

# DJAARA Environmental Watering Plan

2026/27

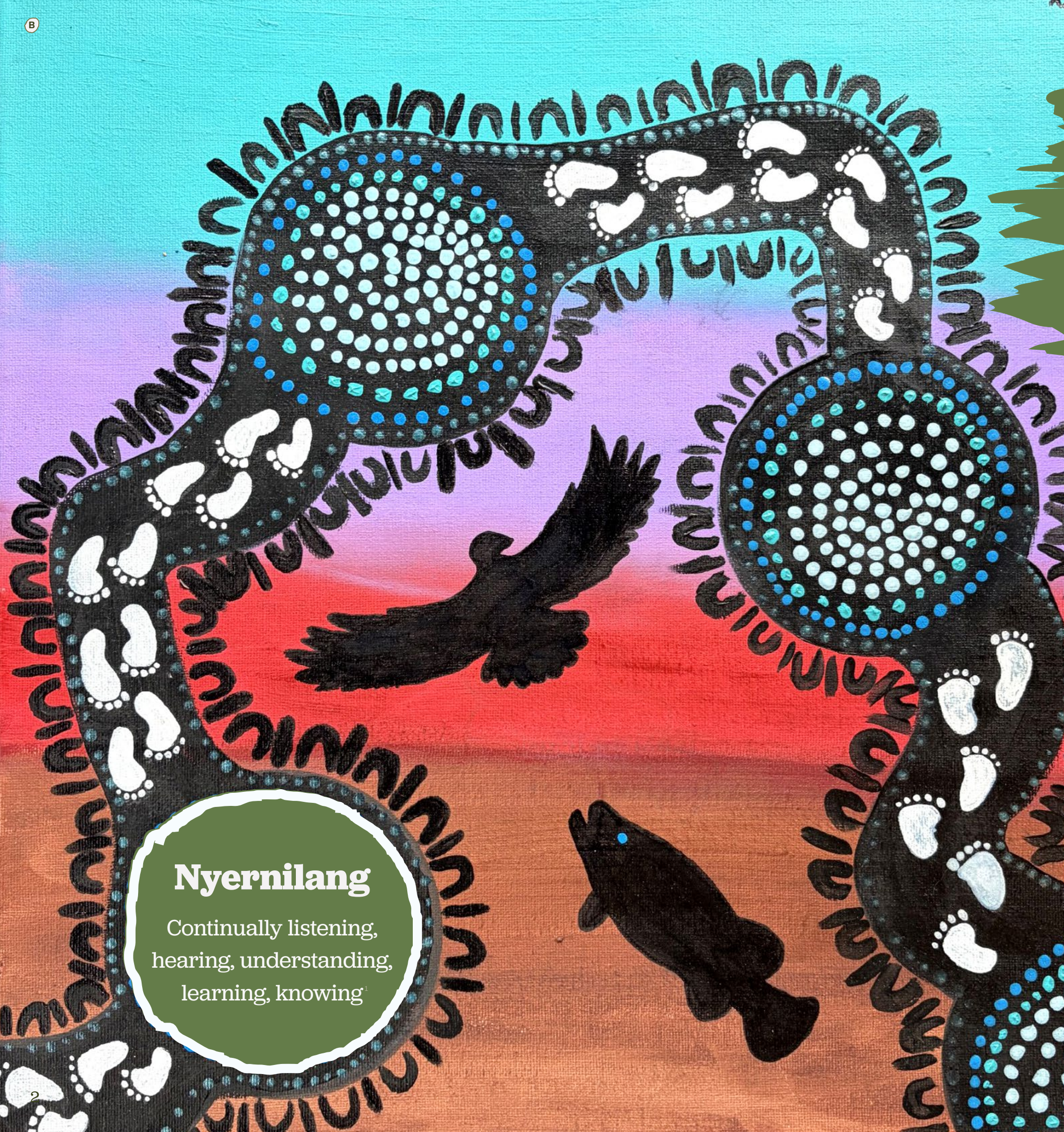
A



*Djaara*  
BALAKI WUKA

## DJANDAK

DJAA WALATJALANG



## Nyernilang

Continually listening,  
hearing, understanding,  
learning, knowing

'Gatjin is the lifeblood of our country. As **gatjin** moves through djandak: seeping into our soils, entering our groundwater, flowing down our waterways, and pooling in our wetlands, it shapes and nourishes our landscape. It is integral to the health of our People and our Country. Our involvement in water management is fundamental. It enables us to live our culture and follow in the footsteps of our ancestors to **dhelkunya** (care) for djandak. It also allows us to apply and share our knowledge to help heal our water systems for the benefit of all.'

### Dhelkunyangu Gatjin Strategy

We ask you to embrace the practice of Nyernilang - the Djaara way of deep, respectful, continuous listening.

Take a moment to sit by your local waterway and let your breath settle. As you do, open yourself to **Nyerna Djayi Wurreka**: the act of listening to Country speak. Beyond the surface, seek a deep knowing of Djandak (Dja Dja Wurrung Country), recognising it not just as a landscape, but as a living entity that holds the histories and spirits of **Ngurar Balak** (Ancestors).

Connect with every element—the water, the birds, and the ancient trees—as if they are your own kin. To show true respect is to understand that the health of the land is inextricably linked to our own. We must first heal this broken relationship and return good health to the spirit of the land before we can truly begin to heal ourselves.

Figure 1: The Cascades, Metcalfe with  
Djaara members conducting Cultural Values Assessments



Acknowledgment

**Djaara** (Dja Dja Wurrung People) are the Traditional Custodians of Djandak (Dja Dja Wurrung Country). Djaara have cared for Djandak for millennia, and for Djaara, this living landscape is embedded with culture, stories and history.

Djaara involvement in water management is fundamental. It enables Djaara to live the Culture and follow in the footsteps of Ancestors to **dhelkunya** (care) for Djandak. It also allows Djaara to apply and share their knowledge to help heal water systems for the benefit of all. We would like to thank all Djaara past, present and emerging, for the tireless efforts to care for Country and each other.

We would like to also thank the Djaara people who have been involved in Wartaka's, **Kapa Gatjin** and Aboriginal Waterways Assessments which has formed the basis for this work. We would like to acknowledge the Environmental Water Wartaka members who helped to ensure this document reflects Djaara's vision and mission for Djandak.



