included a Welcome to Country spoken by Vicki Couzens in the Dhauwurd Wurrung (Gunditjmara) language (see text at the start of this Nomination Dossier) and was accompanied by a Gunditjmara smoking ceremony. A contemporary possum skin cloak, made by Gunditjmara artist Tom Day, was placed on the Federal Court Bench. At the consent determination, Gunditjmara family reunions took place, as people lined up together under the banners of the common ancestors, from whom they trace their descent. The Gunditjmara common (or apical) ancestors recognised by the 2007 native title determination are: Jennie Green (Alberts), Timothy James Arden, Barbara Winter, Mary (mother of James Egan), Billy Gorrie, Mary (wife of Billy Gorrie), William King, Hannah (wife of William King), James Lancaster, Susannah McDonald (Lovett), James and Mary McKinnon, Eliza Mitchell (Saunders), John Henry Rose, Lucy Sutton, James Sutton and Mary, Louisa (mother of Agnes and Alex Taylor) and Andrew Winter.<sup>283</sup>

At the event, the Federal Court noted:

Gunditjmara were able to prove their strong and unrelenting connection to this area where their ancestors farmed eels for food and trade, at the time of European settlement and back through millennia.

For Aunty Euphemia Day, remembering how her grandmothers were not allowed to speak their language at the Mission:

...that was just so real and still so real today. For us it's mind blowing sitting in a place like this today on our ground, on our land forced by us, for them to say 'yes, this is your land'.<sup>284</sup>

283 Cited in Weir 2009:21

284 Cited in Weir 2009:33



2.77 Welcome to Country smoking ceremony and Gunditjmara families with their banners at the native title consent determination at the foot of Budj Bim, March 2007



2.78 The Gunditjmara lined up together under the banners representing each of their common ancestors, March 2007



2.79 Budj Bim (northern) component: The Federal Court is a ritual space. This space was transformed during the ceremony for the native title consent determination in March 2007. The Gunditjmara placed a possum skin cloak on the Federal Court Bench, and lined the back wall of the marquee with the banners of their ancestors.

The 2007 Gunditjmara determination meant that non-exclusive native title rights were recognised over 1,400 square kilometres of Country – largely recognising a right of access to and use of areas of land and water.<sup>285</sup> Critically, these procedural rights meant that the Gunditjmara could now be formally incorporated into the business of managing Gunditjmara Country.<sup>286</sup> As Uncle Johnny Lovett said,

[Native title] puts local tribes and councils on notice that they now have to deal with us as a people when they want to do whatever they used to just think they had the right to do. That no longer exists. They now have to negotiate with us and come through the proper channels instead of just thinking they can just go and dig this up and dig that up and do whatever they want to do. They now have to negotiate with us at a level that we have to come to an agreement, we have to be involved at last.<sup>287</sup>

Uncle Daryl Rose also talked about how it would be different after the consent determination:

We have the right to go hunting and fishing on our land and camping on our land. Well we've been doing that anyway, but this time we can't get arrested for it if we haven't got a permit.<sup>288</sup>

## SUMMARY

As a result of more than a century of legal and political action, the Gunditjmara have forged a self-managed and well-protected landscape within Gunditjmara Country in south-western Victoria. The ongoing fight of Gunditjmara Traditional Owners for rights to Country and culture and the lasting continuity of connection with Country are powerful aspects of Gunditjmara history. The focus of Gunditjmara work in recent years within the **Budj Bim Cultural Landscape** has increasingly turned to the renewal and transmission of cultural traditions and practices – a process which is enabled by access to and control of those parts of Country which Gunditjmara own and manage.

## THE REBIRTH OF TAE RAK AND THE RENEWAL OF WATER FLOW

The ability to revitalise Gunditjmara practices associated with aquaculture has been enabled through Gunditjmara actively pursuing the return of their lands, the return of water flows to the Tae Rak–Killara catchment and the consequent renewal and sharing of Gunditjmara cultural traditions and knowledge.

Water is an underlying force in the **Budj Bim Cultural Landscape**. The flow of water is an essential component of the ecology of the Gunditjmara aquaculture system. Water represents an inseparable link between the cultural and natural attributes and values in the nominated property. With the return of lands to the Gunditjmara following the 2007 native title determination, the Gunditjmara's focus turned to the water flows and the revitalisation of the aquaculture system.

A description of the lake in the *Portland Mercury* (a local newspaper) in the summer of 1843 describes Tae Rak (Lake Condah):

...a splendid freshwater lake ... about a mile and a half long and three quarters of a mile wide, and contains almost every variety of fish in abundance, with swans, ducks &c. It is of considerable depth, and receives a river about 50 yards broad; one side is bold and rocky and contains a number of small coves into one of which a beautiful stream empties itself, and the other side is a gently sloping shore surrounded by a fine tract of country.<sup>289</sup>

Drainage schemes in the late-19<sup>th</sup> century began to remove water from Condah Swamp, Tae Rak and Killara (Darlot Creek).<sup>290</sup> Following major floods in 1946, local pastoralists constructed an artificial channel to drain Tae Rak in order to reduce periods of flooding on the extensive river-flats north of Tae Rak, and to create additional grazing land for cattle. Gunditjmara Elders, along with local landholders adjoining Tae Rak, had lobbied against the drainage proposal by writing to and speaking with local and State politicians, but their efforts went unheeded.

Tae Rak, once 250 hectares in area and up to three metres deep, was reduced to holding less than five percent of its original water capacity. As a result, from the 1950s, the lake bed became increasingly trampled by cattle and invaded by pest plant species. The aquaculture complexes on the lake's margins were rarely able to function except in times of high floods.<sup>291</sup> Although Tae Rak continued to fill with average seasonal rainfalls, the drain meant the waters receded quickly over a few weeks. The former "splendid freshwater lake" was effectively reduced to being a seasonal wetland; and used for the purposes of growing potatoes and fattening stock each summer.

285 Weir 2009:21. On 27 July 2011, the Federal Court of Australia delivered a second consent determination recognising that Gunditjmara and Eastern Maar both hold native title over Crown land between the Shaw and Eumeralla rivers from Deen Maar (Lady Julia Percy) Island (including Yambuk) to Lake Linlithgow. Deen Maar holds deep and significant cultural association for Traditional Owners. This second consent determination is not relevant to the areas contained within the Budj Bim Cultural Landscape.

286 The Gunditj (meaning earth) Mirring (belonging) Traditional Owners Aboriginal Corporation (GMTOAC) was established as the registered native title holder.

287 Cited in Weir 2009:22

288 Cited in Weir 2009:24

289 Portland Mercury, 11 January 1843

290 Gunditjmara 2010:64-64; Richards 2011:67, 70

291 Gunditjmara 2010:65



2.80 At the end of the 19th century, Killara's outlet from Tae Rak (Lake Condah) was converted into a drain

However, the Gunditjmara never lost sight of their long-held vision to restore water to Tae Rak, and by doing so, restore life to the lake and rekindle their connections to the landscape they had shaped and modified over hundreds of generations.

In the mid-1980s, the Gunditjmara initiated the first proposal to restore the water levels and water flows at Tae Rak based on Aboriginal heritage values.<sup>292</sup> Trials conducted in 1990 determined that an outlet water level regulator was required to allow longer retention of water from high rainfall events in the Tae Rak catchment zone. However, it was not until after the early-2000s that detailed feasibility, business and heritage management plans and engineering documents were prepared<sup>293</sup> and consultation with neighbouring and upstream property owners undertaken. In 2008, the Gunditjmara created the following 'Yarkeen' or vision statement for a restored Tae Rak:

Gunditjmara will conserve Lake Condah. It is an important Gunditjmara place and we have fought hard over many generations to see it returned to us so that we can heal this land. Gunditjmara acknowledge the ancestral Kerrup Jmara and the Kerrup Jmara today.

Gunditjmara will restore the natural abundance of the lake. Water will again flow into the lake and remain there year round, enabling native plants and animals to return and be nurtured by the life-giving waters of the lake.



2.81 Tae Rak re filled with water following the construction of the 'cultural weir' in 2010

Lake Condah will again be central to Gunditjmara life and culture. Gunditjmara people will experience the landscape, engage in eel and fish harvesting using the stone trap systems, and apply traditional knowledge and practices in land and water management. As the water returns into this landscape, we will learn more about the ways in which previous generations cared for and used the land, and we will pass what we learn onto the next generation so that traditions and knowledge are never lost again.<sup>294</sup>

In 2010, the vision of the Gunditjmara and the associated planning and studies supported the construction of a 'cultural weir' on Tae Rak. Gunditjmara and local contractors commenced work on the weir in January and construction was completed in May.<sup>295</sup> Heavy rains following the construction of the weir – and again in 2011, resulted in Tae Rak filling to the new height of 52.4 metres above the Australian Height Datum.

The height of 52.4 metres above the Australian Height Datum was chosen because it was the highest possible water level in Tae Rak that still ensured upstream farming properties were not unnecessarily impacted by flooding from the restoration. Detailed contour studies indicated the majority of kooyang (eels) trap complexes at Tae Rak would function at a weir height of 52.4 metres; although some would not (the Muldoons Trap Complex, for example). To restore Tae Rak to

292 Gunditj Mirring Traditional Owners Aboriginal Corporation. 'Lake Condah Restoration Project', <https://www.gunditjmiring.com/lake-condah-restoration-project>

293 The work was undertaken by the Lake Condah Sustainable Development Project (LCSDP) (now Budj Bim Sustainable Development Partnership). The preparatory plans and studies included: Lake Condah Water Restoration Business Plan (Ruge 2004); Mt Eccles Lava Flow Botanical Management Plan (Ecology Australia 2007); Mt Eccles/Mt Napier Digital Flyover and Terrain Modelling Project; Lake Condah Water Restoration Project Hydrological Feasibility Study (Gippel et al. 2006); and Lake Condah Restoration Project: Conservation Management Plan (Context 2008).

294 Context 2008:iii

295 Based on the scope and success of the project, the Lake Condah Restoration Project was awarded the Civil Contractors Federation Earth Award in 2010 (Gunditjmara 2011). The Earth Awards have the specific aim of recognising outstanding work in construction and environmental excellence and which reflect development and use of the best technologies and practices by Australian civil contractors. In 2010, the weir construction project was also recognised by winning the South Australian Society of Civil Engineers Best Project Award. In 2011, the project was the Runner Up at Australia's most prestigious environmental award, The Thiess River Prize for Australian Waterways Restoration.



**2.82** Lake Condah Sustainable Development Project members viewing the construction of the regulator gate on the cultural weir at the downstream end of Tae Rak, March 2010

its early 19<sup>th</sup> century height of 55 metres above the Australian Height Datum – which would enable activation of the higher elevated aquaculture complexes, would inundate upstream and neighbouring properties; rendering those grazing enterprises less tenable for agriculture, especially over the winter/spring seasons.

The Tae Rak restoration brought the lake back to three quarters of its former (pre-drainage) surface area. Within a short time, water-based plants and animals – particularly water-birds, began returning in increasing numbers to Tae Rak. Gunditjmara Elders who remembered seeing water birds in their thousands at Tae Rak prior to it being drained, rejoiced at the splendour of the restored water levels and cacophony of bird sounds. Once water was retained in Tae Rak, the birds began breeding and species diversity rapidly

improved, including of culturally significant species such as Brolga, Sea Eagle and Wedge-tailed Eagle. The results of annual biodiversity monitoring conducted by members of the Portland Field Naturalists Club and Budj Bim Rangers have confirmed the ecological benefits of the restoration.

The restoration and revival of Tae Rak has enabled much of the Gunditjmara aquaculture system to be reactivated. Tae Rak is again becoming a productive wetland landscape brimming with life. It is now possible for the Gunditjmara to revive traditional aquaculture practices and techniques as well as provide a source of tourism and economic development. A new road, jetty and toilets have been constructed on the western margins of Tae Rak to support planned visitor and research facilities.





2.83 Joseph Saunders (left) and Aunty Laura Bell with Merv Lindsay, Engineers Australia National President, at the ceremony that marked the 'Budj Bim Aboriginal Hydraulic Works' as an Engineering Heritage National Landmark, 20 October 2011. The ceremony took place at the Tyrendarra Indigenous Protected Area.

Merv Lindsay said: "What is truly remarkable about the Budj Bim engineering works is not only its ingenuity, but also at its core has been the delivery of a sustainable outcome for hundreds of generations".

The traditional practice of engineering the infrastructure to maintain its integrity and purpose requires a continuing knowledge of climate, hydraulics and the Budj Bim landscape is recognised as being of engineering heritage significance at a national level.



2.84 Budj Bim (northern) component: Gunditjmara people inspecting a 350 metre-long southwest fishtrap at Muldoons Trap Complex, downstream from the Tae Rak (Lake Condah) weir

## CULTURAL RENEWAL: MAINTAINING AND REVITALISING GUNDITJMARA AQUACULTURE

The continuation and revival of Gunditjmara traditional knowledge is evidenced in the maintenance work undertaken on the channels, weirs, dams and ponds within the **Budj Bim Cultural Landscape**, and by the renewal of weaving skills and the re-making of possum skin cloaks (with their associated landscape designs). Cultural renewal is exemplified by the creation of new dances; and establishing new ways of transmitting cultural knowledge across generations – through dance and artistic expression more generally, contemporary education programs and the Budj Bim Ranger program.

### THE SIX SEASONS OF GUNDITJMARA COUNTRY

Over the totality of their traditional lands, the Gunditjmara recognise four types of Country – Woorrowarook Mirring (Forest Country), Bocara Woorrowarook Mirring (River Forest Country), Koonang Mirring (Sea Country) and Tungatt Mirring (Stone Country) (Part 2.A). The management of each type of Country is aligned with the six seasons identified by the Gunditjmara.<sup>296</sup>

The seasons are identified by dominant weather patterns and marked by the availability of water, the abundance of plant and animal foods and the behaviour of particular animal species – including kooyang (eel). Thus the calendar recognises those periods when kooyang feed in shallow waters (Fattening Up – October to December), swim upstream (Flowering Time – August to November) and retreat into the mud (Big Dry – January to April). These periods in turn shape traditional and contemporary management of the kooyang aquaculture system.

The Gunditjmara management framework for Country is underpinned by a philosophy of Ngootyoong Gunditj, Ngootyoong Mara (Healthy Country, Healthy People), which seeks to reinforce and encourage the connections between a healthy environment and a healthy community.<sup>297</sup> The philosophy is enacted through the integration of traditional knowledge associated with the six seasons; and an adaptive management framework as applied in Protected Area management (Part 5).<sup>298</sup> Specific features of the latter approach include the use of monitoring, evaluation, reporting and improvement to record Gunditjmara learnings, implement a risk assessment approach, store and manage information, and use technology to assist in land management activities.<sup>299</sup>

## MAINTAINING AND RESTORING THE GUNDITJMARA AQUACULTURE SYSTEM

The **Budj Bim Cultural Landscape** includes the eight largest Gunditjmara aquaculture complexes (Tae Rak – six complexes, Tyrendarra and Kurtonitj) (Part 2.A) and representative examples of smaller structures (including along Killara and at Lake Gorrie). In the period from the early 1960s until the mid-1990s, the Tae Rak (Lake Condah) complexes received little or no maintenance, largely as a result of the inability of Gunditjmara to access these complexes after the land on which they are situated became privately owned. Nevertheless, the Gunditjmara aquaculture system is remarkably resilient – many parts of the system continue to operate; and the channels, weirs, dams and ponds have survived in remarkably good condition. In this regard, archaeologist Tom Richards notes:

In 2004 members of the Winda-Mara Aboriginal Corporation, under the direction of Daryl Rose, cleared this vegetation [at Muldoons Trap Complex] in preparation for the archaeological investigations, revealing this system to be considerably more extensive than recorded by Ingram. The Aboriginal features indicated by Ingram are both readily identifiable and exceptionally well preserved.<sup>300</sup>

The current work on the Gunditjmara aquaculture system has three foci: using and repairing the kooyang (eel) channels, weirs, dams and ponds (in line with customary and legal obligations regarding cultural heritage), learning more about the ways that the complexes operate under the water regime resulting from the installation of the weir on Tae Rak in 2010, and managing vegetation growth where it is impacting on the aquaculture features.<sup>301</sup> This latter aspect includes the documentation and removal of trees that impede the channels' abilities to fully function, and the application of a 'cultural burning' regime. Cultural burning is the use of fire to frequently and regularly burn small areas of vegetation to create a mosaic or diversity of habitats. The aims of cultural burning are manyfold; but include providing improved access to waterways for kooyang harvesting and promoting the growth of those plants with traditional uses – puunyaart grass for basket making, for example.<sup>302</sup>

There is also an experimental component to the continuation and renewal of Gunditjmara aquaculture. This includes re-learning to construct wood lattice barriers that were once integral to the system. An example of such a structure has been constructed within the Tyrendarra Indigenous Protected Area.

296 GMTOAC 2015:14; Parks Victoria 2015:7

297 Parks Victoria 2015:12

298 Parks Victoria:12-13; and discussed further in Part 5.E of this Nomination Dossier

299 GMTOAC 2015:12-13

300 Richards 2013

301 GMTOAC 2015:33, 56

302 GMTOAC 2015:56

## THE SIX SEASONS OF GUNDITJMARA COUNTRY



2.85 The six seasons of Gunditjmarra Country



2.86 'Cultural burn' being undertaken by the Budj Bim Rangers (Sean Bell and Josh Ferguson)



2.88 Aunty Connie Hart weaving a traditional gnarraban (eel basket)



2.87 Bunjil Lovett netting a kooyang in one of the Tae Rak holding pools

Kooyang harvesting and processing at a small commercial scale has been proposed at Tae Rak.<sup>303</sup> The proposal has been the subject of an economic study and is framed within a set of principles considering sustainability, native title rights, licencing, use of traditional and modern techniques and equipment, and determining suitable locations and areas from which kooyang should not be taken.<sup>304</sup> The revival of commercial kooyang selling will continue the 140-year history associated with Gunditjmarra endurance and enterprise.

## REMEMBERING AND RE-LEARNING FIBRE WEAVING SKILLS

No one taught me to make my baskets. My mum [Francis Alberts, nee Carter] told me we were coming into the white man's way of living. So she wouldn't teach us. That is why we lost a lot of culture. But I tricked her and I watched those old people and I sneaked a stitch or two.<sup>305</sup>

(Aunty Connie Hart)

Aunty Connie Hart, who was born in 1917 at Little Dunmore, near Lake Condah Mission, only began basket weaving in 1983 at the age of 65. She attended the Mission school during her childhood, and was always attentive to the stories and practices of her mother and her Elders while growing up. Having returned to Little Dunmore in 1983 to care for her mother, Connie recollected the baskets that her mother had made from puunyaart grass when Connie was a child. She went on to teach herself Gunditjmarra weaving and made a great variety of items – including functioning and creative kooyang baskets. She passed on weaving skills and methods to a number of members of her family – including her niece Sandra Aitken, as well as to many other Gunditjmarra and other Indigenous and non-Indigenous people through basket-weaving workshops.<sup>306</sup> Weaving traditional and contemporary baskets – including kooyang traps, has been reinvigorated and is a continuing tradition among Gunditjmarra today.

303 McKinnon 2007; GMTOAC 2015:54-55

304 Context 2008:80; GMTOAC 2015:54-55. A framework for decision-making concerning which Tae Rak complexes will be re-activated for aquaculture and which should be left as historical evidence of the activities of the Gunditjmarra in the past has been developed. See Context 2008:Policy 6.4.12, 6.4.13

305 Winda-Mara Aboriginal Corporation cultural display information panel, Heywood. Also see video of Aunty Connie Hart making a basket. Culture Victoria. 'Aunty Connie Hart teaching basket weaving', <http://www.culturevictoria.com/stories/aboriginal-culture/koorie-art-and-artefacts/aunty-connie-hart-teaching-basket-weaving/>

306 'Connie Hart', <http://www.bonmarartleewik.net/connie-hart/> See also: Gunditj Mirring Partnership Project. 'Cultural features of the Budj Bim Landscape – Eel baskets', [https://docs.wixstatic.com/ugd/b5965f\\_8e5840ee44e64502b2e8726cf03a2260.pdf](https://docs.wixstatic.com/ugd/b5965f_8e5840ee44e64502b2e8726cf03a2260.pdf)



2.89 Aunty Eileen Alberts collecting puunyaart for weaving gnarraban (kooyang baskets)

2.90 Aunty Connie Hart with contemporary eel trap, 1988



2.91 Aunty Connie Hart stitching together a traditional gnarraban (eel basket)



2.92 Aunty Eileen Alberts passing on weaving skills to Gunditjmara youth



2.93 Winda-Mara dancers lead the street parade at the Portland Upwelling Festival



2.94 The Fighting Gunditjmara



2.95 Koondoom Yarkeen Karweeyn – the Gunditjmara young Traditional Aboriginal Dance group

## CONTEMPORARY ARTISTIC EXPRESSION OF GUNDITJMARA CULTURAL TRADITIONS

The knowledge and practices of Gunditjmarā aquaculture have both traditional and contemporary dimensions. This is most evident in the areas of dance, the re-making of possum skin cloaks and using creative art to give expression to contemporary Gunditjmarā knowledge and practices associated with kooyang (eel) aquaculture.

### DANCE

Dance is a traditional and contemporary form of Indigenous cultural expression and is practiced throughout Australia. The Gunditjmarā have established two dance groups that perform locally and at national festivals.

*The Fighting Gunditjmarā* Traditional Aboriginal Dance Group was established to promote the existence of a living Gunditjmarā culture in the 21<sup>st</sup> century. The group's influence derives from Gunditjmarā ancestors with the "need to profoundly, prolifically and proudly promote Gunditjmarā identity and *The Fighting Gunditjmarā* spirit." Drawing on both traditional practices and modern technology, *The Fighting Gunditjmarā* perform powerful and dynamic dances which convey the history, identity and contemporary culture of the Gunditjmarā.<sup>307</sup> Their repertoire includes an 'Eel Dance', which the group created and choreographed.

The second Gunditjmarā dance group is *Gunditjmarā Karweeyn* – the Winda-Mara Aboriginal Dancers; the community's young Traditional Aboriginal Dance group. The group was established to enable Gunditjmarā youth to learn about their culture through participation in dance and to express their identity through performance.



2.96 Dhauwurd Wurrung cloak, Possum Skin Cloak Project. Made by Thomas Day and Aunty Janice Lovett.

### POSSUM SKIN CLOAKS: REPRESENTING COUNTRY

A possum skin cloak made at the Lake Condah Mission in 1872 is a rare surviving example of a traditional object and craft.<sup>308</sup> The cloak is notable for the designs etched into it that represent physical features of Gunditjmarā Country, including elements of the aquaculture system.

In more recent times, work has been undertaken to produce contemporary versions of possum skin cloaks. For example, Gunditjmarā artist Thomas (Tom) Day made the Dhauwurd Wurrung cloak for the *Possum Skin Cloak Project*.<sup>309</sup> For Day, the meaning of the possum skin cloaks lies in the construction of identity through place and space.

This rug means much (more) to me than just a piece of art for the games' opening. To me, it is a representation of my ancestors' country and the knowledge that I have been taught. My great-great grandfather (James Lovett) was one of the five men that produced the original Lake Condah cloak, so for me it is a journey of self-discovery I suppose. I have always known my past and where I fit in, but doing this cloak made me realise the significance of what I have done, particularly for my Nan.

The cloak I have produced is a map, or as I like to refer to it as a 'Cultural Footprint'. It is a map or guide, but I'm afraid its meaning has to remain a secret. I come from a proud people, a tribe of fighting Gunditjmarā. We were a proud people. I hope this cloak makes them proud of me.<sup>310</sup>

307 Performances of *The Fighting Gunditjmarā* can be viewed on YouTube. YouTube. 'The Fighting Gunditjmarā – Intro' (Jason Walker), <https://www.youtube.com/watch?v=fM4xNnlbCPU> and YouTube. 'The Fighting Gunditjmarā Welcome Dance', <https://www.youtube.com/watch?v=E4HaaJ7snu4>

308 Gibbins 2010

309 The Possum Skin Cloak Project culminated in the production of 35 cloaks worn by Elders in the Opening Ceremony of the Commonwealth Games in Melbourne in 2006. Gibbins 2010: 126, 128

310 Cited in Gibbins 2010: 140.



2.97 Possum skin cloak. Made by Vicki Couzens and Debra Couzens in 2002. Vicki Couzens is a multimedia artist, best known as a maker of possum skin cloaks such as this one; a replica of the 1872 Lake Condah cloak in the Museum Victoria collections.

Vicki Couzens is an artist renowned for her work in making possum skin cloaks. She made the Grandmothers' Possum Skin Cloak, Koorooke Kooramook, a thirty-skin cloak that is decorated with designs that require cultural knowledge to relate to the following statement that accompanies this cloak:

The Grandmothers are the keepers of the family, kinship, knowledge and relationship, women's business, birth, death, the songs and the land. This cloak shows the Grandmothers' connection to daughters and grandchildren. It also depicts the three parts of a woman's life from young girl to woman and mother and then grandmother and wise woman.<sup>311</sup>

Of possum skin cloaks more generally, Vicki Couzens says:

My work is an expression of my spirituality. Some works have specific messages related to community issues, while other works are personal expressions of my inner world, my relationships to all within the different dimensions. My culture keeps me strong; it guides and teaches me. It is a well of knowledge and wisdom to keep our people and all people strong.

The safety and the warmth of a cloak is a real thing, you wrap it around you and carry your children, it's used in everyday life. In most instances it's used in death as well. You're wrapped in your cloak and buried. I read a quote once about a blanket of love. For me the possum skin cloak is symbolic of wrapping that love and that culture around you, it's symbolic of the warmth and the safety of belonging and of knowing who you are.<sup>312</sup>

311 Cited in Gibbins 2010:130-131

312 Culture Victoria. 'Possum skin cloak', <http://www.culturevictoria.com/stories/aboriginal-culture/meerreeng-an-here-is-my-country/possum-skin-cloak/>





2.98 **Budj Bim Cultural Landscape:** *Fresh and Salty* is a large-scale stone sculpture. The work is the result of a collaboration between established artists Vicki Couzens (right) and Carmel Wallace. The sculpture references traditional Indigenous and European farming methods.

## SCULPTURE

Another creative form of expression of connection to Gunditjmarra Country is evidenced in large-scale stone sculptures. Two such structures have been constructed that lie within the **Budj Bim Cultural Landscape**. They are constructed from local volcanic stone – part of the Budj Bim lava flow. The first of these is a large and impressive stone art sculpture titled *Fresh and Salty*. The sculpture illustrates the journey of the kooyang (eels) from fresh water to salty water and back again. It was constructed in November 2007 and lies within the Kurtonitj (central) component. Gunditjmarra artist Vicki Couzens and Celtic artist Carmel Wallace designed the artwork. It was constructed with Gunditjmarra participants Travis Bannam, Leon Walker and Yaran Bundle. The second is a kooyang sculpture produced from Budj Bim lava flow stone and is situated within the Tyrendarra (southern) component. It was produced by a group of International Student Volunteers.



2.99 Tyrendarra (southern) component: Kooyang (eel) sculpture

## CONTEMPORARY MUSIC

Gunditjmara cultural traditions, knowledge and experience are shared through contemporary music. Gunditjmara playwright, scriptwriter and musician Richard Frankland is influenced by his experiences of the **Budj Bim Cultural Landscape**, evident in the lyrics for *Condah Mission*, for example.<sup>313</sup> Well-known Australian singer songwriter Shane Howard and Gunditjmara Elder the late Uncle Banjo Clarke co-wrote the song titled: *The River Knows (Eel Song) (Kuuyang)*.

### THE RIVER KNOWS (EEL SONG) (KUUYANG)

The south-west wind brings autumn rain  
To fill the rivers once again  
The eels will make their journey now  
Longing for that salty water

Down the Tuoram stones they slither  
In their thousands down the river  
Headed for the river mouth  
Fat and sleek, and slowly moving south

The river knows  
The river flows  
That old river knows  
Watch us come and go

All the tribes will gather here  
Travel in from everywhere  
Food to share and things to trade  
Song and dance until it fades

Hear the stories being told  
Handed down from young to old  
See the fires burning there  
Hear the voices echo through the air

The kuuyang move into the ocean  
Restless motion  
Even though they go away  
The spirits all return to here again<sup>314</sup>

313 Richard Frankland 2002. *The Charcoal Club: Meeting One*, Taram Records

314 Shane Howard and Banjo Clarke 1996. *Clan*, EMI Music

## INTER-GENERATIONAL TRANSMISSION OF GUNDITJMARA CULTURAL TRADITIONS, KNOWLEDGE AND PRACTICES

The Gunditjmara use the **Budj Bim Cultural Landscape** as a focus for cultural, community, education and tourism activities. These activities are important for transmitting knowledge of Country between and across different generations of the Gunditjmara, but also sharing selected parts of their knowledge and experiences of Country with non-Gunditjmara Indigenous people and non-Indigenous groups. For example, the Tyrendarra Indigenous Protected Area, which is owned and managed by Winda-Mara Aboriginal Corporation, is a place “to provide a location for all Aboriginal and Torres Strait Island peoples to walk on country”.<sup>315</sup>

For Gunditjmara Traditional Owners, connection with Country takes place through being in the landscape – including through community events at gathering and ceremony places (such as the Lake Condah Mission); through activities connected to aquaculture, hunting animals (including kooyang (eels)) and collecting plants (including puungyaart [grass]); and through sharing stories about Country.<sup>316</sup> That is, Gunditjmara cultural traditions, knowledge and practices are typically transmitted and shared on Country. Through gatherings, activities and story-telling, the Gunditjmara draw on the **Budj Bim Cultural Landscape** as a place of teaching and learning to pass on knowledge to Gunditjmara youth.

Examples of activities that illustrate the broader transmission and sharing of knowledge on Country include:

- The Budj Bim Ranger program. Funded by the Australian Government, the program employs rangers who manage the Budj Bim and Tyrendarra Indigenous Protected Areas within the **Budj Bim Cultural Landscape**. The rangers have a range of management responsibilities related to caring for Country, which include native flora and fauna management, building and maintaining walking tracks, providing guided tours and monitoring.
- Visiting Schools Program. The Budj Bim Rangers run this program for school groups. Approximately 50 such visits take place each year.
- Budj Bim Tours. An enterprise established and operated by the Winda-Mara Aboriginal Corporation, it is an Indigenous owned tourism company that offers exclusive guided tours to selected areas within the nominated property. Budj Bim Tours operate out of Heywood, Victoria, and itineraries range from two hours to full days.



2.100 Denise Lovett and her grandson, Nyawi Moore, visit Country to teach and learn about kooyang (eel) aquaculture

315 Winda-Mara Aboriginal Corporation 2015:13

316 Parks Victoria 2015:63

- Youth holiday activities. Winda-Mara Aboriginal Corporation and the Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC) run activities during the school holiday periods for local Gunditjmarra children. The events can extend up to three days in length, include culture camps at the Lake Condah Mission and involve a range of traditional and community-based activities.
- Occasional programs. Run by the Gunditjmarra for non-Indigenous youth, the programs include workshops run by Aunty Eileen Alberts who teaches basket weaving to women, for example.
- Cultural Awareness Training. The GMTOAC provides cultural awareness training to government departments, private organisations and university students. Such training aims to: extend participants' knowledge of Gunditjmarra history and culture; explore how attitudes and values can influence perceptions, assumptions and behaviours concerning Aboriginal people; and discuss respectful and informed ways to interact with the Gunditjmarra.

## SUMMARY

In the global context of human history, the **Budj Bim Cultural Landscape** is an outstanding exemplar of a cultural landscape in which human interaction with the environment is an eco-cultural relationship of dynamic manipulation and management of natural resources. It is illustrative of the creation, modification and maintenance of an extensive hydrological engineering system that manipulates water flow in order to trap, store and harvest kooyang (eel) that migrate seasonally through the system.

The **Budj Bim Cultural Landscape** represents a continuing tradition of Gunditjmarra aquaculture that is more than 6,600 years old. More remains to be discovered about the earliest extent of the aquaculture system and how it operated; and work continues to be initiated by the Gunditjmarra in partnership with archaeologists, palaeobotanists and geomorphologists.

In the 19<sup>th</sup> century history of Gunditjmarra Country, considerable information on the operation of their aquaculture system was documented – by the Gunditjmarra in designs applied to possum skin cloaks, for example; and by early European ethnographers including George Augustus Robinson (1840s), James Dawson (1850s-1860s) and Alexander Ingram (1890s). Each of these men visited parts of the aquaculture system in the company of Gunditjmarra. Ingram's visits, for example, were made with Gunditjmarra Elders, including Tommy White. In all instances, the features of the aquaculture system described by Robinson, Dawson and Ingram were in use by the Gunditjmarra – either in the nominated area or close by. Despite the destructive impacts of the Eumeralla War (1840s), confinement at the Lake Condah Aboriginal Mission Station (1867-1918) and government-driven assimilation policies (1920s-1960s), the Gunditjmarra

survived. Over more than a century, the Gunditjmarra continued to apply cultural traditions, knowledge, long-held aquaculture practices and creative approaches to the capture, storage and harvest of kooyang.

From the 1970s, after several decades of dispossession from their lands, the Gunditjmarra successfully initiated and negotiated processes of reconnecting with the aquaculture complexes within the **Budj Bim Cultural Landscape**. These processes began, in part, with working with archaeologists from the mid-1970s in documenting the aquaculture features and associated cultural heritage. As the Gunditjmarra gradually regained ownership of their Country from 1984 and had their native title rights recognised in 2007, they have increasingly come to manage their Country and their aquaculture system on their own terms. The Gunditjmarra are the custodial managers of the **Budj Bim Cultural Landscape** and the outstanding aquaculture system that exists within it.

Ownership, along with rights and obligations to Country, has seen a resurgence and flourishing of creative expression through art, craft (including weaving and possum skin cloak making), dance, song and sculpture that reinforces Gunditjmarra spirituality and connection to Country. Land ownership and active management enable the Gunditjmarra to continue to care for the **Budj Bim Cultural Landscape**. Today, Gunditjmarra cultural traditions, knowledge and practices continue to be part of the six-millennia long connection with the nominated property.



**PART 3**

**JUSTIFICATION  
FOR INSCRIPTION**

# PART 3

## JUSTIFICATION FOR INSCRIPTION

### 3.1.A BRIEF SYNTHESIS

The **Budj Bim Cultural Landscape** is located in the traditional Country of the Gunditjmara Aboriginal people in south-eastern Australia. The three serial components of the property contain one of the world's most extensive and oldest aquaculture systems. Over a period of at least 6,600 years the Gunditjmara created, manipulated and modified local hydrological regimes and ecological systems. They utilised the abundant local volcanic rock to construct channels, weirs and dams and manage water flows in order to systematically trap, store and harvest kooyang (short-finned eel – *Anguilla australis*) and support enhancement of other food resources. The highly productive aquaculture system provided a six millennia-long economic and social base for Gunditjmara society. This deep time interrelationship of Gunditjmara cultural and environmental systems is documented through present-day Gunditjmara cultural knowledge, practices, material culture, scientific research and historical documents. It is evidenced in the aquaculture system itself and in the inter-related geological, hydrological and ecological systems.

The Gunditjmara aquaculture system is one of the world's oldest and most extensive (Part 2). Over a period of at least 6,600 years and continuing to the present day, the Gunditjmara have purposefully created, manipulated, modified and managed local hydrological regimes and ecological systems within the **Budj Bim Cultural Landscape** in order to systematically trap, store and harvest kooyang. The attributes that demonstrate the Gunditjmara aquaculture system and carry the Outstanding Universal Value of the nominated property are as follows.

#### 1. GUNDITJMARA CULTURAL TRADITIONS, KNOWLEDGE AND PRACTICES

The Outstanding Universal Value of the **Budj Bim Cultural Landscape** is evidenced in Gunditjmara aquaculture as manifest in the practices of kooyang management, storage, and harvesting; as well as the associated manipulation, modification and management of the environment. Gunditjmara aquaculture knowledge and practices are also inclusive of sourcing grasses and weaving of gnarraban (kooyang baskets), traditional representations of Gunditjmara aquaculture (the designs produced on possum skin cloaks, for example), adaptation of traditional catching techniques (use of wire mesh baskets and wood crates for holding kooyang) and contemporary, creative artistic expressions of Gunditjmara aquaculture; evidenced in story-telling, dance, song, crafted objects and sculpture. Gunditjmara aquaculture knowledge is demonstrated by millennia of oral transmission; through continuity and adaptation of practice and is supported by well-documented Gunditjmara traditions.

#### 2. THE PHYSICAL EVIDENCE OF GUNDITJMARA AQUACULTURE IN THE LANDSCAPE

The physical system is comprised of interconnected clusters of constructed and modified channels (yereoc), weirs (stone and wood), dams, ponds and sinkholes; developed to manage water and water flows in order to systematically trap, store and harvest kooyang. These physical elements occur in various combinations, with the largest and best-preserved complexes located at Tae Rak (Lake Condah) and within the Kurtonitj (central) and Tyrendarra (southern) components of the **Budj Bim Cultural Landscape**. The physical evidence of Gunditjmara aquaculture is supported by exceptionally well-preserved archaeological, environmental and historical evidence.



### 3. THE INTERCONNECTED GEOLOGICAL, HYDROLOGICAL AND ECOLOGICAL SYSTEMS

Gunditjmara aquaculture is centred on the Budj Bim lava flow that is the result of the dramatic volcanic eruption of Budj Bim between 30,000 and 39,000 years ago. The lava bedrock supported the establishment of a distinctive series of wetland, swamp and sinkhole environments. These environments gradually evolved to provide suitable conditions and habitat for kooyang. Gunditjmara aquaculture is dependent on natural and culturally modified water flows within which Tae Rak and Killara (Darlot Creek) are the central elements of the ecological-cultural system. The reinstatement of traditional water flows to Tae Rak through the construction of the cultural weir in 2010, enabling it to function as a productive lake and wetland after 140 years of being artificially drained, is an outstanding example of the restoration of an eco-cultural system and habitat values.

The **Budj Bim Cultural Landscape** is an expression of Gunditjmara intangible and tangible cultural heritage in combination with underlying volcanic and hydrological processes and kooyang ecology. These inter-related and interconnected systems include Gunditjmara knowledge and practices, the physical elements of the aquaculture system (channels, weirs, dams, ponds, sinkholes), the Budj Bim lava flow, the Tae Rak-Killara catchment water and water flow, and the modified environment to support kooyang husbandry.

The combination of these systems has created an eco-cultural landscape (Part 2.A) in which the local ecology has been manipulated by Gunditjmara to enhance the availability and accessibility of kooyang. The cultural landscape represents the combined works of nature and humans and is an expression of an organically evolved cultural landscape.<sup>317</sup>

The **Budj Bim Cultural Landscape** is a serial property of three components comprised of lands wholly owned or jointly managed by the Gunditjmara Traditional Owners and Winda-Mara Aboriginal Corporation. Indigenous land ownership and co-operative management are significant because they demonstrate that Gunditjmara's free, prior and informed consent is integral to the long-term protection, management and presentation of the nominated property's Outstanding Universal Value; and because Gunditjmara traditional and contemporary knowledge and practices are enabled through their land ownership and management.

### 3.1.B CRITERIA UNDER WHICH INSCRIPTION IS PROPOSED (AND JUSTIFICATION FOR INSCRIPTION UNDER THESE CRITERIA)

The **Budj Bim Cultural Landscape** is nominated under criteria (iii) and (v) for its Outstanding Universal Value.

**Criterion (iii). Bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared.**

The **Budj Bim Cultural Landscape** bears an exceptional testimony to the cultural traditions, knowledge, practices and ingenuity of the Gunditjmara. The extensive networks and antiquity of the constructed and modified aquaculture system of the **Budj Bim Cultural Landscape** bears testimony to the Gunditjmara as engineers and kooyang fishers. For at least the past 6,600 years the Gunditjmara created and adapted a system of aquaculture based on deliberate manipulation, modification and management of wetlands and waterways. Gunditjmara knowledge and practices have endured and continue to be passed down through their Elders and are recognisable across the wetlands of the **Budj Bim Cultural Landscape** in the form of ancient and elaborate systems of stone-walled kooyang husbandry (or aquaculture) facilities. Gunditjmara cultural traditions, including associated storytelling, dance and basket weaving, continue to be maintained by their collective multigenerational knowledge.

**Budj Bim Cultural Landscape** is a significant part of Gunditjmara Country. For Australian Aboriginal people, Country is a 'nourishing terrain' – a place that gives and receives life. Country is everything – people, plants, animals, earth, water, Dreaming, air, sky – and every Aboriginal person has a Country to which they belong.<sup>318</sup>

Each Country has its sacred origins – its Creation written in the land and known through traditions and cultural practices. Spiritual links to Country through the activities of Ancestral Creator beings at particular places are characteristic of Aboriginal societies throughout Australia. Through story and totems, the land, the people and non-human species are

317 McNiven in Context 2013a:28

318 Rose 1996:7-8

connected in a complex web of meanings, responsibilities and reciprocities. Creation time (or 'Dreaming') refers to the time in which the land was formed and shaped and living things created. Ancestral beings, such as Budj Bim, were the creators of all things. Creation time is not a past time or a past event that has concluded. Creation time is ever-present.

For the Gunditjmara, the whole of their Country is filled with the spirit of creation and rich with significance and stories of the ancestral past and present. For the Gunditjmara – as with all Aboriginal Australians, land management and cultural heritage are intertwined and inseparable. A distinctive dimension of Gunditjmara land management and cultural traditions is the conservation of waterways and wetlands within the area known as Tungatt Mirring (Stone Country) which corresponds to the Budj Bim lava flow. Freshwater not only nourishes Tungatt Mirring, it is the ancestral source of kooyang (eels), which play a significant role in Gunditjmara history, subsistence and identity. The interweaving of Gunditjmara land and waterway management, cultural heritage, kooyang and identity is exemplified in the **Budj Bim Cultural Landscape**.

### GUNDITJMARA CULTURAL TRADITIONS, KNOWLEDGE AND PRACTICES

Ensuring conditions suitable to sustainable kooyang management and husbandry was and is a particular focus of Gunditjmara life and caring for Country. Their aquaculture traditions – and the knowledge associated with it, was passed down from Gunditjmara Elders over at least six millennia (representing more than 300 generations) and is enshrined across the wetland landscapes in the form of ancient and elaborate stone-walled fish trapping and aquaculture networks. Knowledge of Gunditjmara aquaculture is and always has been part of Gunditjmara oral history; with present-day families retaining many stories of catching kooyang from Tae Rak (Lake Condah) and Killara (Darlot Creek). As in the past, harvesting kooyang involves detailed knowledge of the seasonal cycle of water flows and kooyang; as well as knowledge and skills associated with kooyang management, storage, harvesting and the associated manipulation and modification of the environment.

As Gunditjmara Elder Daryl Rose explains,

*What would happen, these low-lying areas here, the eels would come in here to feed, and then they would come swimming up these areas, the low areas, and then come to these channels. They would then be forced into these channels and moved down through here into places where the holding pens are. This is part of a farming system. We actually managed the eel. We just didn't come out here and hunt and fish. We actually came out here to collect and manoeuvre and farm and move these eels into places where we wanted them to go so then we could pick them up when we wanted to pick them up.<sup>319</sup>*

319 Daryl Rose, Gunditjmara Elder, Radio National 2007; cited in Bell and Johnstone 2010

### CONTINUATION OF TRADITIONAL KNOWLEDGE THROUGH THE 19TH AND 20TH CENTURIES

Despite the profound and destructive impacts of colonisation on the Gunditjmara; their cultural traditions concerning aquaculture survived and continued to be transmitted across multiple generations to the present day (Part 2.B).

In the 19<sup>th</sup> century, the Gunditjmara provided information to George Augustus Robinson, James Dawson and Alexander Ingram – who documented Gunditjmara aquaculture knowledge and practices.<sup>320</sup> Together, Robinson, Dawson and Ingram detailed differing scales of kooyang aquaculture employed by the Gunditjmara. These practices ranged from small groups spearing fish in lagoons to large-scale engineered complexes with hundreds of metres of constructed embankments, stone walls and excavated channels.<sup>321</sup>

In the period from the 1830s to the 1860s – despite intense levels of conflict with European settlers, the Gunditjmara occupied Tungatt Mirring (Stone Country) and continued their cultural traditions of aquaculture. The establishment of the Lake Condah Aboriginal Mission Station (the Mission) in 1867 incorporated the extensive Gunditjmara aquaculture complexes at the south-west edges of Tae Rak. Access to and use of the aquaculture system was continuous throughout the Mission period (1867-1918), with kooyang continuing to be harvested and consumed and the Tae Rak trap facilities maintained. After the Mission closed, and until the 1950s, Gunditjmara continued to use the Tae Rak complexes. Equally, Gunditjmara living in nearby settlements continued to catch and eat kooyang; an important food source during times of scarcity and a source of income from their sale. When access to the Tae Rak system was restricted following land privatisation after the 1950s, Gunditjmara caught kooyang from public waterways along Killara and on land parcels that allowed Gunditjmara access (Tyrendarra, for example).

With the return of traditional Country to the Gunditjmara from 1984, and in particular following the 2007 Australian Federal Court native title determination, the Gunditjmara gained ownership of lands containing each of the major Gunditjmara aquaculture complexes at Tae Rak, Tyrendarra and Kurtonitj – as well as the Lake Condah Mission and Cemetery. Today, access to traditional lands within the **Budj Bim Cultural Landscape** enables Gunditjmara culture and traditions to be reasserted and continue. Consequently, Gunditjmara cultural traditions concerned with aquaculture are demonstrated by millennia of oral transmission across multiple generations, through continuity and adaptation of practice; and are evidenced by documented Gunditjmara traditions and supported by historical evidence.

320 Robinson in Clark 1998a and Presland 1977; Dawson 1881; Richards 2011

321 McNiven and Bell 2010:87





**THE NOMINATED PROPERTY IS A 'CONTINUING LANDSCAPE' BECAUSE GUNDITJMARA AQUACULTURE RETAINS AN ACTIVE SOCIAL, SPIRITUAL AND ECONOMIC ROLE IN CONTEMPORARY GUNDITJMARA SOCIETY.**

The transmission and resilience of Gunditjmarā cultural traditions is exemplified by fibre weaving skills used to manufacture gnarraban (kooyang baskets). This skill – which is largely the knowledge and work of Gunditjmarā women, was practised into the early part of the 20<sup>th</sup> century. However as a result of the strict rules at the Mission, Gunditjmarā women were actively discouraged from passing on these traditional practices. Thus during the middle parts of the 20<sup>th</sup> century basket weaving was seldom taught or practiced. The renewal and re-learning of basket weaving skills and associated plant collecting and processing skills in the 1980s – largely associated with Aunty Connie Hart, ensured that the tradition continues and flourishes today. Contemporary Gunditjmarā weaving today is exemplified by its vibrancy and creativity – the latter illustrated in the work of Gunditjmarā artist Sandra Aitken, for example.

## SUMMARY

The **Budj Bim Cultural Landscape** bears an exceptional testimony to the cultural traditions, knowledge, practices and ingenuity of Gunditjmarā, primarily through the vast and ancient networks of constructed and modified aquaculture systems. Gunditjmarā traditional and contemporary knowledge is demonstrated by millennia of oral transmission across multiple generations, through continuity and adaptation of practice, and is supported by documented Gunditjmarā cultural traditions. Passing on of knowledge, traditions and connections to the next generation will be sustained because of Gunditjmarā control of, access to, and use of the entirety of the nominated property.

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**Criterion (v). Be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change.**

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The continuing cultural landscape of the Budj Bim Cultural Landscape is an outstanding representative example of human interaction with the environment and testimony to the lives of the Gunditjmarā. The **Budj Bim Cultural Landscape** was created by the Gunditjmarā who purposefully harnessed the productive potential of the patchwork of wetlands on the Budj Bim lava flow. They achieved this by creating, modifying and maintaining an extensive hydrological engineering system that manipulated water flow in order to trap, store and harvest kooyang that migrate seasonally through the system. The key elements of this system are the interconnected clusters of constructed and modified water channels, weirs, dams, ponds and sinkholes in combination with the lava flow, water flow and ecology and life-cycle of kooyang. The **Budj Bim Cultural Landscape** exemplifies the dynamic ecological-cultural relationships evidenced in the Gunditjmarā's deliberate manipulation and management of the environment.

## A CONTINUING CULTURAL LANDSCAPE

The **Budj Bim Cultural Landscape** is nominated as an organically evolved and continuing landscape.<sup>322</sup> It exemplifies cultural landscapes in which human interaction with the environment is an eco-cultural relationship of dynamic manipulation and management of natural resources.

The **Budj Bim Cultural Landscape** is an example of an 'organically evolved landscape'. It illustrates the evolution, over at least 6,600 years, of Gunditjmarā aquaculture – a traditional land-use that is characterised by a series of inter-related and interconnected human and environmental systems. The nominated property is also a 'continuing landscape' because Gunditjmarā aquaculture retains an active social, spiritual and economic role in contemporary Gunditjmarā society. These roles are closely associated with traditional and continuing

322 UNESCO 2016:73 (Annex 3)

contemporary practices that are still in progress. At the same time, the interconnected human and environmental systems exhibit significant material evidence of their evolution over time.<sup>323</sup>

### THE PHYSICAL EVIDENCE OF GUNDITJMARA AQUACULTURE IN THE LANDSCAPE

The outstanding physical attributes of Gunditjmara aquaculture are the interconnected clusters of constructed and modified water channels, weirs, dams, ponds and sinkholes combined with the Budj Bim lava flow, the Tae Rak-Killara catchment water flow and the modified environment to support kooyang husbandry. Collectively these attributes within the **Budj Bim Cultural Landscape** are an outstanding example of a traditional human land-use which is representative of human interaction with the environment.

The Gunditjmara aquaculture system relates to kooyang (eel) management, storage, harvesting and processing; and the associated manipulation, modification and management of the environment as evidenced in the culturally modified and natural channels (yereoc), weirs, dams, ponds and sinkholes (Table 3.1). The Gunditjmara aquaculture system is a key attribute carrying the Outstanding Universal Value of the **Budj Bim Cultural Landscape**.

### THE INTERCONNECTED GEOLOGICAL, HYDROLOGICAL AND ECOLOGICAL SYSTEMS

#### *Budj Bim lava flow: the geological system*

The Budj Bim lava flow shaped the topography of the landscape and provided the locally available materials that underpins Gunditjmara aquaculture. Situated in Tungatt Mirring or Stone Country, Gunditjmara aquaculture is centred on a lava flow that was the result of a dramatic volcanic eruption between 30,000 and 39,000 years ago. The eruption of the Budj Bim volcano and the consequent lava flow disrupted the existing topography and drainage and gradually gave new form to the geography of the Tae Rak-Killara catchment.<sup>324</sup> The lava flow within the nominated property is a key attribute carrying the Outstanding Universal Value of the **Budj Bim Cultural Landscape**.

#### *Water and water flow: the hydrological system*

The **Budj Bim Cultural Landscape** includes a suite of wetlands, swamps and sinkholes that provide ideal conditions for kooyang, as well as a range of fish and numerous aquatic plant species. The system is dependent on the natural and culturally modified water flows – of which Tae Rak (Lake Condah) and Killara (Darlot Creek) are the most significant components. The nominated property includes a relatively undisturbed hydrology, despite changes to the water flow in the late-19th and mid-20<sup>th</sup> centuries. The Gunditjmara-initiated restoration of Tae Rak in 2010 has greatly enhanced the capacity of the system to achieve a water flow similar to that of the preceding thousands of years. Water flows are a key attribute carrying the Outstanding Universal Value of the **Budj Bim Cultural Landscape**.

STRUCTURE	DESCRIPTION
Channels (yereoc)	Channels excavated through lava bedrock and/or sediment, including modified natural drainage lines, which may also be lined with a parallel row of low stone walls. Channels are typically one metre wide and are up to 200 metres long and strategically direct water and kooyang between locations.
Weirs	Low walls (less than one metre high) of basalt blocks constructed across natural waterways and drainage lines, and across artificially constructed channels, with gaps or apertures to accommodate insertion of gnarraban (kooyang baskets). Some weir walls also incorporate natural outcrops of basalt lava.
Dams	Low walls (less than one metre high) of basalt blocks constructed across low points of the lava flow and extending between high points to retain water. Most dam walls are less than 10 metres long and are associated with creation of ponds for holding kooyang.
Ponds	Natural depressions along water courses modified through the use of dam walls. Damming resulted in the capacity of each pond to hold higher numbers of kooyang than would unmodified natural depressions.
Sinkholes	Natural lava tubes and tunnels within the Budj Bim lava flow. These were used either unmodified or modified (as in the case of ponds) to hold kooyang.

TABLE 3.1 Budj Bim Cultural Landscape: Structural elements of the Gunditjmara aquaculture system

323 UNESCO 2016:73 (Annex 3)

324 Grimes and Rosengren 2013:108



### **Modified environment to support kooyang husbandry: the ecological system**

Kooyang (short finned eel – *Anguilla australis*) is the key target species on which Gunditjmara aquaculture is founded. The biology and ecology of kooyang allowed for its management and increased availability resulting from Gunditjmara modifications to the wetland landscape. That is, the ecological-cultural landscape of the nominated property was conducive to the development of a productive kooyang harvesting system. The role of kooyang in Gunditjmara aquaculture is a key attribute carrying the Outstanding Universal Value for the **Budj Bim Cultural Landscape**.

The **Budj Bim Cultural Landscape** is an expression of Gunditjmara intangible and tangible cultural heritage in combination with underlying volcanic and hydrological processes and the modified environment to support kooyang husbandry.

A key dimension of this eco-cultural landscape is that local ecology is not radically altered; but selectively and strategically enhanced. It is for this reason that management practices associated with eco-cultural landscapes are relatively sustainable and resilient. Such eco-cultural landscapes bear the cultural imprint not just of human agency, but of individual societies strategically manipulating environments into culturally relevant and meaningful 'constructed landscapes'.<sup>325</sup>

### **SUMMARY**

The **Budj Bim Cultural Landscape** is a rare, intact and representative example of a cultural landscape that has survived through the continuity of Gunditjmara cultural and social practices and active management of the landscape. The nominated property includes the most outstanding and well-preserved physical attributes of the Gunditjmara kooyang aquaculture system, as well as representative examples of all parts of that system. Collectively the attributes within the nominated property are an outstanding example of a traditional land-use which is representative of human interaction with the environment. **Budj Bim Cultural Landscape** is an outstanding and representative example of an organically evolved, continuing cultural landscape.

### **3.1.C STATEMENT OF INTEGRITY**

The **Budj Bim Cultural Landscape** has a high level of integrity.<sup>326</sup> The serial property incorporates intact and outstanding examples of aquaculture complexes at Tae Rak (Lake Condah), Tyrendarra and Kurtonitj. Each complex includes all the physical elements of the system (that is, channels, weirs, dams and ponds) that demonstrate the operation of Gunditjmara aquaculture. The property also includes Budj Bim, a Gunditjmara Ancestral Being and volcano that is the source of the lava flow on which the aquaculture system is constructed. The 9,935-hectare property is sufficient in size to incorporate the cultural features and ecological processes that illustrate the ways multiple systems – social, spiritual, geological, hydrological and ecological – interact and function. The reinstatement of traditional water flows into Tae Rak through the construction of a cultural weir in 2010, following extensive draining of the lake in the 1950s, has returned and enhanced the water flow across the aquaculture system. This restoration, the rugged environment, the use of stone, the relatively intact vegetation and the lack of major development within the **Budj Bim Cultural Landscape** mean that the extensive aquaculture system has survived, is in good condition and can be readily identified in the landscape.

Integrity is a measure of the wholeness, completeness or intactness of the attributes that convey Outstanding Universal Value.<sup>327</sup> The integrity of the **Budj Bim Cultural Landscape** is discussed under the following headings:

1. **Wholeness:** all the necessary attributes are within the property.
2. **Intactness:** all the necessary attributes are still present – none are lost or have been significantly damaged or have decayed.
3. **Absence of threats:** none of the attributes are threatened by development, deterioration or neglect.<sup>328</sup>
4. **Cultural landscape:** dynamic and functioning relationships between cultural and natural elements are present and essential to the cultural landscape's distinctive character and continue to be maintained.<sup>329</sup>

326 UNESCO 2016:Paragraphs 87-89

327 UNESCO 2011:65

328 UNESCO 2011:65

329 UNESCO 2016:Paragraph 89

325 McNiven in Context 2013a:28

## WHOLENESS: ADEQUATE SIZE

**Budj Bim Cultural Landscape** is a serial property comprised of three components that collectively incorporate the eight largest Gunditjmara aquaculture complexes (Maps 2.2, 2.3, 2.4) and representative examples of smaller aquaculture systems. Each aquaculture complex demonstrates variation in its adaptation to specific local landscape environments. Together the three components contain representative examples of the interconnected Gunditjmara aquaculture system as well as the Budj Bim lava flow system, Tae Rak-Killara water flow system and the modified environment to support kooyang (short-finned eel) husbandry. Thus the 9,935-hectare serial property is sufficient in size to incorporate the cultural features and ecological processes that illustrate the ways multiple systems – social, spiritual, geological, hydrological and ecological – interact and function and demonstrate Gunditjmara kooyang (eel) aquaculture.

Gunditjmara Traditional Owners and Winda-Mara Aboriginal Corporation own all components of the **Budj Bim Cultural Landscape** with the exception of Budj Bim (formally Mount Eccles) National Park, which is a co-operative management arrangement between the Gunditjmara and the Victorian Government. That is, the nominated property is comprised wholly of lands owned or co-operatively managed by Aboriginal groups (GMTOAC and Winda-Mara Aboriginal Corporation). Therefore, the property and its boundaries are assured of the Gunditjmara's free, prior and informed consent by virtue of their ownership, management and control.<sup>330</sup> The wholeness of the property enables Gunditjmara cultural traditions, knowledge and practices to be expressed in the present and into the future as a consequence of the recognition of both their custodial and native title rights and obligations.

## INTACTNESS: INCLUDES ALL ELEMENTS

The **Budj Bim Cultural Landscape** incorporates outstanding and representative examples of Gunditjmara aquaculture that express millennia-long cultural traditions, land-use and interaction with the environment. The attributes that comprise the Gunditjmara aquaculture system are:

- *Gunditjmara cultural traditions, knowledge and practices*, which are enabled by Aboriginal ownership, management and control of the nominated property
- *The physical evidence of Gunditjmara aquaculture in the landscape*, which comprises different combinations and scales of channels, weirs, dams, ponds and sinkholes that illustrate the manipulation, modification and management of the environment
- *The interconnected geological, hydrological and ecological systems*, which are fully represented in each of the three components of the nominated property.

The nominated property also contains important features that express the spiritual and creation elements connected to the Gunditjmara landscape. Specifically, these are the Budj Bim volcano, a Gunditjmara Ancestral Being, and representative sections of the Budj Bim lava flow – upon which and from which the aquaculture system is constructed. In addition, the nominated property contains plant species associated with Gunditjmara aquaculture. These include puunyaart grass used to weave gnarraban (kooyang baskets) and tree species that provide the source material for the construction of wood lattice weirs.

Thus, the nominated property contains all the necessary elements required to demonstrate the dynamic ecological-cultural relationships that are evidenced in Gunditjmara manipulation, modification and management of the environment and of Gunditjmara kooyang aquaculture knowledge and practices. The **Budj Bim Cultural Landscape** includes all the elements necessary to express its Outstanding Universal Value.

## ABSENCE OF THREATS OR ADVERSE EFFECTS

Ownership and/or cooperative management of the **Budj Bim Cultural Landscape** by the Gunditjmara means that the extensive aquaculture system will continue to be managed and renewed by the Gunditjmara into the future. The potential pressures on contemporary Gunditjmara cultural traditions, knowledge and practices continuing into the future include: cultural continuity and the ongoing transmission of traditional and contemporary Gunditjmara knowledge and practices across generations; and sustainable, long term financing to enable the ongoing employment of Budj Bim rangers and cover the costs associated with 'caring for Country'.

The rugged environment, the use of stone and the lack of major development on the Budj Bim lava flow mean that the extensive aquaculture system within the **Budj Bim Cultural Landscape** has survived and can be readily identified in the landscape. Much of the lava flow within the nominated property has not been cleared of vegetation; and the aquaculture structures are in good condition. There are a number of ongoing pressures that are currently being managed by the Gunditjmara. These include water quality and water flow, pest plant and animal species, the unauthorised access of cattle, the regrowth of trees within some of the aquaculture channels, effects of climate change and the sustainability of kooyang populations (Part 4.B). Each of these matters is being currently addressed in accordance with the property management plans.<sup>331</sup>

330 UNESCO 2017: Paragraph 123

331 Parks Victoria 2015; GMTOAC 2015; Winda-Mara Aboriginal Corporation 2015



**THE INTERWEAVING OF GUNDITJMARA LAND AND WATERWAY MANAGEMENT, CULTURAL HERITAGE, KOOYANG AND IDENTITY IS EXEMPLIFIED IN THE BUDJ BIM CULTURAL LANDSCAPE.**

**CULTURAL LANDSCAPE: DISTINCTIVE CHARACTER AND DYNAMIC, INTERCONNECTED SYSTEMS**

Traditional and contemporary Gunditjmara knowledge and practices associated with kooyang aquaculture is distinctive and recognisable in the dynamic relationships that Gunditjmara have with their Country. For Gunditjmara, Country refers to a knowledge system and concept with a whole-of-landscape meaning. The concept of ‘caring for Country’ is a complex notion related both to personal and group belonging and to maintaining and looking after the ecological and spiritual wellbeing of the land and of oneself. The continuing **Budj Bim Cultural Landscape** is central to Gunditjmara life and wellbeing because it expresses the work of the Budj Bim Ancestral Being who made the landscape, and because a core of Gunditjmara identity is as kooyang fishers and engineers. Gunditjmara cultural heritage, landscape and aquaculture practices are distinctive, dynamic and functioning, and are central to carrying the Outstanding Universal Value of the **Budj Bim Cultural Landscape**.

The distinctive character of the continuing **Budj Bim Cultural Landscape** is also evidenced in the combination of interconnected cultural and natural systems. The wholeness and intactness of these systems ensure that the functioning and dynamism of the nominated property is readily identifiable within the property. The dynamism of the cultural landscape is evident over time (that is, changes in usage over six thousand years), across different parts of the system (that is, between the major complexes at Tae Rak (Lake Condah), Kurtonitj and Tyrendarra) and within each system (that is, the vitality expressed through water flow and individual, complex-specific channels, weirs, dams and ponds).

**3.1.D STATEMENT OF AUTHENTICITY**

The Budj Bim Cultural Landscape has a high degree of authenticity.<sup>332</sup> Gunditjmara traditional knowledge is demonstrated by millennia of oral transmission, through continuity of practice and is supported by documented Gunditjmara cultural traditions and exceptionally well-preserved archaeological, environmental and historical evidence. The authenticity of the **Budj Bim Cultural Landscape** is evident in the continuing association of the Gunditjmara with the landscape and their traditional and historical knowledge of the life cycle of kooyang. Authenticity is also evident in the practices associated with the trapping, storage and harvesting of kooyang; including the construction of stone weirs and weaving of fibre baskets. In 2007, the Australian Federal Court recognised the native title rights of the Gunditjmara for their “strong and unrelenting connection to this area where their ancestors farmed eels for food and trade, at the time of European settlement and back through millennia.”

Authenticity is about the link between attributes and Outstanding Universal Value. That link needs to be truthfully and credibly expressed so that the attributes can fully convey the Outstanding Universal Value of the property.<sup>333</sup> In addition, authenticity is judged within the cultural context to which the property belongs; which in the case of the **Budj Bim Cultural Landscape** is Australia’s diverse Indigenous cultures.<sup>334</sup> The following types of attributes are relevant to the authenticity of **Budj Bim Cultural Landscape**: contemporary (customary) traditions and management systems; location and setting; use and function; forms of intangible heritage; and spirit and feeling.<sup>335</sup>

Cultural values in the **Budj Bim Cultural Landscape** are truthfully and credibly expressed through Gunditjmara oral testimony and Gunditjmara-led studies and management plans, as well as scientific research. The physical evidence of the Gunditjmara aquaculture system retains the forms and functionality it had during the last millennia and in relation to the underlying lava flow, the continued functioning of the water flows and the presence of kooyang.

332 UNESCO 2016:Paragraphs 79-86

333 UNESCO 2011:61; UNESCO 2016:Paragraph 82

334 UNESCO 2016:Annex 4 (Nara Document on Authenticity 1994)

335 UNESCO 2016:Paragraph 82

## EXCEPTIONAL EVIDENCE

Together, the physical elements that make up the interconnected Gunditjmara aquaculture systems occur in various combinations with the largest and best preserved complexes located at Tae Rak (Lake Condah), Tyrendarra and Kurtonitj. The physical evidence of Gunditjmara aquaculture is supported by exceptionally well preserved archaeological, environmental and historical evidence.

1. The exceptional *historical evidence* for the Gunditjmara aquaculture system takes two forms: traditional and contemporary Gunditjmara knowledge and practices, and supporting historical records. Gunditjmara knowledge and practices concerning kooyang (eel) aquaculture are living and continue to the present day. This knowledge has been documented in historical records, including 19<sup>th</sup> century descriptions by individuals such as George Augustus Robinson, James Dawson and Alexander Ingram; in Mission records; in recorded oral accounts by the Gunditjmara themselves; and in the Australian Federal Court's native title consent determination.
2. The *environmental evidence* is provided by studies of the past and present biodiversity and geomorphology. The primary data used to reconstruct the ancient environments of the **Budj Bim Cultural Landscape** are pollen records. Pollen records from Tae Rak and Lake Surprise suggest that it was not until after 12,000 and most likely around 7,500 years ago; when increases in annual rainfall and changes in water quality and vegetation and the presence of kooyang made conditions suitable for "the major exploitation of Budj Bim resources".<sup>336</sup> This finding is complemented by evidence confirming a date of at least 6,600 years ago for the commencement of Gunditjmara aquaculture.
3. The *archaeological evidence* is the result of more than 40 years of field survey, recording, analysis and excavation (Part 2.B). This evidence includes extensive records of the eight largest and best-preserved aquaculture complexes; as well as a number of smaller, subsidiary facilities. Archaeological excavations at the Muldoons Trap Complex revealed two stages of construction: an early stage strongly suggested to have occurred at least 6,600 years ago, and a more recent stage occurring within the past 800 years.<sup>337</sup> In addition, archaeological excavation has demonstrated continuity of settlement of the **Budj Bim Cultural Landscape** throughout the period of European settlement and occupation, including during the early colonial period (1830s-1860s).

336 Kershaw 2013:100-101

337 McNiven and Bell 2010; McNiven et al. 2012, 2015

## Criterion (iii)

The cultural values of the **Budj Bim Cultural Landscape** are truthfully and credibly expressed through cultural traditions, oral testimony, scientific research and Gunditjmara-led studies and plans that address the following attributes of authenticity: traditions, techniques and management systems; language and other forms of intangible heritage; location and setting; use and function; and spirit and feeling. Gunditjmara traditional knowledge is demonstrated by millennia of oral transmission, through continuity of practice and is supported by documented Gunditjmara cultural traditions and exceptionally well preserved archaeological, environmental and historical evidence. The authenticity of the nominated property is evident in the continuing Gunditjmara ownership of their landscape and their traditional and historical knowledge, the reinstatement of the cultural weir at Tae Rak and ongoing research of water flow, wetland ecology and the life cycle of kooyang. Authenticity is also evident in the practices associated with their kooyang trapping, storing and harvesting, including the construction of wood weirs and weaving of fibre baskets and sourcing of natural fibres.

## TRADITIONS, TECHNIQUES AND MANAGEMENT SYSTEMS

Traditional and contemporary Gunditjmara knowledge and management practices concerning kooyang (eel) aquaculture have, and continue to be, transmitted to generations of community members through their Elders and through the work of Gunditjmara researchers. This practice is well documented in Gunditjmara histories (both oral and written) and supported by detailed and credible documentation by observers and scholars since the 1840s.

During this 180-year period, Gunditjmara traditions, techniques and management systems have been retained, but also adapted and evolved to changing circumstances – associated with dispossession and colonisation (1830s-1960s), the Mission period (1867-1918), its aftermath (1920s-1950s), the period of Gunditjmara loss of land and access to Country (1960s-1970s), and the return of traditional lands to the Gunditjmara (1980s-present) (Part 2.B). For example, traditional weaving to manufacture fibre baskets for



catching and channelling kooyang has remained relatively unchanged. As elsewhere in Indigenous Australia, the Gunditjmarra adapted their techniques to incorporate new materials. For the Gunditjmarra, the methods for trapping and harvesting kooyang have been adapted to incorporate the use of alternative materials; including for example, wire-mesh and nylon nets and wood-frame storage containers. In each case, the new objects continue to be used to undertake traditional functions. Ultimately, the material culture of kooyang aquaculture has both evolved and retained traditional functions.

Equally, management approaches concerned with the cultural heritage of kooyang aquaculture have evolved to become a mixture of traditional and scientific knowledge and approaches. This mix is demonstrated in the three management plans that cover the **Budj Bim Cultural Landscape** and that comprise the documentation of the management system for the nominated property (Part 5.E).<sup>338</sup>

## LANGUAGE AND OTHER FORMS OF INTANGIBLE HERITAGE

A variety of forms of intangible heritage are intrinsically linked to the Gunditjmarra aquaculture system. These include a revival in the use of language associated with Gunditjmarra aquaculture (see word list); as well as weaving using natural puunyaart (grass) fibres to manufacture gnarraban (kooyang baskets), a practice and skill practiced by Gunditjmarra women today. The making of possum skin cloaks has also been reinvigorated and includes the creation of traditional and contemporary designs etched into the cloaks to represent Gunditjmarra landscapes, aquaculture networks and identities. A final form of intangible heritage associated with Gunditjmarra aquaculture is dance; which is used to engage children, youth and adults in transferring knowledge of Gunditjmarra culture. Amongst the dances created and performed by The Fighting Gunditjmarra dance group is an 'Eel Dance'. Language, weaving and dance represent traditional and revitalised forms of Gunditjmarra knowledge and practice that truthfully and credibly express, and are intimately connected to, kooyang aquaculture.

## LOCATION AND SETTING

**Budj Bim Cultural Landscape** is located wholly within the traditional Country of the Gunditjmarra people; and this has been the case for thousands of years. The most outstanding and well-preserved Gunditjmarra aquaculture complexes are situated within the boundaries of the nominated property. In turn, the aquaculture system is set within the spiritual and ecological landscape created by the Budj Bim Ancestral Being (a significant part of whom is located within the nominated property) and the volcanic lava flow (large and representative examples of the Budj Bim lava flow are included within the nominated property boundaries). Thus Gunditjmarra cultural

traditions, knowledge, practices and ingenuity are attributes that are fully and credibly expressed within the nominated property.

## USE AND FUNCTION

The form of the Gunditjmarra kooyang aquaculture system has remained relatively unchanged for thousands of years. The system of creating channels (yereoc), weirs (from both stone and wood) and dams and modifying ponds and sinkholes is a continuing practice. Some knowledge concerning the functioning of the Gunditjmarra aquaculture network was 'lost' during the 20<sup>th</sup> century, particularly when access to such places was restricted because of private ownership by non-Aboriginal people. Nevertheless, contemporary Gunditjmarra aquaculture knowledge and practices are continuing and being renewed and revitalised because of recorded knowledge, historical documentation and contemporary adaptation.

Water flow – which is an attribute of the Gunditjmarra aquaculture system, has been substantially returned to the Tae Rak-Killara system as a result of the Gunditjmarra initiating the construction of a cultural weir on Tae Rak in 2010 (Part 2.B). This important ecological restoration, and the return of additional water to the aquaculture system, continues to enhance understanding of the system and has enabled the Gunditjmarra to recollect oral and written knowledge associated with the functioning of the kooyang aquaculture network. Water flow is a key attribute in the Gunditjmarra aquaculture system and its cultural significance is demonstrated in the millennia long practices of manipulating, modifying and managing water. Knowledge of how all parts of the system worked is not complete; for those systems that require higher-than-current water levels in order to function, for example. Thus, there are aspects of the aquaculture system that remain to be investigated.

## SPIRIT AND FEELING

The return of Country and the renewal of Gunditjmarra knowledge and practices concerning aquaculture have been powerful actions that have maintained and revitalised the Gunditjmarra's sense of spirit and feeling for the **Budj Bim Cultural Landscape**. This emotional response to the cultural landscape is evidenced and represented in the following statements.

*We as Aboriginal people feel that without land you don't have a spirit. Our connection to the land is that the land is our mother, it gave birth to us, it created all the things that are there for us as a people. This connection to the land is so strong that spiritually, religiously, culturally, it contains all the dreaming that we believe in as Aboriginal people.*  
(Uncle John Lovett)<sup>339</sup>

338 GMTOAC 2015; Parks Victoria 2015; Winda-Mara Aboriginal Corporation 2015

339 Winda-Mara Aboriginal Corporation cultural display information panel, Heywood

Walking the land is important to us because we love the land. The land talks to us; it sings songs and talks to us. Even the birds tell us things ... Each animal's got a story to tell. We've still got those things. They're still here. They're very important. This is the spirituality we've got. We walk this land and we listen and we see and hear them all. Because we love the land we get messages from this and that. (Aunty Iris Lovett-Gardiner)<sup>340</sup>

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## Criterion (v)

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The cultural values of the **Budj Bim Cultural Landscape** are truthfully and credibly expressed through oral testimony, scientific research, and Gunditjmara-led studies and plans that address the following attributes of authenticity: traditions, techniques and management systems; location and setting; and use and function. The outstanding attributes of Gunditjmara aquaculture comprise traditional and contemporary Gunditjmara knowledge and practice and the interconnected Budj Bim lava flow, Tae Rak-Killara water flow and the modified environment to support kooyang husbandry. All components of these inter-related systems continue to function at a high level, and thus underpin the Outstanding Universal Value of the continuing **Budj Bim Cultural Landscape**.

## TRADITIONS, TECHNIQUES AND MANAGEMENT SYSTEMS

The contemporary management of the Gunditjmara aquaculture network is marked by a revitalised and robust Gunditjmara management system which draws on credible traditional and scientific knowledge and practices. This shared, or two-way, knowledge has enabled the enacting of a collaborative, customary and adaptive management framework (Part 5.E). Initially the management framework has focussed on renewing and re-learning traditional skills (cultural burning practice, for example) and removing threats to the aquaculture features (including regrowth of trees in channels and returning water flows to the system). To complement this knowledge, the Gunditjmara will continue to revitalise practices of kooyang (eel) management, storage and husbandry through the careful

and considered repair of cultural features and restoration of water flows. Thus, the Gunditjmara aquaculture management system and approach to continuing, renewing and maintaining the attributes of the system serve to truthfully and credibly convey the Outstanding Universal Value of the **Budj Bim Cultural Landscape**.<sup>341</sup>

## LOCATION AND SETTING

The location and setting of the **Budj Bim Cultural Landscape**, within Tungatt Mirring (Stone Country) and the Budj Bim lava flow, has remained relatively unchanged over millennia. Despite significant changes to the local hydrology in the late-19<sup>th</sup> and mid-20<sup>th</sup> centuries, the construction of a cultural weir on Tae Rak (Lake Condah) in 2010 has largely returned and enhanced the hydrology of the system to its original functioning. Thus, the interconnected physical attributes of the Gunditjmara aquaculture system – the elements of the aquaculture system (channels, weirs, dams, ponds and sinkholes), the Budj Bim lava flow, the Tae Rak-Killara catchment water flow and the modified environment to support kooyang husbandry – continue to operate to a high degree and therefore truthfully and credibly convey the Outstanding Universal Value of the nominated property.

## USE AND FUNCTION

Based on Gunditjmara knowledge and practices and supported by credible historical, archaeological and environmental evidence, the use and function of the aquaculture system is well understood and documented.<sup>342</sup> Peer reviewed archaeological research investigations have shown that the Gunditjmara aquaculture system is at least 6,600 years old.<sup>343</sup> The Gunditjmara aquaculture system has been extensively and well documented as a result of over 40 years of archaeological field survey, recording, analysis and excavation; although further documentation is still required for the Kurtonitj aquaculture complex.<sup>344</sup> In addition, there remains enormous potential for continuing discovery and insight into the past use of the Gunditjmara aquaculture system, including the possibility of uncovering evidence of aquaculture earlier than 6,600 years ago.

The Victorian Government (Aboriginal Victoria) and the Gunditjmara maintain and manage the extensive records documenting the aquaculture system. More than 100 aquaculture features have been documented within the **Budj Bim Cultural Landscape** and more than 50 reports prepared that relate to the Gunditjmara aquaculture system.

<sup>340</sup> Winda-Mara Aboriginal Corporation cultural display information panel, Heywood

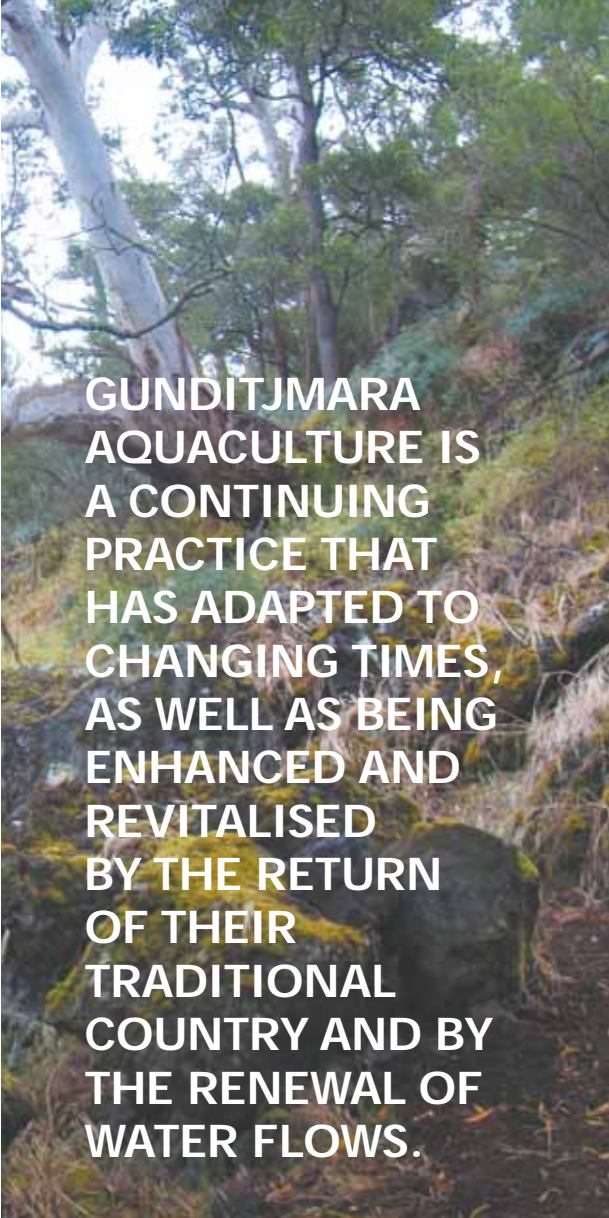
<sup>341</sup> UNESCO 2011:61; UNESCO 2016:Paragraph 82

<sup>342</sup> McNiven 2015; McNiven and Bell 2010;

<sup>343</sup> McNiven et al. 2012, 2015

<sup>344</sup> Lane 2006





**GUNDITJMARA  
AQUACULTURE IS  
A CONTINUING  
PRACTICE THAT  
HAS ADAPTED TO  
CHANGING TIMES,  
AS WELL AS BEING  
ENHANCED AND  
REVITALISED  
BY THE RETURN  
OF THEIR  
TRADITIONAL  
COUNTRY AND BY  
THE RENEWAL OF  
WATER FLOWS.**

In a general sense, the function of the Gunditjmarra aquaculture system has survived unchanged over millennia. However, in the time since 1830 – when European colonists first occupied Gunditjmarra Country, access to all parts of the aquaculture network gradually decreased for the Gunditjmarra. This was particularly the case in the 1960s and 1970s due to the privatisation of lands on which the largest complexes are situated. However, this situation changed dramatically from the 1980s as areas of land within Country were progressively returned to the Gunditjmarra. Access to and management control of all parts of the **Budj Bim Cultural Landscape** has enabled the Gunditjmarra to renew the intensity of maintenance of the system with respect to the physical culture heritage features themselves, as well as the return of water flows and the accompanying increase in abundance of kooyang.

Like Gunditjmarra culture, Gunditjmarra aquaculture is a continuing practice that has adapted to changing times, as well as being enhanced and revitalised by the return of access to their traditional Country and by the renewal of water flows. Additionally, despite the ravages of the 20<sup>th</sup> century caused by the draining of the waterways and wetlands, damage from domestic stock grazing and the introduction of pest plant species and animal species, the landscape has proven to be resilient and the stone aquaculture features remain relatively intact and *in situ*.

### 3.1.E PROTECTION AND MANAGEMENT REGIME

A comprehensive management system has been developed to ensure the highest level of protection of the **Budj Bim Cultural Landscape** (Part 5). The management system is comprised of five interconnected elements:

1. Gunditjmarra Traditional Owner customary rights and obligations, including legal recognition of such under the Australian Federal Court's 2007 Native Title determination
2. Aboriginal ownership and/or cooperative management of all components of the nominated area (Part 5.A)
3. Comprehensive legislative, regulatory and statutory controls at Australian, Victorian and local government levels (Part 5.B)
4. Integrated governance with an emphasis on local-level decision making and implementation (Part 5.C)
5. A complementary suite of management plans, goals and strategies that combine Gunditjmarra knowledge and practices with contemporary science and adaptive management practices (Part 5.D).

In the event that the **Budj Bim Cultural Landscape** is inscribed on the World Heritage List, it is the intention of the Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC), Winda-Mara Aboriginal Corporation and the Australian and Victorian governments that a *Budj Bim Cultural Landscape World Heritage Strategic Management Framework* be developed and adopted. While the **Budj Bim Cultural Landscape** is comprehensively protected and managed under the current management system, a strategic management framework will synthesise and further consolidate these current arrangements. In addition, the implementation and oversight of the framework will be undertaken by a *Budj Bim Cultural Landscape World Heritage Steering Committee*. This group will be established at such time as the nominated property is inscribed on the World Heritage List. Together, the Strategic Management Framework and the Steering Committee will provide the mechanism for ensuring the coordinated management of the three serial components of the **Budj Bim Cultural Landscape**.<sup>345</sup>

345 UNESCO 2016: Paragraph 114

Table 3.2 provides a summary of the **Budj Bim Cultural Landscape** protection and management framework with regard to: the current and proposed governance and decision-making framework; the key Australian, Victorian State and local government legislation; and the current and proposed management regime. This framework is detailed in Part 5.

GOVERNANCE, LEGISLATIVE AND MANAGEMENT FRAMEWORK			
Customary Rights and Obligations	Gunditjmara Traditional Owners		
Governance, Decision-making and Administrative Body (proposed)	<p align="center"><b>Budj Bim Cultural Landscape World Heritage Steering Committee</b></p> <p align="center">This group – with a majority of Gunditjmara Traditional Owners, will be established at such time as the <b>Budj Bim Cultural Landscape</b> is inscribed on the World Heritage List.</p>		
Governance, Decision-making and Administrative Body (current) (Part 5.C)	Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC)	Winda-Mara Aboriginal Corporation	Budj Bim Council
Area Covered and Protective Designation (Part 5.B)	Budj Bim Indigenous Protected Area, Lake Condah Mission	Tyrendarra Indigenous Protected Area	Budj Bim National Park
Ownership (Part 5.A)	GMTOAC	Winda-Mara Aboriginal Corporation	Victorian Government
Australian Government Legislation (Part 5.B)	<p><i>Environment Protection and Biodiversity Management Act 1999</i> establishes World Heritage Management Principles (Annex A) and regulates actions occurring within or outside a National and World Heritage property that have, will have, or are likely to have, a significant impact on the values of the nominated property.</p> <p><i>Native Title Act 1993</i> provides for the recognition and protection of Aboriginal people's rights and obligations to Country.</p>		
Victorian Government Legislation (Part 5.B)	<p><i>Aboriginal Heritage Act 2006</i> provides for the protection of Aboriginal cultural heritage in Victoria.</p> <p><i>National Parks Act 1975</i> enables management services for parks and reserves.</p> <p><i>Planning and Environment Act 1987</i> provides for the adoption and use of municipal planning schemes that regulate land-use.</p>		
Local Statutory Documents (Part 5.B)	Shire of Glenelg Local Planning Scheme Shire of Moyne Local Planning Scheme		
Principal Management Document (Proposed)	<p align="center"><b>Budj Bim Cultural Landscape World Heritage Strategic Management Framework</b></p> <p align="center">This strategic management document will be adopted by the GMTOAC, Winda-Mara Aboriginal Corporation, Australian Government and Victorian Government at such time as the <b>Budj Bim Cultural Landscape</b> is inscribed on the World Heritage List.</p>		
Principal Management Documents (Current) (Part 5.D)	<ul style="list-style-type: none"> <li>• Ngootyoong Gunditj, Ngootyoong Mara South West Management Plan (2015)</li> <li>• Budj Bim Indigenous Protected Area Plan of Management 2015-2019 (2015)</li> <li>• Tyrendarra Indigenous Protected Area Management Action Plan 2015-2018 (2015)</li> </ul>		
Implementation (Part 5.F)	Budj Bim Ranger Program (funded by Australian Government Indigenous Advancement Strategy program)	Parks Victoria staff (funded by the Victorian Government)	

**TABLE 3.2 Budj Bim Cultural Landscape: Summary of the protection and management framework for the serial property.**

THERE REMAINS ENORMOUS POTENTIAL FOR CONTINUING DISCOVERY AND INSIGHT INTO THE PAST USE OF THE GUNDITJMARA AQUACULTURE SYSTEM, INCLUDING THE POSSIBILITY OF UNCOVERING EVIDENCE OF AQUACULTURE EARLIER THAN 6,600 YEARS AGO.



## FRAMEWORK FOR MANAGEMENT AND PROTECTION

The **Budj Bim Cultural Landscape** comprises lands owned by the Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC) and Winda-Mara Aboriginal Corporation, and – in the case of Budj Bim National Park, a co-operative management arrangement between the Gunditjmarra Traditional Owners and Parks Victoria. Thus, in recognition of Aboriginal ownership and/or management of the entirety of the nominated property, the rights and obligations of Gunditjmarra Traditional Owners underpin the protection and management system.

The **Budj Bim Cultural Landscape** does not have a buffer zone. The setting is protected by the Australian Government's *Environment Protection and Biodiversity Conservation Act 1999*. This legislation is supported by a combination of Victorian Government laws and local government land use planning schemes. Collectively these legislative and statutory arrangements mean that a formally designated buffer zone is not required to protect the outstanding heritage attributes and values of the nominated property.

### Legislative framework

Legislation and associated planning and protection instruments have been established across three levels of government – Australian, Victorian State and local – to ensure the **Budj Bim Cultural Landscape's** heritage attributes and values are comprehensively protected and managed. These legislative regimes are outlined below and discussed in detail in Part 5.B.

### Australian Government legislation

The majority of the **Budj Bim Cultural Landscape** is currently included on Australia's National Heritage List. It is recognised as a 'Matter of National Environmental Significance' protected from significant impacts by the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Once included on the World Heritage List, the entire nominated property will be recognised as a Matter of National Environmental Significance and protected from significant impacts by the EPBC Act. The EPBC Act regulates actions occurring within or outside a World Heritage property that have, will have, or are likely to have, a significant impact on the values of the property. The Environment Protection and Biodiversity Conservation Regulations 2000 establish World Heritage management principles (Annex A of this Nomination Dossier) that will apply to the nominated property at such time as it is inscribed on the World Heritage List.

The primary purpose of management of natural heritage and cultural heritage of a declared World Heritage property must be, in accordance with Australia's obligations under the World Heritage Convention, to identify, protect, conserve, present, transmit to future generations and, if appropriate, rehabilitate the World Heritage values of the property. This includes developing a management plan for each declared world heritage property.

### Victorian Government legislation

A suite of Victorian State laws protect the attributes and values of the **Budj Bim Cultural Landscape**. The *Aboriginal Heritage Act 2006* establishes the GMTOAC as a Registered Aboriginal Party for the area which includes the nominated property. Registered Aboriginal Party status provides decision-making responsibilities to the Gunditjmarra for protecting Aboriginal cultural heritage in their Country. Under the Aboriginal Heritage Regulations 2007, the Budj Bim lava flow is recognised as an area of cultural heritage sensitivity within which the removal of stone requires a permit.<sup>346</sup> The Victorian *National Parks Act 1975* protects the cultural and natural values of parks and reserves, including those of Budj Bim National Park. The Victorian *Local Government Act 1989* requires that planning undertaken by each local government authority is consistent with a municipal planning scheme approved under the *Planning and Environment Act 1987*. The nominated property lies within the boundaries of two local councils: Glenelg and Moyne Shires.

### Management and governance framework

The Australian Federal Court's determination on 30 March 2007 recognised the Gunditjmarra's native title rights and interests over lands including Budj Bim National Park. Subsequently, the Gunditjmarra and the Victorian Government established a co-operative management arrangement for Budj Bim National Park.<sup>347</sup> Much of the remainder of the nominated property is Aboriginal-owned land that has been designated as the Budj Bim and Tyrendarra Indigenous Protected Areas. Consequently, the decision-making and administrative bodies that oversee and cooperate in the protection and management of the **Budj Bim Cultural Landscape** are the GMTOAC, Winda-Mara Aboriginal Corporation and the Budj Bim Council.

The *Budj Bim Council* was established as part of the co-operative management arrangement between the GMTOAC and the Victorian Government. The Budj Bim Council comprises representatives of Gunditjmarra Traditional Owners (six members), Parks Victoria (two members), the Department of Environment, Land, Water and Planning (one member) and the Glenelg Hopkins Catchment Management Authority (one member). The Budj Bim Council's role is to manage Budj Bim National Park to achieve both cultural and ecological objectives through joint decision-making. The primary management document developed by, and guiding the work of, the Budj Bim Council is the Parks Victoria 2015 *Ngootyoong Gunditj, Ngootyoong Mara South West Management Plan*.<sup>348</sup> The implementation of the Management Plan (including operational planning, on-ground management,

346 Aboriginal Heritage Regulations 2007: Division 3, s33. The Victorian Government intends to extend protection of the Budj Bim Cultural Landscape to include Aboriginal intangible heritage.

347 Parks Victoria 2015:6

348 Parks Victoria 2015



monitoring and visitor presentation) is undertaken by staff employed by Parks Victoria, including Gunditjmara employees.

The 2015 *Ngootyoong Gunditj, Ngootyoong Mara South West Management Plan* establishes the customary and adaptive management approach for the **Budj Bim Cultural Landscape**.<sup>349</sup> It is a strategic guide for managing and protecting over 130 Parks, Reserves and Indigenous Protected Areas in south-west Victoria and incorporates the three serial components of the nominated property. The plan integrates Gunditjmara Traditional Owners' knowledge into all aspects of protection and management. In addition, two specific sub-management plans have been developed for the Gunditjmara-owned Budj Bim and Tyrendarra Indigenous Protected Areas.<sup>350</sup>

The *Gunditj Mirring Traditional Owners Aboriginal Corporation* (GMTOAC) was established in 2005 and, following the 2007 native title determination, holds and manages the native title rights of the Gunditjmara.<sup>351</sup> The corporation is a Registered Native Title Body Corporate under the Australian Government *Native Title Act 1993* and a Registered Aboriginal Party under the Victorian *Aboriginal Heritage Act 2006*.<sup>352</sup> The GMTOAC promotes the continuing connection to Country by the Gunditjmara through its caring for Country programs and projects. The GMTOAC is the owner and manager of the Budj Bim Indigenous Protected Area and Lake Condah Mission.

*Winda-Mara Aboriginal Corporation*, established in 1992, provides services to the local Aboriginal communities in and around the far south-west Victorian towns of Heywood, Hamilton and Portland.<sup>353</sup> Winda-Mara Aboriginal Corporation is the owner and manager of the Tyrendarra Indigenous Protected Area. It undertakes cultural heritage and land management initiatives in partnership with GMTOAC, as well as with key government agencies and non-government organisations. The Winda-Mara Aboriginal Corporation employs the Budj Bim Rangers who carry out land management and monitoring activities across all parts of the **Budj Bim Cultural Landscape**.

The **Budj Bim Cultural Landscape** management system is undertaken through an Adaptive Management Framework (Part 5.E). The Framework allows for ongoing learning by continually assessing the success of actions in meeting management objectives and supporting adjustment to management actions in the future. The Framework requires the integration of various elements of management to provide an approach that systematically tests assumptions, promotes learning and continuous improvement and provides timely information to support management decisions. Ultimately, the Framework seeks to reinforce and encourage the connections between a healthy environment and a healthy society (Ngootyoong Gunditj, Ngootyoong Mara – Healthy Country, Healthy People).

349 Parks Victoria 2015. This management plan was a partnership between GMTOAC, Parks Victoria, Budj Bim Council and Department of Environment, Land, Water and Planning and was approved by each of the four organisations.

350 GMTOAC 2015; Winda-Mara Aboriginal Corporation 2015

351 Gunditj Mirring Traditional Owners Aboriginal Corporation. 'Gunditjmara Native Title Determination (Part A and B)', <https://www.gunditjmirring.com/single-post/2014/05/07/Gunditjmara-Native-Title-Determination-Part-A-B>

352 Registered 28 May 2007. Aboriginal Victoria. 'Heritage. Gunditj Mirring Traditional Owners Aboriginal Corporation', corporation. <http://www.vic.gov.au/aboriginalvictoria/heritage/registered-aboriginal-parties/gunditj-mirring-traditional-owners-aboriginal-corporation.html>

353 Winda-Mara Aboriginal Corporation. 'About', <https://www.windamara.com.au/about>

## 3.2 COMPARATIVE ANALYSIS

The findings of the comparative analysis are that:

1. Examination of the World Heritage and Tentative List cultural landscapes identified nine properties that can be used for comparative analysis with **Budj Bim Cultural Landscape**.
2. The comparative analysis found that although all nine properties evidence an eco-cultural relationship of dynamic manipulation and management of natural resources, this relationship is expressed in diverse cultural practices and attributes that reflect local ecologies. None has a suite of attributes similar to those of the **Budj Bim Cultural Landscape** as expressed through the Gunditjmarra aquaculture system.
3. **Budj Bim Cultural Landscape** is a rare intact example of an indigenous or traditional cultural landscape in which processes of eel harvesting pattern the landscape. Many other eeling sites known from the historical documentary record including Mt William and Toolondo in Australia, and those of Maori in Aotearoa/ New Zealand, have been significantly impacted by processes of colonisation and changing land use. The scale and the ability to 'read' the system of aquaculture in the **Budj Bim Cultural Landscape** makes it not only representative of landscapes created by indigenous use of wetlands and aquatic resources, but also exceptional.