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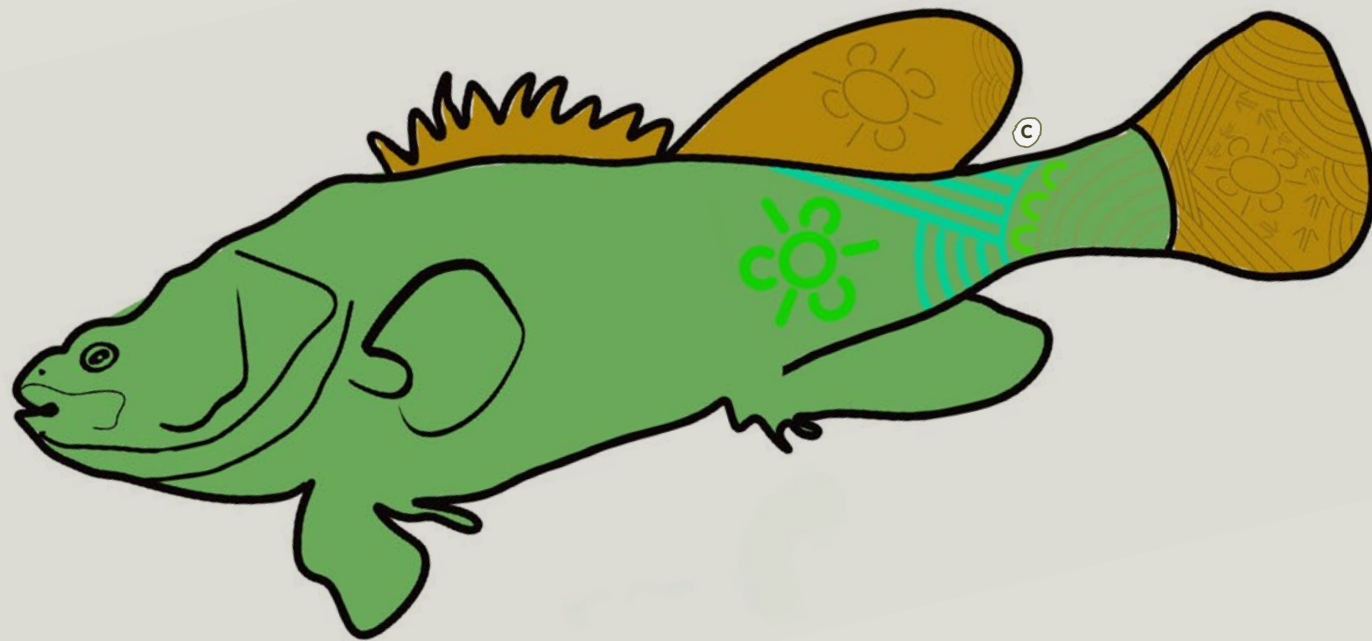
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## DJAARA Environmental Watering Plan (DEWP)

The 2026/27 DJAARA Environmental Watering Plan (DEWP) aims to articulate DJAARA's guidance for Environmental Watering on Djandak. This plan supports DJAARA to take another step towards ambitions and expectations outlined in DJAARA's **Gatjin** (Water) Strategy, specifically towards the Baring (pathway) to make decisions for environmental water. For many years Djaara have been asked for their perspective on environmental water and how it may support cultural values, however, with limited resources to engage with Djaara to properly answer that question. This is an opportunity to explore and identify cultural values that may be supported through environmental watering, then present DJAARA's annual environmental watering directives through the DEWP.

## Background

The DEWP is an annual plan delivered by DJAARA in collaboration with partners. It shares DJAARA's position for environmental water use on Djandak for each water year. The DEWP is DJAARA's take on how environmental water should be delivered on Djandak, drawn from Djaara knowledge and recommendations as well as western science and monitoring.

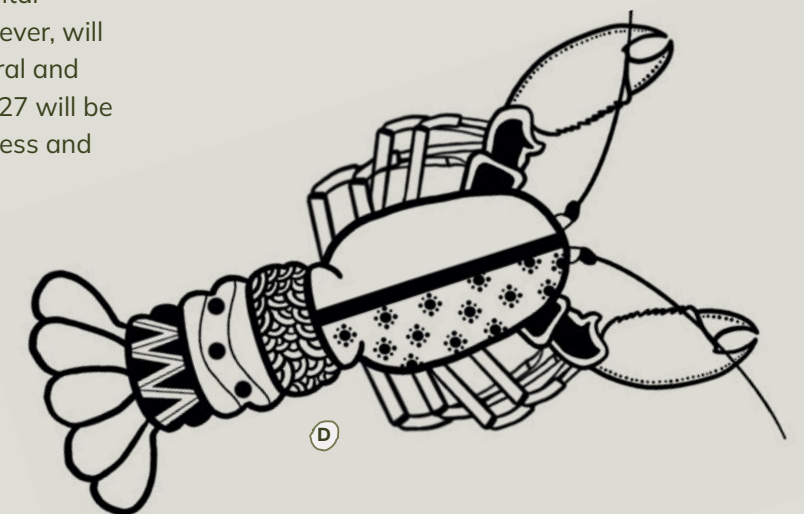
The DEWP will consider annual seasonal water storage outlooks shared through GMW's Seasonal Determinations. This will be done in collaboration with the North Central Catchment Management Authority (CMA), to recommend watering actions and objectives. DJAARA will review the North Central CMA's Seasonal Watering Proposals (SWPs) which will inform the DEWP. The DEWP will be reviewed and endorsed by the Board and sent to the Victorian Environmental Water Holder (VEWH) and the Commonwealth Environmental Water Holder (CEWH) to inform the annual Seasonal Watering Plan written by the VEWH.

For 2026/27, the DEWP will cover all existing environmental water systems on Djandak for the portion of the river reach or wetland that is on Djandak for – Bullarook, Loddon, Campaspe, Wimmera wetlands, Lake Boort and Coliban systems. The DEWP aims to interact with the existing Environmental Watering Process delivered by North Central CMA and the VEWH, however, is important to distinguish as being DJAARA's own process. The DEWP will utilise the VEWH's Water for Country – Traditional Owner Seasonal Watering Proposal Template for ideation. The DEWP will also take from existing information in the environmental watering framework including Environmental Water Management Plans (EWMPs), however, will also draw from Djaara's Indigenous Cultural and Intellectual Property. Given the DEWP 26/27 will be the first, there is expectation that the process and DEWP will evolve.

Each system (Coliban, Loddon, Bullarook etc) contains a desktop analysis of the cultural values identified by **Kapa Gatjin** - DJAARA's specialist water knowledge advisory group. In **Djali** (Dja Dja Wurrung Language), **Kapa Gatjin** means 'to know water'. A balance has been struck between withholding and sharing sensitive cultural information to protect the confidentiality and knowledge of Djaara people, whilst sharing the voices of Djaara and providing guidance and direction for waterway managers for integration of cultural values into environmental water management.

Djaara's cultural values can be captured in many ways with the most widely adopted tool by **Kapa Gatjin** being Aboriginal Waterways Assessments (AWAs). AWAs have been conducted by **Kapa Gatjin** since 2016 and is a way for Djaara people to assess the health of waterways and the catchment; identify, score and comment on current and future cultural health; and recommend decisions for future management in that area. As of December 2025, 118 locations across Djandak have had AWA's completed by **Kapa Gatjin**. This contains a significant dataset and record of cultural knowledge and values shared by Djaara.

As this project progresses, the cultural values of the Loddon, Coliban and Campaspe Systems will become better understood in the context of environmental water. This information will then be shared with agencies, enabling the integration of a Djaara lens into environmental water management on Djandak.