The aim of the cultural comparative analysis is to "explain the importance of the nominated property in its national and international context" by demonstrating there are no other similar properties already on the World Heritage List or on the Tentative Lists, and no comparable sites currently outside the World Heritage system that might be nominated in the future.<sup>354</sup> Comparisons should be drawn with properties expressing the same values as the nominated property and within a defined geo-cultural area, but in some cases the geo-cultural framework may be global.<sup>355</sup>

In line with UNESCO advice, the comparative analysis of the **Budj Bim Cultural Landscape** (a serial nomination of three components) is based on the whole property.<sup>356</sup>

ICOMOS has noted that few models exist for the comparative analysis for properties of indigenous values; especially for those, like the **Budj Bim Cultural Landscape**, where substantial built evidence or large-scale landscape modification does not exist and where the landscape is considered 'natural'.<sup>357</sup>

An independent and expert comparative analysis study for the **Budj Bim Cultural Landscape** was undertaken in 2013 for the Gunditjmarra and the Victorian Government.<sup>358</sup> The study describes the **Budj Bim Cultural Landscape** as an exemplar of cultural landscapes in which human interaction with the environment is an eco-cultural relationship of dynamic manipulation and management of natural resources (see Section 2A). These cultural landscapes are indicative of very long-term cultural interactions with the environment. The practices of resource manipulation and management may be continuing or may have ceased, but cultural knowledge of the resource and the cultural association of a traditional community with the landscape continues

At their most general and for the purposes of comparative analysis, cultural landscapes that are comparable with **Budj Bim Cultural Landscape** will have the following characteristics:

1. The values of the landscape are indicative of the *longevity of systems of knowledge and cultural practices* expressed through interaction with the environment
2. The tangible evidence in the landscape reflects a *continuing cultural tradition of use and management* of a natural resource over a very long time period
3. The use, manipulation or management of natural resources is *expressed in evidence* of these practices *at a landscape scale*
4. The landscape evidence may also demonstrate *increasing specialisation and intensity* in the use of natural resources over time
5. Some landscapes will have *evidence of the manipulation or use of water*, water resources or hydrological systems.

The longevity of cultural connection to landscapes means that they will be associated with non-agricultural, small-scale cultivating societies. A significant subset of these landscapes will have evidence of the manipulation or use of water, water resources or hydrological systems (point 5 above); but this is not the primary characteristic for their selection as sites of comparative value.

354 UNESCO 2016:Paragraph 132

355 UNESCO 2011:67

356 UNESCO 2011:67

357 ICOMOS 2016:65

358 Context 2013a: Anita Smith was the principal author of the study. Ian McNiven provided specialist input.



## COMPARATIVE ANALYSIS OF SITES SELECTED FOR COMPARISON

The selection of sites for comparison with the **Budj Bim Cultural Landscape** draws from the UNESCO World Heritage List, the Tentative Lists and other sites from within Australia, the region and globally. Cultural landscapes selected for comparative analysis align with the characteristics of the **Budj Bim Cultural Landscape**, listed above.

They include both relict and continuing cultural landscapes created by communities over long periods of time in Europe, Africa, Australia, the Pacific Islands and North and South America. In some examples, the cultural processes that patterned the landscape have ceased to be practised, but in others – including the nominated property – the knowledge of these practices and traditional associations with the landscape continue, or have been adapted and are expressed in new ways. In each, these values are expressed in tangible evidence that directly reflects a community's use of resources available in the local environment.

Table 3.3 lists cultural landscapes on the World Heritage List and Tentative Lists that have values similar to those of **Budj Bim Cultural Landscape** for the purposes of comparative analysis.

## COMPARISON WITH SITES ON THE WORLD HERITAGE LIST

There are currently 1,073 properties inscribed on the World Heritage List. Of these, 832 are inscribed on cultural criteria of which 91 are designated as cultural landscapes. An initial review of cultural landscapes on the World Heritage List drew the following conclusions:

- A number of World Heritage properties are *traditional cultural landscapes with primarily associative values*. That is, their Outstanding Universal Value is primarily or exclusively intangible values; being storied landscapes or having spiritual or other cultural associations with 'natural' elements of the landscape. These include: Papahanamokuakea (Hawaii, United States of America), Uluru Kata-Tjuta (Australia), Chief Roi Mata's Domain (Vanuatu) and Tongariro National Park (Aotearoa/New Zealand). Of these, only Uluru-Kata-Tjuta is associated with a non-agricultural society. In this latter site, a Statement of Outstanding Universal Value has not yet been developed, however the management of the cultural landscape is governed by the tjukurpa (law) of Anangu Traditional Owners and documented in rock art. Cultural practices such as burning are also part of the management regime for the property.
- A number of World Heritage properties are *traditional cultural landscapes in which the Outstanding Universal Value is primarily expressed in rock art*. These include five properties inscribed as cultural landscapes – Matobo Hills (Zimbabwe), Tsodilo (Botswana), Rock Shelters

of Bhimbetka (India), Gorbustan Rock Art Cultural Landscape (Azerbaijan) and Petroglyphs within the Archaeological Landscape of Tamgaly (Kazakhstan) - and Kakadu National Park (Australia).<sup>359</sup> Although all reflect the values of non-agricultural societies in their earliest rock art depictions and all provide evidence of natural resource exploitation over a long time period, evidence expressed through rock art is of a substantially different order to that of the **Budj Bim Cultural Landscape**. In the **Budj Bim Cultural Landscape** the evidence of natural resource exploitation is directly related to the processes of manipulation of the resources and their exploitation as expressed in the landscape; rather than through a visual depiction. In this sense, the **Budj Bim Cultural Landscape** is a direct outcome of the interaction of people and the landscape – rather than a depiction of those processes.

- A number of World Heritage properties are *cultural landscapes associated with traditional systems of water manipulation*. These include Cultural Landscapes of Bali Province (Indonesia), Aflaj systems of Oman (Oman), Rice Terraces of the Cordilleros (Philippines) and Cultural Landscape of the Honghe Hani Terraces (China).<sup>360</sup> Although in each there is evidence for an increasing intensity in the manipulation of the water flow or system and each reflects traditional ecological knowledge of water as a natural resource; in all landscapes the manipulation of water is associated with irrigation to support large-scale agriculture.

**Five World Heritage cultural landscapes were identified as having Outstanding Universal Value that is similar to the potential Outstanding Universal Value of Budj Bim Cultural Landscape** (Table 3.3, Figures 3.1-3.5). These are:

- Saloum Delta, Senegal (inscribed on the World Heritage List in 2011)
- Kuk Early Agricultural Site, Papua New Guinea (2010)
- Head Smashed in Buffalo Jump, Canada (1981)
- Rock Islands Southern Lagoon, Palau (2012)
- Laponian Area, Sweden (1996)

The five properties included in this group are all organically evolved, continuing cultural landscapes and carry Outstanding Universal Value that is specifically related to the sustainable exploitation of natural resources. With the exception of the Rock Islands Southern Lagoon (Palau), all have evidence for increasing intensity in the use of the resources over time and are closely aligned to the **Budj Bim Cultural Landscape** in their values. In the Saloum Delta (Senegal) and Kuk Early

359 Kakadu National Park was inscribed in 1981 prior to the introduction of the cultural landscape category into the World Heritage system.

360 These properties align with the sub-theme concerning management and control of water as identified in the ICOMOS thematic study – *Cultural Heritages of Water in the Middle East and Maghreb* (ICOMOS 2015)

SITE NAME	COUNTRY	YEAR OF INSCRIPTION	WORLD HERITAGE CRITERIA	LONGEVITY OF CULTURAL PRACTICES	CONTINUING CULTURAL TRADITION	EVIDENCE AT LANDSCAPE SCALE	INTENSITY IN RESOURCE USE OVER TIME
Budj Bim Cultural Landscape	Australia	NA	iii, v	✓	✓	✓	✓

#### Cultural landscapes inscribed on the World Heritage List

Saloum Delta	Senegal	2011	iii, iv, v	✓	✓	✓	✓
Kuk Early Agricultural site	Papua New Guinea	2010	ii	✓	✓	✓	✓
Head Smashed in Buffalo Jump	Canada	1981	vi	✓	✓	✓	✓
Rock Islands Southern Lagoon	Palau	2012	iii, iv, vii, ix, x	✓	✓	✓	?
Laponian Area	Sweden	1996	iii, v vii, viii, ix	✓	✓	✓	?

#### Cultural landscapes included on Tentative Lists

Barotse Cultural Landscape	Zambia	2009	iii, v	✓	✓	✓	✓
Pimachiowin Aki	Canada	2004	iii, vi, ix	✓	✓	✓	?
Ivavik/Vuntut/Hershel Island (Qikiqtaruk)	Canada	2004	iv, v	✓	✓	✓	?
Aasivitssuit, Arnangarnup Qoorua	Denmark (Greenland)	2003	iii, v	✓	✓	✓	✓

**TABLE 3.3 Budj Bim Cultural Landscape: Comparable Cultural Landscapes on World Heritage and Tentative Lists**



Agricultural Site (Papua New Guinea), the evidence for increasing intensity in resource use is associated with active management of the landscape to increase these resources. Head Smashed in Buffalo Jump (Canada) and Laponian Area (Sweden) have millennia-long histories of herding and manipulating large herds of terrestrial animals – buffalo and reindeer respectively.

The **Budj Bim Cultural Landscape** is a product of interrelated and interconnected cultural and environmental systems – each with its own specific evidence. Similarly, the intersection of natural and cultural systems are clearly evident at the landscape scale in the Saloum Delta, Head Smashed in Buffalo Jump, Laponian Area, and to a lesser extent the drainage systems, mounds and other landscape modifications evident in the archaeological deposits of the Kuk Early Agricultural Site. For the Rock Islands Southern Lagoon, these systems or processes are inferred through the analysis of archaeological deposits.

The Saloum Delta, Head Smashed in Buffalo Jump and Laponian Area have evidence for the processing of shellfish, buffalo and reindeer respectively. In all three the documentary and archaeological record indicates harvesting of these resources in large quantities – probably seasonally; and processing to preserve the food resource for future consumption and/or trade.

Each of these five World Heritage cultural landscapes reflect the traditional ecological knowledge of past and present traditional communities and illustrate cultural practices concerning the exploitation, manipulation and/or management of natural resources that were initiated many thousands of years ago. This may suggest that these values are already well represented on the World Heritage List, however it is evident that this small number of places globally represent a significant diversity of cultural traditions and practices. The attributes of each reflects the specific traditional cultures, environments and the resources that were or are the focus of these communities. None of these properties represent eel aquaculture or the six-millennia longevity of Gunditjmara aquaculture. As a consequence, the five properties are extremely diverse and different expressions of organically evolved cultural landscapes. They are not only located in different environments, but are spread across the globe – in the Pacific Islands, North America, Europe and Africa.

Rather than arguing against there being room on the World Heritage List for the **Budj Bim Cultural Landscape**, the small number, but great diversity in those cultural landscapes considered here, suggests that the **Budj Bim Cultural Landscape** – as an Indigenous Australian expression of these values – would fill a gap on the List. The inscription of **Budj Bim Cultural Landscape** on the World Heritage List will add a further representative example of properties of similar values expressed through a diversity of culturally specific attributes.

## COMPARISON WITH SITES ON TENTATIVE LISTS

For the purpose of this comparative assessment, the Tentative Lists database (1,671 sites at October 2017) was searched for places identified as cultural landscapes (approximately 30 sites) and those suggested for nomination under Criterion (v) (over 350 sites), the criterion most commonly associated with cultural landscapes. The sites were assessed in relation to the key attributes and values for the **Budj Bim Cultural Landscape**. Most of the sites fall into one or more of the following groups:

- Agricultural landscapes, including those with evidence of large-scale manipulation of water to sustain agriculture over a long period of time – for example, Oasis of Fayoum, Hydraulic Remains and Ancient Cultural Landscapes (Egypt)
- Landscapes in which the values are evidenced in settlements and built heritage
- Landscapes with evidence of successive cultures, various land uses and settlements over a long period of time – for example, Valle Calchaqui (Argentina), which has evidence from nomadic hunters to colonial towns over a 12,000-year period
- Landscapes containing archaeological and geological deposits containing evidence of human evolution – for example, Melka Kunture and Bachilt Archaeological Site (Ethiopia)
- Landscapes with values and an extent defined by rock art – for example, Mwela Rock Paintings (Zambia)
- Primarily associative cultural landscapes patterned by the stories and/or spiritual beliefs of traditional peoples.

**Ultimately, only four cultural landscapes connected with traditional peoples, their practices and associated with use or harvesting of natural resources were identified from the Tentative Lists as having values comparable to those of the Budj Bim Cultural Landscape** (Table 3.3, Figures 3.7-3.10). These are:

- Barotse Cultural Landscape (Zambia)
- Pimachiowin Aki (Canada)
- Ivvavik / Vuntut / Herschel Island (Qikiqtaruk) (Canada)
- Aasivittsui, Arnangarnup Qoorua (Denmark)

In two of these sites – Barotse Cultural Landscape (Zambia) and Ivvavik / Vuntut / Herschel Island (Qikiqtaruk) (Canada) – these values are primarily or partially expressed in the manipulation of water and/or aquatic water resources. Additionally, in Barotse Cultural Landscape and Aasivittsui, Arnangarnup Qoorua (Denmark), the evidence indicates an increasing intensity in the exploitation of natural resources over time. All are associated with non-agricultural societies or those practising small-scale cultivation. Pimachiowin Aki (Canada) is not associated with the intensive manipulation of a specific natural resource, but rather a wide range of animal and plant species.



**3.1** Kuk Early Agricultural Site (Papua New Guinea) contains evidence of wetland reclamation worked almost continuously for at least 7,000 years. It demonstrates the technological change that transformed plant exploitation to agriculture around 6,500 years ago.



**3.2** Saloum Delta (Senegal) includes evidence of intensive shellfish gathering practices that led to the formation of 218 humanly-made islets or mounds created from shellfish remains



**3.3** Head Smashed in Buffalo Jump (Canada) evidences a 6,000-year old practice of hunting buffalo by herding them over a precipice



**3.4** Rock Islands Southern Lagoon (Palau) contain cultural remains, including permanent stone villages, that testify to the use of the marine ecosystem over a period of 3,000 years



**3.5** Laponian Area (Sweden) is part of the home of the Saami, or Lapp people, whose ancestral way of life is based on the seasonal herding of reindeer

In each site the values associated with harvesting natural resources are expressed through dramatically different attributes and evidence that are an outcome of cultural practices; and the environmental opportunities and constraints of specific locations. The geographic spread of the properties and the diversity of their evidence strengthen claims for them reflecting themes of universal significance. All demonstrate – through tangible evidence and some through continuing community knowledge, the sophisticated ecological knowledge and technical and engineering expertise that underpins traditional management and use of natural resources.

### OTHER PROPERTIES OF SIMILAR VALUES IN AUSTRALIA AND ELSEWHERE

It is a requirement of the comparative analysis that places with values similar to those of the **Budj Bim Cultural Landscape** that have not been inscribed on the World Heritage List or included in the Tentative Lists be investigated in relation to the nominated property for their values, authenticity and integrity and state of conservation.<sup>361</sup> In the case of the **Budj Bim Cultural Landscape**, identifying places of potentially similar values is not straightforward. Recent studies reveal that cultural landscapes in which the evidence reflects the long-term use of natural resources without substantial changes to local ecological systems are more prevalent than previously thought. There are likely to be many landscapes reflecting processes of traditional resource use, manipulation and enhancement of natural resources and evidenced through diverse attributes. To date, studies and data are limited and few are likely to be recognised in National or regional heritage inventories, or protected for the values associated with eco-cultural landscapes. The scale and detail of the tangible evidence in potentially comparable landscapes has been difficult to ascertain. In many cases, this evidence is likely to have been impacted by changing land use or the cessation of practices that initially patterned the landscape.

### COMPARISON WITH SIMILAR PLACES IN AUSTRALIA

Aboriginal people around Australia modified their environments in a variety of ways to increase their harvest of a target species. This includes: the use of fire to increase production of particular plants and animals; the processing of poisonous foods into edible foods; the creation of stone hides to lure and catch predator birds; and the retouching or repainting of rock 'art' to ensure the supply of a target species.

Fish traps were widely distributed around marine and fresh water areas and are recognised as an important part of Aboriginal fishing technology for thousands of years. Aboriginal people utilised locally available materials and customised the size and design of their fish traps to suit local conditions and to target particular species.



3.6 Toolondo channel

Unlike many indigenous fish traps around Australia, the Gunditjmara aquaculture system farmed as well as trapped eels and fish. According to Sutton, this eel aquaculture system 'is markedly different from contemporary, historical and archaeological records of freshwater fish traps recorded in other parts of Australia which provided a system for channelling fish in streams or rivers into traps rather than creating conditions for fish husbandry'.<sup>362</sup>

**Despite these differences, four Australian exemplar landscapes have been identified as having values and in some cases attributes that are comparable with the potential Outstanding Universal Value of the Budj Bim Cultural Landscape.**

These are:

- Toolondo Channel System (Victoria, Australia)
- Mount William Channel System (Victoria, Australia)
- Brewarrina Fish Trap (New South, Wales, Australia)
- Eastern Torres Strait coastal fish traps (northern Queensland, Australia)

#### *Toolondo and Mount William channel systems*

There is as yet no comprehensive catalogue of fish traps in south-western Victoria. McNiven describes the rich volcanic plains of western Victoria, within which the **Budj Bim Cultural Landscape** is situated, as featuring:

An unequalled record of Aboriginal freshwater fish trapping structures compared to any other region of Australia. While other places in Australia have higher numbers of documented fish traps . . . historical and archaeological records reveal that western Victoria has the most elaborate, most complex and the oldest freshwater fish traps known for the continent.<sup>363</sup>

361 UNESCO 2011:67-69

362 Sutton 2004

363 McNiven in Context 2013a:31



**3.7** The Barotse Cultural Landscape (Zambia) and Budj Bim Cultural Landscape demonstrate similar responses to, and use of, wetland environments and the resources that annual cycles of flooding provide



**3.8** Ivvavik/Vuntut/Hershel Island (Qikiqtaruk) (Canada) where the Vuntut Gwitchin Traditional Owners constructed fences to herd and harvest caribou



**3.9** Aasivittsuiut, Arnangarnup Qoorua (Denmark – Greenland) contains archaeological evidence of settlements, inussuk (cairns) and trails leading from the coast to the caribou hunting camps and caribou drive systems. The systems continue to be part of living cultural traditions.



**3.10** Pimachiowin Aki (the Land that Gives Life) (Canada) is a cultural landscape of Anishinaabeg (Ojibwe people) associated with the cultural tradition of Ji-ganawendamang Gidakiiminaan (Keeping the Land). The property supports an outstanding diversity of boreal plants and animals, including iconic species such as wolf, moose, woodland caribou and loon.



**3.11** The Ngemba Aboriginal people of Brewarrina used their advanced knowledge of river hydrology and fish ecology to trap and catch large numbers of fresh water fish. The innovative fish traps, known as Ngunnhu, are still visible in the Darling River, and have strong social, cultural and spiritual association for Aboriginal people with connections to the area.

McNiven describes two landscape-scale eel fishing complexes in western Victoria – Toolondo<sup>364</sup> and the Mount William channel systems<sup>365</sup> that – like the Gunditjmara aquaculture system, involved the construction of extensive channels in which weirs and baskets were placed to trap kooyang (eel). At both Toolondo and Mount William the trapping system incorporated features interpreted as holding ponds.

At Mount William a complex of excavated channels up to 500 metres in length is known from historical documentary accounts. According to McNiven and Bell, this complex is the largest earthen construction of pre-contact Aboriginal people known for any part of Australia.<sup>366</sup> The condition and integrity of the site complex is unknown, although preliminary archaeological investigations indicate that much of the complex may be buried under ploughed fields.

At Toolondo, much of the very large channel feature constructed to connect Budgeongutte Swamp (within the natural range of kooyang) with Clear Swamp (located outside the natural range of kooyang) remains intact. The channel – which is over three kilometres long, extended kooyang habitat into areas outside their natural range. A system of side channels running parallel to the main channel likely functioned as traps to capture the downstream migrating eels.<sup>367</sup>

Neither of the above complexes has been securely dated. Both, in their extent and complexity, emphasise the active manipulation and management of resources by Indigenous communities in south-west Victoria, the prior social importance of kooyang fisheries and the sophistication of hydrological engineering technology and knowledge. Neither systems have the contemporary adaptive management of the **Budj Bim Cultural Landscape**.

Amongst these three landscapes, the aquaculture system within the **Budj Bim Cultural Landscape** is best known through Aboriginal community knowledge and archaeological, historical and environmental research, and is in a good state of conservation. The extent of surviving evidence from Mount William is unclear and further archaeological research is needed to clarify it. The degree of conservation of evidence at Toolondo is also unclear. However, given the extant evidence and lack of contemporary Aboriginal management of the systems, it is highly unlikely that either Mt William or Toolondo demonstrate the interaction of people and their environment with the degree of authenticity and intactness to that of the **Budj Bim Cultural Landscape**.

#### ***Aboriginal fish traps and dams in general***

Throughout Australia, Aboriginal people built fish traps along rivers and streams and on the coast. These were of considerable variety in type, number, size and location and the more durable of structures, especially those of stone, are still visible in some locations along coasts and waterways and many are listed on State Indigenous heritage registers.

Aboriginal oral stories passed down for generations are supported by historical accounts that attest to Indigenous Australians having manipulated the ecology and specific species to increase the abundance of fish and other aquatic resources. Such accounts indicate that systems of eel aquaculture and fish 'farming' may have been extensive and complex. With the exception of a small number of stone complexes such as Brewarrina Fish Traps complex, few are likely to have survived the interruption to traditional practices and the intense use and alteration of coasts and rivers since European settlement.

364 Lourandos 1980a, 1980b

365 McNiven and Bell 2010

366 McNiven and Bell 2010:95

367 Lourandos 1980a



3.12 Kaiadilt Aboriginal fishtrap complex at Catfish Story, Bentinck Island, southern Gulf of Carpentaria, Queensland

#### *Brewarrina Aboriginal Fish Traps (Baiaemes Ngunnhu)*

The Brewarrina (Ngunnhu) Aboriginal Fish Traps is the only other nationally listed Indigenous fish trap in Australia apart from the **Budj Bim National Heritage**. The Brewarrina Fish Traps is a complex of dry-stone walls and holding ponds stretching half a kilometre in the Barwon River, north-west New South Wales. The fish traps are the largest single group recorded in Australia and the complex is outstanding for its Indigenous associations and as an example of Indigenous dry stone wall construction techniques, river hydrology and fish ecology.

The Brewarrina Fish Traps are however a different order of site to that of the **Budj Bim Cultural Landscape**, both in scale and complexity. In the **Budj Bim Cultural Landscape** the landscape values are more strongly evident in the relationship between the geology, hydrology, ecology and cultural systems evident in Gunditjmara aquaculture. There is no evidence from Brewarrina that the traps enhanced availability or storage of fish – other than providing a highly sophisticated mechanism for trapping them. Similar to the **Budj Bim Cultural Landscape**, the Brewarrina (Ngunnhu) Fish Traps site is nationally significant for its exceptional size, design and complexity. In both, the historical sources attest to complex social relationships and customary law concerning access to and sharing of the resources these systems offered.

#### **Coastal fish traps**

Fish traps along the coasts of northern Queensland and the eastern Torres Strait Islands have been strategically located to take advantage of access to fish, the availability of stone for construction and a coastal geomorphology conducive to trap construction. The age of individual or groups of fish traps is unclear although they or their precursors may have considerable time depth. Archaeologists Michael Rowland and Sean Ulm note that many of the traps have been altered in shape, as well as removed and reconstructed.<sup>368</sup>

In the islands of the eastern Torres Strait the networks of stone fish traps are large and diverse, forming an almost continuous lace-like pattern along sections of the coasts. The cultural landscapes they create are likely to have multiple dimensions of meaning beyond their functions as traps. McNiven has suggested that some stone features in the intertidal zone are associated with the cosmological (and thus associative) landscape rather than serving a purely economic function.<sup>369</sup> As he demonstrates – using examples from the Torres Strait, the two spheres are not mutually exclusive with large fish trap complexes playing a key role in the way that landscapes and seascapes are inscribed with social meaning.

Although there has been considerable recording of individual and complexes of traps; they do not appear to have been evaluated within a landscape framework that describes their interrelationships, social functions and traditional and current uses.

368 Rowland and Ulm 2011

369 McNiven and Feldman 2003

## OTHER PROPERTIES OF SIMILAR VALUES OUTSIDE OF AUSTRALIA

**Four non-Australian landscapes were identified as having attributes and values matching the five defined characteristics and are therefore comparable with the potential Outstanding Universal Value of the Budj Bim Cultural Landscape** (Figures 3.13-3.16). These are:

- Maori Eeling Sites – Te hopu tuna (Aotearoa/New Zealand)
- Hawaiian fish ponds and aquaculture (United States of America)
- Clam gardens (Canada)
- Ahjumawi Lava Springs State Park (United States of America)

### *Maori eeling sites – Te hopu tuna, Aotearoa/ New Zealand*

A search of the Aotearoa/New Zealand Historic Places Trust Register did not reveal a specific heritage site related to Maori eeling, and no specific site or landscape with evidence of these activities has been identified through published or internet sources. Given that traditional Maori eel weirs and traps were primarily constructed from wood and brush, it is likely that little evidence remains of this once widespread practice, or at least as it was traditionally practiced. Unlike the Gunditjmara, it is unknown if the knowledge of eels, eeling and the construction of pa tuna (eel weirs) is held by Maori communities and whether the practice continues using modern materials and practices.

### *Hawaiian fish ponds and aquaculture*

Aquaculture practices and use of fishponds in Hawai'i is unprecedented in the Pacific Islands. The enormous scale and associated labour required to construct and maintain the often very large stone walled ponds is indicative of the rapidly increasing population and power of the Hawaiian chiefs in the centuries immediately prior to European contact. Associated with this rapid social change towards what are described as kingdoms is the intensification of large-scale agriculture and irrigation systems. The aquaculture systems of Hawaiians are – in their complex engineering and technology – aligned with the aquaculture system of the **Budj Bim Cultural Landscape**. However, the scale and social context in which these systems developed and operated makes the Hawaiian landscapes more closely aligned with World Heritage properties associated with traditional manipulation of water resources in Indigenous agricultural societies - for example the Aflaj systems (Oman).

### *Clam gardens, Canada*

Although clam gardens have been known through ethnographic evidence since the early 20<sup>th</sup> century, systematic recording is relatively recent; commencing in the 1990s. The landscapes in which the clam gardens exist have a range of other evidence of Indigenous land uses including fish traps, house sites and middens. These landscapes are culturally rich. Many are protected because they lie within a protected area, however – the use and maintenance of many has ceased and the physical evidence of the clam gardens and other intertidal evidence are eroding and disappearing. Traditional knowledge of cultivating clams and constructing and caring for clam gardens has been recorded and is passed on in Indigenous communities on the west coast of Canada who continue to harvest clams.

The similarities between Gunditjmara kooyang (eel) aquaculture and the clam gardens and mariculture (that is, the cultivation of fish or other marine foods) of Canada's west coast First Nations are striking. Both are considered potentially distinctive practices in their regions that enabled a rich food source to be enhanced through apparently simple processes that are underpinned by deep ecological knowledge and complex engineering.

### *Ahjumawi Lava Springs State Park, California, United States of America*

Of all the sites identified in the comparative analysis as having values similar to the **Budj Bim Cultural Landscape**, the Ahjumawi fish traps and ponds are the most similar in their attributes. In both, the wetland landscape has been created by a lava flow and the aquaculture systems evident in both used stone to construct traps and create habitat for aquatic species. In both cases these practices extend the seasonal availability of resources and enhance their overall numbers. Despite the similarities of their attributes and values, these sites are associated with distinct cultural groups whose origins lie in separate continents. The Ahjumawi fish traps and ponds lie within the Ahjumawi Lava Springs State Park and are protected by this status and management planning that recognises cultural values. The extent to which these aquaculture and fishing sites and the associated remains of villages reflect the extent of the present or past Ahjumawi cultural landscape is unclear.



3.13 Eel weir (pa tuna) named Ruataniwha, on the Hokino Stream. The pā tuna (eel weir) was a common device for catching eels in rivers, streams and the outlets of lagoons and lakes. Weirs were used in autumn, to catch eels as they headed downstream to spawn in the sea. Fences in the water guided the eels into a net and then into a hinaki (eel pot). Pā tuna were useful when rivers were in flood or flowing heavily.



3.14 The Hawaiian people practiced aquaculture through development of fish ponds (Hawaiian: loko i'a), the most advanced fish husbandry among the original peoples of the Pacific.



3.15 The network of Indigenous clam gardens is found along the west coast of Canada. The coastal First Nations of British Columbia and Native Americans of Washington State and Alaska constructed the ancient intertidal features to enhance clam production.



3.16 Situated on one of the nation's largest systems of underwater springs, the Ahjumawi are one of eleven bands of the Pit River Tribe of Indigenous peoples of California. The residents constructed and used fish traps not just to harvest fish but also to manage the stream and fish populations.

## CONCLUSION: THE CASE FOR OUTSTANDING UNIVERSAL VALUE

The comparative analysis for the **Budj Bim Cultural Landscape** demonstrates that it is a rare, intact and representative example of a cultural landscape in which Indigenous or traditional manipulation, management and use of natural resources, over a long period of time is evidenced in attributes at a landscape level. Cultural landscapes of comparable values on the World Heritage List, Tentative Lists and elsewhere evidence these values through attributes that reflect local cultural practices and ecologies. While these landscapes have values that are comparable with the **Budj Bim Cultural Landscape**, their tangible attributes of these values are highly diverse. The very small number of comparable cultural landscapes on the World Heritage List and Tentative Lists indicates that there is room on the World Heritage List for the **Budj Bim Cultural Landscape**.

The use of stone as a raw material, the relative lack of development on the Budj Bim lava flow following European settlement and the restitution of Tae Rak (Lake Condah) means that the tangible evidence of the Gunditjmara aquaculture system has survived. Many other eeling sites known from the historical documentary record including Mt William and Toolondo in Australia, and those of Maori in Aotearoa/New Zealand, have been significantly impacted by processes of colonisation and changing land use and have now disappeared or lack the integrity and authenticity of the nominated property. The scale and the ability to 'read' the system of aquaculture in the **Budj Bim Cultural Landscape** makes it not only representative of the wide range of sites and landscapes created by Indigenous use of wetlands and aquatic resources, but also exceptional.



### 3.3 DRAFT STATEMENT OF OUTSTANDING UNIVERSAL VALUE

#### BRIEF SYNTHESIS

The **Budj Bim Cultural Landscape** is located in the traditional Country of the Gunditjmarra Aboriginal people in south-eastern Australia. The three serial components of the property contain one of the world's most extensive and oldest aquaculture systems. Over a period of at least 6,600 years the Gunditjmarra created, manipulated and modified local hydrological regimes and ecological systems. They utilised the abundant local volcanic rock to construct channels, weirs and dams and manage water flows in order to systematically trap, store and harvest kooyang (short-finned eel – *Anguilla australis*) and support enhancement of other food resources. The highly productive aquaculture system provided a six millennia-long economic and social base for Gunditjmarra society. This deep time interrelationship of Gunditjmarra cultural and environmental systems is documented through present-day Gunditjmarra cultural knowledge, practices, material culture, scientific research and historical documents. It is evidenced in the aquaculture system itself and in the inter-related geological, hydrological and ecological systems.

#### JUSTIFICATION FOR CRITERIA

**Criterion (iii): *The Budj Bim Cultural Landscape bears an exceptional testimony to the cultural traditions, knowledge, practices and ingenuity of the Gunditjmarra.***

The extensive networks and antiquity of the constructed and modified aquaculture system of the **Budj Bim Cultural Landscape** bears testimony to the Gunditjmarra as engineers and kooyang fishers. For at least the past 6,600 years the Gunditjmarra created and adapted a system of aquaculture based on deliberate manipulation, modification and management of wetlands and waterways. Gunditjmarra knowledge and practices have endured and continue to be passed down through their Elders and are recognisable across the wetlands of the **Budj Bim Cultural Landscape** in the form of ancient and elaborate systems of stone-walled kooyang husbandry (or aquaculture) facilities. Gunditjmarra cultural traditions, including associated storytelling, dance and basket weaving, continue to be maintained by their collective multigenerational knowledge.

**Criterion (v): *The continuing cultural landscape of the Budj Bim Cultural Landscape is an outstanding representative example of human interaction with the environment and testimony to the lives of the Gunditjmarra.*** The **Budj Bim Cultural Landscape** was created by the Gunditjmarra who purposefully harnessed the productive potential of the patchwork of wetlands on the Budj Bim lava flow. They achieved this by creating, modifying and maintaining an extensive hydrological engineering system that manipulated water flow in order to trap, store and harvest kooyang that migrate seasonally through the system. The key elements of this system are the interconnected clusters of constructed and modified water channels, weirs, dams, ponds and sinkholes in combination with the lava flow, water flow and ecology and life-cycle of kooyang. The **Budj Bim Cultural Landscape** exemplifies the dynamic ecological-cultural relationships evidenced in the Gunditjmarra's deliberate manipulation and management of the environment.

#### STATEMENT OF INTEGRITY

The **Budj Bim Cultural Landscape** has a high level of integrity. The serial property incorporates intact and outstanding examples of aquaculture complexes at Tae Rak (Lake Condah), Tyrendarra and Kurtonitj. Each complex includes all the physical elements of the system (that is, channels, weirs, dams and ponds) that demonstrate the operation of Gunditjmarra aquaculture. The property also includes Budj Bim, a Gunditjmarra Ancestral Being and volcano that is the source of the lava flow on which the aquaculture system is constructed. The 9,935-hectare property is sufficient in size to incorporate the cultural features and ecological processes that illustrate the ways multiple systems – social, spiritual, geological, hydrological and ecological – interact and function. The reinstatement of traditional water flows into Tae Rak through the construction of a cultural weir in 2010, following extensive draining of the lake in the 1950s, has returned and enhanced the water flow across the aquaculture system. This restoration, the rugged environment, the use of stone, the relatively intact vegetation and the lack of major development within the **Budj Bim Cultural Landscape** mean that the extensive aquaculture system has survived, is in good condition and can be readily identified in the landscape.

## STATEMENT OF AUTHENTICITY

The **Budj Bim Cultural Landscape** has a high degree of authenticity. Gunditjmara traditional knowledge is demonstrated by millennia of oral transmission, through continuity of practice and is supported by documented Gunditjmara cultural traditions and exceptionally well-preserved archaeological, environmental and historical evidence. The authenticity of the **Budj Bim Cultural Landscape** is evident in the continuing connection of the Gunditjmara to their landscape and their traditional and historical knowledge of the life cycle of kooyang. Authenticity is also evident in the practices associated with the trapping, storage and harvesting of kooyang; including the construction of stone weirs and weaving of fibre baskets. In 2007, the Australian Federal Court recognised the native title rights of the Gunditjmara for their “strong and unrelenting connection to this area where their ancestors farmed eels for food and trade, at the time of European settlement and back through millennia.”

## REQUIREMENTS FOR PROTECTION AND MANAGEMENT

All of the **Budj Bim Cultural Landscape** is Aboriginal-owned and/or managed and is managed to respect the customary and legal rights and obligations of the Gunditjmara Traditional Owners. The nominated property is protected and managed through an adaptive and participatory management framework of overlapping and integrated customary, governance, legislative and policy approaches.

The Gunditjmara Traditional Owners apply customary knowledge and scientific approaches through two management regimes; a cooperative arrangement with the Victorian Government for Budj Bim National Park; and Indigenous ownership of the Budj Bim and Tyrendarra Indigenous Protected Areas. The **Budj Bim Cultural Landscape** management system is established through the 2015 *Ngootyoong Gunditj, Ngootyoong Mara South West Management Plan*. A team of Budj Bim Rangers, funded through the Australian Government’s Indigenous Advancement Strategy program, manage, conserve and protect the heritage values of the nominated property in accordance with property management plans.

The majority of the **Budj Bim Cultural Landscape** is included on Australia’s National Heritage List, and is protected by the *Environment Protection and Biodiversity Conservation Act 1999*. Once included on the World Heritage List, the entire property will be recognised as a ‘Matter of National Environmental Significance’ and protected by the Act. All Gunditjmara cultural heritage on the **Budj Bim Cultural Landscape** is protected by Victoria’s *Aboriginal Heritage Act 2006*.

There are no major threats to either the aquaculture system or to the maintenance of associated Gunditjmara cultural traditions, knowledge and practices. Nevertheless there are pressures on the nominated property associated with pest plants and animals, water flow and quality, sustaining kooyang populations, unauthorised access of cattle and regrowth of trees within some aquaculture features. The restoration of Tae Rak in 2010 has contributed to maintaining and rejuvenating water flows through the aquaculture system; thereby ensured the ongoing viability of living Gunditjmara cultural traditions and practices.

The 2014 *Budj Bim (Tourism) Master Plan* establishes requirements for sustainable tourism and visitation, as well as educational opportunities, for the **Budj Bim Cultural Landscape**.



**PART 4**

**STATE OF  
CONSERVATION  
AND OTHER FACTORS  
AFFECTING THE  
PROPERTY**

# PART 4

## STATE OF CONSERVATION AND FACTORS AFFECTING THE PROPERTY

The elements of the three serial components of the **Budj Bim Cultural Landscape** are currently in good condition. None of the outstanding attributes or values are under threat from major development, environmental change, natural disasters or tourism. Pressures on the property relate to pest plants and animals, water flow and quality, sustaining kooyang (eel) populations, unauthorised entry of cattle and regrowth of trees within some aquaculture features (Table 4.1). Each of these matters are being currently addressed in accordance with the property management plans (Part 5.D).

Through ownership and cooperative management arrangements, the three serial components of the **Budj Bim Cultural Landscape** are subject to Aboriginal traditional and customary management practices. The cultural features and landscape settings are maintained and cared for through management and monitoring undertaken through the Budj Bim Ranger program and by Parks Victoria staff. Comprehensive legal protection is in place across all levels of government – Australian, Victorian State and local – to ensure the present condition of the property is maintained to a high standard (Part 5.B). A comprehensive management system – which includes up-to-date management plans for the nominated property, is in place. The full suite of conservation and monitoring measures is detailed in Part 5 and Part 6.

### 4.A PRESENT STATE OF CONSERVATION

All of the fabric of the Gunditjmara aquaculture system, as well as the interconnected geological, hydrological and ecological systems, are in good physical condition and are not subject to major threats (Part 4.B). Despite limited access allowed to the Gunditjmara in the 20<sup>th</sup> century; the landscape setting has proven to be resilient and the stone aquaculture features remain *in situ* and are relatively intact. The **Budj Bim Cultural Landscape** is situated in a location with a small regional population and insignificant urban development. Tourism activities are sustainable and community-led; thus direct threats from human activities are assessed as low.

#### BUDJ BIM (NORTHERN) COMPONENT

The major aquaculture structures and landscape modifications; located within six complexes on the south-west margins of Tae Rak (Lake Condah) (Part 2.A), are in good condition. They continued to be used and maintained by the Gunditjmara until the 1950s (Part 2.B). Subsequently, ownership by non-Aboriginal people, a lack of recognition for the cultural heritage significance of the landscape and various incompatible land and resource uses had some impact on the aquaculture features. Archaeologists working with the Gunditjmara first began to document the extent and condition of the aquaculture facilities from the mid-1970s.<sup>370</sup> Impacts on the cultural features noted at that time related to: physical disturbance of the basalt structures that comprise the fish traps (for example, the removal of small quantities of stone for dry stone wall construction and movement of stones by grazing cattle), soil erosion arising from compaction with the subsequent risks of undercutting of fish trap structures, and the creation of cattle trails (often coinciding with the location of channels) leading to localised erosion.<sup>371</sup> From the late 1980s, the Gunditjmara increasingly regained ownership and access to their Country and the aquaculture system.

An inholding (small land parcel) located three kilometres north of Tae Rak, but excluded from the Budj Bim (northern) component (Map 1.2), contains a commercial basalt quarry and an associated crushing plant. Basalt, which is a ubiquitous part of the Budj Bim lava flow, is quarried from this area under an extraction licence. In the past this operation obtained stone from a wide area, though the Tae Rak aquaculture complexes were not impacted by the quarrying operation. Basalt quarrying is now confined to the inholding and obtaining basalt from outside this area is no longer legally permissible.

370 Clarke 1991; Coutts 1982; Coutts et al. 1977, 1978; Geering 1985; Wesson 1981; summarised in Context 2013b:18-20

371 Context 1993:89-91



More broadly, the landscape of the Budj Bim (northern) component – which is largely comprised of land reserved as National Park, is in relatively good condition. It includes some of the most intact parts of the volcanic plains of south-eastern Australia.<sup>372</sup> The area contains a suite of significant plant and animal species and ecosystems that collectively are in good condition and have a high conservation status and significance.<sup>373</sup> Nevertheless, pest plants and pest animals have created pressures on biodiversity. The current Budj Bim Ranger program provides the resources required to combat pest plants and animals; revegetation work using native plant species is enhancing the natural and cultural environment.

As a result of the Gunditjmaras work to restore water levels and water flows in Tae Rak after 2010 (Part 2.B); water quality is generally good within the Tae Rak-Killara system. Farm fertiliser run off from adjoining pastoral properties (outside of the nominated serial components) has the potential to affect water quality in parts of Killara (Darlot Creek). However, with effective mitigation of off-farm environmental impacts in the Tae Rak-Killara catchment area - due in part to the efforts of the Glenelg Hopkins Catchment Management Authority and programs such as Landcare<sup>374</sup> and the Gunditjmaras 'Yarns on Farms'; the likelihood is assessed as low.

### KURTONITJ (CENTRAL) COMPONENT

The Kurtonitj (central) component of the **Budj Bim Cultural Landscape** is a part of the Budj Bim Indigenous Protected Area. The Gunditjmaras hold freehold title to the Kurtonitj (central) component. A small section (10-15 hectares) of the property has been cleared of surface stone in the past and some of the original open forest vegetation has been cleared of trees. Nevertheless, the aquaculture features (channels, weirs, dams and ponds) are in good condition due to their relatively protected location along watercourses; and because land clearing in these areas has been minimal. Since European occupation of the region from the 1830s, parts of the Kurtonitj (central) component have been used for sheep and cattle grazing. Prior to the acquisition of this component (in 2006 and 2013) by the Gunditjmaras, they had limited access to these lands and the aquaculture complex situated within them.

The Gunditjmaras management plan covering the Kurtonitj (central) component recognises the following factors affecting the aquaculture system and its broader landscape setting:<sup>375</sup>

- There are undocumented and/or incompletely recorded cultural heritage sites – including aquaculture features, within the nominated component

- Parts of the aquaculture features (channels, weirs, dams and ponds) have become overgrown with vegetation, including the growth of trees within some channels
- Pest plant species are widespread and in some cases are displacing native species of importance to the Gunditjmaras – for example, puunyaart (*Carex* spp.), which is a grass fibre necessary for kooyang basket making
- Impacts by pest animal species and cattle grazing have occurred in some areas containing aquaculture features and associated water flows
- There are periodic overpopulations of some native animals – including kangaroo and koala, which can impact on the wetland and treed ecological-cultural environments
- Impacts of water pollution on Killara (Darlot Creek) from fertiliser run-off from farming properties (situated outside the nominated property)
- Impacts of high-intensity wildfires on native plant species as well as the potential to damage or destroy management and tourism infrastructure
- Potential impacts of future land-use planning (for example, plantation forestry which can impact on ground water levels and the setting) on areas beyond and bordering the nominated property.

### TYRENDARRA (SOUTHERN) COMPONENT

The third and most southerly of the three components of the **Budj Bim Cultural Landscape** is comprised of the Tyrendarra Indigenous Protected Area, for which the Winda-Mara Aboriginal Corporation have freehold title (acquired 1999); and a portion of the Budj Bim Indigenous Protected Area, for which the Gunditj Murring Traditional Owners Aboriginal Corporation (GMTOAC) have freehold title (acquired 2008). Both properties have histories of tree clearing and use for pastoralism. In addition, the ecology of the largest wetlands has been impacted by the creation of artificial drains that were constructed to improve grazing land for domestic stock.

Many of the factors affecting the Tyrendarra (southern) component are the same as those listed for the Kurtonitj (central) component. The management plan for the Tyrendarra Indigenous Protected Area includes specific details concerning some of these factors:<sup>376</sup>

- Significant areas of pest plants occur throughout the property including: sweet briar (*Rosa rubiginosa*), elm (*Ulmus* spp.), hawthorn (*Crataegus monogyna*), willow (*Salix* spp.), hemlock (*Conium maculatum*), blackberry (*Rubus fruticosus*), thistle species (various), horehound (*Marrubium vulgare*) and boxthorn (*Lycium ferocissimum*).
- Rabbit (*Oryctolagus cuniculus*) and fox (*Vulpes vulpes*) are major pest species; wild pigs (*Sus domesticus*), which occur in the region but not on the property, may present a threat in the future.

372 Context 2013a:20

373 Parks Victoria 2015:33

374 Landcare is a grassroots movement dedicated to managing environmental issues in local communities across Australia. Landcare Australia. 'Home', <https://landcareaustralia.org.au>

375 GMTOAC 2015:35-36

376 Winda-Mara Aboriginal Corporation 2015:14-20

## 4.B FACTORS AFFECTING THE PROPERTY

Drawing on the description of the present state of conservation of the **Budj Bim Cultural Landscape** (Part 4.A), the factors affecting the property are summarised in Table 4.1. Each factor is discussed below under the headings of development, environment, natural disasters, visitor/tourism and other (cultural and financial) pressures.

FACTOR	POTENTIAL IMPACT	CURRENT LEVEL OF RISK	OUTLOOK (5-25 YEARS)	CURRENT MANAGEMENT
<b>Development pressures</b>				
Agriculture and pastoralism	Moderate	Moderate	Stable	Foster good neighbour relations; maintain boundary fences
Stone extraction	High	Low	Decreasing	Regulatory & planning controls framework
Coal/gas/mineral extraction	Moderate-High	Low	Uncertain	Prohibited by the Victorian Government
Water extraction	High	Low	Increasing	Regulatory & planning controls framework
Plantation forestry	Moderate	Moderate	Increasing	Regulatory & planning controls framework
<b>Environmental pressures</b>				
Climate change	Moderate	Low	Increasing	Implement strategies to increase resilience
Pollution of waterways	Moderate	Low	Stable-Decreasing	Establish monitoring program with government agencies
Kooyang population	High	Low	Stable	In accordance with the Victorian Eel Strategy
Pest plants	Moderate-High	Moderate	Stable	Control using adaptive management framework
Impact of trees on cultural features	High	Moderate	Decreasing	Implement Tree Management Plan
Pest animals	Moderate-High	Low	Stable	Control using Adaptive Management Framework
<b>Natural disasters</b>				
Flood	Minor	Low (beneficial)	Stable-Increasing	Disaster preparedness planning
Wildfire	High	Moderate	Increasing	Use of 'cultural burns' to reduce risk; manage in partnership with government agencies
<b>Visitor/tourism pressures</b>				
Tourism	Moderate	Low	Increasing	Comprehensive management planning & implementation
Illegal access	High	Moderate	Decreasing	Monitoring by Budj Bim Rangers and GMTOAC
<b>Other pressures</b>				
Loss of cultural traditions	High	Low	Stable	Education & cultural learning & employment programs
Financial sustainability	High	Moderate	Stable	Government funding & Gunditjmara enterprises

\* GMTOAC = Gunditj Mirring Traditional Owners Aboriginal Corporation

**TABLE 4.1 Budj Bim Cultural Landscape: Pressures on World Heritage attributes and values**

## 4.B(i) DEVELOPMENT PRESSURES

The **Budj Bim Cultural Landscape** is not subject to major development pressures such as urban encroachment, large-scale agriculture or resource exploration and extraction. Settlements in the surrounding area are also relatively small in size and existing land uses have a generally low to moderate impact on the nominated property. The entire nominated property is protected from major development pressures by comprehensive legal frameworks, planning regimes and provisions in the management plans for the nominated property. The development pressures are assessed to be of moderate and low risk; and measures being undertaken to address these are outlined below. All development pressures relate to factors occurring outside the nominated property.

### AGRICULTURE AND PASTORALISM

Development pressure associated with agriculture and pastoralism in areas immediately bordering the **Budj Bim Cultural Landscape** is moderate and the medium-term outlook is stable. Pastoralism – especially the rearing of beef cattle, is the historical and prevailing land use in the surrounding region. Sustainable land management practices are increasingly being integrated into pastoral grazing activities.

A pressure arising from pastoralism on properties adjoining each of the components of the **Budj Bim Cultural Landscape** is the wandering of stock – primarily cattle, into the nominated property. Wandering stock can cause damage to cultural heritage sites (particularly stone structures), cause environmental problems through the spreading of pest plants, despoil waterways and stream banks and damage infrastructure (including fences, visitor walking tracks and boardwalks). The approaches taken by the Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC) and Winda-Mara Aboriginal Corporation to address this issue include: fostering good relations with adjoining neighbours and landowners; preventing unauthorised access of wandering cattle by ensuring all boundary fences are in good condition and well maintained; and carrying out regular patrols by the Budj Bim Rangers and GMTOAC staff to ensure that stock intrusion is reported and livestock owners and/or relevant local government authorities are notified.<sup>377</sup>

Cattle grazing as a small-scale enterprise is undertaken by the GMTOAC within the **Budj Bim Cultural Landscape** on the Lake Corrie and Allambie land parcels – both part of the Budj Bim Indigenous Protected Area.<sup>378</sup> The potential impacts of this activity are managed in accordance with the GMTOAC ‘Wandering Stock Policy’. The policy is implemented by restricting stock numbers and preventing stock access to



4.1 Budj Bim Indigenous Protected Area: Budj Bim Rangers repairing fence to prevent access by wandering cattle

sensitive cultural and natural areas and waterways through ensuring all boundary and internal fences are maintained in good order.<sup>379</sup> This enterprise is undertaken in ways that ensure the attributes and outstanding values of the nominated property are not compromised.

### RESOURCE EXTRACTION – STONE

Within the **Budj Bim Cultural Landscape**, the extraction of basalt (the stone type derived from the Budj Bim lava flow) is assessed to have a high potential impact, though the current level of risk is low. The commercial quarry that currently operates at an inholding (small land parcel) is outside the boundary of the nominated property.<sup>380</sup> Its operations are restricted to its current inholding and the operator is required to adhere to strict controls with regard to impacts on cultural heritage features. In addition, the extraction or removal of stone from within the Budj Bim lava flow requires authorisation in accordance with the Victorian *Aboriginal Heritage Act 2006*.<sup>381</sup> As a Registered Aboriginal Party appointed under the *Aboriginal Heritage Act 2006*, the GMTOAC has decision-making responsibilities in relation to stone removal from the Budj Bim lava flow (Part 5.B).

377 GMTOAC 2015:40, 45-46. This plan includes a Wandering Stock Policy.

378 GMTOAC 2015:61

379 GMTOAC 2015:46

380 Shire of Moyne, Parish of Ardonachie, Lot 1 LP138567

381 *Aboriginal Heritage Act 2006*:Division 2; s.46

## RESOURCE EXTRACTION – COAL SEAM GAS

Coal seam or shale gas extraction ('fracking') is assessed as having a low current level of risk because the Victorian Government has prohibited this activity from being undertaken in Victoria. However, the potential impact of fracking – if it were to be allowed on properties neighbouring the **Budj Bim Cultural Landscape** in the future, would be moderate to high because of the resulting removal of water from the catchment and the potential impacts on water quality.

## RESOURCE EXTRACTION – WATER

The impact of water extraction is assessed as having a low current level of risk. Tae Rak (Lake Condah) is located within the Killara (Darlot Creek) catchment in western Victoria.<sup>382</sup> The hydrogeology of the lake is complex and the nature of the relationship between surface lake water and groundwater remains speculative.<sup>383</sup>

The major land uses in the catchment are broad-acre grazing of sheep and cattle, broadacre cropping, dairying and Eucalypt plantations. Of these activities, broad-acre cropping can require extraction of water from waterways in the catchment; while plantation forestry can impact on groundwater sources.<sup>384</sup> Factors affecting current and future water resource utilisation in the Tae Rak-Killara catchment include: licenced diversions for irrigation, stock and domestic water use, farm dams, and environmental flow requirements.<sup>385</sup> Southern Rural Water manages annual licences to take and use water in the Killara catchment.

## PLANTATION FORESTRY

Plantation forestry is an established land-use in the region within which the **Budj Bim Cultural Landscape** is located. The potential impacts from plantation forestry relate to intercepting and using water runoff, reduction of ground water and aesthetic impacts on the wider setting of the nominated property.<sup>386</sup> The current level of risk to the **Budj Bim Cultural Landscape** of such development is assessed to be moderate. It is an activity allowable under the Glenelg and Moyne Shires' planning schemes for areas bordering the Budj Bim lava flow. These pressures are managed by the Australian Government's *Environment Protection and Biodiversity Conservation Act 1999*; which regulates actions occurring in National and World Heritage listed places (including indirect and offsite impacts) that have, will have, or are likely to have a significant impact on the values of the nominated property (Part 5.B).

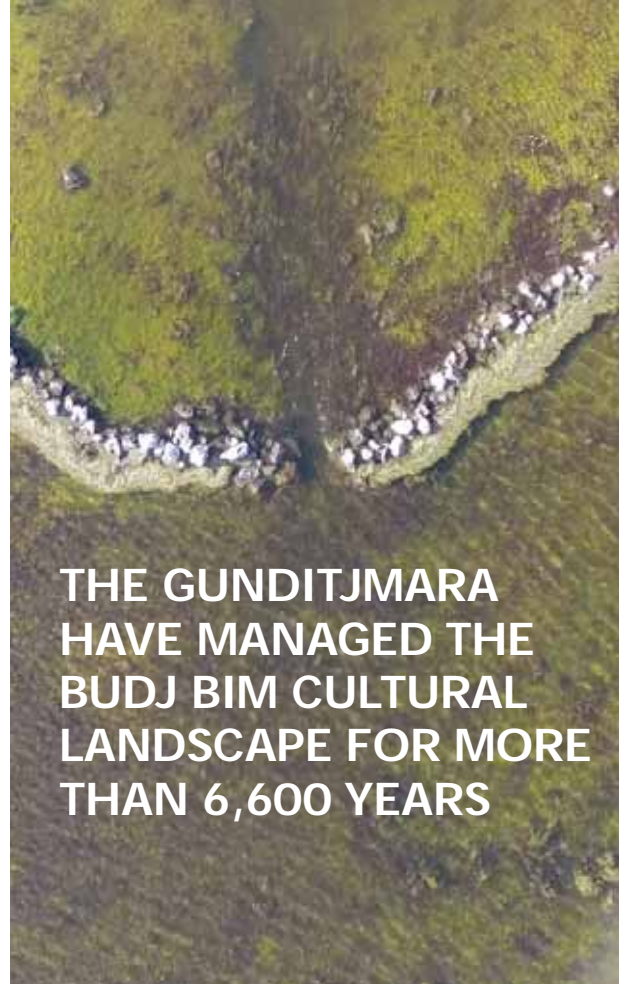
382 Cippel et al. 2006:5

383 Cippel et al. 2006:141-142

384 Cippel et al. 2006:15

385 Cippel et al. 2006:23

386 Benyon et al. 2009



THE GUNDITJMARA  
HAVE MANAGED THE  
BUDJ BIM CULTURAL  
LANDSCAPE FOR MORE  
THAN 6,600 YEARS

## 4.B(ii) ENVIRONMENTAL PRESSURES

The Gunditjmara have managed the aquaculture system for more than 6,600 years. During this period there have been significant fluctuations in natural climatic regimes, and the Gunditjmara have continued to operate the system through processes of what is called, in current land management terminology, 'adaptive management'. The Gunditjmara and their aquaculture system therefore have a history of adaption and resilience to environmental pressures and climate change.

The **Budj Bim Cultural Landscape** is not subject to any major environmental pressures due to its isolation, ruggedness and low population and development. These factors – together with the continuing Gunditjmara custodianship, are likely to give the nominated property's eco-cultural systems a high level of resilience to climate change and associated long-term environmental pressures. The environmental pressures are assessed to be of moderate and low risk; with measures being taken to address these outlined below.

## CLIMATE CHANGE

Climate change is projected to impact the region in which **Budj Bim Cultural Landscape** is situated. Dry Forests and Woodland ecosystems; common across the Budj Bim (northern) component of the nominated property, are subject to projections of a hotter and drier climate with increased wildfire risks. Wildfire seasons are expected to start earlier and end later. A warming climate is predicted to exacerbate many of the existing threats and has implications for the abundance and distribution of some plant and animal species.<sup>387</sup>

387 Parks Victoria 2010:3, 46; 2015:33





Inland Waters and Wetland ecosystems are considered vulnerable to climate change; with increased stress on waterways already under pressure from rising salinity levels and decreasing water quality. Cyclic periods of drought and flood are predicted with extended dry periods interspersed by periods of above-average rainfall and flooding.<sup>388</sup> Changes in the extent and quality of wetlands may reduce the available habitat for kooyang (eels).

Due to the Gunditjmarra's restoration of Tae Rak (Lake Condah), its relative isolation, the low level of population and absence of major development – together with continuing Gunditjmarra custodianship, the **Budj Bim Cultural Landscape's** hydrological and ecological systems are likely to have a higher level of natural resilience to climate change than can be expected of coastal and alpine environments that are already suffering multiple environmental pressures.<sup>389</sup>

Work is currently being undertaken within the **Budj Bim Cultural Landscape** to prepare for the impacts of climate change on ecosystem values; including cooperative working arrangements between government agencies, land managers (including GMTOAC and Winda-Mara Aboriginal Corporation), scientists, research partners and communities to develop climate change adaptation measures.<sup>390</sup>

## POLLUTION OF WATERWAYS

Water flow is a key attribute of the **Budj Bim Cultural Landscape** (Part 3.1.B). Management of water – particularly at Tae Rak and along Killara (Darlot Creek), is necessary to maintain the eco-cultural values of the nominated property (Part 3.1.B). The Gunditjmarra's reinstatement of a cultural weir on Tae Rak in 2010 allowed the lake to be successfully re-flooded and enabled much of the Gunditjmarra aquaculture system to again become operable.

A potential threat to the water quality of Killara is pollution from runoff from agriculture lands, which can increase salinity and chemical levels (from fertilisers). The potential impact of such pollution is moderate to high;<sup>391</sup> although the current level of risk is assessed as low. Monitoring of water quality is not currently undertaken for water flow volume (including height), salinity or nutrients in the Tae Rak-Killara system. The GMTOAC recognise the need for monitoring and is in discussion with the Glenelg Hopkins Catchment Management Authority to determine the best approach to undertaking this work.<sup>392</sup>

## KOOYANG POPULATION

The potential impact of climate change, water quality and over-fishing on kooyang is high; though the current level of risk is low. In Victoria, the number of recreational fishers and the amount of catch taken by them is not known. Anecdotal observations suggest that the take from recreational eel fishing is currently low – in part because recreational anglers are limited to 10 eels per person per day.<sup>393</sup>

Aboriginal Victorians currently have a number of existing rights to access natural resources recognised under Australia's laws. Members of Traditional Owner groups with a native title determination under the Australian Government's *Native Title Act 1993* have non-exclusive rights to hunt, fish and gather natural resources for personal, communal and cultural purposes – without the need to obtain a licence. This includes fishing for and harvesting eels. The Gunditjmarra hold such rights.<sup>394</sup> The Gunditjmarra are currently investigating the scope for wild take from Tae Rak for cultural activities and for small-scale commercial purposes, but these proposals have not yet been subject to detailed feasibility studies.<sup>395</sup> The principles for such a proposal have been drafted and cover sustainability, licensing agreements where required, use of modern and traditional techniques and equipment, maintaining cultural traditions, and health and safety.<sup>396</sup>

## PEST PLANTS

The potential impact from the spread of invasive plants in the **Budj Bim Cultural Landscape** is assessed to be moderate to high; and the current level of risk as moderate. Uncontrolled spread of pest plants can smother and out-compete native vegetation, reduce biodiversity values and reduce the abundance of culturally important species (such as puunyaart – *Carex* spp. – necessary for weaving kooyang baskets). In addition, pest plants can also over-run aquaculture features (channels, weirs, dams and ponds), making it difficult to document, protect, maintain and monitor these features, and ensure their continued functioning.

Fifty-two pest plant (or weed) species have been documented as occurring within the Budj Bim lava flow; and control methods (herbicide treatments and physical methods) have been determined for each of these species.<sup>397</sup> In the Inland Waters and Wetlands ecosystem, focus is currently given to eradicating new and emerging pest plants in aquatic and semi-aquatic environments; and reducing the extent of blackberry

388 Parks Victoria 2010:3, 46; 2015:36

389 Parks Victoria 2010

390 Parks Victoria 2015:32

391 Victorian Fisheries Authority 2017:9. The Victorian Eel Fishery Management Plan notes that the risk to the eel fishery due to reduced water quality (including due to drought and the modification of flow regimes) is high.

392 GMTOAC 2015:41-44

393 Victorian Fisheries Authority 2017:8. The Victorian Eel Fishery Management Plan notes that there is no legal minimum length for eels taken by the recreational fishing sector; and that recreational eel fishing is permitted in all Crown waters which are open to recreational angling.

394 Victorian Fisheries Authority 2017:6

395 GMTOAC 2015:54

396 Context 2008

397 Carr et al. 2008:96-100; GMTOAC 2015:75-79 (Appendix 3)



4.2 Tae Rak (Lake Condah) area: Budj Bim Ranger spraying pest plants

(*Rubus fruticosus*), Bridal Creeper (*Asparagus asparagoides*) and other highly invasive established weeds in riparian areas.<sup>398</sup>

In the Budj Bim and Tyrendarra Indigenous Protected Areas within the **Budj Bim Cultural Landscape**, particular efforts are being made to eradicate pest plants such as Phalaris (*Phalaris tuberosa*) and Soft Rush (*Juncus effusus*) from riparian and fringing wetland vegetation.<sup>399</sup> In addition, the Budj Bim Rangers are currently undertaking significant weed control works (funded under the Australian Government ‘Working on Country’ program). At Tae Rak the works target Bathurst burr (*Xanthium spinosum*), Sweet Briar (*Rosa rubiginosa*), thistles (*Centaurea* spp.) and teasel (*Dipsacus fullonum*); while at Lake Corrie the works target African honeysuckle (*Tecoma capensis*). Willow (*Salix* spp.) control works were undertaken along the entire length of Killara at Kurtonitj (central) component in 2014-2015. Rangers document and log pest plant (and animal) eradication works using the Cybertracker program, as well as maintaining written records.<sup>400</sup>

### IMPACT OF TREES ON CULTURAL FEATURES

The potential impact of trees on aquaculture features is assessed as high; and the current risk as moderate. The unmanaged growth of trees and other vegetation can result in damage to cultural features.

A Cultural Heritage Management Plan – sponsored by GMTOAC, has been prepared to inform the management of trees around the stone channels and related features that comprise part of the Tae Rak aquaculture complexes.<sup>401</sup> The purpose of the Cultural Heritage Management Plan was to

(Facing page)

4.4 Tae Rak (Lake Condah): Field survey team measure the position of trees impacting on an aquaculture feature

4.5 Tae Rak (Lake Condah): Plan showing significant features and trees recorded during a 2012 field survey<sup>404</sup>



4.3 Tae Rak (Lake Condah): Two trees (red arrows) growing in a dam feature (blue arrows) at the south-eastern corner of the Muldoons Fish Trap

determine the best approach to managing those trees that are currently impacting on channels, weirs, dams, stone circles and related features, or are likely to impact on them in the future. The Cultural Heritage Management Plan identifies impacts arising from existing growing trees, falling trees and rotting trees, but also potential impacts arising from the felling of trees, the removal of roots and the use of heavy equipment. A field survey identified and mapped 91 trees as currently or potentially impacting on features of the Tae Rak aquaculture system and 18 impacting or potentially impacting on nearby stone circles.<sup>402</sup> An arborist inspected the mapped trees and has developed a Priority Works Program. The Gunditjmarra are in discussion with the Australian Government to determine the best approach to undertaking this work.<sup>403</sup>

### PEST ANIMALS

Uncontrolled pest animals have the ability to cause considerable damage to the ecological-cultural attributes and values of the **Budj Bim Cultural Landscape**; though the current level of risk is assessed as low. Terrestrial, non-native pest animals present within the nominated property include cat (*Felis catus*), wild dog (*Canis lupus familiaris*), Red fox (*Vulpes vulpes*), goat (*Capra hircus*), pig (*Sus scrofa*), European rabbit (*Oryctolagus cuniculus*), Brown hare (*Lepus europaeus*) Red deer (*Cervus elaphus*), Fallow deer (*Dama dama*), and feral bees (*Apis* spp.). Non-native aquatic pest species include European carp (*Cyprinus carpio*), Tench (*Tinca tinca*), Brown trout (*Salmo trutta*), Rainbow trout (*Oncorhynchus mykiss*), Eastern gambusia or Mosquito fish (*Gambusia holbrooki*), Goldfish (*Carassius auratus*) and Redfin perch (*Perca fluviatilis*).

398 Parks Victoria 2015:36-40

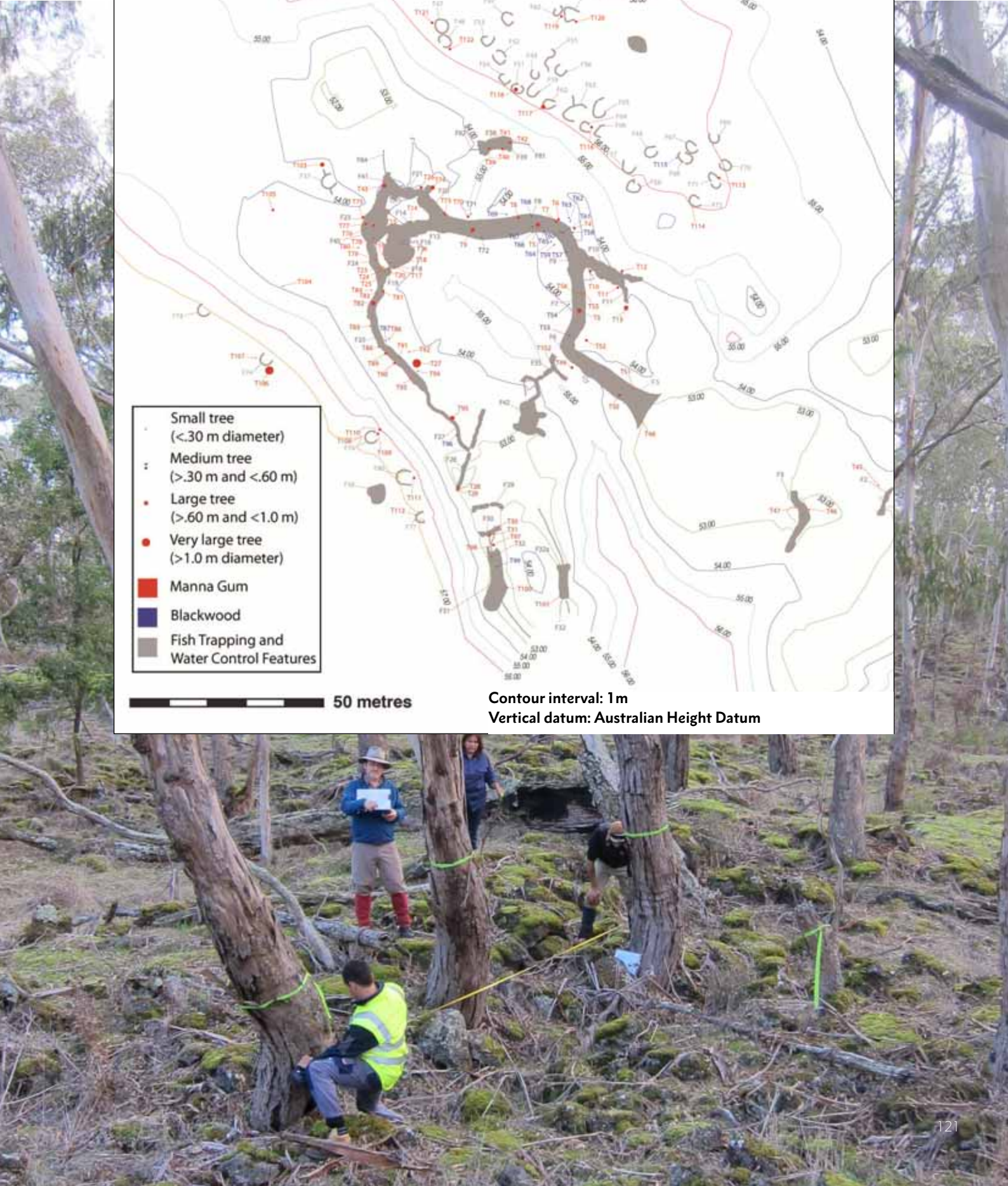
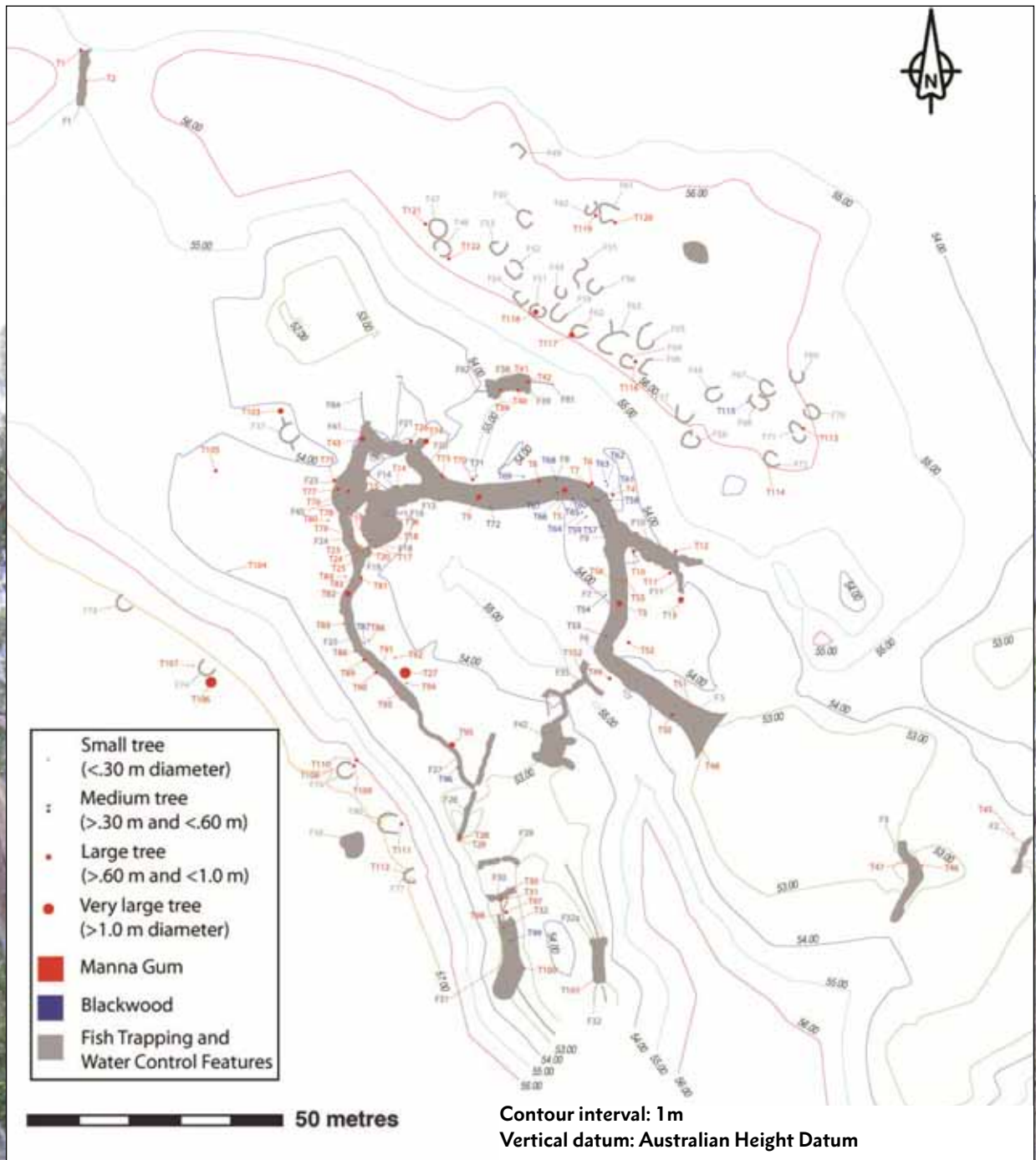
399 Parks Victoria 2015:39; Winda-Mara Aboriginal Corporation 2015:19, 21-22

400 GMTOAC 2015:45

401 Context 2013b

402 Context 2013:32, Appendix C

403 Context 2013b:35





4.6 Budj Bim Indigenous Protected Area: Budj Bim Rangers setting poison baits as part of a rabbit control program

Actions to control terrestrial pest animals within the **Budj Bim Cultural Landscape** currently focus on reducing fox, cat, rabbit, pig and feral bee numbers,<sup>405</sup> and includes current work by the Budj Bim Rangers involving poisoning rabbits and shooting foxes, pigs and deer.<sup>406</sup> All control programs for pest species – particularly in areas of high cultural sensitivity, are undertaken in accordance with Gunditjmara custodial responsibilities and legal requirements and government protocols. In addition to non-native species, some terrestrial native animals – including kangaroo and koala when present in abundant numbers, impact on native vegetation communities and their ability to regenerate.<sup>407</sup> Over-grazing by kangaroos and over-browsing by koalas are managed within the **Budj Bim Cultural Landscape** via ongoing operations.<sup>408</sup> For example, a two-week program in November 2017 was undertaken in the Kurtonitj (central) component and contraceptive devices were implanted into 46 mature female koalas and 43 koalas were relocated to Tappoc (Mount Napier) State Park.

Control of pest fish within the **Budj Bim Cultural Landscape** currently focuses on preventing the spread of introduced fish – including European carp, into kooyang habitat.<sup>409</sup> The GMTOAC is currently in discussion with the Victorian Government's Department of Environment, Land, Water and Planning to determine the best approach for monitoring and surveying native and pest fish species.<sup>410</sup>

404 Richards 2012

405 Parks Victoria 2015:32-35, 38-39; GMTOAC 2015:44-48

406 GMTOAC 2015:45; Winda-Mara Aboriginal Corporation 2015:20

407 GMTOAC 2015:51-53

408 Parks Victoria 2015: 33-34

409 Parks Victoria 2015:36-40

410 GMTOAC 2015:47

## 4.B(iii) NATURAL DISASTERS AND RISK PREPAREDNESS

Overall, the risk of major natural disasters is relatively low due to Australia's stable geology and climate. Although the **Budj Bim Cultural Landscape** is located in a region that is susceptible to floods and wildfire; these climatic conditions are natural processes that have shaped the landscape and wetlands of the nominated property over millennia.

### FLOOD

Flooding is a natural part of the Australian environment. The potential impact of floods on the Gunditjmara aquaculture complexes and their surroundings within the **Budj Bim Cultural Landscape** is assessed as minor; and the current level of risk low. Flooding is generally beneficial to the operation of the Tae Rak-Killara hydrological system and indeed necessary for the operation of the aquaculture system. The impact of extreme flood events resulting from climate change on the aquaculture system is unknown. However, because the current level of the cultural weir is two metres below Tae Rak's (Lake Condah) traditional height (Part 2.B), extreme flooding events are considered unlikely to impact the aquaculture structures.

### WILDFIRE

Fire is a both a natural and cultural part of the Australian environment; important for the regenerating and maintaining of species and ecosystems. The potential impact of wildfire on the **Budj Bim Cultural Landscape** is assessed as high; and the current level of risk moderate. Reducing the risk and impact of wildfires are important aspects of protecting life and community and the cultural and environmental values and assets within the nominated property. In partnership with Parks Victoria, the Victorian Government's Department of Environment, Land, Water and Planning (DELWP) is the lead agency for fire management on Victoria's public land – including Budj Bim (formerly Mount Eccles) National Park.<sup>411</sup> The Gunditjmara also work closely with the Country Fire Authority (a Victorian government agency) to ensure that fire management on private property – including the Budj Bim and Tyrendarra Indigenous Protected Areas, addresses risks to life, property, cultural values and essential services.

Within the **Budj Bim Cultural Landscape**, the Gunditjmara carry out burning practices (termed 'cultural burns'), based on traditional ecological and cultural knowledge. Cultural burns consist of controlled, mosaic 'cool' burning of small areas carried out in low-risk weather conditions, usually in autumn and winter. The aims of cultural burns are diverse and include: to enhance biodiversity – including diverse vegetation growth stages, reduce dense undergrowth (especially beside

411 DELWP 2015



4.7 Kurtonitj (central) component: Budj Bim Rangers carry out a 'cultural burn'

4.8 Budj Bim Indigenous Protected Area (Allambie): Budj Bim Rangers work alongside Country Fire Authority fire-fighters to extinguish the remaining embers of a wildfire

walking tracks), facilitate access to waterways and kooyang (eel) aquaculture structures, promote the growth of plants for traditional uses (for example, puunyaart grass for basket-making), pest plant control and to reduce the likelihood and impact of wildfires. Planning for cultural burns is undertaken in close consultation with Elders and Traditional Owners and monitoring and recording all aspects of cultural burns is an important part of this practice.<sup>412</sup> Gunditjmara traditional ecological and cultural knowledge concerning fire is currently being integrated with scientific ecology principles for use across the whole of the nominated property.

Beyond wildfires themselves, a high level of risk to cultural heritage features (such as channels, dams and weirs) can also arise from the use of ground disturbing machinery during wildfire response and the subsequent emergency stabilisation and rehabilitation stage. Such activities include using earth moving machinery to create firebreaks and fire control lines.<sup>413</sup> Mitigation strategies to address this risk include avoiding the use of machinery in or near to waterways, riparian zones and wetlands; and avoiding all areas with known cultural heritage values – including the major aquaculture complexes at Tae Rak, Kurtonitj and Tyrendarra.<sup>414</sup>

Finally, planning for and fighting wildfires provides opportunities for the Gunditjmara to build capacity, cooperation and partnerships with the Country Fire Authority, DELWP and Parks Victoria fire-fighters, as well as neighbouring landholders. It also provides an opportunity for the Gunditjmara to obtain wider community feedback and input and demonstrate that they are managing wildfire risk responsibly, including through cultural burns.<sup>415</sup>

## VISITOR/TOURISM PRESSURES

Visitors are attracted to the **Budj Bim Cultural Landscape** for the distinctive Aboriginal cultural experiences it offers, its aesthetic qualities and the recreational opportunities it provides (walking, cycling, picnicking and camping). The **Budj Bim Cultural Landscape** is the setting for visitor experiences of a rich Gunditjmara cultural heritage and the spiritual, historical and cultural stories of Tungatt Mirring (Stone Country).<sup>416</sup> Currently, visitors and tourism are a relatively minor pressure on the nominated property because of the low numbers. Each of the three components of the nominated property has the capacity and management frameworks in place to absorb current and future numbers of visitors without adverse effects.<sup>417</sup> For details on visitor numbers see Part 4.A(iv); and for descriptions of the visitor facilities see Part 5.H.

There are seven defined Visitor Experience Areas within the **Budj Bim Cultural Landscape** (Map 5.1). The Budj Bim Trail is a walking and cycling route along unsealed tracks in Budj Bim National Park and adjacent portions of the Budj Bim Indigenous Protected Area.<sup>418</sup> In addition there are six 'destination' precincts – Budj Bim (Mount Eccles/Lake Surprise), Allambie, Lake Condah Mission, Lake Gorrie, Kurtonitj and Tyrendarra (Part 5.H).<sup>419</sup> Each precinct contains visitor facilities and trails – for example, the trails at Kurtonitj and Tyrendarra allow visitors to explore features associated with two different aquaculture complexes and their wetland settings. Currently, Budj Bim Tours – a company owned and

412 GMTOAC 2015:55-57; Winda-Mara Aboriginal Corporation 2015:22-23

413 GMTOAC 2015:57

414 Parks Victoria 2015:50-53

415 GMTOAC 2015:55

416 Context 2012b; Parks Victoria 2015:62

417 Key documents in this regard are: Context 2000:121-146; GMTOAC 2015:59-60; Parks Victoria 2015:67-75; Tract Consultants 2014; Winda-Mara Aboriginal Corporation 2015:23-25

418 The Budj Bim Trail has a maintenance plan in place that covers site inspections and treatment, rubbish and weed removal and repairs/updates to signage and information as needed. It also allows for review of communications relating to the trail such as Park Notes and website information (GMTOAC 2015:59).

419 Parks Victoria 2015:71; Tract Consultants 2014:26-34



4.9 Tyrendarra Indigenous Protected Area: School group visiting the Gunditjmara aquaculture landscape

managed by the Gunditjmara, operates guided tours of the **Budj Bim Cultural Landscape** for corporate visitors, school groups, interest groups and holiday and leisure groups. The tours are provided on an ad hoc basis in response to demand.

The Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC) and Winda-Mara Aboriginal Corporation have aspirations for cultural tourism at the properties they own.<sup>420</sup> These are documented in the 2014 *Budj Bim (Tourism) Master Plan*, which presents a vision for the conservation and sustainable use of the **Budj Bim Cultural Landscape** for cultural, tourism and community purposes. The Master Plan provides an overview of the key actions required to establish the nominated property as a sustainable tourism destination (Part 4.A[iv]).<sup>421</sup>

Threats and pressures that may arise from potential increased visitation include: damage to cultural heritage sites and features, damage to infrastructure, illegal access to GMTOAC and Winda-Mara Aboriginal Corporation owned lands, compromise of intellectual property rights, misuse of cultural knowledge, health, safety and legal liability and ongoing ability to provide effective training for and employment of Gunditjmara tour guides and tourism administrators.<sup>422</sup> Steps taken to manage visitors are detailed in management plans and include: continue to build partnerships between the Gunditjmara and Parks Victoria to develop and promote tourism and tourism products, further develop partnerships with regional tourism bodies and licensed tour operators, develop emergency management plans for all destination areas, ensure Budj Bim Rangers are trained and prepared to respond to emergency situations in partnership with Victoria Police, maintain facilities in a condition that allows for safe use, and implement management actions for access tracks – including public access control.<sup>423</sup>

420 GMTOAC 2015:59

421 Tract Consultants 2014

422 GMTOAC 2015:59-60

423 GMTOAC 2015:60; Parks Victoria 2015:94-97; Rose 2011

### *Illegal access*

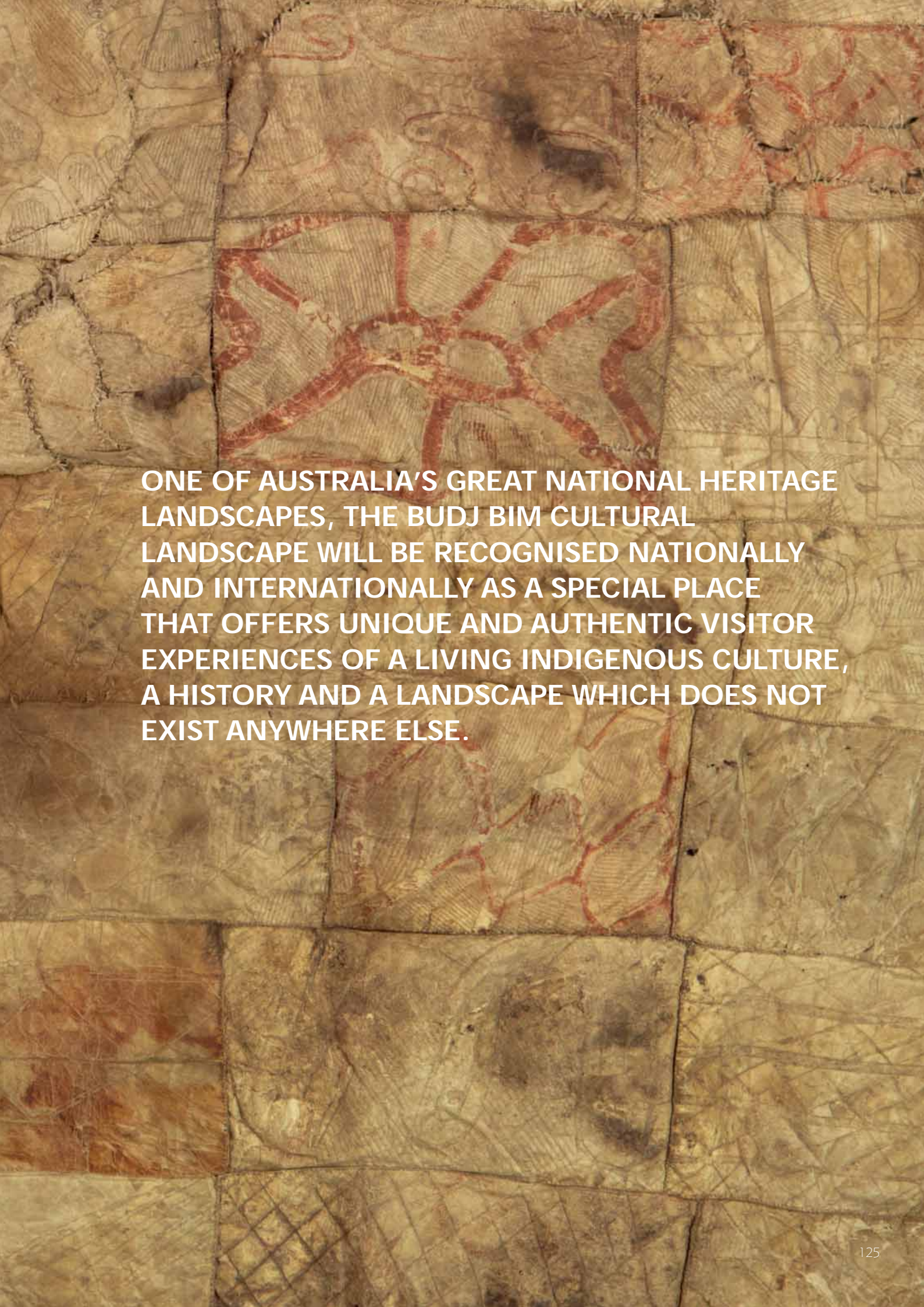
Illegal access – and in particular to those privately owned land parcels that comprise the Budj Bim and Tyrendarra Indigenous Protected Areas, is assessed to have a high potential impact on the **Budj Bim Cultural Landscape**; though the current level of risk is moderate. Potential impacts that arise from illegal entry into the nominated property include: vandalism to cultural heritage features, buildings, infrastructure and signage; damage by cattle as a result of leaving open boundary gates and cutting fences, and damage arising from illegally lit fires. Actions to control illegal access include patrols across the nominated property by the Budj Bim Rangers, and GMTOAC and Parks Victoria staff.

### OTHER PRESSURES

Aboriginal ownership and/or cooperative management of the **Budj Bim Cultural Landscape** means that the extensive aquaculture system can continue to be managed and renewed by the Gunditjmara into the future. Two pressures related to the ownership and management of land owned by the GMTOAC and Winda-Mara Aboriginal Corporation are maintaining cultural traditions and financial sustainability.

### *The continuation of Gunditjmara cultural traditions*

The transmission of contemporary Gunditjmara cultural traditions, knowledge and practices and their continuation into the future are necessary for the Gunditjmara to continue to be able to care for Country in general; and specifically to manage and use the kooyang aquaculture complexes and related water flows. This factor also relates to succession planning and the transmission of administrative and management skills from older to younger generations. This factor is assessed as having a high potential impact; though the current level of risk is low. Inter-generational knowledge transmission and succession planning is achieved, for example, through: documenting cultural traditions by the Gunditjmara in line with their philosophy of continuing connection to Country;



**ONE OF AUSTRALIA'S GREAT NATIONAL HERITAGE LANDSCAPES, THE BUDJ BIM CULTURAL LANDSCAPE WILL BE RECOGNISED NATIONALLY AND INTERNATIONALLY AS A SPECIAL PLACE THAT OFFERS UNIQUE AND AUTHENTIC VISITOR EXPERIENCES OF A LIVING INDIGENOUS CULTURE, A HISTORY AND A LANDSCAPE WHICH DOES NOT EXIST ANYWHERE ELSE.**

the Indigenous Protected Area program, which supports continuing connection to Country, working on and visiting Country; community programs (typically delivered on Country) that support cultural and family strengthening and involvement of youth in several Gunditjmara based traditional dance groups; as well as fostering an employment pathway for Gunditjmara youth in environment, health and education programs to support cultural and family strengthening.

The continuing connection to Country of the Gunditjmara Traditional Owners is supported through partnerships with Parks Victoria, the Department of Environment, Land, Water and Planning (DELWP) – including the Budj Bim Council; the Glenelg Aboriginal Partnership Agreement 2011-2020, the Country Fire Authority and the Glenelg Hopkins Catchment Management Authority. These partnerships integrate cultural knowledge and traditional land management into contemporary protected area and waterway management; respect Gunditjmara knowledge, and provide opportunities for ‘two-way’ learning.<sup>424</sup>

#### Financial sustainability

A second pressure relates to the ongoing availability of sustainable, long-term financing to enable the continuing employment of the Budj Bim Rangers and cover the costs associated with Caring for Country. Currently the major funding source for managing Gunditjmara lands is derived from the Australian Government’s ‘Working on Country’ program (which is linked to the Indigenous Advancement Strategy program) and through employment with Victorian Government agencies (including Parks Victoria, Aboriginal Victoria and DELWP). The development of a sustainable and resilient tourism program is a significant potential funding source for the Gunditjmara.<sup>425</sup>

## 4.B(iv) RESPONSIBLE VISITATION AT WORLD HERITAGE SITES

One of Australia’s great national heritage landscapes, the **Budj Bim Cultural Landscape** will be recognised nationally and internationally as a special place that offers unique and authentic visitor experiences of a living Indigenous culture, a history and a landscape which does not exist anywhere else.<sup>426</sup>

The *Budj Bim (Tourism) Master Plan*, which covers the whole of the **Budj Bim Cultural Landscape**, was prepared for the Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC) in 2014. It presents a vision for the conservation and sustainable use of the nominated property for cultural, tourism and community purposes; along with a range of potential infrastructure works that will enhance business potential and investment attraction and provide a nationally significant visitor experience in south-western Victoria. The *Budj Bim (Tourism) Master Plan* also recognises opportunities to continue to increase the capacity of the Gunditjmara to manage tourism and thereby increase local community employment.<sup>427</sup>

### CURRENT VISITOR LEVELS

The **Budj Bim Cultural Landscape** comprises Budj Bim National Park, Budj Bim and Tyrendarra Indigenous Protected Areas and Lake Condah Mission (Part 5.B; Table 5.2). The visitor destination areas within the nominated property generally have a moderate level of site infrastructure (Part 5.H) and 2-wheel-drive road access to some destination areas is restricted. Nevertheless, the nominated property has established visitor walking trails at the Tyrendarra (southern) and Kurtonitj (central) components. Both trails include

VISITOR TYPE	MARKET	2009		2016	
		NO.	%	APPROX. NO.	%
Corporate Visitors	Government agencies, regulatory bodies and private companies in the region seeking cultural awareness programs and tours for professional development purposes	250	39%	200	5%
School Groups	School groups within south-west Victoria and university students from Melbourne and Warrnambool undertaking field trips	178	27%	2,100	52%
Interest Groups	History groups, conservation volunteers, bird watching clubs, photography groups, and mountain bike clubs	164	25%	400	10%
Holiday Visitors	International visitors and older domestic visitors	56	9%	1,300	33%
TOTAL		648	100%	4,000	100%

TABLE 4.2 Budj Bim Cultural Landscape: Number of participants in Budj Bim Tours – 2009 and 2016

424 Parks Victoria 2015:63-65

425 Tract Consultants 2014; Winda-Mara Aboriginal Corporation 2015:24

426 Tract Consultants 2014:Cover

427 Tract Consultants 2014:12





on-site interpretation and viewing areas; and allow visitors to see a variety of aquaculture features (channels, dams, weirs and ponds) without damaging the sites. In addition, both areas have buildings (Part 5.H) able to accommodate talks, educational activities and small-scale functions.

The estimated number of visitors to Budj Bim National Park is 30,000 people per year. Most visits are undertaken as daytrips, with visitation strongest in January, March and April.<sup>428</sup> People visit the Budj Bim National Park to bushwalk, view the wildlife (especially koalas and kangaroos), picnic, visit Lake Surprise and explore the volcanic geology; though increasingly visitors are seeking information on the areas' rich Aboriginal culture, history and heritage. There are no commercial services in Budj Bim National Park. There is a campground at Lake Surprise. Parks Victoria data on numbers of campers indicates that camping for the period July 2016 – June 2017 was 781.<sup>429</sup>

Budj Bim Tours – established in 2002 and operated by the Winda-Mara Aboriginal Corporation – offers exclusive guided tours to selected areas within the **Budj Bim Cultural Landscape**. Budj Bim Tours operates out of Heywood, Victoria; itineraries range from two hours to full days. Visitor numbers have increased significantly over the last decade or so (Table 4.2), both as part of the Budj Bim Tours enterprise and as independent travellers are able to access the Tyrendarra (southern) component interpretation trail.