### Right Water, Right Way, Right Time

Djaara have a special relationship with Djandak. In the Djaara worldview, dreaming stories of Djandak date back to the creation of these lands and all within them. Djaara evolved with Djandak. Djandak has been shaped and nurtured by the traditional way of life of Djaara, reflecting principles embedded in kinship, language, spirituality and **Bunjil's Law**. **Bunjil** is the creator being who bestows Djaara with the laws and ceremonies that ensure the continuation of life. Djaara know **Mindy** the Giant Serpent as the keeper and enforcer of **Bunjil's Law**.

Djaara peoples' enduring connection to Djandak and associated cultural values and objectives underpin Djaara's expectation and knowledge towards ensuring 'right water, right way, right time' in the right places. Altered hydrological landscapes and colonial water management principles have rapidly degraded the waterways on Djandak, contributing to biodiversity loss as well as loss of cultural values. DJAARA, through the Recognition and Settlement Agreement 2014 (RSA) with the Victorian Government recognises Djaara as the rights holders on Djandak as well as Djaara having a cultural obligation to care for Djandak. Djaara will always aim to exercise these rights. DJAARA aims to apply cultural values and objectives to all environmental management, including environmental water, to ensure healthy Country, waterways and communities. It is Important to distinguish environmental and cultural water as serving separate purposes. Environmental water may support cultural values and objectives but until DJAARA expresses so, it is not cultural water.

The environmental water system is not ideal, but with colonial water management on Djandak now resulting in intensive water extraction, control and regulation, environmental water provides an opportunity to heal waterways in a water constrained environment. DJAARA hopes to work towards a system and way of being with Country which is harmonious, respectful and sustainable. Where people are treating Country as though it is kin, treading lightly, acting with care, and being thankful for the abundance which is shared. We hope one day for a system that is less extractive and destructive. One where we can be sure the generations to come are in good stead for a bright future.

We ask you to take a moment to sit by your local waterway, take a few deep breaths, connect with the Country and all its elements, and appreciate the abundance that land provides. Listen to Country and hear what it is trying to tell you. Connect with it as if it is your relation. We must heal the broken relationship we have with the land in order to begin to heal it.



(E)

### Environmental Water on Djandak

Figure 2 below is a map of Djandak where Environmental Water is available. In the future DJAARA hopes to see more regulated systems receive environmental water. The only two systems which are wholly on Djandak are Birches Creek, Tullaroop Creek and **Dindilong Yaluk** (Coliban River).

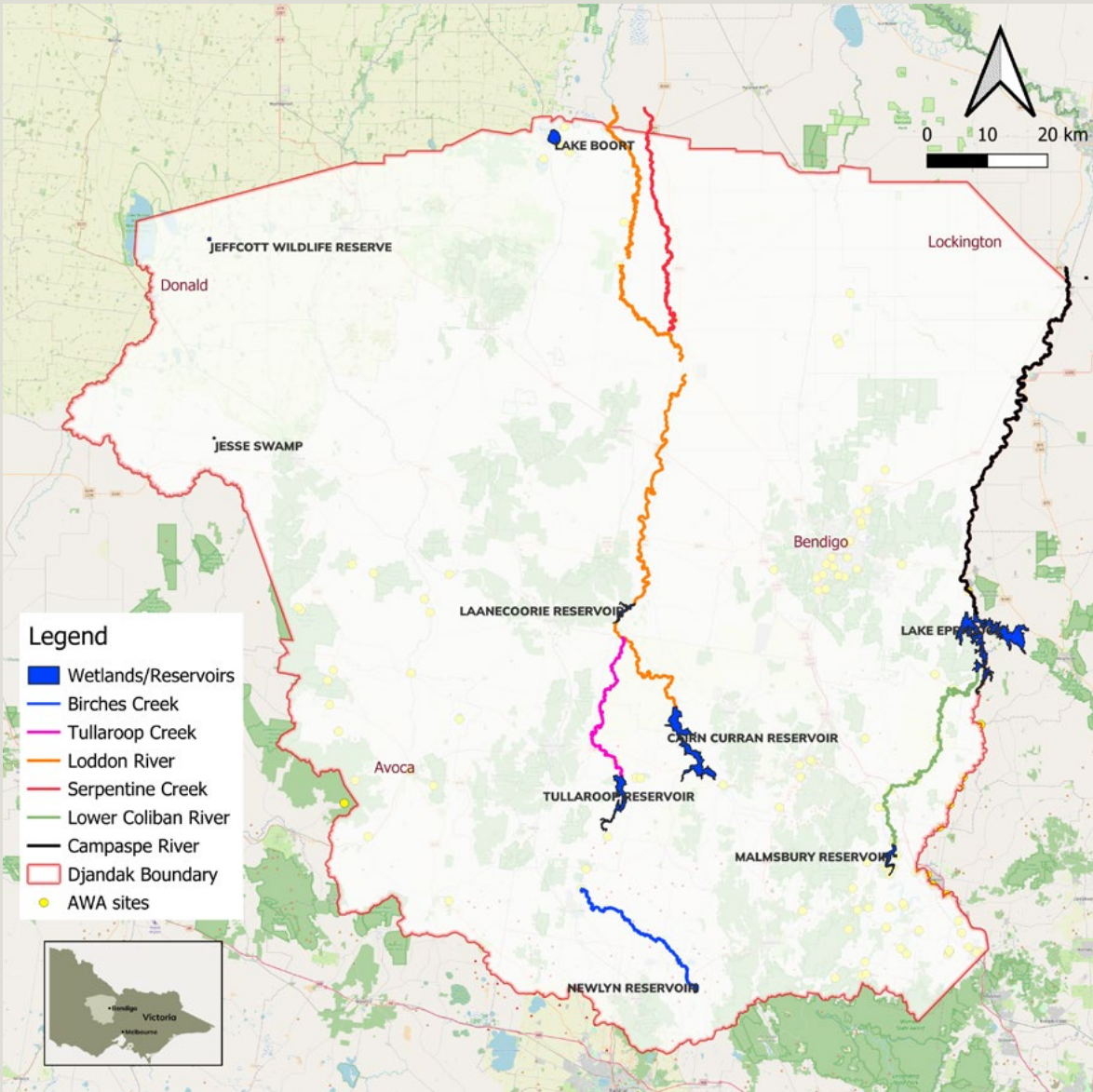


Figure 2: Environmental Water on Djandak

*Djaara people should be trained up and be in a decision making position to influence how water comes through Djandak, to create more opportunities to heal Country - it may mean having Djaara in various water authorities and CMAs*

- Environmental Water Wartaka member (19/3/2026)

Water shortfall

Water extraction from rivers and groundwater has damaged Country for many years and will continue to damage Country if we don't act with care. Waterway regulation including building dams and extracting water for industrial and agricultural purposes has resulted in a water deficit in many of Djandak's waterways. This has resulted in severe environmental degradation. EWMPs exist for regulated waterways on Djandak that receive environmental water. These Plans tell us what the river requires to operate in a healthy state. Current environmental water availability falls well short of the water volume needed for the waterway to be healthy.

As waterways on Djandak continue to degrade through ongoing extraction and an altered hydrology, it causes harm to various species which ultimately affects Djaara and the wider community. The chain reaction of causing harm to Country and not treating it with love and respect ultimately results in adverse consequences for all people. The repercussions for Djaara are significant, with Djaara less able to fulfill their rights to practice culture and gather resources in the rivers due to detrimental ecological impacts including fish decline.

An AI analysis was conducted of the water deficit in the environmental watering systems of the Loddon, Campaspe, and Bullarook. This analysis aims to show how far short of water the rivers are from meeting ecological health. The analysis compared the water needed in each system through the EWMP, with the available water through environmental water entitlements. The EWMP outlines the volumes required for a river to be healthy, and the environmental water entitlements tell us how much environmental water is available. An analysis in the Coliban system was completed by North Central CMA in 2024, showing the AI results to be more conservative.

This is a high level overview used for the purpose of illustrating the current state at a macro level in the absence of modelling. Although the figures may be subject to change with more detailed monitoring this assessment clearly articulates the significant deficit of water in our rivers and both the AI and North Central CMA's analysis concluded that there is a need to at least double the amount of environment water available in each system. Appendix 2 provides a more detailed breakdown of Table 1.

“The environmental flows are too low”

– Kapa Gatjin Member at Regional Waterway Strategy meeting (12/11/2025)

“We are disgusted by the over extraction of water”

– Environmental Water Wartaka member (6/2/2026)

Table 1: Water volumes deficit for environmental water systems on Djandak according to an AI analysis (see Appendix 2 for more details)

|          | Environmental Water required to meet healthy conditions (GL/yr) | Environmental Water available (GL/yr) | Total Shortfall (GL/yr)                                      |
|----------|-----------------------------------------------------------------|---------------------------------------|--------------------------------------------------------------|
| Coliban  | ~9                                                              | ~3.5                                  | ~5.5<br>(~11.3 GL/yr according to North Central CMA in 2024) |
| Loddon   | ~22                                                             | ~12                                   | ~10                                                          |
| Campaspe | ~16.5                                                           | ~8                                    | ~8.5                                                         |
| Birches  | ~1.25                                                           | ~0.1                                  | ~1.15                                                        |

Other systems for Environmental Watering

There are many waterways on Djandak that are regulated and could receive environmental water if an entitlement was available. DJAARA seeks to explore opportunities to provide water to systems that currently lack an environmental water entitlement, particularly where an upstream dam could enable additional releases into these rivers, wetlands and creeks.

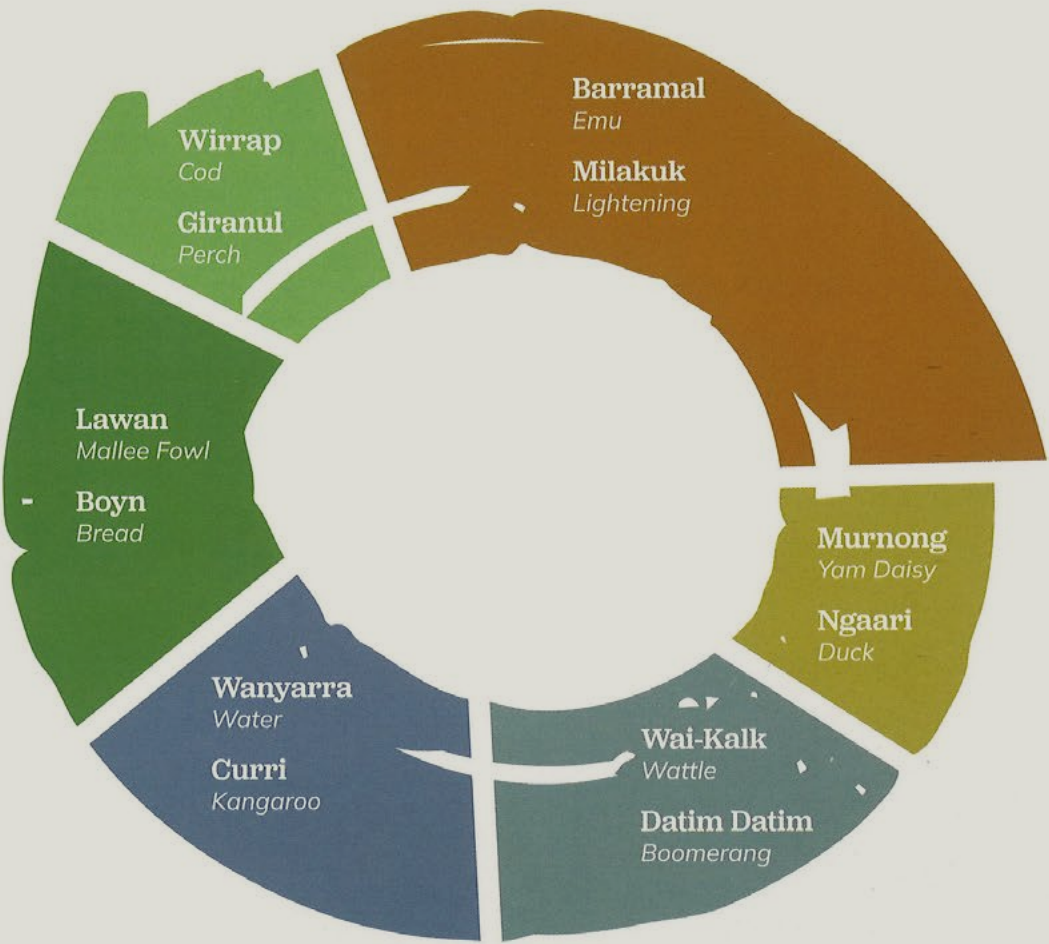
Below is a list of some waterways that may have capacity or DJAARA has interest in enabling Environmental Water delivery.

- Kamarooka Wetlands (e.g. Tang Tang Swamp, Thunder Swamp)
  - Boort Wetland Complex (e.g. Woolshed Swamp, Lake Lyndger)
  - Kinypanial creek
  - Mooloort Plains
  - Brandshaw Swamp
- Avon Plains
  - Castlemaine: Campbells Creek, Forest Creek, Barkers Creek.
  - Creswick Creek
  - Lake Wooroonook
  - Wetlands in the Wimmera catchment
  - Upper Campaspe River (above lake Eppalock)

Djaara Seasonal Calendar

The four seasons —Winter, Spring, Summer, and Autumn—are disconnected from the living pulse of Djandak. For Djaara, seasons are not fixed dates on a page; they represent a fluid knowledge system defined by the behaviour of the land itself.

Rather than looking to a calendar, Djaara observe the flowering of the **Wayi-galk** (Golden Wattle), the arrival of migratory cuckoos, or the rising of the stars to understand which of the six Djaara seasons is beginning. This deep knowing enables Djaara to live in harmony with the breeding cycles of animals and the ripening of resources like **Murnong** (Yam Daisy). The Djaara seasonal calendar serves as a vital guide, ensuring only what is ready is harvested and there is a respect for the delicate balance of the environment as it shifts through the year.