### **Projected visitor levels and carrying capacity**

Current visitor numbers to the **Budj Bim Cultural Landscape** are at relatively low levels and visitor facilities are adequate for the current numbers of day-visitors and specialist tour participants. Those visitors seeking specialist tours of the landscape with Gunditjmara guides are currently well catered for, and the intimate character of such tours is readily managed due to the large area of the nominated property and the variety of available Visitor Experience Areas (described in Part H). However, future increases in visitor numbers to the nominated property will require the continued development of new and improved facilities and infrastructure, as well as the continued building of the Gunditjmara's tourism business capacity.

The *Budj Bim (Tourism) Master Plan* identifies ambitious target visitation numbers for the **Budj Bim Cultural Landscape** – approximately 86,000 visitors by 2030.<sup>430</sup> This target will be achieved through: existing visitor markets (school groups, special interest groups and corporate/business groups), expanding into the regional self-drive and bus/coach tour market; and broader 'experience seeker markets', both international and domestic, achievable through the development of various overnight accommodation options. Increased visitor numbers will necessarily expand business

and tourism experience within the Gunditjmara community (for example, through Budj Bim Tours) and require their participation in partnership arrangements with established tour providers to expand available guided tours.

The *Budj Bim (Tourism) Master Plan* recognises that the successful development of the **Budj Bim Cultural Landscape** will require a 'slow build' approach. That is, a need to build tourism markets, visitor numbers and site facilities progressively over time – through business partnerships and with available resources; rather than looking to meet all market needs in the initial tourism development phase.<sup>431</sup> The 'slow build' approach also recognises that the nominated property will not function in isolation as a tourism destination. Rather, it recognises the necessity for the Gunditjmara to continue to engage with the regional tourism industry to leverage the skills and capacities of other tourism businesses.<sup>432</sup>

It is impossible to identify accurately the carrying capacity of the nominated property because of the uncertainty surrounding the funding and timing of upgrading existing facilities and infrastructure and constructing additional facilities (including accommodation). The distribution of visitors is uneven across the whole area – more tourists visit Budj Bim National Park than the Indigenous Protected Areas, for example.

Carrying capacity also assumes that all the social, economic and environmental systems within a landscape are stable and predictable. This is clearly not the case within the **Budj Bim Cultural Landscape**; it is a dynamic and complex place with many interdependencies. Given these factors, it is not appropriate to establish a carrying capacity for the nominated property.

Nevertheless, monitoring – in its broadest sense – through the indicators established in Part 6.A will determine if the impact of visitation is harming attributes that carry the Outstanding Universal Value; and thereby inform issues relating to carrying capacity. That is, monitoring of tourism levels and impacts will increasingly provide data on issues of carrying capacity. If carrying capacity did become a problem in the medium-term, there are opportunities to open new Visitor Experience Areas within the **Budj Bim Cultural Landscape**. Such an action would enable the carrying capacity to continue at a manageable scale.

### **Visitor pressures**

Visitor/tourism pressures are identified in Table 4.1. Specific pressures relating to current and projected visitation, as well as steps currently being undertaken to manage these pressures, are discussed above.

428 Tract Consultants 2014:41. The number of visitors to the park as a whole is not monitored.

429 Information provided by Don Tumney, Area Chief Ranger - Glenelg, Parks Victoria, October 2017

430 Tract Consultants 2014:61-62, Table 7

431 Tract Consultants 2014:51, 60

432 Tract Consultants 2014:51



4.10 Lake Condah Mission: Residential dwelling for use by the caretaker



4.11 Kurtonitj (central) component: Residential dwelling in use for Gunditjmara community briefing on the Koala Management Program, 2017

#### 4.B(v) NUMBER OF INHABITANTS WITHIN THE NOMINATED PROPERTY

There are no people currently living permanently within the **Budj Bim Cultural Landscape** (Table 4.3). The nominated property does not include a buffer zone and therefore the number of inhabitants for such is not applicable. However, the number of inhabitants living in areas adjoining the nominated property is low.

No staff live permanently within the Budj Bim National Park and all operational, management and administrative staff work from the Parks Victoria office in Portland, Victoria. On occasion, fire-fighting crews stay overnight at the Budj Bim National Park Information Centre and Office. Camping is permitted within the National Park. The number of individual campers for July 2015 - June 2016 was 903 (with an average stay of two-nights per person), and for July 2016 - June 2017 was 781.<sup>433</sup>

There are no permanent residents living on the lands owned by the Gunditj Mirring Traditional Owners Aboriginal Corporation (Budj Bim Indigenous Protected Area and Lake Condah Mission) and Winda-Mara Aboriginal Corporation (Tyrendarra Indigenous Protected Area). There is one house at the Lake Condah Mission for the use of a caretaker. The current caretaker lives with his family in Heywood and only occasionally occupies the residence. During the period July 2016 - June 2017, 438 people stayed at the Lake Condah Mission accommodation facilities (cabins). This included at least 15 Gunditjmara family groups and 12 organisations (Aboriginal and non-Aboriginal).<sup>434</sup>

There is a residential dwelling in the Kurtonitj (central) component. The house is not permanently occupied, but is available for use by Budj Bim Rangers, Gunditjmara community members and researchers. It is estimated that 150 people stayed at the Kurtonitj house during the period July 2016 - June 2017, mostly Gunditjmara families and a small number of special interest groups.<sup>435</sup>

COMPONENT	PERMANENT (2017)	TEMPORARY (2017)
Budj Bim (northern component)	0	(1)
Kurtonitj (central component)	0	0
Tyrendarra (southern component)	0	0

TABLE 4.3 Budj Bim Cultural Landscape: Number of inhabitants within the nominated property

433 Information provided by Don Tumney, Area Chief Ranger - Glenelg, Parks Victoria, October 2017

434 Information provided by Gunditjmara Elder Denis Rose, October 2017  
435 Information provided by Gunditjmara Elder Denis Rose, October 2017



**PART 5**

**PROTECTION AND  
MANAGEMENT OF  
THE PROPERTY**

# PART 5

## PROTECTION AND MANAGEMENT OF THE PROPERTY

The Budj Bim Cultural Landscape is comprehensively managed and protected under a system comprising Gunditjmara customary knowledge and practices in conjunction with National and State legislation, complementary management plans and associated policies and programs. The management system combines Traditional Owner and adaptive management approaches (Table 3.2), in which governance and decision-making is shared between the Gunditj Murring Traditional Owners Aboriginal Corporation (GMTOAC), the Budj Bim Council and Winda-Mara Aboriginal Corporation. Each management group has a majority representation of Gunditjmara Traditional Owners; which ensures coordination across them.

The Budj Bim Council is responsible for overseeing the cooperative management of Budj Bim (formerly Mount Eccles) National Park. It demonstrates the 'two-way' sharing of expertise between Gunditjmara Traditional Owners and Victorian Government agencies. The 2015 Ngootyoong Gunditj, Ngootyoong Mara South West Management Plan, which covers all protected areas within Gunditjmara Country, establishes the management framework and mechanism for management coordination for the three serial components of the Budj Bim Cultural Landscape.

The GMTOAC has developed guiding principles for implementing a customary approach to the management and protection of the **Budj Bim Cultural Landscape**. The five principles by which Gunditjmara make decisions on the management of the nominated property are:

- The protection of the **Budj Bim Cultural Landscape** is paramount
- The **Budj Bim Cultural Landscape** is a dynamic living place
- The **Budj Bim Cultural Landscape** is a place of learning
- Connections with the **Budj Bim Cultural Landscape** are strengthened
- All uses and users of the **Budj Bim Cultural Landscape** respect its significance.<sup>436</sup>

It is the intention of the GMTOAC, Winda-Mara Aboriginal Corporation, the Victorian Government and the Australian Government that a *Budj Bim Cultural Landscape World Heritage Strategic Management Framework* be developed. While the **Budj Bim Cultural Landscape** is already comprehensively managed and protected under the current system, a strategic management framework will synthesise and further consolidate these arrangements. In addition, the implementation and oversight of the framework will be undertaken by a *Budj Bim Cultural Landscape World Heritage Steering Committee* – a group that will be established at such time as the nominated property is inscribed on the World Heritage List. The Steering Committee will ensure the continued coordinated management of the nominated property.

### 5.A OWNERSHIP

The primary categories of land ownership are presented in Table 5.1. Owners of the different land parcels within the nominated area comprise the GMTOAC, Wind-Mara Aboriginal Corporation and the Victorian Government. The Budj Bim Indigenous Protected Area, which is owned and managed by the GMTOAC, includes land parcels in each of the three components of the nominated property.

TABLE 5.1 Budj Bim Cultural Landscape: Ownership

COMPONENT	OWNERSHIP
<b>Budj Bim (northern component)</b>	
Budj Bim National Park	State of Victoria. A Co-operative Management Agreement for the National Park has been established between the GMTOAC* and the Victorian Government.
Budj Bim Indigenous Protected Area	GMTOAC
Lake Condah Mission	GMTOAC
<b>Kurtonitj (central component)</b>	
Budj Bim Indigenous Protected Area	GMTOAC
<b>Tyrendarra (southern component)</b>	
Tyrendarra Indigenous Protected Area	Winda-Mara Aboriginal Corporation
Budj Bim Indigenous Protected Area	GMTOAC

\* GMTOAC = Gunditj Murring Traditional Owners Aboriginal Corporation

## 5.B PROTECTIVE DESIGNATION

The **Budj Bim Cultural Landscape** is wholly within the Country of the Gunditjmara and is subject to the traditional and customary rights and obligations of the Gunditjmara Traditional Owners. These rights are recognised under the Australian Government's *Native Title Act 1993* and the Victorian Government's *Aboriginal Heritage Act 2006*. The Gunditjmara's traditional and customary rights and obligations are implemented through governance arrangements (Part 5.C). These rights and obligations are recognised in and enacted through property management plans (Parts 5.E).

### DESIGNATION

The **Budj Bim Cultural Landscape** comprises land parcels whose tenure includes National Park, Indigenous Protected Area (both being components of Australia's National Reserve System) and land owned by the Gunditjmara Traditional Owners (Table 5.2). In the latter case, the Lake Condah Mission on land owned and managed by the Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC).

Most of the nominated property was included on Australia's National Heritage List in 2004 as the *Budj Bim National Heritage Landscape*. Some additional areas within the nominated property – and now incorporated into the Budj Bim Indigenous Protected Area, have been acquired by the Gunditjmara since the 2004 National listing. These areas are now recognised as integral to the Outstanding Universal Value of the **Budj Bim Cultural Landscape**. All listed National and World heritage values are protected under the *Environment Protection and Biodiversity Conservation Act 1999*.

### INDIGENOUS PROTECTED AREA (IPA) PROGRAM

Indigenous practices of caring for habitats, species and ecological functions have been in existence for thousands of years. Since 1997, the Australian Government has formally recognised Aboriginal and Torres Strait Islander peoples' management of Country (often referred to as 'Caring for Country') by including and funding Indigenous Protected Areas (IPAs) within Australia's National Reserve System. IPAs currently make up almost 50 percent of the National Reserve System, and allow the Australian Government to meet its obligations under the international *Convention on Biological Diversity*.<sup>437</sup>

IPAs are areas of land or sea Country that have been voluntarily dedicated by their Traditional Owners. IPAs are managed through an agreement between a Traditional Owner group and the Australian Government; established by a combination of legal and other administrative measures consistent with international Protected Area guidelines. They serve to promote biodiversity conservation, cultural maintenance and governance, customary sustainable resource use and community benefit-sharing.

The success of the IPA Program is underpinned by principles that empower Traditional Owners and Aboriginal and Torres Strait Islander communities. Caring for Country is a community-led, participatory planning process. IPA management plans combine traditional knowledge and customary decision-making with contemporary science and governance systems.

The IPA Program balances conservation with community benefits. Indigenous people are given the opportunity to apply their aspirations for their Country, which can include a mix of conservation activities and other land uses. The Program fosters Indigenous business development and increased economic participation; including sustainable grazing, ecotourism, bush tucker (native food plant) harvesting and 'fee for service' arrangements on adjoining agricultural, mining and conservation tenures. The Program enables Indigenous communities to form partnerships with government, business, researchers and philanthropic organisations. In addition to the environmental benefits, IPAs provide employment opportunities, promote community cohesion and improve relationships between Indigenous communities and other land and sea managers.

Independent reviews have consistently found that the IPA Program contributes to improved individual and family health, increased well-being and self-confidence, and lower rates of community violence, crime and incarceration rates. The Program is currently delivered by the Department of the Prime Minister and Cabinet's Regional Network in combination with Indigenous rangers funded under the Indigenous Advancement Strategy.

IPAs are internationally recognised as successful models for community-conserved areas with an important role in the global Protected Area estate. International Union for the Conservation of Nature (IUCN) guidelines recognise Indigenous ownership and customary laws, institutions and traditional land management practices of Indigenous communities as effective mechanisms for delivering Protected Area management and responding to the management objectives of the IUCN Protected Area categories.<sup>438</sup>

437 Convention on Biological Diversity. 'The Convention on Biological Diversity', <https://www.cbd.int/convention/>

438 IUCN. 'Protected Areas', <https://www.iucn.org/theme/protected-areas/about/protected-area-categories>

COMPONENT	STATUS	YEAR DESIGNATED	LEGISLATION / PROGRAM
<b>Budj Bim (northern) component</b>			
Budj Bim National Park	Protected Area – IUCN* Category II National Park	1960	Victorian Government <i>National Parks Act 1975</i> ; Australian Government National Heritage List**
Budj Bim Indigenous Protected Area	Protected Area - IUCN Category VI Protected Area	2017	Australian Government National Heritage List and Indigenous Protected Areas Program
Lake Condah Mission	Land owned by the GMTOAC	1988	Australian Government National Heritage List and <i>Aboriginal Land (Lake Condah and Framlingham Forest) Act 1987</i>
<b>Kurtonitj (central component)</b>			
Budj Bim Indigenous Protected Area	Protected Area - IUCN Category VI Protected Area	2017	Australian Government Indigenous Protected Areas Program
<b>Tyrendarra (southern component)</b>			
Tyrendarra Indigenous Protected Area	Protected Area - IUCN Category VI Protected Area	2003	Australian Government National Heritage List and Indigenous Protected Areas Program
Budj Bim Indigenous Protected Area	Protected Area - IUCN Category VI Protected Area	2017	

\*IUCN = International Union for the Conservation of Nature

TABLE 5.2 Budj Bim Cultural Landscape: Protective designation

## LEGISLATION, REGULATION AND STATUTORY CONTROLS

Legislation and associated planning and protection instruments are established across three levels of government – Australian, Victorian State and local – to ensure the **Budj Bim Cultural Landscape's** International, National, State and local values are comprehensively conserved and managed (Table 5.3). All outstanding attributes within the nominated property are protected by listing on statutory heritage registers – the Australian Government National Heritage List and the Victorian Aboriginal Heritage Register. These registers include specific provisions for protecting the heritage values of the nominated property.

### AUSTRALIAN GOVERNMENT LEGISLATION

#### *Environment Protection and Biodiversity Conservation Act 1999*

Australia's obligations under the World Heritage Convention are administered through the provisions of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) to promote a nationally consistent standard for the management of Australian World Heritage properties. Approval under the EPBC Act is required for any action occurring within or outside a declared National or World Heritage property that has, will have, or is likely to have a significant impact on the National or Outstanding Universal Value of the World Heritage property. The *Budj Bim National Heritage Landscape* was inscribed on the National Heritage

List in 2004.<sup>439</sup> The EPBC Act provides comprehensive protection for National and World Heritage values.

No buffer zones are proposed for the serial components of the **Budj Bim Cultural Landscape** on the basis that the Outstanding Universal Value of the nominated property will be comprehensively protected under the EPBC Act. In essence, the EPBC Act provides a legislative 'buffer zone' in place of a physical buffer zone.

In the event the **Budj Bim Cultural Landscape** is inscribed on the World Heritage List, the listed National and World Heritage values for the entire property will be recognised as a Matter of National Environmental Significance; and protected from actions occurring within or outside that have, will have or are likely to have a significant impact on the values of the nominated property. The EPBC Act also establishes substantial penalties for individuals or organisations that undertake an action or actions likely to have a significant impact on the Outstanding Universal Value of a World Heritage property.

#### *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (ATSIHP Act) protects areas and objects that are of particular significance to Aboriginal people. An Aboriginal person can request the Australian Government to make a declaration under the ATSIHP Act to protect culturally significant places and objects

439 Australian Government. 'National Heritage Places – Budj Bim National Heritage Landscape', <http://www.environment.gov.au/heritage/places/national/budj-bim>

BUDJ BIM CULTURAL LANDSCAPE	BUDJ BIM (NORTHERN) COMPONENT	KURTONITJ (CENTRAL) COMPONENT	TYRENDARRA (SOUTHERN) COMPONENT
Customary rights and obligations	Gunditjmara Traditional Owners		
National legislation	<i>Environment Protection and Biodiversity Conservation Act 1999</i>		
	<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i>		
	<i>Native Title Act 1993</i>		
State of Victoria (provincial) legislation	<i>Aboriginal Land (Lake Condah and Framlingham Forest) Act 1987</i>		
	<i>Aboriginal Heritage Act 2006</i>		
	<i>Heritage Act 2017</i>		
	<i>National Parks Act 1975</i>		
	<i>Parks Victoria Act 1998</i>		
	<i>Fisheries Act 1995</i>		
	<i>Flora and Fauna Guarantee Act 1988</i>		
	<i>Water Act 1989</i>		
	<i>Catchment and Land Protection Act 1994</i>		
	<i>Country Fire Authority Act 1958</i>		
	<i>Planning and Environment Act 1987</i>		
Local statutory documents	<i>Local Government Act 1989</i>		
	<i>Glenelg Planning Scheme</i>		
	<i>Moyne Planning Scheme</i>		

**TABLE 5.3 Budj Bim Cultural Landscape: Customary and legal protection**

from threats of injury or desecration. Declarations by the Australian Government are intended as a last resort in circumstances where relevant State processes for protection have been exhausted.

### ***Aboriginal Land (Lake Condah and Framlingham Forest) Act 1987***

The *Aboriginal Land (Lake Condah and Framlingham Forest) Act 1987* was passed by the Australian Government at the request of the Victorian Government. The Act vested the Lake Condah Mission and Cemetery with the Kerrup-Jmara Elders Aboriginal Corporation – the group established to represent Gunditjmara Traditional Owners at the time.<sup>440</sup> Since 2008, the Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC) has been recognised by the Australian Government in this role. The GMTOAC hold decision-making powers over the use of the Lake Condah Mission and Cemetery. The Act also allows for annual operational funding for the management of the Lake Condah Mission and Cemetery.<sup>441</sup>

### ***Native Title Act 1993***

Native title is the recognition in Australian law that certain Aboriginal and Torres Strait Islander people continue to hold

rights and interests in land and water. The source of native title lies in the laws and customs observed by Aboriginal and Torres Strait Islander people when Australia was colonised by Britain in 1788. For native title to be recognised, those laws and customs must have been acknowledged and observed in a ‘substantially uninterrupted’ way from the time of settlement until the present day. The *Native Title Act 1993* (Native Title Act) provides a process through which Indigenous Australians can lodge an application to seek a determination of native title. In 1998, significant amendments were made to the Native Title Act; including the introduction of a registration test and Indigenous Land Use Agreements.

In 2007, the Federal Court of Australia recognised the Gunditjmara Traditional Owners as native title holders of almost 133,000 hectares of vacant Crown land, National Park, reserves, rivers, creeks and sea across their traditional Country. The determination gives the Gunditjmara Traditional Owners non-exclusive rights and interests over their native title determination area, including the right to:

- access to enter and remain on land and waters
- use and enjoy land and waters
- take the resources of the land and water
- protect places and areas of importance on the land.

Under the Native Title Act, Gunditjmara Traditional Owners have right of notification and consultation about certain applications on their native title lands. In certain circumstances, Gunditjmara Traditional Owners have the right

440 Lake Condah Mission and Cemetery have subsequently been transferred to the GMTOAC.

441 Funding has been provided to GMTOAC to implement the Act through the Aboriginal Rights to Land and Sea program and the Australian Government Indigenous Advancement Strategy.

to negotiate and raise native title issues with proponents of development and land use activities.

## VICTORIAN GOVERNMENT LEGISLATION

### *Aboriginal Heritage Act 2006*

The *Aboriginal Heritage Act 2006* (Aboriginal Heritage Act) is Victoria's principal legislation for the protection of Aboriginal cultural heritage and the management of Aboriginal cultural heritage in relation to development and land use activities. The Aboriginal Heritage Act protects all Aboriginal cultural heritage in Victoria; regardless of whether it has been recorded in the Register established under the Act, and prescribes significant penalties to ensure Aboriginal cultural heritage is protected from harm.

The Aboriginal Heritage Act legislates a central role for Aboriginal people in identifying, managing and protecting their cultural heritage. It does this by establishing Registered Aboriginal Parties; organisations with statutory decision-making responsibilities for Aboriginal cultural heritage in their appointed geographical area. These responsibilities include; approving and participating in the assessment of Cultural Heritage Management Plans, deciding Cultural Heritage Permits, advising the Victorian Government about Aboriginal cultural heritage and carrying out compliance and enforcement activities. Registered Aboriginal Parties are appointed by the Victorian Aboriginal Heritage Council (Council); a group comprising up to 11 Traditional Owners with extensive knowledge and experience in cultural heritage management. The Council appointed the Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC) as a Registered Aboriginal Party over Gunditjmara traditional Country (including the **Budj Bim Cultural Landscape** in its entirety) in 2007.<sup>442</sup>

The Aboriginal Heritage Act establishes mechanisms to ensure Aboriginal cultural heritage is properly managed during development and land use activities, or in regard to any act which may harm Aboriginal cultural heritage. Cultural Heritage Management Plans may be prepared for any proposed development or land use activity in Victoria and are mandatory for those activities that will, or are likely to harm Aboriginal cultural heritage. Cultural Heritage Management Plans require: an assessment of an activity area to determine the nature, extent and significance of Aboriginal cultural heritage present; and a written report which includes legislatively enforced management conditions.

In addition to these protection mechanisms, the Aboriginal Heritage Act also establishes the Victorian Aboriginal Heritage Register – for Victorian Traditional Owners to store information concerning: (1) their cultural heritage (including

Aboriginal intangible heritage); (2) Protection Declarations – to enforce specific protective measures over significant Aboriginal places; (3) Aboriginal Cultural Heritage Land Management Agreements – to protect Aboriginal places during routine land management activities; and (4) Aboriginal Intangible Heritage Agreements – to assist Traditional Owners decide if and how their intangible heritage is used by others.

The Aboriginal Heritage Regulations 2007 (Aboriginal Heritage Regulations) give effect to the Aboriginal Heritage Act, and prescribe the standards of assessment, forms and associated fees of the Aboriginal Heritage Act's provisions – including for Cultural Heritage Management Plans. The Aboriginal Heritage Regulations specify the circumstances in which a Cultural Heritage Management Plan is required for an activity or class of activity. Specifically, a Cultural Heritage Management Plan is mandatory for any 'high impact activity' proposed in an 'area of cultural heritage sensitivity'. High impact activities and areas of cultural heritage sensitivity are defined in the Aboriginal Heritage Regulations.

The **Budj Bim Cultural Landscape** is a defined area of cultural heritage sensitivity in its entirety. The Aboriginal Heritage Regulations define the extraction or removal of loose stone (including that related to the Budj Bim lava flow) on agricultural land associated with the Western Victorian Volcanic Plain as a high impact activity. This protects the nominated property from any agricultural activities which could harm the Budj Bim lava flow. Significant penalties apply to any person who damages, defaces, desecrates, destroys, disturbs, injures or interferes with any Aboriginal place or object unless in accordance with an approved Cultural Heritage Management Plan or Cultural Heritage Permit. GMTOAC is the approval body for all Cultural Heritage Management Plans and Cultural Heritage Permits for activities within the nominated property and across the whole of its Registered Aboriginal Party area.

### *Heritage Act 2017*

The *Heritage Act 2017* (Heritage Act) is Victoria's principal legislation for the identification and management of 'post-contact' heritage places and objects of State significance, historical archaeological sites and maritime heritage. This includes historic buildings, structures and precincts; gardens, trees and cemeteries; historic archaeological sites; cultural landscapes; shipwrecks and associated relics; and significant objects. The Heritage Act does not apply to places of Aboriginal significance; as they are protected under the *Aboriginal Heritage Act 2006* (see above). The Heritage Act establishes the Victorian Heritage Register, which lists and protects heritage places and objects significant to the history and development of Victoria. Any works or activities which may impact a listed place or object requires a heritage Permit issued by Heritage Victoria; the Victorian Government agency responsible for administering the Heritage Act.

442 Aboriginal Victoria. 'Gunditj Mirring Traditional Aboriginal Corporation', <http://www.vic.gov.au/aboriginalvictoria/heritage/registered-aboriginal-parties/gunditj-mirring-traditional-owners-aboriginal-corporation.html>





The Heritage Act also provides for the management of places in Victoria that are inscribed in the World Heritage List. World Heritage listed properties must be recorded on the Victorian Heritage Register and this will apply to the **Budj Bim Cultural Landscape** in the event that it is so inscribed.

### **National Parks Act 1975**

The *National Parks Act 1975* is Victoria's principal legislation for declaring protected areas (Parks) for the purposes of preserving and protecting the natural environment and archaeological or historical features and for the responsible management of Parks. The Act establishes the purposes of Parks, management responsibilities and permitted activities and works. The Act also sets out a range of offences and the penalties for non-compliance. Budj Bim (formerly Mount Eccles) National Park has been established under the provisions of the National Parks Act.

### **Parks Victoria Act 1998**

The *Parks Victoria Act 1998* establishes Parks Victoria as the Victorian Government agency responsible for providing services to the State and its agencies for the management of Parks, Reserves and other public land. With the approval of the relevant Minister, Parks Victoria may also provide land management services to the owner of any other land used for public purposes. Parks Victoria's *Ngootyoong Gunditj Ngootyoong Mara South West Management Plan* – developed in partnership with the GMTOAC, covers all components of the **Budj Bim Cultural Landscape**, comprising Budj Bim National Park, Budj Bim and Tyrendarra Indigenous Protected Areas and Lake Condah Mission.<sup>443</sup>

### **Fisheries Act 1995**

The *Fisheries Act 1995* (Fisheries Act) provides the legislative framework for managing Victoria's fisheries resources and sets out the general provisions applicable to all recreational fishing activities and commercial access licences, including the Eel Fishery Access Licence. The objectives of the Fisheries Act include: facilitating the management and development of Victoria's fisheries, protection and conservation of fishery resources, and promoting sustainable fishing and aquaculture industries.

Under the Fisheries Act, the responsible Minister may declare a management plan be prepared for a Victorian Fishery. The purpose of Fishery Management Plans is to specify policies and strategies for the management of the fishery; having regard to the commercial, recreational, traditional and non-consumptive uses of the fishery. Fishery Management Plans may specify restrictions in fishery reserves, specify conditions and permit types, specify fishing capacities and licensing requirements.

The Victorian Minister for Agriculture declared the *Victorian Eel Fishery Management Plan* in 2017.<sup>444</sup> The Management Plan recognises access to eel resources as fundamental to the wellbeing of many Aboriginal Victorians, and recognises the fishing rights provided for by the *Native Title Act 1993*. The Management Plan also outlines management strategies to ensure its objectives are met. These objectives include the long-term sustainability of eel resources and equitable resource access and use. The management strategies include commercial and recreational eel harvest restrictions and restricting eel fishing from certain waterways.

### **Flora and Fauna Guarantee Act 1988**

The *Flora and Fauna Guarantee Act 1988* aims to conserve all of Victoria's native plants and animals. The Act establishes a process for listing threatened species and communities and requires action plans describing the required actions to protect the threatened species. The Act also allows for the declaration of habitat critical to the survival of native plants and animals and interim conservation orders to protect and manage these areas. The Act controls the impact of activities on threatened plants and animals through a regulatory framework including permit requirements. The Act also establishes a range of compliance and enforcement mechanisms and provides powers to authorised officers to ensure businesses and the community comply with legislative requirements.

### **Water Act 1989**

The *Water Act 1989* (Water Act) is Victoria's principal legislation related to water. The Water Act ensures water resources are properly managed by and conserved for all Victorians. The Water Act establishes the allocation and management of Victoria's water resources, and the functions, rights, and obligations of Victoria's water corporations. The Water Act provides for sustainable management principles for water corporations. These principles incorporate internationally recognised environmental concepts, which ensure water corporations sustainably manage water resources for use by future generations.

The Water Act controls water use through various licenses and entitlements. Among these are environmental entitlements, which provide for environmental releases of water from specified waterways to mimic seasonal flow patterns. Environmental releases contribute to enabling fish migration, maintaining and connecting habitats, and regenerating wetlands and floodplains. The GMTOAC has a requirement to maintain water flow from the weir at Lake Condah to ensure the environmental conditions of Killara (Darlot Creek) are maintained.

443 Parks Victoria 2015

444 Victorian Fisheries Authority 2017

### ***Catchment and Land Protection Act 1994***

The *Catchment and Land Protection Act 1994* establishes a framework for the management and protection of Victoria's water catchments, as well as a system of controls on noxious weeds and pest animals. The Act achieves this by legislating Catchment Management Authorities across Victoria, which are responsible for ensuring the quality of the State's land and water resources while maintaining and enhancing associated native plants and animals. The Glenelg Hopkins Catchment Management Authority is responsible for the Glenelg Hopkins Catchment, within which the **Budj Bim Cultural Landscape** is located. The Glenelg Hopkins Catchment Management Authority is responsible for reporting on the condition of water in the catchment, and assists with water quality monitoring.

### ***Country Fire Authority Act 1958***

The Country Fire Authority provides Victoria-wide coordination of wildfire, structural and transport-related fire and emergency response. The Country Fire Authority is also involved in a range of non-emergency activities; including supporting private landowners in fire prevention and planning, vegetation management, planned burning and sustainable fire management, including supporting Traditional Owners to undertake 'cultural burns' (Part 4).

### ***Planning and Environment Act 1987***

The *Planning and Environment Act 1987* (Planning and Environment Act) establishes procedures for preparing and amending local planning schemes that set out how land may be used and developed within the framework of the Victorian Planning Provisions. It also has provisions for obtaining permits for development and rezoning land, and includes enforcing provisions. Two planning schemes under the Planning and Environment Act apply to the **Budj Bim Cultural Landscape**: the Glenelg and Moyne planning schemes.

### ***Local Government Act 1989***

The *Local Government Act 1989* is Victoria's principal legislation for the establishment and operation of local government authorities. The Act defines the purposes and functions of local government as well as providing the legal framework for establishing and administering the elected representative body (the council). Two local government authorities administer planning schemes under the *Planning and Environment Act 1987* for their local government areas (including those areas within the **Budj Bim Cultural Landscape**) – the Glenelg Shire Council and Moyne Shire Council.

## **LOCAL STATUTORY DOCUMENTS**

A 'planning scheme' is a statutory document which regulates the use and development of land to which it applies; through zoning, objectives, policies and specific provisions.<sup>445</sup>

### ***Glenelg and Moyne Planning Schemes***

The Glenelg and Moyne planning scheme establish a 'special use zone' over parts of the Budj Bim (northern) component of the **Budj Bim Cultural Landscape**, including Tae Rak (Lake Condah) and the Lake Condah Mission. The purpose of the special use zone is to provide for the development of land consistent with the protection, conservation and management of the natural and Aboriginal cultural values. The special use zone also provides for the continuation of Aboriginal cultural practices. The types of development activities permitted in the special use zone are restricted to those which support its purposes.

The planning schemes also establish a 'public conservation and resource zone' over Budj Bim National Park which provides for the development of the Park consistent with the protection and conservation of the natural environment and its historic, scientific, landscape, habitat and cultural values. The zone allows for the development of facilities that assist in public education and interpretation of the Park; so long as these have minimal impacts on the natural environment or natural processes.

The planning schemes also establish an 'environmental significance overlay' over Palawarra (Fitzroy River) and Killara (Darlot Creek), immediately adjacent to the serial components of the **Budj Bim Cultural Landscape**. The purpose of the zone is to prevent pollution by limiting inappropriate development and land use adjacent to significant wetlands and waterways. A permit is required for a broad range of activities in this zone. Decisions on permit applications must include an assessment of the likely environmental impact of the proposed activity to water quality and flora and landscape features.

Finally, the schemes also establish a 'bushfire [wildfire] management overlay' over much of the **Budj Bim Cultural Landscape**. The purpose of the overlay is to ensure that the protection of life and property, as well as strengthening community resilience to wildfire, is prioritised in current and future development and land use activities.

445 Victorian State Government. Planning Schemes Online. 'About planning schemes', <http://planning-schemes.delwp.vic.gov.au/about>



## 5.C MEANS OF IMPLEMENTING PROTECTIVE MEASURES

Australia provides a high level of legal protection to its World and National Heritage properties. Legislative protection applies across three levels of government: Australian, Victorian State and local (Part 5.B). The listed heritage values of the **Budj Bim Cultural Landscape** are safeguarded through a robust protective management system (Part 5.E). The customary and legislative protective measures for the **Budj Bim Cultural Landscape** are enabled and implemented through an established governance framework (Table 5.4).

BUDJ BIM CULTURAL LANDSCAPE	BUDJ BIM NATIONAL PARK	BUDJ BIM AND TYRENDARRA INDIGENOUS PROTECTED AREAS	LAKE CONDAH MISSION
Coordination	Budj Bim Cultural Landscape World Heritage Steering Committee (proposed)		
Customary governance	Cooperative decision making shared by three bodies: GMTOAC*, Budj Bim Council and Winda-Mara Aboriginal Corporation		
Governance at National level	Australian World Heritage Advisory Committee		
Governance at State level	Victorian Aboriginal Heritage Council GMTOAC Registered Aboriginal Party Victorian Heritage Council		
Governance at local level	Budj Bim Council	GMTOAC and Winda-Mara Aboriginal Corporation	GMTOAC

\*GMTOAC = Gunditj Mirring Traditional Owners Aboriginal Corporation

TABLE 5.4 **Budj Bim Cultural Landscape:** Governance arrangements for implementing protective measures

### BUDJ BIM CULTURAL LANDSCAPE WORLD HERITAGE STEERING COMMITTEE

A *Budj Bim Cultural Landscape World Heritage Steering Committee* will be established at such time as the nominated property is inscribed on the World Heritage List to provide oversight and ensure the coordinated management of the whole of the serial property.

### CUSTOMARY GOVERNANCE

The **Budj Bim Cultural Landscape** is wholly within the Country of the Gunditjmarra and is subject to the traditional and customary rights and obligations of the Gunditjmarra Traditional Owners. These rights are recognised under the Australian Government's *Native Title Act 1993*. The Gunditjmarra ensure that their responsibilities and duties, arising under Gunditjmarra law, custom and beliefs, are carried out in relation to caring for

Country and the protection and continuation of Gunditjmarra cultural traditions. These responsibilities and duties are undertaken through the Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC).

The GMTOAC is governed by Full Group meetings which bring together Gunditjmarra Traditional Owners on a monthly cycle for discussions and decision-making. The corporation is a Registered Native Title Body Corporate under the *Native Title Act 1993* and a Registered Aboriginal Party under the *Aboriginal Heritage Act 2006*. GMTOAC promotes the continuing connection to Country by Gunditjmarra people through its Caring for Country programs and projects. The GMTOAC has the majority role in the established governance arrangements for the nominated property.<sup>446</sup>

446 Gunditj Mirring Traditional Owners Aboriginal Corporation. 'About', <https://www.gunditjmirring.com/about>

## GOVERNANCE AT NATIONAL LEVEL

### *Australian World Heritage Advisory Committee*

The Australian World Heritage Advisory Committee (AWHAC) was established in 2008. It is a forum advising Australia's Federal, State and Territory governments on issues affecting Australia's World Heritage properties. The AWHAC comprises the Chairs of the advisory committees from each World Heritage property in Australia. Membership of the AWHAC includes two Traditional Owner representatives, who are also co-chairs of the Australian World Heritage Indigenous Network.

The role of this committee includes: providing a forum for World Heritage site managers to share information on best-practice management of World Heritage sites, facilitating the sharing of knowledge and experience, encouraging continual improvement in the protection of World Heritage properties, advising on the development of effective national policies, and identifying and considering matters that require an agreed common approach between multiple jurisdictions. Another of the AWHAC's specific functions is to advise on research, monitoring and other information needs for World Heritage properties.

In the event the **Budj Bim Cultural Landscape** is inscribed on the World Heritage List, an authorised Gunditjmarra Traditional Owner representative for the nominated property will be appointed to the AWHAC and to the Australian World Heritage Indigenous Network.

## GOVERNANCE AT VICTORIAN STATE LEVEL

The Victorian Aboriginal Heritage Council (Council) was created under the *Aboriginal Heritage Act 2006* to ensure that Traditional Owners in Victoria play a central role in the protection and management of their cultural heritage. The Council consists of up to 11 Traditional Owners who are appointed by the Minister for Aboriginal Affairs. All members are resident in Victoria and have extensive knowledge and relevant experience or knowledge of Aboriginal cultural heritage in Victoria. The Council determines applications for appointment as a Registered Aboriginal Party.

The GMTOAC was appointed as a Registered Aboriginal Party for Gunditjmarra Country in 2007, an area that includes the **Budj Bim Cultural Landscape**. As such, the GMTOAC is recognised as the primary guardian, keeper and knowledge holder of Aboriginal cultural heritage for the Registered Aboriginal Party area, including the **Budj Bim Cultural Landscape**. Its responsibilities include evaluating Cultural Heritage Management Plans, determining Cultural Heritage Permits, making decisions about Cultural Heritage Agreements and providing advice on applications for interim and ongoing Protection Declarations.

The Victorian Heritage Council is established under the *Heritage Act 2017*. The Heritage Council, which includes a new membership role concerning Aboriginal heritage, has a role in regard to World Heritage listed properties in Victoria (Part 5.B). The Victorian Heritage Council and the Victorian Aboriginal Heritage Council will establish protocols for their respective governance and management roles under the *Heritage Act 2017* and the *Aboriginal Heritage Act 2006* in the event the **Budj Bim Cultural Landscape** is inscribed on the World Heritage List.

### *Governance at local level*

The native title determination on 30 March 2007 recognised the Gunditjmarra's non-exclusive native title rights and interests over various lands, including Budj Bim National Park.<sup>447</sup>

The governance, decision-making and administrative bodies that oversee and cooperate in the protection and management of the **Budj Bim Cultural Landscape** are the Budj Bim Council, GMTOAC and Winda-Mara Aboriginal Corporation.

### *Budj Bim Council*

The Budj Bim Council was established as part of the cooperative management agreement between GMTOAC and the Victorian government for the Budj Bim National Park. The Budj Bim Council comprises representatives of Gunditjmarra Traditional Owners (six members) and the Victorian Government; represented by Parks Victoria (two representatives), the Department of Environment, Land, Water and Planning (one representative) and the Glenelg Hopkins Catchment Management Authority (one representative). The Budj Bim Council's role is to manage Budj Bim National Park to achieve both cultural and ecological objectives through joint decision-making. The primary management document guiding the work of the Budj Bim Council is Parks Victoria's *Ngootyoong Gunditj, Ngootyoong Mara South West Management Plan*.<sup>448</sup> The on-ground implementation of the Management Plan is undertaken by staff employed by Parks Victoria, including Gunditjmarra Traditional Owner employees.

### *Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC)*

The GMTOAC was established in 2005 and – following the 2007 native title determination, holds and manages the native title rights of the Gunditjmarra. The corporation is a Registered Native Title Body Corporate under the *Australian Native Title Act 1993* and a Registered Aboriginal Party under the Victorian *Aboriginal Heritage Act 2006*.<sup>449</sup> The GMTOAC promotes the continuing connection to Country

447 Parks Victoria 2015:7

448 Parks Victoria 2015

449 Registered 28 May 2007. Aboriginal Victoria. 'Heritage. Gunditj Mirring Traditional Owners Aboriginal Corporation', corporation. htmlhttp://www.vic.gov.au/aboriginalvictoria/heritage/registered-ab-original-parties/gunditj-mirring-traditional-owners-aboriginal-corporation.html

by the Gunditjmarra through its Caring for Country programs and projects. Within the **Budj Bim Cultural Landscape**, the GMTOAC holds freehold areas of land comprising the Budj Bim Indigenous Protected Area and Lake Condah Mission (Table 5.1).

### **Winda-Mara Aboriginal Corporation**

Winda-Mara Aboriginal Corporation (Winda-Mara), established in 1991, provides services to the local Aboriginal communities in and around the far south-west Victorian towns of Heywood, Hamilton and Portland (Map 2.1).<sup>450</sup> Winda-Mara is the owner and manager of the Tyrendarra Indigenous Protected Area. It undertakes cultural heritage and land management initiatives in partnership with GMTOAC as well as with key government agencies and non-government organisations. In co-operation with GMTOAC, Winda-Mara employs the Budj Bim Rangers who carry out land management activities across all parts of the **Budj Bim Cultural Landscape**.



5.1 Logo of the Gunditj Mirring Traditional Owners Aboriginal Corporation. The circle of stones in the centre represents the Gunditjmarra 14 apical ancestors. The outside ring represents those clans/family groups that have been lost since the arrival of Europeans.

Designer: Thomas Day



5.2 Logo of Winda-Mara Aboriginal Corporation. The logo incorporates the shape of Tae Rak (Lake Condah) with infill designs derived from those used on a possum skin cloak.

Designer: Nadia Rose

450 Winda Mara Aboriginal Corporation. 'About', <https://www.windamara.com.au/about>

## 5.D EXISTING PLANS RELATED TO MUNICIPALITY AND REGION

A variety of regional, property-wide and land parcel-based plans are in place to provide for the protection and management of the **Budj Bim Cultural Landscape** (Table 5.5). These documents provide objectives, policies, goals and strategies to protect and manage the heritage values of the nominated property. They cover a broad range of management topics including land management, cultural and natural heritage management, kooyang management, tourism planning and development and business planning.

Management planning for the area commenced in 1993 with the *Lake Condah Heritage Management Plan and Strategy*.<sup>451</sup> Since that time, a variety of new and updated plans have been produced, with each plan responding to changing circumstances (including new land acquisition) and the needs of the Gunditjmarra. Changes in land ownership has necessitated land management, tourism and business planning.

### MANAGEMENT PLANS

The **Budj Bim Cultural Landscape** is managed under three current, inter-related management plans. The *Ngootyoong Gunditj Ngootyoong Mara South West Management Plan* is a regional plan which includes all components of the nominated property. The two management plans for the Indigenous Protected Areas within the nominated property are complementary to the regional plan. The *Budj Bim Indigenous Protected Area Plan of Management 2015-2019* applies to the Budj Bim Indigenous Protected Area which is owned and managed by the Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC); the *Tyrendarra Indigenous Protected Area Management Action Plan 2015-2018* applies to the Tyrendarra Indigenous Protected Area which is owned and managed by the Winda-Mara Aboriginal Corporation.

#### **Ngootyoong Gunditj Ngootyoong Mara South West Management Plan**

The 2015 *Ngootyoong Gunditj Ngootyoong Mara South West Management Plan* (Plan) is a strategic guide for managing Parks, Reserves and Aboriginal community-owned properties across a large proportion of Gunditjmarra Country.

The Plan is regional in scope and includes all parts of the **Budj Bim Cultural Landscape**. It takes a landscape-scale approach to protecting cultural and natural values and undertaking recreational and tourism management.<sup>452</sup> The Plan has a timeframe of 15 years commencing 2015.

The *Ngootyoong Gunditj Ngootyoong Mara South West Management Plan* was the result of a partnership between GMTOAC, Parks Victoria, the Budj Bim Council and the Department of Environment, Land, Water and Planning and was approved by each of the four organisations.

Preparation of the Plan included an extensive program of community engagement across the region. The Plan was awarded a 2015 Planning Institute of Australia (Victoria) Commendation for Planning Excellence, in the category of Best Large Project.<sup>453</sup>

The Plan establishes how the Gunditjmarra Traditional Owners and Parks Victoria work together; with particular emphasis on adaptive, respectful and mutually responsive processes and practices of 'two-way' listening and learning. This is illustrated, for example, in two actions: "Gunditjmarra Traditional Owner's ecological knowledge and practices and contemporary science and management practices will inform land, water and fire management"; and "Gunditjmarra Traditional Owners retain decision-making for management of Indigenous cultural heritage places."<sup>454</sup>

Driven by a shared vision of Ngootyoong Gunditj, Ngootyoong Mara (Healthy Country, Healthy People), the plan sets out goals and strategies related to:

- Caring for Country (including healthy ecosystems, catchments and water; fire management; and caring for geological features) (Chapter 4)
- Cultural Landscapes and Community Connections (caring for cultural heritage and maintaining Gunditjmarra Traditional Owner connections to significant places, including aquaculture systems) (Chapter 5)
- People on Country (concerned with visitor experiences; recreation activities; interpretation; tourism; risks and safety; and authorised uses) (Chapter 6)
- Understanding Country (research and monitoring) (Chapter 7).<sup>455</sup>

A copy of the *Ngootyoong Gunditj Ngootyoong Mara South West Management Plan* is provided as an Annex to this Nomination Dossier (Annex B.1).

<sup>451</sup> Context 1993

<sup>452</sup> Parks Victoria 2015:v

<sup>453</sup> Planning Institute of Australia. '2015 Victorian Awards for Planning Excellence', <https://www.planning.org.au/awards/2015-2>

<sup>454</sup> Parks Victoria 2015:vii

<sup>455</sup> Parks Victoria 2015

SCOPE	NAME OF PLAN	DATE ADOPTED	AGENCY/GROUP RESPONSIBLE FOR PREPARATION OF PLAN
Regional Plan	Victoria's Aboriginal Tourism Development Strategy 2013 – 2023	2013	Tourism Victoria
	Glenelg Hopkins Catchment Management Authority Regional Catchment Strategy 2013 – 2019	2013	Glenelg-Hopkins Catchment Management Authority
	* Ngootyoong Gunditj, Ngootyoong Mara South West Management Plan	2015	Parks Victoria, GMTOAC, the Budj Bim Council and the Department of Environment, Land Water and Planning
Property Plan	Budj Bim (Tourism) Master Plan	2014	GMTOAC** (Tract Consultants)
Land Parcel Plan (plan for parts of the nominated property)	Lake Condah Heritage Management Plan and Strategy	1993	Aboriginal Affairs Victoria and Kerrup Jmara Elders Aboriginal Corporation (Context Consultants)
	Lake Condah Mission and Cemetery Conservation Management Plan	2000	Kerrup Jmara Aboriginal Corporation and Aboriginal Affairs Victoria (Context Consultants)
	Budj Bim Sustainable Tourism Plan	2007	GMTOAC (Context Consultants)
	Lake Condah Restoration Project Conservation Management Plan	2008	GMTOAC (Context Consultants)
	* Budj Bim Indigenous Protected Area Plan of Management 2015 - 2019	2015	GMTOAC
	* Tyrendarra Indigenous Protected Area Management Action Plan 2015 - 2018	2015	Winda-Mara Aboriginal Corporation
Species Plan	Victorian Eel Fishery Management Plan	2017	Victorian Fisheries Authority

\* Indicates primary current management plan \*\*GMTOAC = Gunditj Mirring Traditional Owners Aboriginal Corporation

**TABLE 5.5 Budj Bim Cultural Landscape: Regional, property-wide and land parcel plans**

### ***Budj Bim Indigenous Protected Area Plan of Management 2015-2019***

The 2015 *Budj Bim Indigenous Protected Area Plan of Management 2015-2019* covers land parcels owned by the GMTOAC. The land parcels are spread across each of the three serial components of the **Budj Bim Cultural Landscape**.