The months of a year with Djaara Seasonal indicators included at the relevant time they occur:

Barramal (Emu) and Milakuk (Lightning)  
Time (December-March)

Murnong (Yam Daisy) and Ngaari (Black Duck)  
Time (April)

Datim datim (Boomerang) and Wai-kalk (Wattle)  
Time (May-June)

Wanyarra (Water) and Gurri (Kangaroo)  
Time (July-August)

Boyn (Bread) and Lawan (Mallee fowl)  
Time (September-October)

Giranul (Perch) and Wirrap (Cod)  
Time (November-December)

Figure 3: DJAARA Seasonal Calendar – Different areas of Djandak will show different signs at different times. This version is the currently accepted DJAARA calendar.

Figure 4: **Dindilong Yaluk** downstream of Malmsbury on Private land (19/3/25)





## 1 Dindilong Yaluk (Coliban River)

The Lower Coliban catchment is more than a geographical feature; it is a living, cultural landscape pulsating with the presence of **Ngurar Balak** (Ancestors). To Djaara, the river system is an intricate web of Dreaming stories, Lore, and ceremonies that breathe life into the land. This deep connection is rooted in the knowledge that all things possess a **murrup** (spirit)—from the **gatjin** that flows through the veins of the earth to the birds, plants, and ancient stones.

Every bend in the river reflects a holistic worldview where the people and Djandak are one. As the Lower Coliban winds from the Malmsbury Reservoir to Lake Eppalock, it travels entirely through Djaara Country. This stretch is particularly renowned for its Tachylite quarries. This rare volcanic glass moved through ancient trade networks, serving as a vital resource that once connected various clans across the region.

Figure 5: **Dindilong Yaluk** near Malmsbury

1.1) Truth telling

European squatters established pastoral runs in the Coliban district during the 1830s and 1840s, with land taken for grazing sheep and cattle. As colonisation expanded south from the Loddon-Campaspe area, large areas of existing native woodlands were cleared, and waterways were modified with banks grazed and trees removed. According to The University of Newcastle Colonial Frontier Massacre Project there are two massacre sites nearby to the Coliban River. These two sites were known as Barfold Station, where 7 Aboriginal people were killed over the alleged theft of sheep. And Darlington Station where 13 Aboriginal people were killed in an act of ‘reprisal’ over also allegedly stealing “a flock of 800-900 sheep”. Bruce Pascoe explains that in this massacre mapping project “We have only included massacres for which documented evidence can be found....”<sup>2</sup> Therefore, there likely having been many more massacres not formally recognised.

The catchment has undergone significant changes since Europeans first traversed it. The effects of the introduction of European farming techniques, native vegetation clearance, the gold rush, the construction of the Coliban reservoirs (Upper Coliban, Lauriston and Malmsbury) and water supply systems for agriculture and urban development are reflected in the current poor condition of the catchment. As detailed by the most recent 2010 Index of Stream Condition assessment the river is in poor condition, is flow stressed and does not have a sufficient environmental entitlement to maintain and improve the current ecological values.

Prior to regulation **Dindilong Yaluk** would have been a low-energy system made up of fine-grained sediments and occasional rocky outcrops. Its channel would have been incised with deep pools scattered along its length, with riffles over gravel and an abundance of boulders and large wood. Flows would have been seasonally variable, responding to rainfall patterns, with high, fast flows in winter and spring and low or no flows during the summer and autumn months.<sup>3</sup>

Today, **Dindilong Yaluk** is ecologically sick, with most natural flows captured in the upstream storages.<sup>4</sup> Blackfish are now considered locally extinct, platypus numbers are declining, and the river is in 11.3GL/yr of shortfall according to the North Central CMA. Between 2012 and 2022, the river flowed at less than 1 Megalitres/day for 60% of the time, a flow rate experts state to be detrimental for ecological health. Every year new farm dams are built, further reducing the flow in creeks and rivers, attributing to the water insecurity future of the catchment.

We must be honest with ourselves that the degradation of **Dindilong Yaluk** continues today. Our current actions continue to harm Country.

*“We need to manage the waterways as our old people did. Caring for Country brings health and spirited benefits. It also benefits the wider community to understand cultural values”*

– Environmental Water Wartaka member (6/2/2026)

1.2) Aboriginal Waterways Assessments

AWAs have been undertaken by Djaara on **Dindilong Yaluk** downstream of Malmsbury since 2017. Most sites assessed were highly degraded showing low waterway health. As of 2025, 17 AWAs have been conducted in the Lower Coliban catchment. These can be seen on Figure 5 where the star overlaps the purple area. A list of these AWAs is found in Table 2.

Table 2: Past AWA locations on **Dindilong Yaluk** downstream of Malmsbury Reservoir (2017-2025)

| #  | Location                             | Date       |
|----|--------------------------------------|------------|
| 1  | The Cascades                         | 24/5/2017  |
| 2  | Mollison Road Malmsbury              | 19/02/2019 |
| 3  | Lyalls Road Bridge                   | 4/03/2019  |
| 4  | Metcalfe Streamside Reserve          | 6/03/2019  |
| 5  | Dalhousie/Todd's Bridge              | 6/03/2019  |
| 6  | Taradale Mineral Spring              | 6/03/2019  |
| 7  | Coliban Geological Falls             | 12/03/2019 |
| 8  | Phillips Road Reserve                | 12/03/2019 |
| 9  | Coliban Pool                         | 14/3/2019  |
| 10 | Coliban Geological Falls             | 29/04/2025 |
| 11 | The Cascades                         | 29/04/2025 |
| 12 | Dalhousie/Todd's Bridge              | 30/04/2025 |
| 13 | Mc Kiltaricks Rd/ Sutton Grange      | 30/04/2025 |
| 14 | Pattersons Rd                        | 18/06/2025 |
| 15 | Burk Streamside Reserve              | 18/06/2025 |
| 16 | McGaffins Farm (Back & Blind Creeks) | 19/06/2025 |
| 17 | Taradale Mineral Spring              | 19/06/2025 |

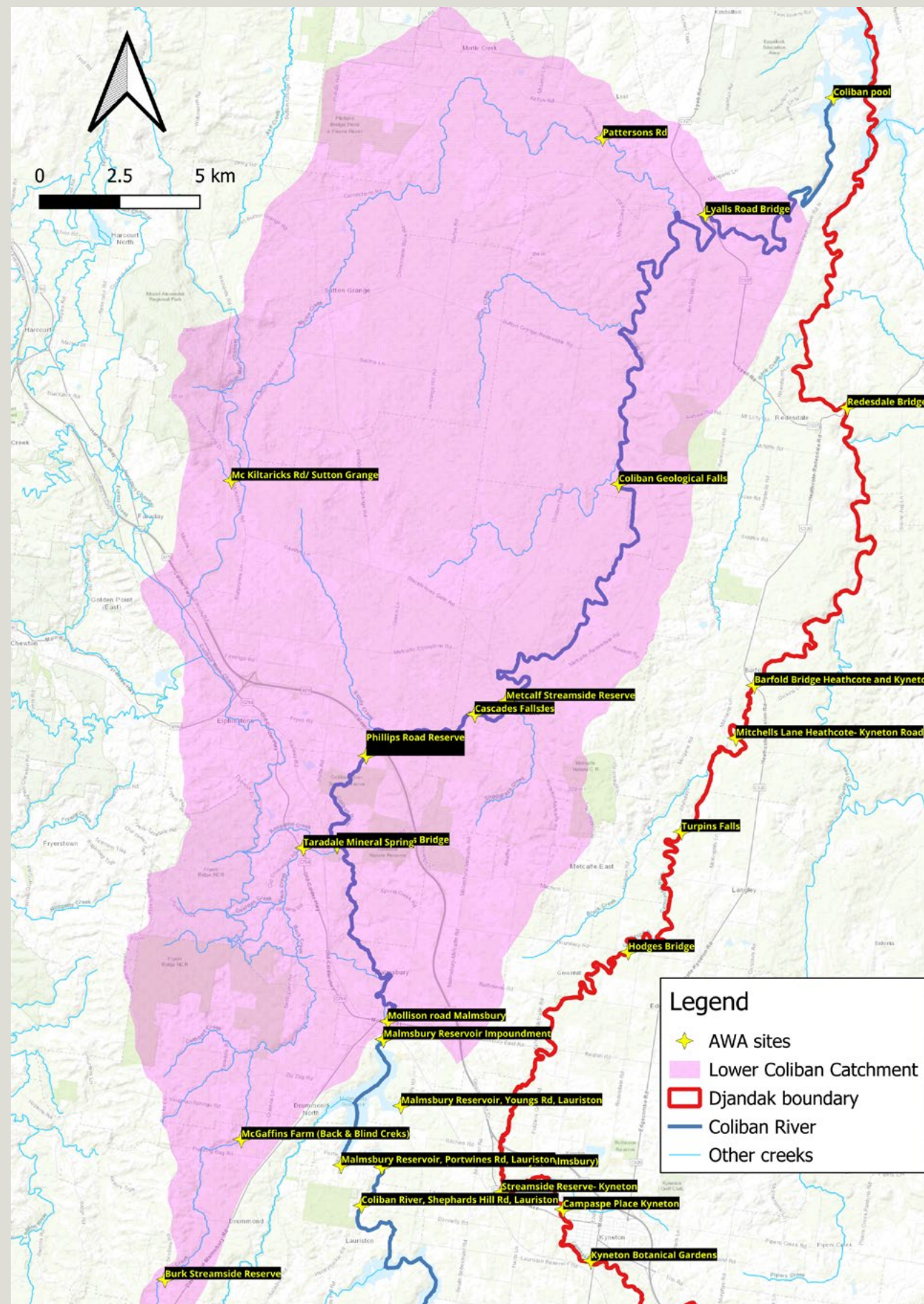


Figure 5: AWA sites in the Lower Coliban Catchment and beyond

### 1.3) Reflections

In Autumn 2025, platypus surveys were conducted along **Dindilong Yaluk** in collaboration with North Central CMA, Malsbury Landcare Group and Ecology Australia. Seven **Kapa Gatjin** members attended the survey where one female platypus was found and documented.

In April and June 2025, the full **Kapa Gatjin** group conducted AWAs in the Lower Coliban Catchment. Highlights included a ceremony presenting Duncan Barber and his family who reside on the Coliban Geological Falls with a cultural gift to give thanks for their openness for Djaara to visit the culturally significant site. A day-long workshop was also held at the Sutton Grange Winery where discussions were had to progress DJAARA's role in developing a Healthy Catchment Plan for the Lower Coliban Catchment.

### 1.4) Opportunities

Various opportunities exist on the Coliban system to heal Djandak, some only requiring minor change. These include:

- **Malsbury Spill Rules:** Amending the spill rules for Malsbury Reservoir so that banked passing flows are not the first to be forfeited during a spill; and aligning the reservoir's spill arrangements with those of other storages to ensure a more equitable distribution of spill losses across entitlement holders.
- **Hydro scheme:** Having Bendigo's potable water go from Malsbury Reservoir, along the Coliban River into Lake Eppalock and then pumped up to Bendigo with a hydro scheme helping to reduce power costs. This would enable the Coliban River to receive greater flows.
- **30 ML additional entitlement** – 30ML, although a nominal sum, is sitting with the Commonwealth Environmental Water Holder, but has never been used due to prohibitive costs in delivery. Discussions with Coliban Water should occur to unlock the entitlement, with Coliban Water having mentioned their willingness to reduce fees. This entitlement could also be moved to DJAARA from the CEWH for ownership.
- **Alternative water sources:** research into sourcing additional water via stormwater and recycled water from local towns - Coliban Water and Greater Western Water have looked at piping recycled water into the Coliban storages. This concept could be applied for E flows rather than drinking water.
- **Take and Use rules** - Better understand the take and use rules along the creek and how we could work with landholders.
- **Cold Water pollution** – Study impacts of cold-water pollution to native fish and make appropriate changes to support their conditions.



Figure 6: Kapa Gatjin members, North Central CMA and Ecology Australia staff setting nets to survey platypus with (19/3/25)

Figure 7: Kapa Gatjin conducting a ceremony presenting the Barber's a gift at Sutton Grange Winery (18/6/25)



1.5) Cultural Objectives for **Dindilong Yaluk**

| Cultural Objectives for Dindilong Yaluk |                                                                                                                                                                     |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C1                                      | Support the maintenance of cultural values as shown in Table 3 through the water requirements with monitoring through success in meeting Djimbunang                 |
| C2                                      | Weaving grasses, food & fibre plants, and medicine plants harvested by Djaara                                                                                       |
| C3                                      | The management of invasive flora and fauna                                                                                                                          |
| C4                                      | Supporting native revegetation especially understorey plants, shrubs and herbs                                                                                      |
| C5                                      | Conducting of Djandak <b>Wi</b> (cultural burns) along the river bank where appropriate in collaboration with the Djandak <b>Wi</b> team.                           |
| C6                                      | Support abundance of large bodied native fish including <b>Wulk</b> (Blackfish), <b>Giranal</b> (Perch), <b>Wirrap</b> (Murray Cod) and <b>Watjarang</b> (Platypus) |
| C7                                      | Support native small-bodied fish, crustaceans, macro-invertebrates and other smaller water species                                                                  |
| C8                                      | Native trees being harvested for artefact making including boomerangs, woomeras, shields, clapsticks, coolamons, didgeridoos, spears by Djaara                      |
| C9                                      | Scars being placed on trees as signage to mark elements in the landscape and it being visited by local community, schools, for tours.                               |
| C10                                     | The river being accessible for culture and ceremony, and accessed by Djaara, local and wider community.                                                             |
| C11                                     | Strengthen Cultural knowledge transfer on Country by bringing elders, knowledge holders and young people together on the river to share stories and knowledge       |
| C12                                     | Strengthening partnerships and knowledge sharing with local landcare networks.                                                                                      |
| C13                                     | Reinstatement of Cultural place names and <b>Djali</b> (language) when referring to <b>Dindilong Yaluk</b>                                                          |
| C14                                     | DJAARA leadership and Cultural governance                                                                                                                           |