The aims of the Plan of Management are to:

- Incorporate new and emerging land and water management issues and propose new actions to care for Country
- Develop work plans for GMTOAC-owned and managed land parcels
- Determine resources required to complete the work plan
- Provide a sound basis for future funding applications
- Document GMTOAC's best practice planning incorporating both traditional and contemporary management
- Encourage participation in planning for caring for Country
- Align the Plan of Management with the land management planning requirements of World Heritage listing
- Recognise the *Ngootyoong Gunditj Noogootyoong Mara South West Plan* and the opportunities it provides for improved management and protection of the **Budj Bim Cultural Landscape**.<sup>456</sup>

The Plan of Management incorporates three primary steps related to Indigenous Protected Areas and protecting the key values of Country and culture, and the linkages between them:

1. identify the most important values
2. identify the threats to these values
3. develop strategies to protect values and reduce threats.<sup>457</sup>

The Plan of Management identifies current partnership arrangements and 11 key management topics, each with defined actions. Many of the actions relate to increasing knowledge of the condition of the GMTOAC-managed areas through survey, documentation and monitoring. Key actions include:

- Undertake systematic field surveys to identify new cultural sites and further document and monitor known cultural heritage features<sup>458</sup>
- Monitor water quality and the effects that re-flooding of Tae Rak (Lake Condah) is having on ecosystems and the aquaculture complexes<sup>459</sup>
- Monitor pest plant and animal impacts in areas with high cultural heritage sensitivity and ensure control works are in line with customary and legal protocols<sup>460</sup>

457 Hill et al. 2011:29-41

458 GMTOAC 2015:38-39

459 GMTOAC 2015:41-43

460 GMTOAC 2015:47

456 GMTOAC 2015:11

- Undertake eel and elver monitoring at Killara (Darlot Creek) and Tae Rak to assess the effectiveness of the fishway, constructed in 2010 alongside the cultural weir on Tae Rak, in providing passage for eels and fish<sup>461</sup>
- Commence implementation of the *Budj Bim (Tourism) Master Plan*.<sup>462</sup>

A copy of the *Budj Bim Indigenous Protected Area Plan of Management 2015-2019* is provided as an Annex to this Nomination Dossier (Annex B.2).

### **Tyrendarra Indigenous Protected Area Management Action Plan 2015-2018**

The Winda-Mara Aboriginal Corporation (Winda-Mara) prepared the 2015 *Tyrendarra Indigenous Protected Area Management Action Plan 2015-2018*. The Tyrendarra Indigenous Protected Area is owned by Winda-Mara and is managed through the Winda-Mara Aboriginal Corporation Board, Tyrendarra Indigenous Protected Area Sub-Committee and Tyrendarra Indigenous Protected Area Advisory Group.<sup>463</sup> The latter includes, as needed, representatives from the GMTOAC, Parks Victoria, Country Fire Authority (Victoria), Glenelg Hopkins Catchment Management Authority and Glenelg Shire Council; thus ensuring communication between organisations with responsibilities for management of all other parts of the **Budj Bim Cultural Landscape**.

The Management Action Plan sets out desired outcomes and strategies and actions across a number of management categories comprising:

- Conservation of natural and cultural heritage (geology; Aboriginal/archaeological heritage; post-contact heritage; native plants; and native animals) (Section 3)
- Conservation and land management (introduced species; fire management; and economic development) (Section 4)
- Visitor opportunities and education (Section 5)
- Recreational opportunities (Section 6)
- Research and monitoring (Section 7)
- Facilities and operations (Section 8).

The Management Action Plan also identifies high priority management actions,<sup>464</sup> including:

- Regular monitoring of cultural sites and maintaining related records
- Undertaking re-vegetation of stream banks with riparian species
- Undertaking cultural activities, including basket weaving, bush tucker (native plant foods), tool making and dance

- Conducting cultural burns in consultation with Traditional Owners.

A copy of the *Tyrendarra IPA Management Action Plan 2015-2018* is provided as an Annex to this Nomination Dossier (Annex B.3).

### **TOURISM PLAN**

The 2014 *Budj Bim (Tourism) Master Plan* provides a comprehensive overview of the key actions required to establish the **Budj Bim Cultural Landscape** as a sustainable tourism destination.<sup>465</sup> The Master Plan:

... presents a vision for the conservation and sustainable use of the Budj Bim National Heritage Landscape for cultural, tourism and community purposes, and provides an enabling framework for the government, the Gunditjmara community and tourism industry to invest in the future development of the Budj Bim Landscape as a tourism destination and as a home to the Gunditjmara community. That future will be based on partnerships between public and private groups and on the incremental and flexible development of tourism products and resources across the Budj Bim Landscape.<sup>466</sup>

The Master Plan presents a future vision, guiding principles, site planning framework and implementation strategy; as well as analyses of business feasibility and management system needs. The Master Plan identifies 15 key projects and priorities for the development of tourism at key visitor experience areas: Budj Bim/Lake Surprise – Budj Bim National Park; Tae Rak (Lake Condah); Lake Condah Mission; Budj Bim Indigenous Protected Area (Kurtonitj [central] component); and Tyrendarra Indigenous Protected Area (all of which are within the **Budj Bim Cultural Landscape**), as well as Tyrendarra township and the Convincing Ground in Portland, Victoria.

### **SPECIES PLAN – KOOYANG**

The 2017 *Victorian Eel Fishery Management Plan* recognises that the Gunditjmara Traditional Owners have rights – in accordance with the *Native Title Act 1993*, to hunt, fish and gather natural resources for personal, communal and cultural purpose, without the need to obtain a licence. This includes fishing for kooyang (eels).<sup>467</sup> Fisheries Victoria – the Victorian Government agency responsible for the implementation of the Plan, is committed to working collaboratively with Traditional Owner groups to ensure their participation in Victoria's eel management.<sup>468</sup>

461 GMTOAC 2015:53

462 GMTOAC 2015:64

463 Winda-Mara Aboriginal Corporation 2015:10

464 Winda-Mara Aboriginal Corporation 2015:7, 28-33


465 Tract Consultants 2014:ii

466 Tract Consultants 2014:iii

467 Victorian Fisheries Authority 2017:6

468 Victorian Fisheries Authority 2017:14





**THE INTEGRITY, AUTHENTICITY, SUSTAINABILITY AND THE RESILIENCE OF THE OUTSTANDING UNIVERSAL VALUE OF THE BUDJ BIM CULTURAL LANDSCAPE ARE MAINTAINED AND IMPROVED THROUGH MAINTENANCE OF GUNDITJMARA AQUACULTURE, GEOLOGICAL, HYDROLOGICAL AND ECOLOGICAL SYSTEMS AND ACTIVE MANAGEMENT OF THREATS AND PRESSURES.**

## 5.E PROPERTY MANAGEMENT PLAN OR OTHER MANAGEMENT SYSTEM

A comprehensive management system has been developed to ensure the highest level of protection of the **Budj Bim Cultural Landscape** (Table 5.6).<sup>469</sup> The management system is comprised of five interconnected elements:

1. Gunditjmara Traditional Owner customary rights and obligations, including legal recognition of such under the Australian Federal Court's 2007 Native Title determination;
2. Aboriginal ownership and/or cooperative management of all components of the nominated area (Part 5.A);
3. Comprehensive legislative, regulatory and statutory controls at National, State and local levels (Part 5.B);
4. Integrated governance with an emphasis on local-level decision making and implementation (Part 5.C); and
5. Complementary suite of management plans, goals and strategies that combine Gunditjmara knowledge and practices with contemporary science and adaptive management practices (Part 5.D).

In the event that the **Budj Bim Cultural Landscape** is inscribed on the World Heritage List, a number of actions will follow:

1. A *Budj Bim Cultural Landscape World Heritage Steering Committee* will be established. The committee will have a majority of Gunditjmara Traditional Owners and include local community representatives to advise on the management of the nominated property. An Australian Government representative will liaise with and support the Steering Committee's Executive Officer.
2. A representative of the **Budj Bim Cultural Landscape World Heritage Steering Committee** will be appointed to the *Australian World Heritage Advisory Committee* and the *Australian World Heritage Indigenous Network*.
3. A *Budj Bim Cultural Landscape World Heritage Strategic Management Framework* will be finalised and adopted by all relevant parties (the Gunditj Mirring Traditional

Owners Aboriginal Corporation, Winda-Mara Aboriginal Corporation, Australian and Victorian Governments) and will be the basis of the work of the Steering Committee. The framework will provide a synthesis of the existing management and governance arrangements and will ensure that there is effective integration across the five management system elements listed above to safeguard and ensure consistent and holistic management of all components of the nominated property.

### MANAGEMENT APPROACH

The management approach for the **Budj Bim Cultural Landscape** sits within the context of Australian and Victorian Government legislation, international treaties, local government public and private land policies and plans, best-practice principles, strategies and guidelines. In synergy with the Gunditjmara's philosophy of Ngootyoong Gunditj, Ngootyoong Mara (Healthy Country, Healthy People) – which aligns closely with that of Parks Victoria ('Healthy Parks, Healthy People'), management planning seeks to reinforce and encourage the connections between a healthy environment and a healthy society. The approach encourages those from the health, environment, parks, tourism, recreation, community development and education sectors to work with the Gunditjmara to provide positive outcomes for all.<sup>470</sup>

Management planning also adopts a landscape approach: setting goals and strategies across public and private land tenures and coordinating programs with other agencies and communities. The alignment with broader Australian and Victorian Government strategies for the use, management and conservation of land and water is particularly important to achieving the desired management outcomes for the **Budj Bim Cultural Landscape**. This planning approach seeks to make direct links between management plans, annual programs and evaluation and reporting.

Safeguarding the values of the **Budj Bim Cultural Landscape** is undertaken within an 'Adaptive Management Framework'; enabling ongoing learning and adaptation by continually assessing the success of actions in meeting management objectives, and allowing for adjustment of management actions in the future to best achieve the management goals. Adaptive management aims to integrate specific components of management to provide a framework that systematically tests assumptions, promotes learning and continuous improvement, as well as providing timely information to support management decisions.<sup>471</sup>

469 UNESCO 2016: Paragraph 132

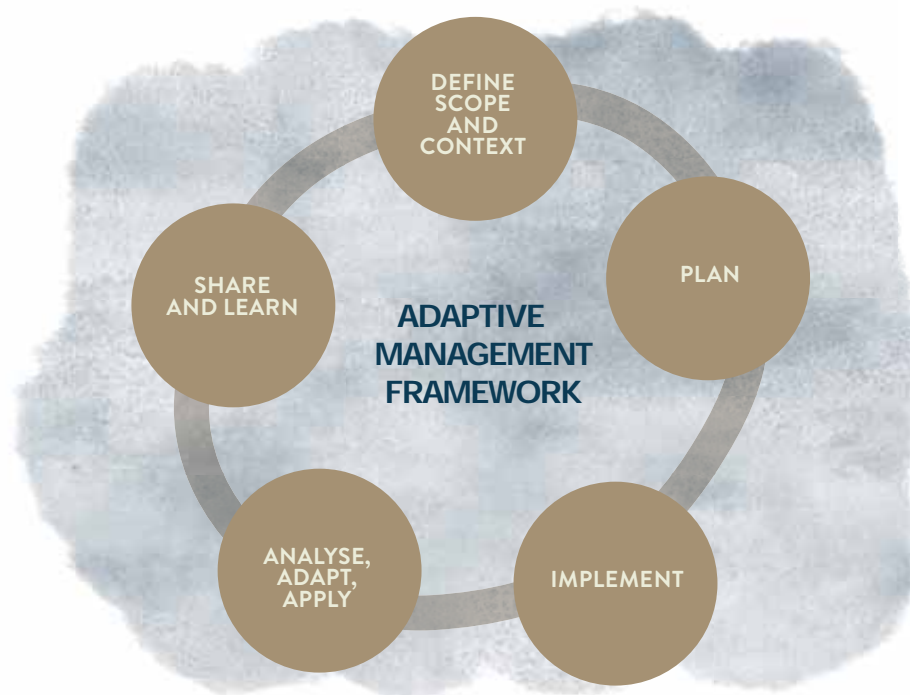
470 Parks Victoria 2015:12

471 Parks Victoria 2015:12

BUDJ BIM CULTURAL LANDSCAPE	BUDJ BIM NATIONAL PARK	BUDJ BIM AND TYRENDARRA INDIGENOUS PROTECTED AREAS	LAKE CONDAH MISSION
National system	Australian World Heritage Management Principles (see Annex A) In the event the Budj Bim Cultural Landscape is inscribed on the World Heritage List, appoint GMTOAC* representative to the Australian World Heritage Advisory Committee and the Australian World Heritage Indigenous Network		
Victoria regional system	In the event the Budj Bim Cultural Landscape is inscribed on the World Heritage List: 1. Establish <i>Budj Bim Cultural Landscape World Heritage Steering Committee</i> 2. Implement <i>Budj Bim Cultural Landscape World Heritage Strategic Management Framework</i>		
Property system	<i>Ngootyoong Gunditj, Ngootyoong Mara South West Management Plan</i>		
	Budj Bim Council oversee implementation of <i>Ngootyoong Gunditj, Ngootyoong Mara South West Management Plan</i> for Budj Bim National Park	GMTOAC implement <i>Budj Bim Indigenous Protected Area Plan of Management 2015-2019</i> ; Winda-Mara Aboriginal Corporation implement <i>Tyrendarra Indigenous Protected Area Management Action Plan 2015-2018</i> ;	GMTOAC implement <i>Lake Condah Mission and Cemetery Conservation Management Plan</i>
Tourism system (planning)	GMTOAC oversee implementation of <i>Budj Bim (Tourism) Master Plan</i>		

\*GMTOAC = Gunditj Mirring Traditional Owners Aboriginal Corporation

TABLE 5.6 Budj Bim Cultural Landscape: Management system



### 5.3 Adaptive Management Framework: Management approach applied for the Budj Bim Cultural Landscape

## **BUDJ BIM CULTURAL LANDSCAPE MANAGEMENT SYSTEM: FIVE INTERCONNECTED ELEMENTS**

### ***1. Gunditjmara Traditional Owner customary rights and obligations***

The **Budj Bim Cultural Landscape** is located within the traditional Country of the Gunditjmara. As such, the Gunditjmara have long-held rights, responsibilities and obligations to care for Country based on continuing traditional and contemporary Gunditjmara knowledge and practices. In addition, Gunditjmara rights are recognised under the Australian Government's *Native Title Act 1993* and the Victorian Government's *Aboriginal Heritage Act 2006*. The Gunditjmara's traditional and customary rights and obligations are implemented through governance arrangements (Part 5.C). These rights and obligations are recognised in and enacted through property management plans (Part 5.D).

Gunditjmara cultural traditions, knowledge and practices are evident in Gunditjmara aquaculture; as manifest in the changing practices of kooyang (eel) management, storage, harvesting and the associated manipulation, modification and management of water flows. Gunditjmara aquaculture knowledge and practices are also inclusive of sourcing grasses for the weaving of gnarraban (kooyang baskets), traditional representations of Gunditjmara aquaculture (for example, the complex designs produced on possum skin cloaks), adaptation of traditional catching techniques (for example, use of wire mesh baskets and wood crates for holding kooyang) and contemporary, creative artistic expressions of Gunditjmara aquaculture – evidenced in story-telling, dance, song, crafted objects and sculpture (Part 2.B).

### ***2. Aboriginal ownership and co-operative management***

**Budj Bim Cultural Landscape** is a serial property comprised of three components that collectively incorporate the eight largest Gunditjmara aquaculture complexes (Part 2.A) and representative examples of smaller aquaculture systems; as well as sufficient representative parts of their related geological, hydrological and ecological systems.

Aboriginal organisations own and manage all components of the nominated property with the exception of Budj Bim National Park, which is co-operatively managed by the Gunditjmara Traditional Owners and the Victorian Government. The nominated property is comprised wholly of lands owned or jointly managed by the GMTOAC and Winda-Mara Aboriginal Corporation. Therefore the property and its boundaries are assured of free, prior and informed consent by virtue of their ownership, management and control. The wholeness of the property enables Gunditjmara cultural traditions, knowledge and practices to be expressed in the present and into the future as a consequence of the recognition of both Gunditjmara custodial and native title rights and obligations (as outlined above).

### ***3. Comprehensive legislative, regulatory and statutory controls***

The **Budj Bim Cultural Landscape** comprises land parcels whose status includes National Park, Indigenous Protected Areas (both being components of Australia's National Reserve System) and land owned by the Gunditjmara Traditional Owners (Table 5.2).

Legislation and associated planning and protection instruments are established across three levels of government – Australian, Victorian State and local – to ensure the nominated property's International, National, State and local values are comprehensively conserved and managed (Part 5.B; Table 5.3). Aboriginal cultural heritage within the nominated area is protected by listing on statutory heritage registers – the Australian Government National Heritage List and the Victorian Aboriginal Heritage Register. These registers enable specific provisions for protecting the heritage values of the nominated property.

### ***4. Integrated governance***

The customary and legislative protective measures for the **Budj Bim Cultural Landscape** are enabled and implemented through an established governance framework (Part 5.C; Table 5.4). At the local level: the governance, decision-making and administrative bodies that oversee and cooperate in the protection and management of the nominated property are the Budj Bim Council, the Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC) and Winda-Mara Aboriginal Corporation.

The Budj Bim Council comprises representatives of Gunditjmara Traditional Owners (the majority of Council members) and the Victorian Government. Its role is to manage Budj Bim National Park to achieve both cultural and ecological objectives through joint decision-making. The GMTOAC manages the native title rights of the Gunditjmara and promotes continuing connection to Country by the Gunditjmara through its Caring for Country programs and projects. The GMTOAC owns and manages the Budj Bim Indigenous Protected Area and Lake Condah Mission, which lie wholly within the nominated property. Winda-Mara Aboriginal Corporation is the owner and manager of the Tyrendarra Indigenous Protected Area. It undertakes cultural heritage and land management initiatives in partnership with the GMTOAC as well as with key government agencies and non-government organisations.

### ***5. Complementary suite of management plans***

The **Budj Bim Cultural Landscape** is managed under three current, inter-related management plans – developed to meet Gunditjmara customary rights and obligations and the requirements of Australian and Victorian government legislation (Part 5.D; Table 5.5). The *Ngootyoong Gunditj Ngootyoong Mara South West Management Plan* is a regional plan which includes all components of the nominated

property. It has a 15-year timeframe for implementation. The two management plans for the Indigenous Protected Areas within the **Budj Bim Cultural Landscape** are complementary plans to the regional plan. The *Budj Bim Indigenous Protected Area Plan of Management 2015-2019* applies to those land parcels in each of the three components – owned by the GMTOAC, that together comprise the Budj Bim Indigenous Protected Area. The *Tyrendarra Indigenous Protected Area Management Action Plan 2015-2018* applies to the Tyrendarra Indigenous Protected Area which is owned and managed by the Winda-Mara Aboriginal Corporation. Copies of each of these primary management documents are provided as Annexes B.1, B.2 and B.3 to this Nomination Dossier.

The Gunditjmara Traditional Owners play a leading role in the implementation of protection and management measures for the **Budj Bim Cultural Landscape**. The development of all management plans has included extensive community consultation, and direct consultation and collaboration with Gunditjmara community members has been a central feature.

## STRATEGIC MANAGEMENT

World Heritage status is the highest level of recognition afforded to a heritage place. It places an important responsibility on Australia to apply the highest standards of management practice. The management system applied to the **Budj Bim Cultural Landscape** is hierarchical. Australia's obligations under the World Heritage Convention and its Operational Guidelines are established in the Australian World Heritage management principles as established by the *Environment Protection and Biodiversity Conservation Regulations 2000* (Annex A).<sup>472</sup>

### Management goals

Management goals are listed in Table 5.7 for each of six key areas of World Heritage management as applied in the care and safeguarding of the **Budj Bim Cultural Landscape**. Management strategies for each of the goals are presented in the three key management plans that cover the nominated property. In addition, management of the nominated property – including active management of cultural and natural heritage values not considered part of the Outstanding Universal Value, is detailed in each plan.<sup>473</sup>

MANAGEMENT	GOAL
Indigenous peoples	The Gunditjmara Traditional Owners are recognised as the custodians of all parts of the Budj Bim Cultural Landscape. <sup>474</sup>
Identification	Attributes that carry the Outstanding Universal Value of the Budj Bim Cultural Landscape continue to be researched, identified and documented. <sup>475</sup>
Protection	Customary, legislation and regulatory and institutional arrangements are actively supported, maintained and, where necessary, updated and strengthened to ensure the Outstanding Universal Value of the Budj Bim Cultural Landscape is protected. <sup>476</sup>
Conservation	The integrity, authenticity, sustainability and the resilience of the Outstanding Universal Value of the Budj Bim Cultural Landscape are maintained and improved through maintenance of Gunditjmara aquaculture, geological, hydrological and ecological systems and active management of threats and pressures. <sup>477</sup>
Presentation	The Outstanding Universal Value of the Budj Bim Cultural Landscape is presented to the community and visitors, to enhance their understanding, appreciation and enjoyment of the nominated property, and to give the property a function in the life of community. <sup>478</sup>
Governance	There is effective, coordinated, strategic and transparent management of the Budj Bim Cultural Landscape, with ongoing technical, scientific and community input and Gunditjmara Traditional Owner leadership in the governance structure. <sup>479</sup>

TABLE 5.7 Budj Bim Cultural Landscape: Strategic management goals

472 *Environment Protection and Biodiversity Conservation Regulations 2000*: Schedule 5. Australian Government, 'World Heritage Management Principles', <http://www.environment.gov.au/heritage/about/world/management-australias-world-heritage-listed/managing-world-heritage-australia>

473 The heritage values for which the Budj Bim National Heritage Landscape is inscribed on Australia's National Heritage List are available from: Australian Government, 'National Heritage Places – Budj Bim National Heritage Landscape', <http://www.environment.gov.au/heritage/places/national/budj-bim>

474 Parks Victoria 2015:6-7; GMTOAC 2015:2, 6-9; Winda-Mara Aboriginal Corporation 2015:2

475 Parks Victoria 2015:99-101; GMTOAC 2015:37-41; Winda-Mara Aboriginal Corporation 2015:18-19

476 Parks Victoria 2015:12-13; GMTOAC 2015:37-63; Winda-Mara Aboriginal Corporation 2015:11-12

477 Parks Victoria 2015:29-55; GMTOAC 2015:37-63; Winda-Mara Aboriginal Corporation 2015:18-21

478 Parks Victoria 2015:92-95; GMTOAC 2015:59-60; Winda-Mara Aboriginal Corporation 2015:22-24

479 Parks Victoria 2015:4; GMTOAC 2015:28-30; Winda-Mara Aboriginal Corporation 2015:10

## 5.F SOURCES AND LEVELS OF FINANCE

The management of the **Budj Bim Cultural Landscape** is financed primarily through Australian and Victorian State Government programs and grants. In addition, supplementary funding from other sources is expended on the nominated property – including income generated from enterprises associated with the lands owned and managed by the Guditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC) and Winda-Mara Aboriginal Corporation. In the long-term, the Guditjmarra anticipate increased revenue from tourism, for which detailed planning has been undertaken.<sup>480</sup>

### AUSTRALIAN GOVERNMENT FUNDING

The Australian Government has an obligation to ensure that the objectives of the World Heritage Convention are met for World Heritage properties. These objectives include the obligations to identify, protect, conserve, present and – where necessary, rehabilitate and transmit to future generations, the World Heritage values of the property. The Australian Government has competitive funding programs that provide assistance to protect and manage Australia's heritage.

The primary funding provided by the Australian Government toward the care and management of the **Budj Bim Cultural Landscape** is through its Indigenous Protected Areas and Working on Country programs. In the financial year 2016-2017, the Australian Government provided a total of AUD \$1,011,840 in funding to the Tyrendarra and Budj Bim Indigenous Protected Areas.<sup>481</sup> These funds were primarily used for the employment of Budj Bim Rangers (11 full-time Budj Bim Rangers and two part-time Guditjmarra Elders) and the costs associated with their employment. Funding for the Indigenous Protected Areas within the nominated property is guaranteed until the 2018-2019 financial year.

In addition, the Australian Government – through its Indigenous Advancement Strategy, provided AUD \$116,000 in 2016-2017 to the GMTOAC for the upkeep and maintenance of the Lake Condah Mission. In 2015-2016, the Australian Government – through its Community Heritage and Icons Grants Program, provided funding of \$10,000 to support the development of the Budj Bim Field Guide App.<sup>482</sup>

### VICTORIAN GOVERNMENT FUNDING

The management of the Budj Bim National Park (wholly within the **Budj Bim Cultural Landscape**) is funded by the Victorian Government. Parks Victoria currently expends approximately AUD \$230,000 annually on management of the National Park. The budget provides funds for staff and preparation and implementation of management plans; as well as actions related to the management of cultural heritage, flora and fauna, roads and trails, campgrounds and fire, visitor services and capital works. In addition, the Department of Environment, Land, Water and Planning (DELWP) provides annual funding of AUD \$50,000 to support the activities of the Budj Bim Council; and provides funding and support for wildfire management and support for flora and fauna management in Budj Bim National Park. In 2017, DELWP provided funding and expertise for koala management within the Kurtonitj (central) component of the nominated property.

The Victorian Government provides an annual amount of AUD \$50,000 to the GMTOAC for the management of the Lake Condah Mission and Cemetery.

The Victorian Government is providing AUD \$8 million to the GMTOAC to implement stages one and two of the *Budj Bim (Tourism) Master Plan*.<sup>483</sup> The funding, which is allocated over three years to 2020, is provided to support sustainable tourism infrastructure projects while providing economic opportunities for the Guditjmarra.

### GMTOAC AND WINDA-MARA ABORIGINAL CORPORATION FUNDING

The GMTOAC and Winda-Mara Aboriginal Corporation generate income from business enterprises conducted within the **Budj Bim Cultural Landscape**. In the 2016-2017 financial year, the income generated from commercial tours, the provision of accommodation and the sale of cattle was \$32,000.<sup>484</sup> Approximately half of this amount was allocated to land management activities within the nominated property.

### COLLABORATIVE RESEARCH FUNDING

Monash University, in partnership with the Guditjmarra, have an ongoing archaeological research and teaching program that is undertaken annually within the **Budj Bim Cultural Landscape**. The annual funding provided for the short-term employment of Guditjmarra researchers as part of this program is approximately AUD \$7,000.

480 Tract Consultants 2014

481 AUD = Australian dollars

482 This app presents descriptions and images of 250 species found in and around the Budj Bim Cultural Landscape. The content was developed by Museums Victoria in collaboration with the GMTOAC.

483 Tract Consultants 2014

484 This amount does not include monies raised from the tours provided to visiting schools, which is funded through Australian Government funding allocations.

## 5.G SOURCES OF EXPERTISE AND TRAINING IN CONSERVATION AND MANAGEMENT TECHNIQUES

Management of the **Budj Bim Cultural Landscape** is based on a collaborative system of custodial and scientific knowledge and adaptive management practices (Part 5.E). The primary source of expertise in the management of the property is the Gunditjmarra Traditional Owners, who are the custodians of the Country that includes the nominated property. The Gunditjmarra work collaboratively with a wide range of partners, including cultural heritage specialists (archaeologists, historians, architects, building and materials conservators), natural heritage specialists (ecologists, botanists, zoologists, geologists, palynologists, arborists) and specialist advisors (Protected Area managers, visitor and tourism specialists, business planners, hydrologists, engineers).

### GUNDITJMARA TRADITIONAL OWNERS

The Gunditjmarra have tens of thousands of years of experience in caring for Country; which includes at least 6,600 years of management, maintenance and monitoring of the kooyang (eel) aquaculture system and its setting. The Gunditjmarra draw on cultural traditions, knowledge and practices in caring for the ecological, hydrological, cultural heritage and spiritual health of the **Budj Bim Cultural Landscape**. In addition to drawing on traditional ecological knowledge, the Gunditjmarra undertake research – both with partners and in their own right, to increase understanding and learning concerning the functioning and management needs of the aquaculture system and its landscape context.

The Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC) and Winda-Mara Aboriginal Corporation each have a Board of Directors. The GMTOAC Board is comprised of Gunditjmarra Traditional Owners, including members with extensive traditional and contemporary knowledge of the **Budj Bim Cultural Landscape**. The Winda-Mara Aboriginal Corporation currently has a Board comprising Gunditjmarra Traditional Owners, though can include non-Gunditjmarra members. The Budj Bim Rangers, who undertake day-to-day

management and maintenance work across the **Budj Bim Cultural Landscape**, receive cultural training and mentoring from their Gunditjmarra Elders. The Budj Bim Rangers have Aboriginal cultural heritage and park management qualifications.<sup>485</sup>

The Gunditjmarra organise and provide training programs for both external groups and for members of their own community. For example, the Gunditjmarra provide 'cultural awareness training' to government agencies, regulatory bodies and private companies (Part 4.B[iv]); and the Budj Bim Rangers are mentored by Gunditjmarra Elders. The Gunditjmarra also provide education programs, typically delivered on Country, for younger people; part of their practice of transmitting cultural traditions and knowledge to Gunditjmarra youth (Part 4.B).

### PROTECTED AREAS AND ADAPTIVE MANAGEMENT

Australia has a long history of Protected Area management and has developed expertise in applying an Adaptive Management Framework (Part 5.E). As the lead agency responsible for managing a large area of the Budj Bim (northern) component within the **Budj Bim Cultural Landscape**, Parks Victoria has a wealth of expertise and experience in conservation and management from on-ground staff through to scientific specialists. This includes specialist knowledge in relation to ecology (including native flora and fauna management and pest plant and animal control), fire management (undertaken in conjunction with the Department of Environment, Land, Water and Planning), asset management, and visitor and tourism management. The Gunditjmarra provide specialist knowledge to Parks Victoria through the Budj Bim Council with regard to the conservation and management of cultural heritage within the Budj Bim National Park.

Parks Victoria officers who undertake day-to-day site management have tertiary qualifications in land conservation and management. All current Parks Victoria rangers who assist with the management and maintenance of the Budj Bim National Park have land management qualifications – either Technical and Further Education (TAFE) Certificates (Level 3 or 4) or higher qualifications as well as a range of hands-on skills achieved through training; such as First Aid, four-wheel driving, chemical handling and fire-fighting. Heritage advice is provided by GMTOAC staff with cultural heritage qualifications and experience, supported by Victorian Government officers (archaeologists in Aboriginal Victoria, for example) with tertiary qualifications in cultural heritage management. External consultants with specialist skills are engaged as required.

485 GMTOAC 2015:39

## OTHER SOURCES OF EXPERTISE

Managers of Australian World Heritage properties can draw on specialist advice from a large pool of professional services within government departments, heritage advisory bodies, universities and private practice. The managers of the **Budj Bim Cultural Landscape** have access to specialist expert services as outlined below.

- At the National level, the Australian Government Department of the Environment and Energy provides advice on the protection, conservation and promotion of National Heritage and World Heritage properties
- At the State level, Victorian Government agencies such as Aboriginal Victoria, Parks Victoria and the Department of Environment, Land, Water and Planning provide advice on cultural and natural conservation and management techniques and act as a conduit to specialist services and training
- Archaeologists in universities or private practice undertake research and documentation in partnership with the Gunditjmarra and provide advice on conservation issues<sup>486</sup>
- Ecologists at universities or in private practice undertake research and documentation (for example, on vegetation and kooyang (eel)) and provide advice on conservation issues
- Conservation consultants – including planners and heritage specialists, have been engaged to prepare and update conservation management plans for the **Budj Bim Cultural Landscape**
- Tourism consultants have been engaged to undertake studies and prepare tourism plans for the nominated property.

In all cases where external specialist expert services are engaged, the Gunditjmarra Traditional Owners work in collaborative partnerships with the service providers.

## 5.H VISITOR FACILITIES, INFRASTRUCTURE AND STATISTICS

The **Budj Bim Cultural Landscape** is a key destination in south-western Victoria. Its rich Aboriginal culture, history and heritage and the Budj Bim volcano and its lava flow are the major attractions to visitors. The relative remoteness of the area from large population centres provides an opportunity for visitors seeking less crowded experiences.<sup>487</sup> In addition, interpretation and presentation of the **Budj Bim Cultural Landscape** and its values has also been provided off-site – including through Museums Victoria and inter-State museums, as well as through media interest. As more people learn about the nominated property, tourism interest is expected to grow, creating enhanced tourism marketing potential for the nominated property and surrounding rural towns.

Each year the **Budj Bim Cultural Landscape** receives a steady stream of visitors – estimated at around 31,000, mainly between September and April (Part 4.B[iv]). Most visitors stay in the adjacent towns of Heywood and Portland; though each year over 900 visitors camp within the nominated property (Part 4.B[vi]). Statistics for the Glenelg Shire – within which the majority of the nominated property is situated, show that there were 175,000 domestic overnight visitors in 2014, each staying on average 4.4 nights in the region and spending on average AUD \$129 per night. Domestic overnight visitors are estimated to have spent \$100 million in the region.<sup>488</sup> These figures point to the potential tourism market available for the **Budj Bim Cultural Landscape**.

### ACCESS – ROADS AND TRACKS

All areas within the **Budj Bim Cultural Landscape** are accessible by a network of public roads and vehicle tracks.<sup>489</sup> Local public roads provide two-wheel drive access to the three components of the nominated property. Responsibility for the maintenance of local roads lies with local government (Glenelg and Moyne Shires). Parks Victoria, the Department of Environment, Land, Water and Planning, the Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC) and

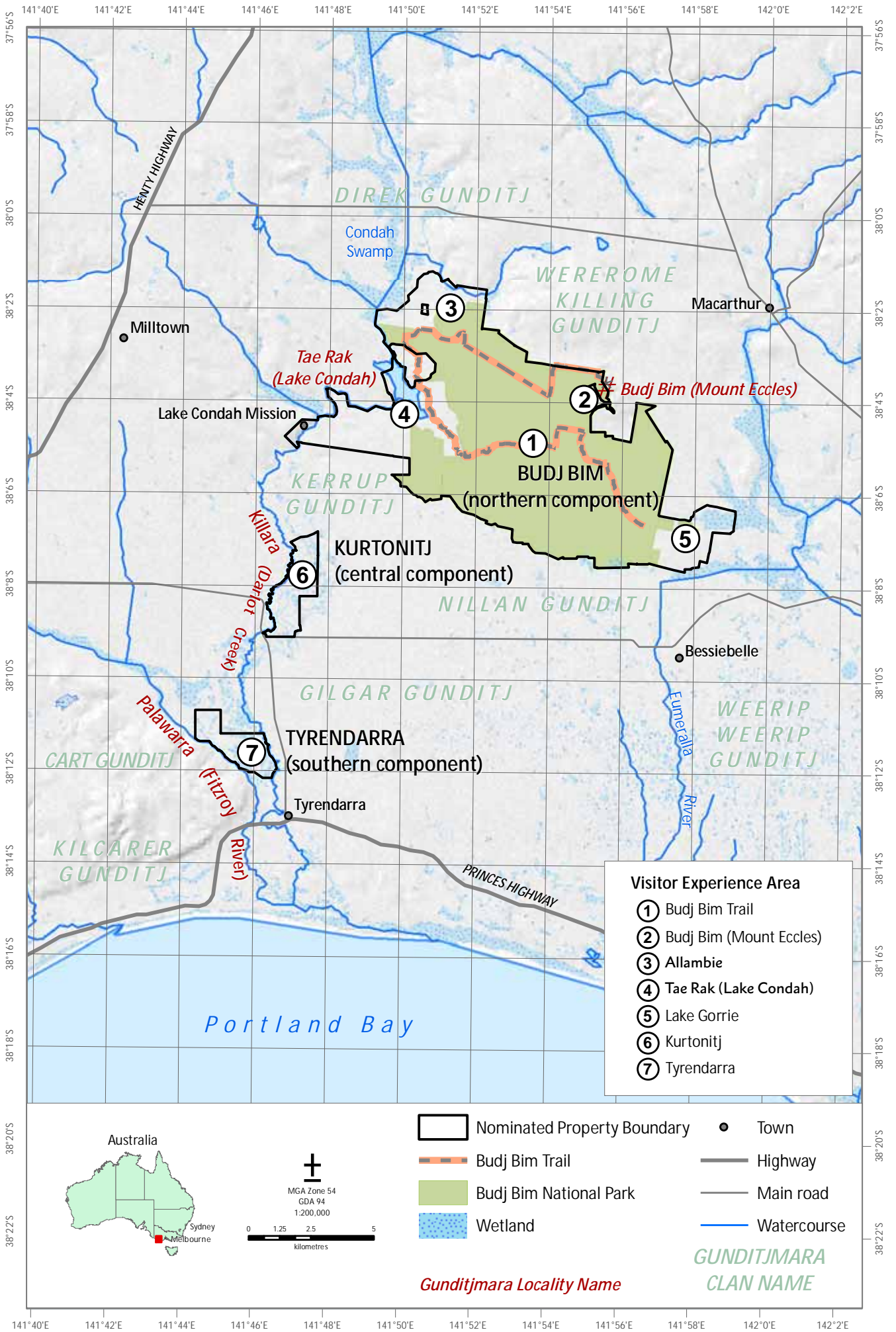
<sup>486</sup> A number of PhD research projects that focus on the Budj Bim Cultural Landscape have been undertaken (e.g., Builth 2002; Richards 2013). Monash University provides archaeological expertise through an ongoing teaching and research program (e.g., McNiven et al. 2015, 2017)

<sup>487</sup> Parks Victoria 2015:67

<sup>488</sup> *National Visitor Survey, September 2014*, Tourism Research Australia, cited in Fox et al. 2015:85. Data for domestic day trip visitation and international overnight visitors are not available.

<sup>489</sup> Parks Victoria 2015:Map 3A





Winda-Mara Aboriginal Corporation are responsible for roads and tracks within the lands they manage. The roads and tracks are maintained for a variety of uses including: access to visitor sites and National Park features for recreation and tourism, fire and park management activities, emergency response and transit. The road and track network also provides for a range of non-motorised uses such as walking and cycling. Access to the Indigenous Protected Areas is generally restricted and only permitted as part of guided experiences. Tracks may be closed seasonally or permanently for public safety and to prevent damage to tracks, or to cultural heritage and environmental values.

A number of strategies are detailed in the key nominated property management plans (Part 5.E) that support the goal of: "A safe and sustainable network of roads and tracks supports visitor access and management." These strategies include: renaming tracks and trails in Gunditjmarra language, restricting access to Gunditjmarra spiritual places as required for cultural practices and managing access within Indigenous Protected Areas through guided experiences to protect Gunditjmarra culture and heritage.<sup>491</sup>

## BUDJ BIM TOURS

Budj Bim Tours is an enterprise established in 2002 and operated by Winda-Mara Aboriginal Corporation. It is an Indigenous-owned tourism company that offers exclusive guided tours to selected areas within the **Budj Bim Cultural Landscape**. Budj Bim Tours operates out of Heywood, Victoria, and itineraries range from two hours to full days.

In 2013, GMTOAC approved the implementation of the Budj Bim Commercial Tourism Program. The Program provides licenced access for accredited tour operators to the Budj Bim and Tyrendarra Indigenous Protected Areas and Lake Condah Mission. As part of the licenced access, tour operators must engage an endorsed Gunditjmarra interpretative guide for all tours. GMTOAC endorses Gunditjmarra Traditional Owners following the completion of a professional development program that focuses on interpretation, communication and small business.<sup>492</sup>

## BUDJ BIM TRAIL

The Budj Bim Trail offers a cycling and walking trail in a natural and cultural setting. The trail uses unsealed vehicle tracks in the Budj Bim National Park and land parcels adjacent to the Park – within the Budj Bim Indigenous Protected Area. There are opportunities for further development of the trail consistent with the *Budj Bim (Tourism) Master Plan*.<sup>493</sup>

## VISITOR EXPERIENCE AREAS

Six 'visitor experience areas' within the **Budj Bim Cultural Landscape** are recognised as priority precincts that support a range of visitor uses, activities, experiences and the delivery of visitor programs. They are also a focus for delivering visitor services and facilities in a way that minimises impacts and protects the integrity of cultural and natural values. The visitor experience areas may include campgrounds and picnic areas with visitor facilities such as parking, toilets, picnic tables and interpretive signs. Sites and facilities are managed to meet the needs of different visitors at a level of service appropriate to each of the experiences, activities and settings.<sup>494</sup>

The level of service for visitor sites ranges from high to basic. High service sites generally provide visitors with accessible, convenient and quality facilities; while basic sites have limited facilities and cater for visitors seeking a self-reliant experience in relatively undeveloped settings. All facilities and services are located and designed to be sustainable, minimise impact on cultural and natural heritage values and managed to a safe standard within available resources.<sup>495</sup>

Each of the six visitor experience areas within the **Budj Bim Cultural Landscape** is described here.

### *Budj Bim Visitor Experience Area (Mount Eccles and Lake Surprise)*

The Budj Bim Visitor Experience Area is a destination for campers, sightseers and trail users exploring western Victoria's volcanic history and seeking to appreciate Gunditjmarra Creation stories. The Mount Eccles camping and day visitor area is the major visitor destination and service location within Budj Bim National Park and is the most frequently visited location within the **Budj Bim Cultural Landscape**.

The current focus of the Budj Bim Visitor Experience Area is on the scenic qualities of the location (crater lake views and walks), environmental conservation and interpretation for the nominated property and for nature-based recreation (camping and walking). The site is designed to be a low-volume day visitor destination with basic camping (22 sites) and well maintained day visitor facilities (barbeques/picnics). It generally functions as an isolated visitor destination or a stopping-point within a regional tourism journey.<sup>496</sup>

The *Budj Bim (Tourism) Master Plan* recognises that the area is designed to be a key setting within a Nationally / Internationally important heritage landscape. It identifies opportunities to achieve this goal through provision of a visitor centre and commercial accommodation at this location or on lands bordering the nominated property.<sup>497</sup>

491 Parks Victoria 2015:68-70, 73-75

492 GMTOAC 2015:29

493 Tract Consultants 2014:58

494 Parks Victoria 2015:73-75

495 Parks Victoria 2015:72

496 Tract Consultants 2014:26

497 Parks Victoria 2015:73-74; Tract Consultants 2014:26



5.4 A section of the Budj Bim Trail, within the Budj Bim (northern) component of the Budj Bim Cultural Landscape. The recreation trail is used for walking and cycling



5.5 Budj Bim Visitor Experience Area: Lake Surprise is located within the crater of the Budj Bim volcano



5.6 Budj Bim Visitor Experience Area: Lake Surprise lookout



5.7 Budj Bim Visitor Experience Area: Budj Bim National Park day visitor area



5.8 Budj Bim Visitor Experience Area: National Park car park



5.9 Budj Bim Visitor Experience Area: Lake Surprise historic shelter



5.10 Budj Bim Visitor Experience Area: National Park Visitor Centre and Ranger Station



5.11 Visitors to Tae Rak at the Budj Bim Cultural Landscape



5.12 Tae Rak Visitor Experience Area: Jetty and boat ramp

**Tae Rak (Lake Condah) Visitor Experience Area**

The Tae Rak (Lake Condah) Visitor Experience Area is a defining element in the **Budj Bim Cultural Landscape**. It is the best known place within the nominated area; and, with lava formations, the lake and its associated wetlands, the cultural weir, kooyang (eel) aquaculture complexes and stone circles, and the Mission (the Mission), the Tae Rak Visitor Experience Area provides visitors with an overall picture of the landscape and Gunditjmara culture, stories and history.

Facilities in this area include a jetty and boat ramp used for lake-based tours, management of the lake and fishing activities. Facilities at the Mission include a meeting/ conference venue and accommodation cabins. The Mission is currently used as a multipurpose site by the Gunditjmara and as a venue for major events. The Mission is a place



5.13 Tae Rak Visitor Experience Area: The Mission conference venue and accommodation cabins

with special meaning to the Gunditjmara community – as a community meeting place, an administrative centre, a symbol of political struggle and a link to family histories. As a result, the Gunditjmara community do not propose to allow open public access to this site, but will limit visitor access.

The *Budj Bim (Tourism) Master Plan* identifies a range of future developments for the Tae Rak Visitor Experience Area, including:

- Developing the location as a specialist interpretation point relating to the Tae Rak ecosystem and Gunditjmara aquaculture. This area has the potential to function as a higher order multipurpose facility and service hub that tells a wider story of the **Budj Bim Cultural Landscape** and the cultural history of the Gunditjmara



5.14 Kurtonitj Visitor Experience Area: Shelter used during inclement weather when hosting school and tour groups

- Maintain the group of six aquaculture complexes as a conservation area and cultural sites with restricted tourist activity and access
- Utilise the jetty and boat ramp facilities to further develop lake-based tours
- Gradually introduce new trails, pathways and shelter structures along the lake edge, recognising that the water level of the lake varies seasonally depending on rainfall and the dynamism of the lake littoral zone.<sup>498</sup>

### Kurtonitj Visitor Experience Area

The Kurtonitj Visitor Experience Area contains cultural places important to the Gunditjmarra, including kooyang aquaculture channels, dams, weirs and ponds and stone circles. The area is currently used as a cultural site by the Gunditjmarra community and as a destination for guided tours. The area has been used as a grazing property and it retains fences and other infrastructure related to that land use.

The *Budj Bim (Tourism) Master Plan* identifies future directions for the Kurtonitj Visitor Experience Area including:

- Developing the area as a key visitor destination which forms a part of an interpretive ‘journey’ that takes in a number of key destinations (including the Tae Rak and Tyrendarra Visitor Experience Areas) – a sequential experience that will explain the nature of the landscape and the cultural story linked to that landscape. The Kurtonitj Visitor Experience Area is particularly linked to stories related to Killara (Darlot Creek) and to the hunting, food cultivation and environmental modification techniques used by the Gunditjmarra
- Separating Gunditjmarra community-use from tourism-based use where possible
- Developing a landscape setting which has intact environmental qualities, flood patterns and landscape character – qualities that will enable an immersive visitor experience
- In the long term – develop an alternative site entry that enters the centre of the site from the west. Limit vehicle movement through the site.<sup>499</sup>

498 Tract Consultants 2014:28

499 Tract Consultants 2014:29



5.15 Kurtonitj Visitor Experience Area: Detail of interpretation panel



5.16 Kurtonitj Visitor Experience Area: Visitor facilities in their landscape context

### Tyrendarra Visitor Experience Area

The Tyrendarra Visitor Experience Area sits between the Palawarra (Fitzroy River) and Killara and features wetland, floodplain and lava flow landscapes. The Visitor Experience Area contains cultural sites and features important to Gunditjmarra people; including aquaculture features (channels and weirs) and stone circles (including reconstructed examples) (Part 2.A).

The Tyrendarra Visitor Experience Area is currently a major destination for Budj Bim Tours. The site has facilities that are designed to cater for education and corporate groups, including the Gilgar Gunditj Visitor Place. The area includes a walking trail comprised of pathways (including boardwalks) and non-intrusive interpretive signage. Independent travellers and visitors can access the trail without taking a guided tour.