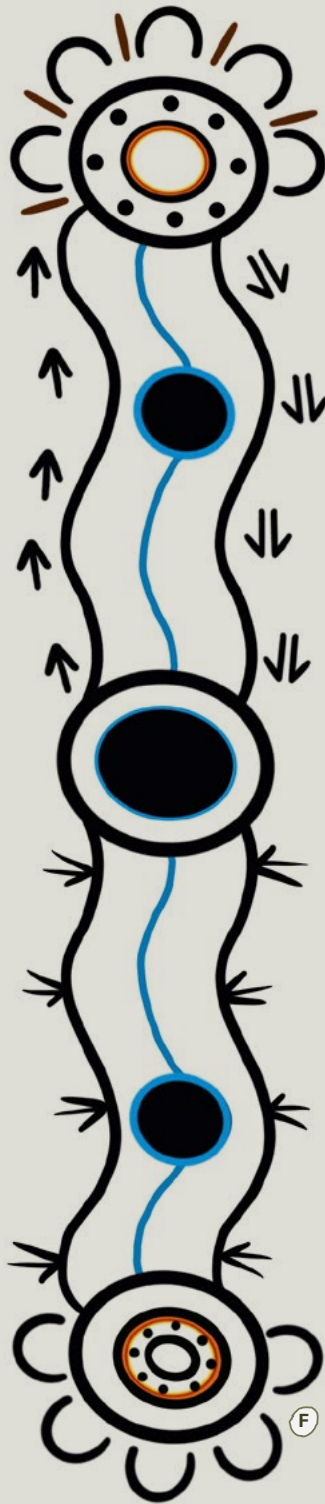


Figure 8: Coliban Geological Falls

1.6) Cultural Values

Table 3 shows a table of Cultural Values on **Dindilong Yaluk** from AWAs completed in the area. For a fully compiled list of Cultural Values across all the environmental water systems on Djandak and their associated cultural uses, cultural indicators, water requirements and Djimbunang (right way) indicators & objectives see Appendix 2.

Table 3: Cultural Values of **Dindilong Yaluk**

| Theme/<br>Category       | Quotes/Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Cultural Value                                                                                                                                                                            |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Murrun Djaa<br>(Animals) | “Evidence of Kangaroos, birds, water insects”<br><br>“non-native fish driving out natives. Mosquito fish nip at natives until they get infections and die.”<br><br>“Waterflow is regulated, therefore fish are minimal.”<br><br>“No Fish, barely any macroinvertebrates, seems isolated from rest of Coliban, no habitats for fish in water (water too low) no deep pools or pockets.”                                                                                                                                          | Gurri (Kangaroos)                                                                                                                                                                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Duwan (Brush Tailed Phascogale)                                                                                                                                                           |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Possums                                                                                                                                                                                   |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Balam Balam (Common Brown Butterfly)                                                                                                                                                      |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Dusky Woodswallow                                                                                                                                                                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Birds - Black Cockatoo, Gang Gang Cockatoo, Wiran (Red tail Black Cockatoo), Kookaburra, Bundjil, Magpies, Waa (Crow), Willie Wagtail, Mopoke (Tawny Frogmouth), Galah, Dusky Woodswallow |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Water Blrds                                                                                                                                                                               |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Water bugs                                                                                                                                                                                |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Native Fish – Giranal (Perch), Wulk (River Blackfish), Bandjal (Murray Cod)                                                                                                               |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Wurkuk murmura (Blue Ringtail Damselfly)                                                                                                                                                  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Bees                                                                                                                                                                                      |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Djalup (Mussels)                                                                                                                                                                          |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Rakali                                                                                                                                                                                    |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Watjarang (Platypus)                                                                                                                                                                      |
| Malak (Plants)           | “Some native trees (redgum, blackwood, yellow box) abundance of kangaroo grass nearby indicates good country”<br><br>“Revegetation - more native trees, food and fibre, cool burn. Take care of blackberries and willows. Cater for fish and native fauna.”<br><br>”Very big old, spaced gum trees. Some shrubs - not sure what they are. Kangaroo apple shrub.”<br><br>“Weeds destroying natives”<br><br>“Some native plants, more weeds”<br><br>“This section of the river seems to be polluted by rubbish/overgrown foliage” | Buwatj (Kangaroo grass)                                                                                                                                                                   |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Malak Gatjin (Water plants)                                                                                                                                                               |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Biyal (River Red Gum)                                                                                                                                                                     |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Darrk (Manna Gum)                                                                                                                                                                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Yellow Box                                                                                                                                                                                |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Ngamakiyi galk (Candlebark)                                                                                                                                                               |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Yulawil bunu (Prickly TeaTree)                                                                                                                                                            |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Mutjang (Blackwood)                                                                                                                                                                       |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Cherry Ballart                                                                                                                                                                            |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Dhurunguk Gurrka (Kangaroo Apple)                                                                                                                                                         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Various other medicine, food & fibre plants                                                                                                                                               |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Wayi Galk (Golden Wattle)                                                                                                                                                                 |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | A diversity of flora                                                                                                                                                                      |

| Theme/<br>Category | Quotes/Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Cultural Value                                                                |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Gatjin             | “...but water needs to be cleaned and the falls need to be maintained”<br><br>“With the right water flows, aquatic life could be abundant”<br><br>“The water is important to community as it is on Djarra country and we need to make sure our water is cleaned so we are not sending dirty water downstream”                                                                                                                                                                                                                                                                                                   | Water quality                                                                 |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Water Flow                                                                    |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Instream features (riffles, snags)                                            |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Deep pools                                                                    |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Pass on clean water                                                           |
| Continuing Culture | “cool burns”<br><br>“Waterways are significant places as we spent majority of our time along them fishing hunting and gathering”<br><br>“Sites need to be burnt for cleansing purposes”<br><br>“We managed and conserved the landscape and waterways for thousands of generations. We built fish traps and animal habitats for breeding.”<br><br>“We need to manage the waterways as our old people did. Caring for country brings health and spirited benefits. Also benefits for the wider community to understand cultural values”<br><br>“Consider farmers as custodians and build a culture of stewardship | Djandak Wi (Cultural burns)                                                   |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Fishing & hunting                                                             |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Manage Country appropriately                                                  |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Nyernilang (Continually listening, hearing, understanding, learning, knowing) |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Relationships with all stakeholders                                           |
| Cultural Heritage  | “Waterways are significant places for Aboriginal people. Water is the resource of life. We swim in it, drink it, bathe in it, cook in it and are created in it!”<br><br>“Water is sensitive as it holds emotion and reacts. It is sad to see the waterway so overgrown with introduced plants and fish”<br><br>“Spirit place, you could feel the presence of the ancestors”<br><br>“Water is sensitive, it carries emotion. It is sad to see the waterway so overgrown with introduced plants and fish”<br><br>“The water spirit is trapped because of blockages that are preventing river flow. “              | Tangible Cultural Heritage                                                    |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Cultural landscape                                                            |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Gatjin murrup (water spirit)                                                  |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Murrup (spirit)                                                               |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                               |

1.6) 2026-27 Scenario Planning  
& Watering Objectives

For more information on Scenario Planning and the watering objectives for 26/27 please refer to **Dindilong Yaluk** (Coliban River) Seasonal Watering Proposal – a jointly developed proposal between DJAARA and the North Central CMA.