For many current visitors, the Tyrendarra Visitor Experience Area is the only location that they visit within the **Budj Bim Cultural Landscape** and therefore their only experience of it. The area is often not accessible during July and August due to flooding, therefore during this period alternative sites and interpretation experiences are planned for both organised and independent Budj Bim tourism. Past wildfires have removed some tree cover and this has changed the visual character of the landscape, but has also resulted in the regeneration of native grasses and shrubs.



5.17 Tyrendarra Visitor Experience Area: Walking track entry from car parking area to the start and finish of the interpretive trail



5.18 Tyrendarra Visitor Experience Area: Gilgar Gunditj Visitor Place



5.19 Tyrendarra Visitor Experience Area: Gilgar Gunditj Visitor Place is designed to mimic the movement of kooyang (eel). It is used for school group activities, talks to tour groups and community events



5.20 Tyrendarra Visitor Experience Area: Toilet facility adjacent to car park

The *Budj Bim (Tourism) Master Plan* identifies future directions for the Tyrendarra Visitor Experience Area including:

- Further developing the Tyrendarra Visitor Experience Area as a key visitor area which forms a part of an interpretive journey that takes in a number of key destinations (including Tae Rak and Kurtonitj Visitor Experience Areas). The Tyrendarra Visitor Experience Area is particularly linked to stories related to Killara and to the hunting, food cultivation and environmental modifications that are underpinned by knowledge and practices applied by the Gunditjmarra. This area can function as a single visitor destination – a place that tells the whole of the **Budj Bim Cultural Landscape** story as well as a place that tells a site-specific story
- Developing a landscape setting with intact environmental qualities, flood patterns and landscape character – qualities that will enable an immersive visitor experience.
- Removing remnant farm features, rubbish dumps and exotic trees
- Providing a level of interpretation experience for all of the seasons in a year.



5.21 Tyrendarra Visitor Experience Area: Tyrendarra trail interpretive signage

### Allambie Visitor Experience Area

The Allambie Visitor Experience Area is a destination for visitors wishing to understand Gunditjmara culture, stories and history – with a particular emphasis on the stone circles and villages. The property consists of a combination of lava flow landforms and wetland areas. Parts of the area are used for cattle grazing.

The Allambie Visitor Experience Area has a range of well-preserved stone circles representing Gunditjmara settlement and cultural practices. The current focus of the site is on supporting cultural activities, Budj Bim Tours and occasional day visitor use. Facilities comprise a toilet and shelter facility to support small group tours, as well as independent trail users (mountain bikers and walkers). The *Budj Bim (Tourism) Master Plan* identifies future directions that include developing the location as a specialist interpretation point relating to the wetland area and past Gunditjmara settlement and developing a specific road access system that connects Allambie Visitor Experience Area to the wider **Budj Bim Cultural Landscape** network without using external public roads.<sup>500</sup>

### Lake Gorrie Visitor Experience Area

The Lake Gorrie Visitor Experience Area consists of Budj Bim lava flow and wetland landforms. Until recently the site has been used as a grazing property. The Lake Gorrie Visitor Experience Area has archaeological features representing both Aboriginal and more recent European settlement. The current focus of the Visitor Experience Area is on supporting Gunditjmara cultural activities and day-visitor use, along with occasional Budj Bim Tours. Facilities are minimal; with a toilet and shelter facility to support Budj Bim Tours, mountain bike trail users and walkers. The *Budj Bim (Tourism) Master Plan* recommends developing the location as a specialist interpretation point relating to wetlands, Gunditjmara settlement and the Eumeralla War themes (Part 2.B) and developing a specific road access system that connects Lake Gorrie to the wider **Budj Bim Cultural Landscape** network without using external public roads.<sup>501</sup>



5.22 Allambie Visitor Experience Area: Visitor facilities in their landscape context



5.23 Lake Gorrie Visitor Experience Area: Visitor facilities in their landscape context

500 Tract Consultants 2014:27

501 Tract Consultants 2014:27



## 5.1 POLICIES AND PROGRAMS RELATED TO THE PRESENTATION AND PROMOTION OF THE PROPERTY

The **Budj Bim Cultural Landscape** is presented and promoted through the established, collaborative working arrangements between, and the shared goals of, the Guditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC), Parks Victoria and Winda-Mara Aboriginal Corporation. Land management plans, a thematic heritage study and tourism planning documents identify arrangements for presenting and promoting the Budj Bim Cultural Landscape.<sup>502</sup> The significance of the property is communicated to visitors through strategies tailored to the diverse attributes of the nominated property.

### GUNDITJMARA CUSTOMARY PRACTICES

As part of an Indigenous landscape, knowledge and cultural traditions concerning the **Budj Bim Cultural Landscape** are held by Guditjmara Traditional Owners. They are transmitted from past to present generations and will continue to be transmitted to future generations. The nominated property is an important component of Guditjmara Country, and for millennia has had a function in the life of the Guditjmara community through their occupation, settlement and use. That is, for the past and present Traditional Owners of the **Budj Bim Cultural Landscape**, this place has and always will have a “function in the life of the community” through shared knowledge and practices and their “transmission to future generations.”<sup>503</sup>

In addition to customary approaches, the Guditjmara have established programs to present the **Budj Bim Cultural Landscape** within their community. These include: education programs led by Guditjmara Elders and undertaken with Guditjmara youth within the nominated property; cultural activities, events and celebrations (at Lake Condah Mission, for example); and working on Country programs, such as the Budj Bim Ranger program. In addition, cultural knowledge is shared and expressed through creative arts projects illustrated in the activities of The Fighting Guditjmara Traditional Aboriginal Dance Group and Guditjmara Karweeyn – the Winda-Mara Aboriginal Dancers (Part 2.B).

### PRESENTATION AND PROMOTION OF THE PROPERTY

A suite of management documents set out approaches for the presentation of the **Budj Bim Cultural Landscape** including external promotion and marketing.

- A study of the history and heritage of the **Budj Bim Cultural Landscape** identified key themes and stories underpinning the presentation of information, interpretation and education.<sup>504</sup> These themes and storylines illustrate the interconnectedness of the nominated property’s history and demonstrate the connections to valued places across the nominated property and beyond. The landscape of the nominated property provides a setting within which to share stories and interpretation of the property and its history.
- The key management plans (Part 5.D) for the **Budj Bim Cultural Landscape** set out goals and strategies for presenting and promoting the heritage values of the nominated property.<sup>505</sup> The key goals are: visitors feel welcomed, are well informed of the nominated property’s values and are aware of the range of visitor opportunities available; visitors and locals appreciate the landscape, its ancient and recent history, cultural and ecological richness and the interwoven nature of peoples’ connections; and students are provided with a range of enjoyable educational experiences that inspire a strong appreciation of the nominated property and its values.<sup>506</sup>
- The *Budj Bim (Tourism) Master Plan* sets out a framework for the presentation and promotion of the **Budj Bim Cultural Landscape** with the aim of establishing it as an outstanding tourism destination (Parts 4.B[iv] and 5.H). A signage and interpretation plan will be developed for the Guditjmara-owned properties in line with objectives of the *Budj Bim (Tourism) Master Plan* – with the intent to communicate Guditjmara stories in relevant visitor experience areas and to reinstate traditional names.<sup>507</sup>

Interpretive mechanisms are in place to promote a good understanding of the heritage values of the **Budj Bim Cultural Landscape**. These include on-site interpretive panels that outline the cultural, historic and environmental values of the nominated property, Guditjmara-led guided tours, brochures and publications – in particular, *The People of Budj Bim*.<sup>508</sup> Information for visitors regarding the nominated property and its values is presented and promoted through accredited visitor information centres, regional Parks Victoria offices, websites – including YouTube videos, social media and local interpretation centres – such as that operated by the Winda-Mara Aboriginal Corporation in Heywood, Victoria.

502 Parks Victoria 2015; GMTOAC 2015; Winda-Mara Aboriginal Corporation 2015; Context 2012b; Tract Consultants 2014

503 UNESCO *Convention Concerning the Protection of the World Cultural and Natural Heritage* 1972:Articles 4 and 5.

504 Context 2012b; Parks Victoria 2015:57-62

505 Parks Victoria 2015:92-93; GMTOAC 2015:59, 63; Winda-Mara Aboriginal Corporation 2015:23-24

506 Parks Victoria 2015:92-93

507 GMTOAC 2015:59

508 Guditjmara 2010



5.24 Tyson Lovett-Murray holding kooyang (eel) trap

The current and established programs for the presentation of the **Budj Bim Cultural Landscape** include:

- The Budj Bim Tours enterprise operated by Winda-Mara Aboriginal Corporation (Parts 4.B[iv] and 5.H), including specialist tours for corporate bodies and school and university groups
- The Budj Bim Commercial Tours Program for licenced tour operators that cater to guided tourist groups (Part 5.H)
- Self-guided visitor walks along established interpretive trails at Tyrendarra Visitor Experience Area and Budj Bim National Park (Part 5.H)
- Participation of international visitors in the International Student Volunteers Program which enables students to work with the Budj Bim Rangers on re-vegetation and cultural heritage management projects<sup>509</sup>
- The Gunditjmara Yarns on Farms program established to develop relationships with local farmers concerning land management techniques and to communicate the heritage values of the **Budj Bim Cultural Landscape**
- An archaeological research program undertaken by Monash University that promotes the cultural and archaeological values of the nominated area to the scientific community
- One-off events programs that have resulted in, for example, two major sculptural installations (Part 2.B).

509 Winda-Mara Aboriginal Corporation. 'Revegetation work that occurs at the Tyrendarra Indigenous Protected Area', <https://www.windamara.com.au>

## 5.J STAFFING LEVELS AND EXPERTISE

A range of professional, technical, operational, customer service and administration staff, who are a mixture of government employees and those employed by the Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC) and Winda-Mara Aboriginal Corporation, manage and care for the **Budj Bim Cultural Landscape**. Most staff are employed locally (either on a permanent basis or on temporary contracts), although a number of specialist support staff are based in Melbourne, Victoria's capital city.

Table 5.7 summarises the staffing levels for the **Budj Bim Cultural Landscape** as at November 2017. The calculation for staffing levels take into account the following considerations:

- Professional staff are employed by the Australian Government in Canberra, Australian Capital Territory, to provide technical/legal advice concerning the protection of the listed values for Australian National and World Heritage-listed properties. Tasks are undertaken by a number of staff when and as required.
- Three Victorian Government departments employ staff that support the governance and management of the **Budj Bim Cultural Landscape**. No single staff member is dedicated

to the nominated property in any of the agencies, but rather provide support and advice as required.

- Parks Victoria*. Six staff based at the Portland Office contribute time to Budj Bim National Park. Five are rangers (with one being a Gunditjmara Traditional Owner) and one a Planning Officer. The staff contribution is estimated as equivalent to one full-time Ranger (allowing for the employment of contractors) and 0.5 full-time equivalent for a Planning Officer.
  - Aboriginal Victoria*. The Heritage Services Unit of Aboriginal Victoria employs 38 staff at its central office in Melbourne and a further nine staff are located in regional offices; three of which are based in Ballarat and service the region that includes the nominated property. The staff contribution is estimated as equivalent to one professional staff member.
  - The Department of Environment, Land Water and Planning (DELWP)*. Employs staff locally that are responsible for management advice concerning flora and fauna values, threatening processes, fire management and water catchment protection.
- The Budj Bim Ranger program, which is managed through Winda-Mara Aboriginal Corporation, employs 11 full-time Budj Bim Rangers and two part-time Gunditjmara Elders (one full-time equivalent) who are mentors to the Budj Bim Rangers. The Budj Bim Rangers work across the Budj Bim and Tyrendarra Indigenous Protected Areas.
  - The GMTOAC employs the equivalent of 1.5 full time officers on projects related to the Budj Bim Indigenous Protected Area.

	NUMBER OF STAFF IN OCCUPATIONAL CATEGORY				TOTAL NUMBER OF STAFF
	OPERATIONS (RANGERS)	PROFESSIONAL AND TECHNICAL	CUSTOMER SERVICE	ADMINISTRATION	
Australian Government		As required			
Victorian Government					
Parks Victoria	1	0.5		As required	1.5
Aboriginal Victoria		1		As required	1
DELWP*		As required			
GMTOAC**		1.5		As required	2.5
Winda-Mara Aboriginal Corporation	11	1	1	1	14

\* Department of Environment, Land, Water and Planning \*\* Gunditj Mirring Traditional Owners Aboriginal Corporation

TABLE 5.7 Budj Bim Cultural Landscape: Staffing levels and occupational categories (November 2017)



**PART 6**

**MONITORING**

# PART 6

## MONITORING

A number of different land tenures and protective designations cover the **Budj Bim Cultural Landscape** (Part 5.B). The nominated area is managed and protected under a comprehensive system comprising Gunditjmara customary knowledge and practices in conjunction with Australian and Victorian Government legislation and management plans that implement an adaptive management approach (Part 5.E). Research and monitoring are essential components of adaptive management, providing objective evidence to support decision-making. The **Budj Bim Cultural Landscape** has an evaluation and monitoring regime in place to measure the effectiveness of management programs and monitor issues, threats and pressures relating to cultural heritage, geoheritage, water flow and quality, native flora and fauna (including kooyang (eel)), pest plants and animals, wildfire effects, visitor experience areas and assets.

The 2015 *Ngootoyong Gunditj Ngootoyong Mara South West Management Plan* provides an over-arching regional approach to monitoring and research that applies to all parts of the **Budj Bim Cultural Landscape**.<sup>510</sup> The *Budj Bim IPA Plan of Management 2015-2019* and the *Tyrendarra IPA Management Action Plan 2015-2018* establish monitoring and evaluation approaches for their respective land parcels.<sup>511</sup> While the approaches across the three property management plans are compatible, in the event that the **Budj Bim Cultural Landscape** is inscribed on the World Heritage List, a *Budj Bim Cultural Landscape World Heritage Strategic Management Framework* will be adopted to enhance the coordinated and property-wide approach to monitoring.

### 6.A KEY INDICATORS FOR MEASURING STATE OF CONSERVATION

Table 6.1 identifies key indicators to measure the state of conservation of the whole nominated property. The indicators, which relate to the attributes that carry Outstanding Universal Value, provide a basis for reporting on trends over time against the development, environmental, natural disaster and visitor/tourism pressures identified in Part 4 (Table 4.1). The key indicators reflect priorities for research, evaluation and monitoring, and contribute to the Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC), Parks Victoria and Winda-Mara Aboriginal Corporation Adaptive Management Framework for the **Budj Bim Cultural Landscape**.<sup>512</sup> In the event that the nominated property is inscribed on the World Heritage List; the indicators, as well as related measures, will be incorporated into the *Budj Bim Cultural Landscape World Heritage Strategic Management Framework*.

The extent of previous monitoring within the **Budj Bim Cultural Landscape** varies according to land ownership. For Budj Bim (formerly Mount Eccles) National Park (established 1960), three monitoring and evaluation cycles have been undertaken through the Parks Victoria *State of the Parks* program – in 2000, 2007 and 2013.<sup>513</sup> For the more recently established Indigenous Protected Areas of Tyrendarra (established 2003) and Budj Bim (established 2017), monitoring and evaluation processes have been designed and reporting is being implemented.<sup>514</sup> Condition assessments of the aquaculture features have been undertaken as part of archaeological survey projects since the 1970s.<sup>515</sup> These assessments – in the form of photographs, drawings and descriptions of cultural heritage features, and current inspection schedules, provide data to determine the current ('good') condition and enable longitudinal studies of the state of conservation of aquaculture structures and complexes and, ultimately, the **Budj Bim Cultural Landscape** aquaculture system as a whole.

510 Parks Victoria 2015:Chapter 7

511 GMTOAC 2015:66-68; Winda-Mara Aboriginal Corporation 2015:32-34

512 Parks Victoria 2015:99-101; GMTOAC 2015:66-68; Winda-Mara Aboriginal Corporation 2015:25. For previous policies relating to monitoring, see Context 1993, 2000, 2008:97-98.

513 Parks Victoria. 'State of the Parks', <http://park-web.vic.gov.au/park-management/environment/research-and-scientific-management/state-of-the-parks>

514 GMTOAC 2015; Winda-Mara Aboriginal Corporation 2015

515 For example, see Coutts 1977; Geering 1985; Clarke 1991

KEY INDICATORS (RELATED TO PRESSURES IDENTIFIED IN PART 4.A, TABLE 4.1)	PERIODICITY (TIMEFRAMES)	LOCATION OF RECORDS
<b>Cultural heritage</b> <ul style="list-style-type: none"> <li>Continuation of documentation of Gunditjmara knowledge and practices by the Gunditjmara.</li> <li>No significant decline in the condition and function of the aquaculture features (channels, weirs, dams and ponds) at the Tae Rak, Kurtonitj and Tyrendarra complexes.</li> <li>Decrease in number of existing trees impacting on channel features.</li> <li>Decrease in the number of new trees establishing in channel features.</li> <li>Increase in area surveyed for cultural sites.</li> <li>Increase in information on condition of cultural heritage sites added to information systems.</li> </ul>	1-5 years	Cultural Information Management System (GMTOAC*, Heywood)  Victorian Aboriginal Heritage Register (Aboriginal Victoria, Melbourne)
<b>Climate change</b> <ul style="list-style-type: none"> <li>Increase in research on climate change impacts and appropriate adaptation measures.</li> </ul>	5 years	Cultural Information Management System (GMTOAC, Heywood)
<b>Water</b> <ul style="list-style-type: none"> <li>Water flows are within the range that enables sustainable functioning of the Gunditjmara aquaculture system.</li> <li>No decrease in water quality.</li> </ul>	5 years	State of the Parks (Parks Victoria, Portland)
<b>Native flora</b> <ul style="list-style-type: none"> <li>Increase in health of recorded Ecological Vegetation Classes as measured by the Habitat Hectare method.<sup>516</sup></li> <li>Increase in area and availability of culturally significant native species, such as puunyaart grass.</li> </ul>	5 years	
<b>Pest plants</b> <ul style="list-style-type: none"> <li>Pest plants controlled in line with Victorian Government requirements and targets.<sup>517</sup></li> <li>Decrease in pest plant species in riparian areas.</li> </ul>	5 years	
<b>Native fauna</b> <ul style="list-style-type: none"> <li>Maintain or increase diversity of known native fauna populations as measured by presence and numbers.<sup>518</sup></li> <li>Maintain sustainable levels of kooyang (eel) population for use by the Gunditjmara for cultural purposes.</li> </ul>	5 years	
<b>Pest animals</b> <ul style="list-style-type: none"> <li>Numbers of pest animals kept below key Victorian Government targets for the region and land type.<sup>519</sup></li> <li>Decrease in impacts of cattle grazing on aquaculture features.</li> <li>No increase in European Carp, Mosquito Fish or other introduced fish species.</li> </ul>	5 years	
<b>Wildfire</b> <ul style="list-style-type: none"> <li>Increase in the area subject to cultural burning practices until a balanced fire management regime is achieved.</li> <li>Decrease in frequency of wildfire.</li> <li>Increase in recognition of the location and significance of cultural heritage features amongst fire management and control personnel.</li> </ul>	5 years	
<b>Tourism</b> <ul style="list-style-type: none"> <li>Maintain sustainable carrying capacities for each Visitor Experience Area.</li> </ul>	5 years	

\* Gunditj Mirring Traditional Owners Aboriginal Corporation

**TABLE 6.1 Budj Bim Cultural Landscape: Key indicators for measuring the state of conservation of threats/pressures**

516 GMTOAC 2015:36

517 GMTOAC 2015:36

518 GMTOAC 2015:36

519 GMTOAC 2015:36

## 6.B ADMINISTRATIVE ARRANGEMENTS FOR MONITORING PROPERTY

All components of the **Budj Bim Cultural Landscape** have well established administrative arrangements for monitoring in place. The name and contact information of the agencies responsible for the monitoring are detailed in Table 6.2.

MONITORING AGENCY AND CONTACT DETAILS	BUDJ BIM NATIONAL PARK	BUDJ BIM IPA*	LAKE CONDAH MISSION	TYRENDARRA IPA
<b>Budj Bim Cultural Landscape World Heritage Steering Committee</b>	When established, the Steering Committee will coordinate monitoring activities across the separate organisations (listed below).			
<b>Department of the Environment and Energy</b> GPO Box 787 Canberra ACT 2600 Tel: +61 2 6274 1111	Budj Bim National Heritage Landscape <i>Environment Protection and Biodiversity Conservation Act 1999</i> requires that any significant damage or threat to National Heritage values of listed places must be reported at least once in every 5-year period (EPBC Act, Section 324ZC)			
<b>Parks Victoria</b> Portland Office 8-12 Julia Street Portland VIC 3305 Tel: +61 3 8427 2002	✓			
<b>Department of Environment, Land, Water and Planning</b> Barwon South West Office 30-38 Little Malop Street, Geelong VIC 3220 Tel: +61 3 5226 4667	✓			
<b>Glenelg Hopkins Catchment Management Authority</b> PO Box 502 Hamilton VIC 3300 Tel: +61 3 5571 2526	✓			
<b>Gunditj Mirring Traditional Owners Aboriginal Corporation</b> 4/48 Edgar Street Heywood VIC 3304 Ph: +61 3 5527 1427	✓	✓	✓	
<b>Winda-Mara Aboriginal Corporation</b> 21 Scott Street Heywood VIC 3304 Ph: +61 3 5527 0000				✓

\*Indigenous Protected Area

TABLE 6.2 Budj Bim Cultural Landscape: Administrative arrangements for monitoring property

## 6.C RESULTS OF PREVIOUS REPORTING EXERCISES

The results of previous reporting exercises are outlined below. They are presented in a form that correlates with the outstanding attributes of the **Budj Bim Cultural Landscape** – Gunditjmara cultural traditions, knowledge and practices; the physical evidence of Gunditjmara aquaculture in the landscape; and the interconnected geological, hydrological and ecological systems (Part 3.1.A).

A number of monitoring reports have been prepared that cover areas included within the **Budj Bim Cultural Landscape**. Reports are prepared for places on Australia's National Heritage List. The 2016 Australian National Heritage List Monitoring Report for the Budj Bim National Heritage Landscape states that the condition of the values is improved since listing in 2004, but the risks to listed values are very high for the ability of the integrity to recover from inappropriate fire regimes; and pressures on the values are high for climate change, altered fire regimes, wildfire and pest species.

The Gunditj Mirring Traditional Owners Aboriginal Corporation (GMTOAC) and Winda-Mara Aboriginal Corporation prepare annual reports for the Australian Government with regard to the Indigenous Protected Areas and Working on Country programs. These reports provide descriptive information against a range of management areas including: cultural heritage management, Indigenous knowledge transfer, native flora and fauna management, pest plant and animal management, soil management, freshwater management, fire management, information management, visitor management, community education and development and staff training and development.

### GUNDITJMARA CULTURAL TRADITIONS, KNOWLEDGE AND PRACTICES

Gunditjmara cultural traditions, knowledge and practices are not subject to formal processes of monitoring or reporting of their state of conservation. Nevertheless, the vitality and ingenuity of contemporary knowledge and practices are evidenced:

- increased Gunditjmara access to the aquaculture systems through property ownership by GMTOAC and the Winda-Mara Aboriginal Corporation (Part 5.A)
- increased documentation, management (including monitoring) and presentation of the aquaculture system by the Budj Bim Rangers program and Budj Bim Tours
- increased learning and skill-sharing associated with the sourcing of natural fibres and weaving of gnarraban (kooyang (eel) baskets)
- increased contemporary creative artistic expressions of Gunditjmara aquaculture, evidenced in story-telling, dance, crafted objects and sculpture

- increased research on the effects of improved water flows associated with the construction of the cultural weir on Tae Rak (Lake Condah) in 2010<sup>520</sup>
- development of management tools, such as the Gunditjmara Traditional Owners' Ecological Tool Kit (for managing threatening processes across the **Budj Bim Cultural Landscape**)<sup>521</sup> and the Gunditjmara Traditional Owner Cultural Information Management System (for archiving and managing information such as oral histories, historical documents and site records).

### PHYSICAL EVIDENCE OF GUNDITJMARA AQUACULTURE IN THE LANDSCAPE

#### *Tae Rak (Lake Condah) aquaculture complexes*

The state of conservation of the physical evidence of Gunditjmara aquaculture (channels, dams, weirs and ponds) was initially undertaken at the time of the first archaeological field surveys to document the features in the late 1970s and 1980s.<sup>522</sup> In 1990, archaeologist Anne Clarke revisited many of the previously recorded sites in the Tae Rak and Allambie areas and documented a number of new sites.<sup>523</sup> Clarke's resource inventory study provided basic condition assessments (good, fair, poor) for 88 aquaculture features (as well as 129 stone circles and 7 stone artefact scatters)<sup>524</sup> and provided baseline data against which future assessments could be compared.

Archaeological surveys and investigations undertaken by Aboriginal Victoria (2004) and Monash University (since 2006), while focussed on particular elements of the Tae Rak aquaculture complexes, also documented the condition of selected aquaculture features.<sup>525</sup> In 2011, archaeologists Sharon Lane and Alyssa Gilchrist carried out an audit of cultural heritage sites on the Allambie, Vaughans and Muldoons properties (prior to their transfer from the Victorian Government to the GMTOAC).<sup>526</sup> The most recent assessment of the state of conservation of aquaculture features in the Tae Rak area was undertaken as part of the *Tree Management Cultural Heritage Management Plan*.<sup>527</sup> While this survey focussed on the condition of 122 trees growing within or beside aquaculture features; it did so in the context of the existing and potential future impacts on the condition of the features.<sup>528</sup>

520 GMTOAC 2015:41-44

521 Parks Victoria 2015:30

522 Coutts 1982; Coutts et al. 1977, 1978; Geering 1985; Wesson 1981; summarised in Context 2013a:18-20

523 Clarke 1991:45-46; summarised in Context 1993:77-91

524 Clarke 1991:Appendix 2

525 Richards 2011; McNiven and Bell 2010; McNiven et al. 2012

526 Lane and Gilchrist 2011. These land parcels have now been incorporated into the Budj Bim Indigenous Protected Area.

527 Context 2013b

528 Context 2013b:21



These reports and the Budj Bim Rangers routine inspections of the Tae Rak aquaculture features, boundary fences and visitor and other infrastructure facilities provide a baseline for current and future monitoring of the condition and state of conservation of the aquaculture features.

### **Kurtonitj aquaculture complex**

The Kurtonitj aquaculture system, extending over an area of 300 metres by 150 metres (Part 2.A), was documented and investigated by archaeologist Heather Builth. Builth's work provided baseline data on the condition and state of conservation of the weirs, dam and channels.<sup>529</sup> These reports and the Budj Bim Rangers annual inspections of the Kurtonitj aquaculture complex provide a baseline for current and future monitoring of the condition and state of conservation of the aquaculture features.

### **Tyrendarra aquaculture complex**

The Tyrendarra aquaculture complex is a 1.4 kilometre by 0.3 kilometre area of lava flow featuring an inter-connected complex of 18 dams/weirs, seven excavated channels and numerous swampy depressions associated with trapping and holding kooyang (Part 2.A).<sup>530</sup> Initially documented in 1990 and 1996,<sup>531</sup> the complex was subsequently the subject of intensive study by Builth in the mid-to late-1990s. Lane undertook a further cultural heritage assessment of the property in 2001.<sup>532</sup> These reports, and the documentation associated with the site records, provide a baseline for the future monitoring of the condition and state of conservation of the aquaculture features. These reports, the documentation associated with the site records, and the Budj Bim Rangers annual inspections of the aquaculture features provide a baseline for the current and future monitoring of the condition and state of conservation of the aquaculture features.

## **INTERCONNECTED GEOLOGICAL, HYDROLOGICAL AND ECOLOGICAL SYSTEMS**

The state of conservation of the environment – and in particular of the Budj Bim lava flow, Tae Rak/Killara catchment and ecological health of the **Budj Bim Cultural Landscape** (including kooyang habitat) is documented in a number of reports and is the subject of ongoing monitoring by Parks Victoria, GMTOAC and Winda-Mara Aboriginal Corporation.

### **State of the Parks**

Parks Victoria evaluates the effectiveness of park management activities in protected areas across Victoria through the State of the Parks program. The purpose of State of the Parks reporting is to: (1) undertake a systematic evaluation

of the outcomes of management programs and the extent to which park management objectives are being met; (2) review achievements, highlight current challenges and identify emerging issues; and (3) inform and adapt management programs following each review.

The process for State of the Parks is based around best-practice adopted by the International Union for the Conservation of Nature World Commission on Protected Areas, and is consistent with the Australian Government's National Reserve System guidelines for the states and territories.<sup>533</sup> State of the Parks assesses all park management output areas – environment, land and water; culture and heritage; visitors and community; fire and emergency management, and a sustainable organisation. State of the Parks surveys were undertaken in 2000, 2007 and 2013. Parks Victoria holds the data collected for each reporting period. State of the Parks data provide a baseline of information against which each protected area in Victoria is compared and evaluated.

### **Management Plans**

The three key management plans for the **Budj Bim Cultural Landscape** outline strategies for monitoring the environment of the nominated property and establish research and monitoring programs.<sup>534</sup>

### **Baseline studies**

The environmental attributes of the **Budj Bim Cultural Landscape** have been identified and assessed for state of conservation through a number of research studies.

### **Geological system**

Geologists Ken Grimes and Neville Rosengren, in *The Geology and Landforms of Budj Bim, Western Victoria*,<sup>535</sup> describe the geological history of an area that includes the **Budj Bim Cultural Landscape**. They conclude that the Budj Bim lava flow is well preserved, though “the smaller surface details have been modified by 36,000 years of weathering and disruption by tree roots” and “some features have been damaged or destroyed by quarrying and agricultural activities.” Despite these changes, the Budj Bim lava flow provides the physical and hydrological basis for the wetlands and is a source of the materials (loose basalt rocks) for Gunditjmara aquaculture engineering and construction.<sup>536</sup>

529 Builth 2002:262, 264; 2004:172

530 Builth 2002:225-258; 2004:174-175

531 Schell 1996; Van Waarden 1990

532 Lane 2001

533 Parks Victoria. 'State of the Parks', <http://park-web.vic.gov.au/park-management/environment/research-and-scientific-management/state-of-the-parks>

534 Parks Victoria 2015:99-101; GMTOAC 2015:66-68; Winda-Mara Aboriginal Corporation 2015:25

535 Grimes and Rosengren 2013

536 Grimes and Rosengren 2013:96

### *Hydrological system*

A number of detailed studies of the Tae Rak-Killara catchment water flow were undertaken in advance of the reconstruction of the cultural weir on Tae Rak (Lake Condah) in 2010 (Part 2.B).<sup>537</sup> The Tae Rak restoration brought the lake back to three quarters of its former (pre-drainage) surface area. Within a short time, water-based plants and animals, particularly water-birds, began returning in increasing numbers to Tae Rak. Once water was retained in Tae Rak, the birds began breeding and species diversity has rapidly increased; including of culturally significant species such as Brolga, Sea Eagle and Wedge-tailed Eagle. The results of annual biodiversity monitoring conducted by members of the Portland Field Naturalists Club and Budj Bim Rangers have confirmed the ecological values of the restoration.

### *Ecological system - vegetation*

Two reports on the vegetation of the **Budj Bim Cultural Landscape** and its setting have been undertaken by Ecology Australia – in 1991 and 2006-2007.<sup>538</sup> Despite the number and coverage of invasive pest plant species, the moderately to highly intact native vegetation of the Eccles Land System has been assessed to be of National conservation significance.<sup>539</sup> The reports conclude that the condition of vegetation within the nominated property is variable (Part 2.A). The dryland vegetation is vulnerable to pest plant species, introduced animal species and cattle grazing, but the condition of the wetland vegetation is good. This has especially been the case with increased water retention and flow following the Gunditjmaras restoration of Tae Rak in 2010; and higher-than-average rainfall in subsequent and recent years.

### *Ecological system - kooyang (Short-finned eel)*

Ecologist Lachlan McKinnon, in *Short-finned Eel Harvest Capacity of the Budj Bim Landscape*,<sup>540</sup> states that the **Budj Bim Cultural Landscape** is a major stronghold for the kooyang short-finned eel - (*Anguilla australis*) in southern Australia.<sup>541</sup> Killara and its associated wetlands – including those at Tae Rak, Kurtonitj and Tyrendarra, form an interconnected network of habitat that provides conditions suitable for kooyang. This is because these areas offer continuity of habitat and water of sufficient quality to attract and support kooyang populations.<sup>542</sup> Furthermore, kooyang habitat has been substantially rejuvenated and extended with the Gunditjmaras restoration of Tae Rak and its associated wetland environments. The construction of the cultural weir in 2010 was a major achievement in habitat restoration (Part 2.A).

The refilling of Lake Condah via installation of a weir and fishway has brought back to life the seed banks of aquatic plants and many waterbirds now use the lake as a breeding ground. After the weir was installed, the lake was quickly colonised by eels and other fish. Lake Condah is once again functioning as a productive wetland and provides an outstanding example of what can be achieved via ecologically sensitive restoration of habitat.

537 For example, Context 2008; Gippel et al. 2006

538 Carr et al. 2006; Context 1993:41-69, 340-371; Ecology Australia 2007

539 Ecology Australia 2007:56

540 McKinnon 2007

541 McKinnon 2002

542 Crook 2013:88



**PART 7**

**DOCUMENTATION**

# PART 7

## DOCUMENTATION

### 7.A PHOTOGRAPHS AND AUDIO-VISUAL IMAGE INVENTORY AND AUTHORISATION FORM

**TABLE 7.1 Budj Bim Cultural Landscape:** Photographs and audio-visual image inventory and authorisation form

ID. No.	Format	Caption	Date of Photo (Mo/Yr)	Photographer	Copyright Owner	Contact Details of Copyright Owner (Name, Address, Telephone, Email)	Non Exclusive Cession of Rights
Cover page (1)	Photograph	Top of page – no caption (drone landscape image)	Nov. 2017	Tyson Lovett-Murray	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
Cover page (2)	Photograph	Centre page – no caption (Jennie Green weaving; as photograph 2.56)	circa 1865	Unknown	Out of copyright	Not applicable  Held in the collection of the State Library of Victoria	Yes
Cover page (3)	Photograph	Centre page – no caption (kooyang [eel] basket by Aunty Connie Hart)	2009	Graham Baring	Koorie Heritage Trust	c/- Koorie Heritage Trust Levels 1 and 3, The Yarra Building Federation Square Cnr Swanston and Flinders Streets Melbourne VIC 3000 Tel: +61 3 8662 6300	Yes
Cover page (4)	Drawing	Centre page – no caption (Crater of Budj Bim [Mount Eccles] volcano; same as drawing 2.19)	1858	Eugene von Guerard	Out of copyright	Not applicable  Held in the collection of the National Gallery of Victoria	Yes
Cover page (5)	Illustration	Centre page – no caption (possum skin cloak design)	2002	Unknown	Museums Victoria	Museums Victoria PO Box 666 Melbourne VIC 3001 Tel: +61 3 9392 4800 Email: ICenquiries@museum.vic.gov.au	Yes
Title page	Photograph	No caption (Possum skin cloak, Lake Condah 1872; as photograph 2.53)	2009	Rodney Start	Museums Victoria	Museums Victoria PO Box 666 Melbourne VIC 3001 Tel: +61 3 9392 4800 Email: ICenquiries@museum.vic.gov.au	Yes
Page ix	Photograph	No caption (drone landscape image)	Nov. 2017	Tyson Lovett-Murray	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
Part 1; front	Photograph	No caption (Aquaculture channel and pond)	Nov. 2017	Tyson Lovett-Murray	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
Part 2A; front	Photograph	No caption (Brolgas nesting on Tae Rak [Lake Condah])	Jul. 2016	Vin Cannon	Winda-Mara Aboriginal Corporation	Winda-Mara Aboriginal Corporation 21 Scott Street Heywood Victoria 3304 Tel: +61 3 5527 0000	Yes

ID. No.	Format	Caption	Date of Photo (Mo/Yr)	Photographer	Copyright Owner	Contact Details of Copyright Owner (Name, Address, Telephone, Email)	Non Exclusive Cession of Rights
2.1	Illustration	Extent of Gundijmara Country	Nov. 2017	The Designery	Aboriginal Victoria	Aboriginal Victoria Level 31 Treasury Place Melbourne VIC 3000 Tel: 03 8392 5388	Yes
2.2	Photograph	Woorrowarook Mirring or Forest Country	Jan. 2011	Parks Victoria	-	Parks Victoria Level 10, 535 Bourke Street Melbourne VIC 3000	Yes
2.3	Photograph	Bocara Woorrowarook Mirring or River Forest Country	Jan. 2010	Parks Victoria	-	Parks Victoria Level 10, 535 Bourke Street Melbourne VIC 3000	Yes
2.4	Photograph	Koonang Mirring or Sea Country	Feb. 2012	Peter Hill	Parks Victoria	Parks Victoria Level 10, 535 Bourke Street Melbourne VIC 3000	Yes
2.5	Photograph	Tungatt Mirring or Stone Country	Nov. 2009	Mike Cusack	Parks Victoria	Parks Victoria Level 10, 535 Bourke Street Melbourne VIC 3000	Yes
2.6	Photograph	Tae Rak (Lake Condah): Muldoons Trap Complex with archaeological excavation trench across a channel	Apr. 2008	Ian McNiven	-	c/- Monash University Monash Indigenous Studies Centre Clayton Campus VIC 3800 Email: Ian.McNiven@monash.edu	Yes
2.7	Illustration	Tae Rak (Lake Condah): Large 180 metre long stone walled channel	1978	Peter Coutts	Aboriginal Victoria	Aboriginal Victoria Level 3, 1 Treasury Place Melbourne VIC 3000 Tel: +61 3 8392 5388	Yes
2.8	Photograph	Tae Rak (Lake Condah): Kooyang weir	1990	Ian McNiven	-	c/- Monash University Monash Indigenous Studies Centre Clayton Campus VIC 3800 Email: Ian.McNiven@monash.edu	Yes
2.9	Photograph	Tae Rak (Lake Condah): Kooyang weir	1990	Ian McNiven	-	c/- Monash University Monash Indigenous Studies Centre Clayton Campus VIC 3800 Email: Ian.McNiven@monash.edu	Yes
2.10	Illustration	Tae Rak (Lake Condah): Stone walled fishing weir	1978	Peter Coutts	Aboriginal Victoria	Aboriginal Victoria Level 3, 1 Treasury Place Melbourne VIC 3000 Tel: +61 3 8392 5388	Yes
2.11	Photograph	Tae Rak (Lake Condah): Muldoons Trap Complex with archaeological excavation of a dam	Feb. 2006	Ian McNiven	-	c/- Monash University Monash Indigenous Studies Centre Clayton Campus VIC 3800 Email: Ian.McNiven@monash.edu	Yes
2.12	Illustration	Tae Rak 2 aquaculture complex: Sketch plan showing water flow and aquaculture features	Nov. 2017	The Designery	Aboriginal Victoria	Aboriginal Victoria Level 3, 1 Treasury Place Melbourne VIC 3000 Tel: +61 3 8392 5388	Yes

ID. No.	Format	Caption	Date of Photo (Mo/Yr)	Photographer	Copyright Owner	Contact Details of Copyright Owner (Name, Address, Telephone, Email)	Non Exclusive Cession of Rights
2.13	Illustration	Tae Rak (Lake Condah): Muldoons Trap Complex	2006	Tom Richards	-	c/- Monash University Monash Indigenous Studies Centre Clayton Campus VIC 3800 Email: Thomas.Richards@monash.edu	Yes
2.14	Photograph	Tae Rak (Lake Condah): Excavating a section of channel, Muldoons Trap Complex	Feb. 2008	Bruno David	-	c/- Monash University Monash Indigenous Studies Centre Clayton Campus VIC 3800 Email: Ian.McNiven@monash.edu	Yes
2.15	Illustration	Kurtonitj (central) component: Kurtonitj aquaculture complex	Apr. 2002	Heather Buihth	-	PO Box 85 Upper Sturt SA 5156 Email: hbuihth@bigpond.com	Yes
2.16	Illustration	Tyrendarra (southern) component: Tyrendarra aquaculture complex (winter)	Apr. 2002	Heather Buihth	-	PO Box 85 Upper Sturt SA 5156 Email: hbuihth@bigpond.com	Yes
2.17	Illustration	Tyrendarra (southern) component: Tyrendarra aquaculture complex (summer)	Apr. 2002	Heather Buihth	-	PO Box 85 Upper Sturt SA 5156 Email: hbuihth@bigpond.com	Yes
2.18	Photograph	The crater of Budj Bim volcano today has a crater lake, Lake Surprise	Jan. 2012	Parks Victoria	-	Parks Victoria Level 10, 535 Bourke Street Melbourne VIC 3000	Yes
2.19	Drawing	Crater of Budj Bim volcano as drawn by Eugène von Guérard in 1858	1858	Eugene von Guerard	Out of copyright	Not applicable Held in the collection of the National Gallery of Victoria	Yes
2.20	Photograph	Aerial view showing wetlands and lava flow outcrops	Nov. 2017	Tyson Lovett-Murray	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
2.21	Photograph	The dramatic evidence of the Budj Bim lava flow, cloaked by Manna Gum woodland	Aug. 2015	Tyson Lovett-Murray	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
2.22	Photograph	"The healing of Lake Condah within a generation is our vision for the future..."	Nov. 2017	Tyson Lovett-Murray	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
2.23	Photograph	Tyson Lovett-Murray holding a large kooyang (eel)	Jan. 2015	Justin McManus	Fairfax Media Ltd	Fairfax Media Ltd Head Office, GPO 506 Sydney NSW 2001 Tel: +61 2 9282 2833	Yes

ID. No.	Format	Caption	Date of Photo (Mo/Yr)	Photographer	Copyright Owner	Contact Details of Copyright Owner (Name, Address, Telephone, Email)	Non Exclusive Cession of Rights
2.24	Illustration	From egg to maturity, <i>A. australis</i> goes through five stages in its lifecycle	Nov. 2017	The Designery, after Cib Wettenhall 2010	Aboriginal Victoria	Aboriginal Victoria Level 3, 1 Treasury Place Melbourne VIC 3000 Tel: +61 3 8392 5388	Yes
2.25	Photograph	Richard Bamblett at Tae Rak (Lake Condah) using a traditional spear and puunyaart reed basket to capture kooyang	Unknown	Damein Bell	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
2.26	Photograph	Budj Bim (northern) component: High quality Stony Rises Woodland with Manna Gum ...	Nov. 2006	Geoff Carr	Ecology Australia	Ecology Australia 88B Station Street Fairfield VIC 3078 Tel: +61 3 9489 4191 Email: admin@ecologyaustralia.com.au	Yes
2.27	Photograph	Kurtonitj (central) component: Extensive wetland on the southern boundary...	Nov. 2006	Geoff Carr	Ecology Australia	Ecology Australia 88B Station Street Fairfield VIC 3078 Tel: +61 3 9489 4191 Email: admin@ecologyaustralia.com.au	Yes
2.28	Photograph	Tyrendarra (southern) component: The 14 hectare wetland is one of the largest and most significant in the Budj Bim lava flow...	Nov. 2006	Geoff Carr	Ecology Australia	Ecology Australia 88B Station Street Fairfield VIC 3078 Tel: +61 3 9489 4191 Email: admin@ecologyaustralia.com.au	Yes
2.29	Photograph	Tyrendarra (southern) component: The near-to-dry bed of Palawarra (Fitzroy River)...	Nov. 2006	Geoff Carr	Ecology Australia	Ecology Australia 88B Station Street Fairfield VIC 3078 Tel: +61 3 9489 4191 Email: admin@ecologyaustralia.com.au	Yes
2.30	Photograph	The tubers of all three local forms of Water Ribbons ( <i>Triglochin procera</i> (2 forms) and <i>T. alcockiae</i> ) can be eaten raw or roasted	Dec. 2006	Geoff Carr	Ecology Australia	Ecology Australia 88B Station Street Fairfield VIC 3078 Tel: +61 3 9489 4191 Email: admin@ecologyaustralia.com.au	Yes
2.31	Photograph	Collecting rushes and grass to make baskets	2008	Gib Wettenhall	-	Gib Wettenhall, em PRESS Publishing 133 McPhans Rd Mollongghip VIC 3352 Email: gib@vic.chariot.net.au	Yes
2.32	Photograph	South-eastern Red-tailed Black Cockatoo: A totemic (moiety) species for Gunditjmara	Oct. 2008	Bob McPherson	-	Bob McPherson 25 Bennett Street, Portland VIC 3305. Tel: +61 3 5523 4779 Email: bobm@iconnect.net.au	Yes
Page 29	Photograph	No caption (cockatoo)	Unknown		Open source image	Not applicable	Yes
Part 2B; front	Photograph	No caption (kooyang [eel basket] from Lake Condah, circa 1910)	Unknown	South Australian Museum	-	South Australian Museum North Terrace Adelaide SA 5000 Tel: +61 8 8207 7500 Email: Archives@samuseum.sa.gov.au	Yes

ID. No.	Format	Caption	Date of Photo (Mo/Yr)	Photographer	Copyright Owner	Contact Details of Copyright Owner (Name, Address, Telephone, Email)	Non Exclusive Cession of Rights
2.33	Photograph	Muldoons Fish Trap: Excavation, 2008	Feb. 2008	Ian McNiven	-	c/- Monash University Monash Indigenous Studies Centre Clayton Campus VIC 3800 Email: Ian.McNiven@monash.edu	Yes
2.34	Photograph	Budj Bim (northern) component: Stone house after archaeological test excavation...	Feb. 2006	Ian McNiven	-	c/- Monash University Monash Indigenous Studies Centre Clayton Campus VIC 3800 Email: Ian.McNiven@monash.edu	Yes
2.35	Digital recreation	Budj Bim (northern) component: Digital reconstruction of archaeological remains of stone houses	2013	First Footprints Productions	Flame	Flame Unit 2, 65 Whiting Street Artarmon NSW 2064 Tel: +61 2 8065 4899	Yes
2.36	Photograph	Kurtonitj (central) component: Stone house prior to archaeological excavation...	Oct. 2011	Ian McNiven	-	c/- Monash University Monash Indigenous Studies Centre Clayton Campus VIC 3800 Email: Ian.McNiven@monash.edu	Yes
2.37	Photograph	Kurtonitj (central) component: Stone house after completion of archaeological excavation	Mar. 2013	Ian McNiven	-	c/- Monash University Monash Indigenous Studies Centre Clayton Campus VIC 3800 Email: Ian.McNiven@monash.edu	Yes
2.38	Illustration	Kurtonitj (central) component: Archaeological excavation plan for stone house	Mar. 2013	Ian McNiven	-	c/- Monash University Monash Indigenous Studies Centre Clayton Campus VIC 3800 Email: Ian.McNiven@monash.edu	Yes
2.39	Illustration	Budj Bim (northern) component: Stone house site complex...	Nov. 2017	The Designery	Aboriginal Victoria	Aboriginal Victoria Level 3, 1 Treasury Place Melbourne VIC 3000 Tel: +61 3 8392 5388	Yes
2.40	Photograph	Titled 'The last gathering of the Portland tribe'...	Late 1850s	Unknown	Out of copyright	Not applicable  Held in the collection of Museums Victoria	Yes
2.41	Photograph	Gunditjmara men dressed for a ceremony in 1859...	circa 1859	Thomas Hannay	Out of copyright	Not applicable  Held in the collection of Museums Victoria	Yes
2.42	Painting	Cold Morning and his family camped at Portland...	1847	George French Angas	South Australian Museum	South Australian Museum North Terrace Adelaide SA 5000 Tel: +61 8 8207 7500 Email: Archives@samuseum.sa.gov.au	Yes
2.43	Archival sketch	Stake and branch fishing weir, tributary of the Hopkins River	Apr. 1841	George Augustus Robinson	Mitchell Collection, State Library of New South Wales	State Library of New South Wales Macquarie Street Sydney NSW 2000 Tel: +61 2 9273 1414	Yes



ID. No.	Format	Caption	Date of Photo (Mo/Yr)	Photographer	Copyright Owner	Contact Details of Copyright Owner (Name, Address, Telephone, Email)	Non Exclusive Cession of Rights
2.44	Archival sketch	Section of a large stake, branch and basket fishing weir, Moyne River, during use...	Apr. 1841	George Augustus Robinson	Mitchell Collection, State Library of New South Wales	Aboriginal Victoria Level 3, 1 Treasury Place Melbourne VIC 3000 Tel: +61 3 8392 5388	Yes
2.45	Archival sketch	Detail of front of a large stake, branch and basket fishing weir, Moyne River	Apr. 1841	George Augustus Robinson	Mitchell Collection, State Library of New South Wales	Aboriginal Victoria Level 3, 1 Treasury Place Melbourne VIC 3000 Tel: +61 3 8392 5388	Yes
2.46	Archival sketch	Detail of back of a large stake, branch and basket fishing weir, Moyne River	Apr. 1841	George Augustus Robinson	Mitchell Collection, State Library of New South Wales	Aboriginal Victoria Level 3, 1 Treasury Place Melbourne VIC 3000 Tel: +61 3 8392 5388	Yes
2.47	Archival sketch	Eel basket (gnarraban), a series of which were used in association with a stake and branch fishing weir, Moyne River	Apr. 1841	George Augustus Robinson	Mitchell Collection, State Library of New South Wales	Aboriginal Victoria Level 3, 1 Treasury Place Melbourne VIC 3000 Tel: +61 3 8392 5388	Yes
2.48	Archival map	Plan of the Parish of Condah (c.1889) showing the additional land of 1,710 acres set aside in 1885 to safeguard Gunditjmara hunting grounds	circa 1889	Unknown	Out of copyright	Not applicable  Held in the collection of the Public Record Office of Victoria	Yes
2.49	Drawing	Budj Bim (northern) component: Lake Condah Aboriginal Mission Station, circa 1874	circa 1874	Unknown	Out of copyright	Not applicable  Held in the collection of the State Library of Victoria	Yes
2.50	Photograph	Lake Condah Mission: School (left), church (centre) and mission house (right)	Unknown	Unknown	Out of copyright	Not applicable	Yes
2.51	Photograph	Lake Condah Mission: Houses built by the Gunditjmara, circa 1914	circa 1914	Unknown	Out of copyright	Not applicable  Held in the collection of Museums Victoria	Yes
2.52	Photograph	Lake Condah Mission: St Mary's Church and the community that built it c.1914	circa 1914	Unknown	Out of copyright	Not applicable  Held in the collection of Museums Victoria	Yes
2.53	Photograph	Possum skin cloak made at Lake Condah Mission in 1872...	2009	Rodney Start	Museums Victoria	Museums Victoria PO Box 666 Melbourne VIC 3001 Tel: +61 3 9392 4800 Email: ICenquiries@museum.vic.gov.au	Yes
2.54	Photograph	Aunty Iris Lovett-Gardiner wrapped in a possum skin cloak	Unknown	Jim Berg	-	c/- Koori Heritage Trust Levels 1 and 3, The Yarra Building Federation Square Cnr Swanston and Flinders Streets Melbourne VIC 3000 Tel: +61 3 8662 6300	Yes

ID. No.	Format	Caption	Date of Photo (Mo/Yr)	Photographer	Copyright Owner	Contact Details of Copyright Owner (Name, Address, Telephone, Email)	Non Exclusive Cession of Rights
2.55	Archival map	Map of 'Lake Condah Aboriginal Fishery' produced by Alexander Ingram in 1893...	1893	Alexander Ingram	Out of copyright	Not applicable  Held in the collection of the South Australian Museum	Yes
2.56	Photograph	Jennie Green ... circa 1865...	circa 1865	Unknown	Out of copyright	Not applicable  Held in the collection of the State Library of Victoria	Yes
2.57	Photograph	A 1.5 m long eel trap made at Lake Condah in 1910	Unknown	South Australian Museum	-	South Australian Museum North Terrace Adelaide SA 5000 Tel: +61 8 8207 7500 Email: Archives@samuseum.sa.gov.au	Yes
2.58	Illustration	Locations where Gunditjmara lived following the closure of Lake Condah Mission. Daryl Rose 1988.	Nov. 2017	The Designery, after Daryl Rose 1988	Aboriginal Victoria	Aboriginal Victoria Level 31 Treasury Place Melbourne VIC 3000 Tel: +61 3 8392 5388	Yes
2.59	Photograph	Picnic at Tae Rak (Lake Condah), circa 1920	circa 1920	Unknown	Out of copyright	Not applicable  Connie Hart's personal collection	Yes
2.60	Photograph	Uncle Norman Lovett, Aunty Connie Hart and Uncle Roderick (Mookeye) Alberts with their catch of kooyang	circa 1930s	Unknown	Out of copyright	Not applicable  Connie Hart's personal collection	Yes
2.61	Photograph	Donald Alberts as a boy catching eels with a spear made from reed, circa 1950...	circa 1950	Unknown	Out of copyright	Not applicable  Connie Hart's personal collection	Yes
Page 57; full page image	Photograph	No caption ('The last gathering of the Portland tribe'; as photograph 2.40)	Late 1850s	Unknown	Out of copyright	Not applicable  Held in the collection of Museums Victoria	Yes
2.62	Photograph	Uncle Denis Rose fishing near Homerton Bridge – a location where he used to catch kooyang (eel) as a young man	Nov. 2017	Michael Bell	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
2.63	Photograph	Chicken wire kooyang (eel) net made by Ivan Couzens	2009	Graham Baring	Koorie Heritage Trust	c/- Koorie Heritage Trust Levels 1 and 3, The Yarra Building Federation Square Cnr Swanston and Flinders Streets Melbourne VIC 3000 Tel: +61 3 8662 6300	Yes

ID. No.	Format	Caption	Date of Photo (Mo/Yr)	Photographer	Copyright Owner	Contact Details of Copyright Owner (Name, Address, Telephone, Email)	Non Exclusive Cession of Rights
2.64	Photograph	Damein Bell (left) and archaeologist Ian McNiven (right) discuss progress on excavations at Muldoons Trap Complex with Monash University students	2010	Ian McNiven	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
2.65	Photograph	Uncle John King showing John Evans, right, and Rex Morgan, left, Aboriginal fish traps in central Victoria	Apr. 1985	John McKinnon	National Library of Australia	National Library of Australia Parkes Place Canberra ACT 2600 Tel: +61 02 6262 1111	Yes
2.66	Photograph	Budj Bim (northern) component: Tae Rak (Lake Condah), 1978	1978	Unknown	Aboriginal Victoria	Aboriginal Victoria Level 3, 1 Treasury Place Melbourne VIC 3000 Tel: +61 3 8392 5388	Yes
2.67	Photograph	Budj Bim (northern) component: Field survey of channel, Tae Rak (Lake Condah), 1989	1989	Unknown	Aboriginal Victoria	Aboriginal Victoria Level 3, 1 Treasury Place Melbourne VIC 3000 Tel: +61 3 8392 5388	Yes
2.68	Photograph	Budj Bim (northern) component: Andrea Warren at stone house structure, Tae Rak (Lake Condah), 1989	1989	Unknown	Aboriginal Victoria	Aboriginal Victoria Level 3, 1 Treasury Place Melbourne VIC 3000 Tel: +61 3 8392 5388	Yes
2.69	Photograph	Budj Bim (northern) component: Christina Saunders at stone house structure, Tae Rak (Lake Condah), 1989	1989	Unknown	Aboriginal Victoria	Aboriginal Victoria Level 3, 1 Treasury Place Melbourne VIC 3000 Tel: +61 3 8392 5388	Yes
2.70	Photograph	Budj Bim (northern) component: Linda Saunders at stone house structure, Tae Rak (Lake Condah), 1989	1989	Unknown	Aboriginal Victoria	Aboriginal Victoria Level 3, 1 Treasury Place Melbourne VIC 3000 Tel: +61 3 8392 5388	Yes
2.71	Photograph	Sandra Onus and Christina Frankland at the protest site in Portland	1980	Unknown	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
2.72	Photograph	Laura Bell, Frederick Lovett's daughter, walks through the ruins at Lake Condah Mission...	Mar. 2015	Joe Armao	Fairfax Media Ltd	Fairfax Media Ltd Head Office, GPO 506 Sydney NSW 2001 Tel: +61 2 9282 2833	Yes
2.73	Photograph	Kurtonitj (central) component: Official declaration of the Kurtonitj (now part of Budj Bim) Indigenous Protected Area	Nov. 2009	Denis Rose	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes

ID. No.	Format	Caption	Date of Photo (Mo/Yr)	Photographer	Copyright Owner	Contact Details of Copyright Owner (Name, Address, Telephone, Email)	Non Exclusive Cession of Rights
2.74	Photograph	Kurtonitj (central) component: Community celebration to mark the official declaration of the Kurtonitj (now part of Budj Bim) Indigenous Protected Area	Nov. 2009	Denis Rose	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
2.75	Photograph	The Australian Federal Court convened in March 2007 at the base of Budj Bim for the Gunditjmara native title consent determination. L-R: Georgina Redfern, Eugene Lovett, Justice Tony North, Christina Saunders, John Lovett	Apr. 2007	Damian White	Fairfax Media Ltd	Fairfax Media Ltd Head Office, GPO 506 Sydney NSW 2001 Tel: +61 2 9282 2833	Yes
2.76	Photograph	Elder Eileen Alberts giving evidence to Justice North	Mar. 2005	Unknown	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
2.77	Photograph	Welcome to Country smoking ceremony and Gunditjmara families with their banners at the native title consent determination at the foot of Budj Bim volcano	Mar. 2007	Damein Bell	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
2.78	Photograph	Gunditjmara lined up together under the banners representing each of their common ancestors	Mar. 2007	Unknown	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
2.79	Photograph	Budj Bim (northern) component: The Federal Court is a ritual space	Mar. 2007	Damian White	Fairfax Media Ltd	Fairfax Media Ltd Head Office, GPO 506 Sydney NSW 2001 Tel: +61 2 9282 2833	Yes
2.80	Photograph	At the end of the 19th century, Killara's outlet from Tae Rak (Lake Condah) was converted into a drain	circa 1914	Unknown	Out of copyright	Not applicable  Held in the collection of Museums Victoria	Yes
2.81	Photograph	Tae Rak re-filled with water following the construction of the 'cultural weir' in 2010	Sep. 2009	Unknown	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes

ID. No.	Format	Caption	Date of Photo (Mo/Yr)	Photographer	Copyright Owner	Contact Details of Copyright Owner (Name, Address, Telephone, Email)	Non Exclusive Cession of Rights
2.82	Photograph	Lake Condah Sustainable Development Project members viewing the construction of the regulator gate on the rebuilt weir at the downstream end of Tae Rak	Mar. 2010	Unknown	Glenelg Hopkins Catchment Management Authority	Glenelg Hopkins Catchment Management Authority PO Box 502 Hamilton Victoria 3300 Tel: +61 3 5571 2526	Yes
2.83	Photograph	Joseph Saunders (left) and Aunty Laura Bell with Merv Lindsay, Engineers Australia National President...	Oct. 2011	Unknown	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
2.84	Photograph	Budj Bim (northern) component: Gunditjmara people inspecting a 350 metre-long-southwest fishtrap at Muldoons Trap Complex...	Mar. 2010	Gib Wettenhall	-	Gib Wettenhall, em PRESS Publishing 133 McPhans Rd Mollongghip VIC 3352 Email: gib@vic.chariot.net.au	Yes
2.85	Illustration	The six seasons of Gunditjmara Country	Nov. 2017	The Designery, after Parks Victoria	Aboriginal Victoria	Aboriginal Victoria Level 3, 1 Treasury Place Melbourne VIC 3000 Tel: +61 3 8392 5388	Yes
2.86	Photograph	'Cultural burn' being undertaken by the Budj Bim Rangers	2015	Unknown	Winda-Mara Aboriginal Corporation	Winda-Mara Aboriginal Corporation 21 Scott Street Heywood Victoria 3304 Tel: +61 3 5527 0000	Yes
2.87	Photograph	Bunjil Lovett netting a kooyang (eel) in one of the Tae Rak holding pools	Nov. 2017	Tyson Lovett Murray	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
2.88	Photograph	Aunty Connie Hart weaving a traditional gnarraban (eel basket)	1990s	Jim Berg	-	c/- Koorie Heritage Trust Levels 1 and 3, The Yarra Building Federation Square Cnr Swanston and Flinders Streets Melbourne VIC 3000 Tel: +61 3 8662 6300	Yes
2.89	Photograph	Aunty Eileen Alberts collecting puunyaart for weaving gnarraban (kooyang baskets)	Jan. 2015	Justin McManus	Fairfax Media Ltd	Fairfax Media Ltd Head Office, GPO 506 Sydney NSW 2001 Tel: +61 2 9282 2833	Yes
2.90	Photograph	Aunty Connie Hart with contemporary eel trap, 1988	1988	Derek Fowell	Museums Victoria	Museums Victoria PO Box 666 Melbourne VIC 3001 Tel: +61 3 9392 4800 Email: ICenquiries@museum.vic.gov.au	Yes

ID. No.	Format	Caption	Date of Photo (Mo/Yr)	Photographer	Copyright Owner	Contact Details of Copyright Owner (Name, Address, Telephone, Email)	Non Exclusive Cession of Rights
2.91	Photograph	Aunty Connie Hart stitching together a traditional gnarraban (eel basket)	1990s	Jim Berg	-	c/- Koorie Heritage Trust Levels 1 and 3, The Yarra Building Federation Square Cnr Swanston and Flinders Streets Melbourne VIC 3000 Tel: +61 3 8662 6300	Yes
2.92	Photograph	Aunty Eileen Alberts passing on weaving skills to Gunditjmara youth	May 2014	Winda-Mara Aboriginal Corporation	-	Winda-Mara Aboriginal Corporation 21 Scott Street Heywood Victoria 3304 Tel: +61 3 5527 0000	Yes
2.93	Photograph	Winda-Mara dancers lead the street parade at the Portland Upwelling Festival	Unknown	Daryl Cram	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
2.94	Photograph	The Fighting Gunditjmara	2017	Organic Photo (Francesco Vicenzi)	-	c/Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
2.95	Photograph	Koondoom Yarkeen Karweeyn – the Gunditjmara young Traditional Aboriginal Dance group	2017	Jessica Lovett	-	c/Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
2.96	Photograph	Dhauwurd wurrung cloak, Possum Skin Cloak Project. Made by Thomas Day and Aunty Janice Lovett	Unknown	Unknown	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
2.97	Photograph	Possum skin cloak made by Debra Couzens and Vicki Couzens in 2002. Vicki Couzens is a multimedia artist, best known as a maker of possum skin cloaks such as this one, a replica of the 1872 Lake Condah cloak.	2002	Unknown	National Museum of Australia	National Museum of Australia GPO Box 1901 Canberra ACT 2601 Tel: +61 2 6208 5000	Yes
2.98	Photograph	Budj Bim Cultural Landscape: <i>Fresh and Salty</i> is a large scale stone sculpture...	2012	Bindi Cole	-	Bindi Cole Email: bindi@bindicolechocka.com Web address: <a href="https://www.bindicolechocka.com">https://www.bindicolechocka.com</a>	Yes

ID. No.	Format	Caption	Date of Photo (Mo/Yr)	Photographer	Copyright Owner	Contact Details of Copyright Owner (Name, Address, Telephone, Email)	Non Exclusive Cession of Rights
2.99	Photograph	Tyrendarra (southern) component: Kooyang (eel) sculpture	Unknown	Unknown	Winda-Mara Aboriginal Corporation	Winda-Mara Aboriginal Corporation 21 Scott Street Heywood Victoria 3304 Tel: +61 3 5527 0000	Yes
Page 80	Photograph	Tae Rak (Lake Condah): Kooyang weir (detail)	1990	Ian McNiven	-	c/- Monash University Monash Indigenous Studies Centre Clayton Campus VIC 3800 Email: Ian.McNiven@monash.edu	Yes
2.100	Photograph	Denise Lovett and her grandson, Nyawi Moore, visit Country to teach and learn about kooyang (eel) aquaculture	Aug. 2007	Unknown	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
Part 3; front	Photograph	No caption (drone image)	Nov. 2017	Tyson Lovett-Murray	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
Page 87	Photograph	No caption (Aquaculture channel and pond)	Nov. 2017	Tyson Lovett-Murray	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
Page 91	Photograph	No caption (Tyson Lovett-Murray and Uncle Denis Rose on Country)	Jan. 2015	Justin McManus	Fairfax Media Ltd	Fairfax Media Ltd Head Office, GPO 506 Sydney NSW 2001 Tel: +61 2 9282 2833	Yes
Page 95	Photograph	No caption (Tungatt Mirring or Stone Country; same as 2.5)	Nov. 2009	Mike Cusack	Parks Victoria	Parks Victoria Level 10, 535 Bourke Street Melbourne VIC 3000	Yes
Page 97; full page	Drawing	No caption (Brough Smythe sketch of stone houses)	circa 1840	Brough Smythe	Out of copyright	Not applicable  Held in the collection of the State Library of Victoria	Yes
3.1	Photograph	Kuk Early Agricultural Site (Papua New Guinea)	Unknown	Amos Chapple	OUR PLACE PUBLISHING Ltd	Amos Chapple Email: amos.chapple@gmail.com	Yes
3.2	Photograph	Saloum Delta (Senegal)	Jan. 2009	Jean Goepf	-	Non-exclusive cession of rights held by UNESCO	Yes
3.3	Photograph	Head Smashed in Buffalo Jump (Canada)	Jul. 2017	Geoff Sowrey	-	Creative Commons	Yes
3.4	Photograph	Rock Islands Southern Lagoon (Palau)	Feb. 2014	Charly W. Karl	-	Creative Commons	Yes
3.5	Photograph	Laponian Area (Sweden)	Sep. 2014	Kari Siren	-	Creative Commons	Yes

ID. No.	Format	Caption	Date of Photo (Mo/Yr)	Photographer	Copyright Owner	Contact Details of Copyright Owner (Name, Address, Telephone, Email)	Non Exclusive Cession of Rights
3.6	Photograph	Toolondo channel	circa 1980	Harry Lourandos	Aboriginal Victoria	Aboriginal Victoria Level 3, 1 Treasury Place Melbourne VIC 3000 Tel: +61 3 8392 5388	Yes
3.7	Photograph	The Barotse Cultural Landscape (Zambia)	Nov. 2012	WorldFish	-	Creative Commons	Yes
3.8	Photograph	Ivavik/Vuntut/ Hershel Island (Qikiqtaruk) (Canada)	Jul. 2015	Daniel Case	-	Creative Commons	Yes
3.9	Photograph	Aasivitssuit, Arnangarnup Qoorua (Denmark – Greenland)	Aug. 2010	Patrick Müller	-	Creative Commons	Yes
3.10	Photograph	Pimachiowin Aki (the Land that Gives Life) (Canada)	Sep. 2003	Timkal	-	Wikimedia Creative Commons	Yes
3.11	Negative	The Ngemba people of Brewarrina used their advanced knowledge of river hydrology and fish ecology to trap and catch large numbers of fresh water fish...	circa 1890	Henry King	Out of copyright	Not applicable	Yes
3.12	Photograph	Kaiadilt Aboriginal fishtrap complex at Catfish Story, Bentinck Island, southern Gulf of Carpentaria	Jun. 2013	Sean Ulm	-	Sean Ulm College of Arts, Society and Education James Cook University QLD 4811 Email: sean.ulm@jcu.edu.au	Yes
3.13	Photographic print	Eel weir (pa tuna) named Ruataniwha, on the Hokio Stream	Nov. 1925	G L Adkin	Out of copyright	Held in the collections of the Alexander Turnbull Library, Wellington, New Zealand	Yes
3.14	Photograph	The Hawaiian people practiced aquaculture through development of fish ponds (Hawaiian: loko i'a)...	May 2003	Collin Grady	-	Creative Commons	Yes
3.15	Photograph	The network of Indigenous clam gardens is found along the west coast of Canada...	Mar. 2008	Simon Fraser University	-	Creative Commons	Yes
3.16	Photograph	Situated on one of the nation's largest systems of underwater springs, the Ahjumawi are one of eleven bands of the Pit River Tribe of native peoples...	Jan. 2008	Marcia Wright	-	Wikimedia Commons	Yes
Part 4; front	Photograph	No caption (Tyrendarra Indigenous Protected Area: Weir and channel alongside walking trail)	Nov. 2017	Tyson Lovett-Murray	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes



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4.1	Photograph	Budj Bim Indigenous Protected Area: Budj Bim Rangers repairing fence...	Unknown	Winda-Mara Aboriginal Corporation	-	Winda-Mara Aboriginal Corporation 21 Scott Street Heywood Victoria 3304 Tel: +61 3 5527 0000	Yes
Page 118	Photograph	No caption (drone image of weir)	Nov. 2017	Tyson Lovett Murray	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
4.2	Photograph	Tae Rak (Lake Condah) area: Budj Bim Ranger spraying pest plants	Not dated	Winda-Mara Aboriginal Corporation	-	Winda-Mara Aboriginal Corporation 21 Scott Street Heywood Victoria 3304 Tel: +61 3 5527 0000	Yes
4.3	Photograph	Tae Rak (Lake Condah): Two trees growing in a dam feature at the south-eastern corner of the Muldoons Trap Complex	May 2012	Ian Travers	Context Heritage Consultants	Context Heritage Consultants 22 Merri Street Brunswick VIC 3056 Tel: +61 3 9380 6933	Yes
4.4	Photograph	Tae Rak (Lake Condah): Field survey team measure the position of a tree impacting on an aquaculture feature	May 2012	Context	Context Heritage Consultants	Context Heritage Consultants 22 Merri Street Brunswick VIC 3056 Tel: +61 3 9380 6933	Yes
4.5	Illustration	Tae Rak (Lake Condah): Plan showing significant features and trees recorded during 2012 tree survey	May 2012	Thomas Richards	-	c/- Monash University Monash Indigenous Studies Centre Clayton Campus VIC 3800 Email: Thomas.Richards@monash.edu	Yes
4.6	Photograph	Budj Bim Indigenous Protected Area: Budj Bim Rangers setting poison baits as part of a rabbit control program	Unknown	Winda-Mara Aboriginal Corporation	-	Winda-Mara Aboriginal Corporation 21 Scott Street Heywood Victoria 3304 Tel: +61 3 5527 0000	Yes
4.7	Photograph	Kurtonitj (central) component: Budj Bim Rangers carry out a 'cultural burn'	Unknown	Winda-Mara Aboriginal Corporation	-	Winda-Mara Aboriginal Corporation 21 Scott Street Heywood Victoria 3304 Tel: +61 3 5527 0000	Yes
4.8	Photograph	Tyrendarra Indigenous Protected Area: Budj Bim Rangers work alongside Country Fire Authority fire-fighters...	Unknown	Winda-Mara Aboriginal Corporation	-	Winda-Mara Aboriginal Corporation 21 Scott Street Heywood Victoria 3304 Tel: +61 3 5527 0000	Yes
4.9	Photograph	Tyrendarra Indigenous Protected Area: School group visiting the Gunditjmarra aquaculture landscape	Unknown	Winda-Mara Aboriginal Corporation	-	Winda-Mara Aboriginal Corporation 21 Scott Street Heywood Victoria 3304 Tel: +61 3 5527 0000	Yes

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Page 125	Photograph	No caption (Possum skin cloak, Lake Condah 1872; as photograph 2.53)	2009	Rodney Start	Museums Victoria	Museums Victoria PO Box 666 Melbourne VIC 3001 Tel: +61 3 9392 4800 Email: ICenquiries@ museum.vic.gov.au	Yes
4.10	Photograph	Lake Condah Mission: Residential dwelling for use by the caretaker	Nov. 2013	Denis Rose	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@ gunditjmirring.com	Yes
4.11	Photograph	Kurtonitj (central) component: Residential dwelling in use for Gunditjmara community briefing...	Nov. 2017	Denis Rose	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@ gunditjmirring.com	Yes
Part 5; front	Photograph	No caption (Kurtonitj [central] component: weir and pond]	Nov. 2017	Tyson Lovett-Murray	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@ gunditjmirring.com	Yes
5.1	Illustration	Logo of the Gunditj Mirring Traditional Owners Aboriginal Corporation	Unknown	Thomas Day	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@ gunditjmirring.com	Yes
5.2	Illustration	Logo of Winda-Mara Aboriginal Corporation	Unknown	Nadia Rose	Winda-Mara Aboriginal Corporation	Winda-Mara Aboriginal Corporation 21 Scott Street Heywood Victoria 3304 Tel: +61 3 5527 0000	Yes
Page 139	Photograph	No caption (Possum skin cloak made at Lake Condah Mission in 1872. Reproduction by Vicki Couzens and Debra Couzens; same as 2.97)	2002	Unknown	National Museum of Australia	National Museum of Australia GPO Box 1901 Canberra ACT 2601 Tel: +61 2 6208 5000	Yes
Page 143	Photograph	No caption (Aunty Eileen Alberts collecting grass)	Jan. 2015	Justin McManus	Fairfax Media Ltd	Fairfax Media Ltd Head Office, GPO 506 Sydney NSW 2001 Tel: +61 2 9282 2833	Yes
5.3	Illustration	Adaptive Management Framework...	Nov. 2017	The Designery, after Parks Victoria	Aboriginal Victoria	Aboriginal Victoria Level 3, 1 Treasury Place Melbourne VIC 3000 Tel: +61 3 8392 5388	Yes
5.4	Photograph	A section of the Budj Bim trail – used for walking and cycling	May 2013	Tract Consultants Pty Ltd	-	Tract Consultants Pty Ltd Level 6, 6 Riverside Quay Southbank VIC 3006 Tel: +61 3 9429 6133	Yes

ID. No.	Format	Caption	Date of Photo (Mo/Yr)	Photographer	Copyright Owner	Contact Details of Copyright Owner (Name, Address, Telephone, Email)	Non Exclusive Cession of Rights
5.5	Photograph	Budj Bim Visitor Experience Area: Lake Surprise is located within the crater of the Budj Bim volcano	Dec. 2012	Tract Consultants Pty Ltd	-	Tract Consultants Pty Ltd Level 6, 6 Riverside Quay Southbank VIC 3006 Tel: +61 3 9429 6133	Yes
5.6	Photograph	Budj Bim Visitor Experience Area: Lake Surprise lookout	Dec. 2012	Tract Consultants Pty Ltd	-	Tract Consultants Pty Ltd Level 6, 6 Riverside Quay Southbank VIC 3006 Tel: +61 3 9429 6133	Yes
5.7	Photograph	Budj Bim Visitor Experience Area: National Park day visitor area	May 2013	Tract Consultants Pty Ltd	-	Tract Consultants Pty Ltd Level 6, 6 Riverside Quay Southbank VIC 3006 Tel: +61 3 9429 6133	Yes
5.8	Photograph	Budj Bim Visitor Experience Area: National Park car park	May 2013	Tract Consultants Pty Ltd	-	Tract Consultants Pty Ltd Level 6, 6 Riverside Quay Southbank VIC 3006 Tel: +61 3 9429 6133	Yes
5.9	Photograph	Budj Bim Visitor Experience Area: Lake Surprise historic shelter	Dec. 2012	Tract Consultants Pty Ltd	-	Tract Consultants Pty Ltd Level 6, 6 Riverside Quay Southbank VIC 3006 Tel: +61 3 9429 6133	Yes
5.10	Photograph	Budj Bim Visitor Experience Area: National Park Visitor Centre and Ranger Station	May 2013	Tract Consultants Pty Ltd	-	Tract Consultants Pty Ltd Level 6, 6 Riverside Quay Southbank VIC 3006 Tel: +61 3 9429 6133	Yes
5.11	Photograph	Visitors to Tae Rak at the Budj Bim Cultural Landscape	Unknown	Unknown	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
5.12	Photograph	Tae Rak Visitor Experience Area: Jetty and boat ramp	Nov. 2017	Tyson Lovett-Murray	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
5.13	Photograph	Tae Rak Visitor Experience Area: The Mission conference venue and accommodation cabins	Nov. 2017	Tyson Lovett-Murray	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
5.14	Photograph	Kurtonitj Visitor Experience Area: Shelter...	Dec. 2012	Tract Consultants Pty Ltd	-	Tract Consultants Pty Ltd Level 6, 6 Riverside Quay Southbank VIC 3006 Tel: +61 3 9429 6133	Yes
5.15	Photograph	Kurtonitj Visitor Experience Area: Detail of interpretation panel...	Aug. 2017	Steve Brown	-	Gozinta 807 Lower Boro Road Boro NSW 2622	Yes

ID. No.	Format	Caption	Date of Photo (Mo/Yr)	Photographer	Copyright Owner	Contact Details of Copyright Owner (Name, Address, Telephone, Email)	Non Exclusive Cession of Rights
5.16	Photograph	Kurtonitj Visitor Experience Area: Visitor facilities in their landscape context	Nov. 2017	Tyson Lovett-Murray	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
5.17	Photograph	Tyrendarra Visitor Experience Area: Walking track entry from car parking area to the start and finish of the interpretive trail	May 2013	Tract Consultants Pty Ltd	-	Tract Consultants Pty Ltd Level 6, 6 Riverside Quay Southbank VIC 3006 Tel: +61 3 9429 6133	Yes
5.18	Photograph	Tyrendarra Visitor Experience Area: Gilgar Gunditj Visitor Place	Dec. 2012	Tract Consultants Pty Ltd	-	Tract Consultants Pty Ltd Level 6, 6 Riverside Quay Southbank VIC 3006 Tel: +61 3 9429 6133	Yes
5.19	Photograph	Tyrendarra Visitor Experience Area: Gilgar Gunditj Visitor Place is designed to mimic the movement of kooyang (eel)	Unknown	Visit Victoria	-	Visit Victoria Lee Breakwater Road Portland VIC 3305 Tel: 1800 035 567	Yes
5.20	Photograph	Tyrendarra Visitor Experience Area: Toilet facility adjacent to car park	Dec. 2012	Tract Consultants Pty Ltd	-	Tract Consultants Pty Ltd Level 6, 6 Riverside Quay Southbank VIC 3006 Tel: +61 3 9429 6133	Yes
5.21	Photograph	Tyrendarra Visitor Experience Area: Tyrendarra trail interpretive signage	Dec. 2012	Tract Consultants Pty Ltd	-	Tract Consultants Pty Ltd Level 6, 6 Riverside Quay Southbank VIC 3006 Tel: +61 3 9429 6133	Yes
5.22	Photograph	Allambie Visitor Experience Area: Visitor facilities in their landscape context	Nov. 2017	Gunditj Mirring Traditional Owners Aboriginal Corporation	-	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
5.23	Photograph	Lake Gorrie Visitor Experience Area: Visitor facilities in their landscape context	Nov. 2017	Gunditj Mirring Traditional Owners Aboriginal Corporation	-	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
5.24	Photograph	Tyson Lovett-Murray holding kooyang (eel) trap	Jan. 2015	Justin McManus	Fairfax Media Ltd	Fairfax Media Ltd Head Office, GPO 506 Sydney NSW 2001 Tel: +61 2 9282 2833	Yes
Part 6; front	Photograph	No caption (Jennie Green ... circa 1865; as photograph 2.56)	circa 1870	Unknown	Out of copyright	Not applicable  Held in the collection of the State Library of Victoria	Yes
Part 7; front	Photograph	No caption (Basket by Aunty Connie Hart, made 1992 in Portland)	Unknown	Museums Victoria	-	Museums Victoria PO Box 666 Melbourne VIC 3001 Tel: +61 3 9392 4800 Email: ICenquiries@museum.vic.gov.au	Yes

ID. No.	Format	Caption	Date of Photo (Mo/Yr)	Photographer	Copyright Owner	Contact Details of Copyright Owner (Name, Address, Telephone, Email)	Non Exclusive Cession of Rights
Part 8; front	Photograph	No caption (Eels)	Unknown	Parks Victoria	-	Parks Victoria Level 10, 535 Bourke Street Melbourne VIC 3000	Yes
Part 9; front	Photograph	No caption (Bunjil Lovett with eel)	Nov. 2017	Tyson Lovett-Murray	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
Acknlts., front	Photograph	No caption (Uncle Denis Rose with plant)	Jan. 2015	Justin McManus	Fairfax Media Ltd	Fairfax Media Ltd Head Office, GPO 506 Sydney NSW 2001 Tel: +61 2 9282 2833	Yes
Annexes, front	Photograph	No caption (Children with eel)	Nov. 2017	Tyson Lovett-Murray	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
Page 206	Photograph	Tungatt Mirring or Stone Country (same as 2.5)	Nov. 2009	Mike Cusack	Parks Victoria	Parks Victoria Level 10, 535 Bourke Street Melbourne VIC 3000	Yes
Back cover (1)	Photograph	Top of page – no caption (drone landscape image)	Nov. 2017	Tyson Lovett-Murray	Gunditj Mirring Traditional Owners Aboriginal Corporation	Gunditj Mirring Traditional Owners Aboriginal Corporation 4/48 Edgar Street Heywood Victoria 3304 Tel: +61 3 5527 1427 Email: reception@gunditjmirring.com	Yes
Back cover (2)	Illustration	Centre page – no caption (possum skin cloak design)	2002	Unknown	Museums Victoria	Museums Victoria PO Box 666 Melbourne VIC 3001 Tel: +61 3 9392 4800 Email: ICenquiries@museum.vic.gov.au	Yes

## 7.B TEXTS RELATING TO PROTECTIVE DESIGNATION, COPIES OF PROPERTY MANAGEMENT PLANS OR DOCUMENTED MANAGEMENT SYSTEMS AND EXTRACTS OF OTHER PLANS RELEVANT TO THE PROPERTY

### LEGISLATION

#### Australian Government legislation

*Environment Protection and Biodiversity Conservation Act 1999*

*Aboriginal Land (Lake Condah and Framlingham Forest) Act 1987*

*Aboriginal and Torres Strait Islander Heritage Protection Act 1984*

*Native Title Act 1993*

#### Victorian Government legislation

*Aboriginal Heritage Act 2006*

*Heritage Act 2017*

*National Parks Act 1975*

*Parks Victoria Act 1998*

*Fisheries Act 1995*

*Flora and Fauna Guarantee Act 1988*

*Water Act 1989*

*Catchment and Land Protection Act 1994*

*Country Fire Authority Act 1958*

*Planning and Environment Act 1987*

*Local Government Act 1989*

### MANAGEMENT PLANS

#### Primary current management plans (Annex B)

*Ngootyooong Gunditj, Ngootyooong Mara South West Management Plan (2015)*

*Budj Bim IPA Plan of Management 2015-2019 (2015)*

*Tyrendarra IPA Management Action Plan 2015-2018 (2015)*

#### Other relevant plans

*Budj Bim (Tourism) Master Plan (2014)*

*Budj Bim Sustainable Tourism Plan (2007)*

*Lake Condah Mission and Cemetery Conservation Management Plan (2000)*

*Lake Condah Restoration Project Conservation Management Plan (2008)*

*Lake Condah Heritage Management Plan and Strategy (1993)*

*Victorian Eel Fishery Management Plan (2017)*

#### In preparation

*Budj Bim Cultural Landscape World Heritage Strategic Management Framework (in prep., 2018)*

## 7.C FORM AND DATE OF MOST RECENT RECORDS OR INVENTORY OF PROPERTY

Table 7.2 lists the most recent records and inventories for the property. In addition, the management plans listed above and detailed in Part 5 outline much of the available information for the nominated property.

RECENT RECORDS OR INVENTORY (INSTITUTION)	DATE	FORM OF RECORD
Cultural Information Management System (Gunditj Mirring Traditional Owners Aboriginal Corporation)	Current	Paper and electronic
Victorian Aboriginal Heritage Register (Aboriginal Victoria)	Current	Paper and electronic
State of the Parks (Parks Victoria)	2013	Electronic
Victorian Biodiversity Atlas <sup>543</sup> (Department of Environment, Land, Water and Planning)	Current	Electronic
Victorian Heritage Database <sup>544</sup> (Heritage Victoria)	Current	Paper and electronic
Geologically Significant Features (Geological Society of Australia)	Current	Paper and electronic

TABLE 7.2 Budj Bim Cultural Landscape: Records and inventory for nominated property

543 Victoria State Government. 'Victorian Biodiversity Atlas', <https://www.environment.vic.gov.au/biodiversity/victorian-biodiversity-atlas>

544 Heritage Council Victoria. 'Victorian Heritage Database', <http://vhd.heritagecouncil.vic.gov.au>

## 7.D ADDRESS WHERE INVENTORY, RECORDS AND ARCHIVES ARE HELD

### Gunditj Mirring Traditional Owners Aboriginal Corporation

4/48 Edgar Street  
Heywood, Victoria 3304

### Winda-Mara Aboriginal Corporation

21 Scott Street  
Heywood, Victoria 3304

## AUSTRALIAN GOVERNMENT

### Department of the Environment and Energy

John Gorton Building  
King Edward Terrace  
Parkes, Australian Capital Territory 2600

## VICTORIA GOVERNMENT

### Aboriginal Victoria

Level 9, 1 Spring Street  
Melbourne, Victoria 3000

### Parks Victoria

Level 10, 535 Bourke Street  
Melbourne, Victoria 3000

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**PART 8**

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# PART 8

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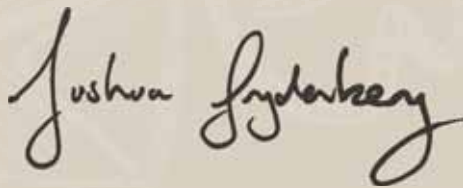
A man wearing a blue beanie and a blue jacket is holding a large, dark fish. He is looking down at the fish. The background shows a stone wall and some greenery. In the foreground, there is a patterned rug. The text "PART 9" is overlaid on a dark circular background.

**PART 9**

**SIGNATURE ON  
BEHALF OF THE  
STATE PARTY**



# PART 9 SIGNATURE ON BEHALF OF THE STATE PARTY



*Joshua Frydenberg*

**The Hon Josh Frydenberg MP**  
Minister for the Environment and Energy  
December 2017



**Budj Bim**  
Cultural Landscape



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# ACKNOWLEDGEMENTS

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As determined by the Federal Court of Australia in 2007, the Gunditjmarra native title consent determination held that native title is held by those descendants of the following persons who identify as Gunditjmarra: Jennie Green (Alberts), Timothy James Arden, Barbara Winter, Mary (mother of James Egan), Billy Gorrie, Mary (wife of Billy Gorrie), William King, Hannah (wife of William King), James Lancaster, Susannah McDonald (Lovett), James and Mary McKinnon, Eliza Mitchell (Saunders), John Henry Rose, Lucy Sutton, James Sutton and Mary, Louisa (mother of Agnes and Alex Taylor) and Andrew Winter.

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# ANNEXES

# ANNEX A

## ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION REGULATIONS 2000 - SCHEDULE 5

### *Australian World Heritage Management Principles*

#### 1 GENERAL PRINCIPLES

- 1.01 The primary purpose of management of natural heritage and cultural heritage of a declared World Heritage property must be, in accordance with Australia's obligations under the World Heritage Convention, to identify, protect, conserve, present, transmit to future generations and, if appropriate, rehabilitate the World Heritage values of the property.
- 1.02 The management should provide for public consultation on decisions and actions that may have a significant impact on the property.
- 1.03 The management should make special provision, if appropriate, for the involvement in managing the property of people who:
- (a) have a particular interest in the property; and
  - (b) may be affected by the management of the property.
- 1.04 The management should provide for continuing community and technical input in managing the property.

#### 2 MANAGEMENT PLANNING

- 2.01 At least one management plan should be prepared for each declared World Heritage property.
- 2.02 A management plan for a declared World Heritage property should:
- (a) state the World Heritage values of the property for which it is prepared; and
  - (b) include adequate processes for public consultation on proposed elements of the plan; and
  - (c) state what must be done to ensure that the World Heritage values of the property are identified, conserved, protected, presented, transmitted to future generations and, if appropriate, rehabilitated; and
  - (d) state mechanisms to deal with the impacts of actions that individually or cumulatively degrade, or threaten to degrade, the World Heritage values of the property; and

- (e) provide that management actions for values, that are not World Heritage values, are consistent with the management of the World Heritage values of the property; and
- (f) promote the integration of Commonwealth, State or Territory and local government responsibilities for the property; and
- (g) provide for continuing monitoring and reporting on the state of the World Heritage values of the property; and
- (h) be reviewed at intervals of not more than 7 years.

#### 3 ENVIRONMENTAL IMPACT ASSESSMENT AND APPROVAL

- 3.01 This principle applies to the assessment of an action that is likely to have a significant impact on the World Heritage values of a property (whether the action is to occur inside the property or not).
- 3.02 Before the action is taken, the likely impact of the action on the World Heritage values of the property should be assessed under a statutory environmental impact assessment and approval process.
- 3.03 The assessment process should:
- (a) identify the World Heritage values of the property that are likely to be affected by the action; and
  - (b) examine how the World Heritage values of the property might be affected; and
  - (c) provide for adequate opportunity for public consultation.
- 3.04 An action should not be approved if it would be inconsistent with the protection, conservation, presentation or transmission to future generations of the World Heritage values of the property.
- 3.05 Approval of the action should be subject to conditions that are necessary to ensure protection, conservation, presentation or transmission to future generations of the World Heritage values of the property.
- 3.06 The action should be monitored by the authority responsible for giving the approval (or another appropriate authority) and, if necessary, enforcement action should be taken to ensure compliance with the conditions of the approval.

## ANNEX B

### MANAGEMENT PLANS FOR THE NOMINATED PROPERTY

- B.1 *Ngootyoong Gunditj Ngootyoong Mara South West Management Plan* (Parks Victoria, 2015)
- B.2 *Budj Bim Indigenous Protected Area Plan of Management 2015-2019* (Gunditj Mirring Traditional Owners Aboriginal Corporation, 2015)
- B.3 *Tyrendarra Indigenous Protected Area Management Action Plan 2015-2018* (Winda-Mara Aboriginal Corporation, 2015)

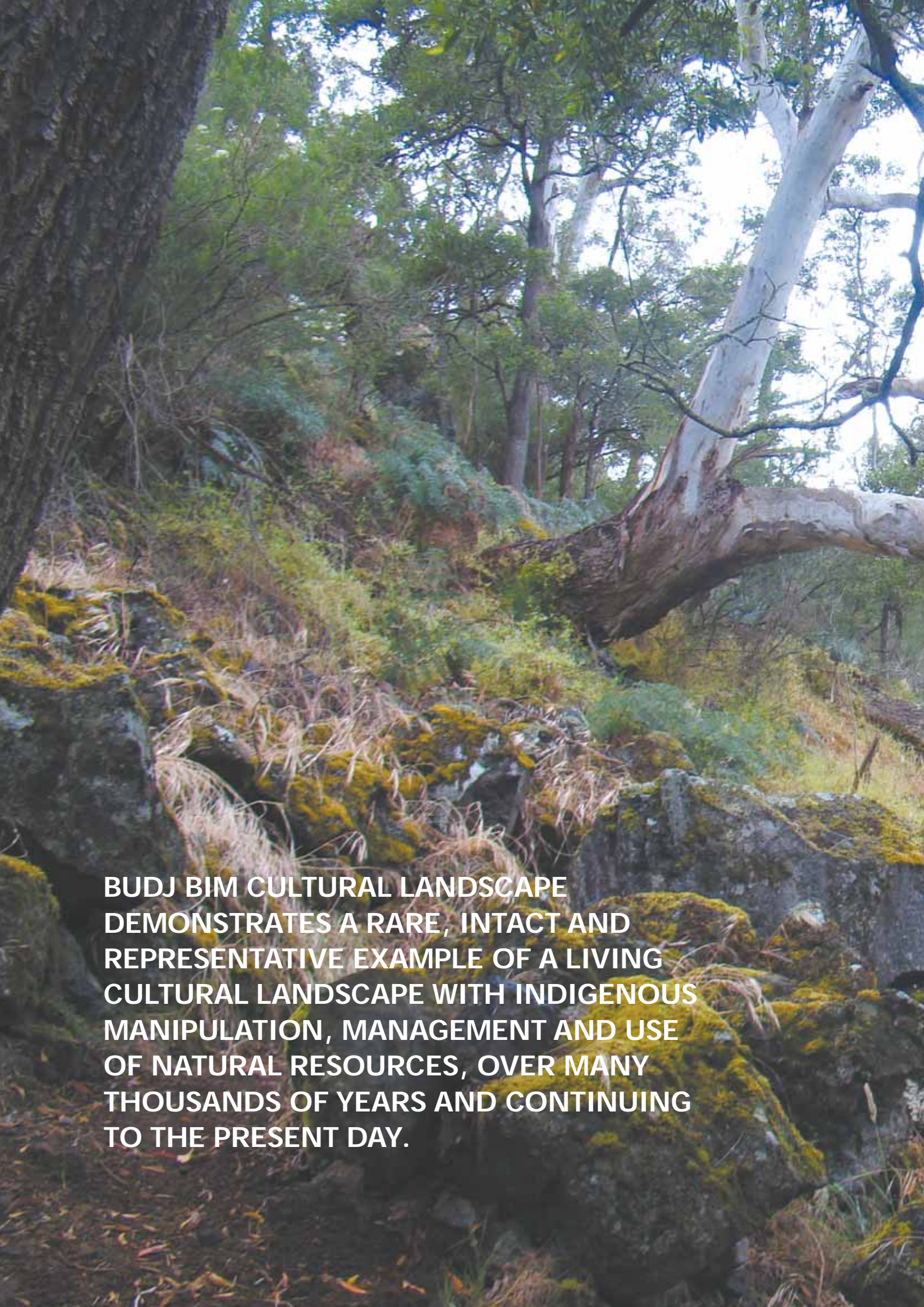
**These management plans are provided as three separate, bound documents that accompany this Nomination Dossier.**

## ANNEX C

### LARGE FORMAT MAP OF THE NOMINATED PROPERTY

Budj Bim Cultural Landscape: Nominated property boundary (Scale: 1:30,000)

**This AO-size plan is provided as a separate document that accompanies this Nomination Dossier.**



**BUDJ BIM CULTURAL LANDSCAPE  
DEMONSTRATES A RARE, INTACT AND  
REPRESENTATIVE EXAMPLE OF A LIVING  
CULTURAL LANDSCAPE WITH INDIGENOUS  
MANIPULATION, MANAGEMENT AND USE  
OF NATURAL RESOURCES, OVER MANY  
THOUSANDS OF YEARS AND CONTINUING  
TO THE PRESENT DAY.**