It is DJAARA's intent that in future years, as DJAARA's understanding of environmental water on the Coliban River strengthens, watering can better support cultural outcomes and objectives.

Figure 9: DJAARA & North Central CMA led community engagement day in Malmsbury along **Dindilong Yaluk**. Participants included members from the Environmental Water Wartaka, VEWH, Malmsbury Landcare, DJAARA and North Central CMA.





2

## Bulatjal Yaluk (Loddon River), Serpentine Creek and Tullaroop Creek

**Bulatjal Yaluk** is the largest river within the Loddon catchment and has been cared for by Djaara for thousands of years. **Bulatjal Yaluk** has always been a travel and trade route, a food source and refuge, and a place to continue Culture<sup>5</sup>. Various songlines connect culturally significant places in the Loddon catchment and beyond, to and from neighbouring nations. **Bulatjal Yaluk** and the catchment it sits within has been cared for by Djaara for generations and continues to be cared for through cultural obligations of Djaara. Culturally significant **gatjin** landscapes in the Loddon Catchment include the Mooloort Plains and Kamarooka wetlands, as well as the mineral springs near Daylesford which have provided healing for Djaara for thousands of years.

Culturally significant sites include the Carisbrook Ceremonial Stone Arrangement archaeological site which sits near the banks of Tullaroop Creek (Tullaroop meaning “reeds”), where Djaara continues to hold ceremony today. The stone arrangement highlights how the area is rich in spirit, holding lore, stories and knowledge.

Some culturally significant mountains in the Loddon area include **Yapenya** (Mt Barker), **Lalgambuk** (Mt Franklin), **Liyanganyuk Banyul** (Mt Alexander), **Nyaniynyuk** (Mt Beckworth), **Dharrang Gauwa** (Mt Tarrengower), **Guyura** (Mt Kooyoora), **Ngarri** (Mt Egbert), **Moliagulk** (Mt Moliagul).

Figure 10: Significant tree on the **Bulatjal Yaluk**  
(8/9/2025)

2.1) Truth telling

Early colonisers arrived in the Loddon catchment in the 1830s, brutally stealing Djaara land. A mission was initially set up at Neura Mong (Neereman) in 1841 then at Franklinford soon after, both in the Loddon catchment where some Djaara people were forced onto by the colonial government to seek refuge from the brutal and deadly squatter invasion. Albeit the relative safety of the protectorates, Djaara were forced off Country and banned from speaking language and practicing culture.

In the 1850’s gold mining brought thousands of people to **Bulatjal Yaluk** and its catchment. At the time Bendigo was the richest town in the world and Melbourne the richest city. The Yoorook Justice Commission found that \$287 billion worth of gold in today’s terms have been extracted from Victoria, with vast quantities coming from Djandak, the wealth failing to be distributed to Djaara. Yoorook’s report shows how Djaara were excluded from economic opportunities during the gold rush, and explains how that continues to contribute to the economic and health inequalities experienced by Djaara today. The government acknowledged that Traditional Owners have not benefited from nearly 200 years of mineral extraction in Victoria.<sup>6</sup>

The impact of gold mining continues to devastate Djandak today. ‘Upside Down Country’ is DJAARA’s way of describing a landscape turned over from mining, leading to destructive consequences, with land and waters continuing to be negatively impacted. Toxic levels of arsenic, mercury and lead are commonly found in land and waters. A byproduct of mining practices. Not only was all the wealth from gold extracted by colonists and taken away with no benefit for Djaara, DJAARA with likeminded partners are tasked with working towards healing Upside Down Country.

A 2017 Environmental Protection Authority (EPA) report confirmed the Loddon River is significantly impacted by historical gold mining, with mercury and arsenic concentrations in the river well exceeding safe values. This contamination has transferred into animals, with mercury levels in redfin, perch and carp exceeding national food safety limits. This now makes it harmful for Djaara to eat fish from rivers on Djandak, limiting fishing which is important for continuing culture for Djaara.

Additionally, agricultural development throughout the catchment has increased nutrient runoff into the river system. Fertilisers washing off paddocks introduce excessive nutrients into **Bulatjal Yaluk**, contributing to toxic algal blooms. These blooms damage river health, reduce water quality and restrict cultural, recreational and ecological uses of the river. In recent years the number of algal blooms in the reservoirs of Cairn Curran, Tullaroop, Newlyn and Hepburn Lagoon have become more frequent. This is a clear sign from Country that something is not right.

The various dams along **Bulatjal Yaluk** have severely disrupted connectivity for migratory fish like **Girranal** (Perch) and **Wirrap** (Murray Cod). Girranal no longer spawn in **Bulatjal Yaluk** because they cannot migrate upstream due to barriers such as weirs. Fishways are important in creating opportunities for fish to move through these barriers.

It is well known amongst waterway managers and government that **Bulatjal Yaluk** is in trouble. Not only is it not supporting healthy populations of native flora and fauna, but the contamination is having a negative chain reaction to Djaara and others who gather resources on the river. We must act swiftly to recover more environmental water for **Bulatjal Yaluk**, heal the surrounding upside-down Country and return a more natural rhythm to the river, or else the already critically depleted populations of native fauna and flora may be lost forever.

Figure 11: Kinypanial Creek (5/2/24)



“Fish taste worse here on the Loddon. The Murray Cod look different, as though they are sick. They are bluer than they should be, they should have a cleaner green tinge. The Yabbies caught here also need to be flushed out well before eating”

– E-water Wartaka member (6/2/2026)

Eating the fish where the water is bad, we are poisoning ourselves

– E-water Wartaka member (6/2/2026)

We want our spirit fish to be able to complete their lifecycle as they should such as cod and perch in the Loddon

– Kapa Gatjin member (12/11/2025)

2.2) Aboriginal Waterways Assessments

The Loddon River catchment is Djandak’s largest catchment. 38 AWA’s have been conducted in the entire catchment area. That includes well known waterways such as Birches Creek, Tullaroop Creek, the Loddon River, The Mooloort Plans, Bendigo Creek, Kamarooka Wetlands. Some of the well-known townships include Bendigo, Castlemaine, Maryborough, Daylesford, Wedderburn, Inglewood.

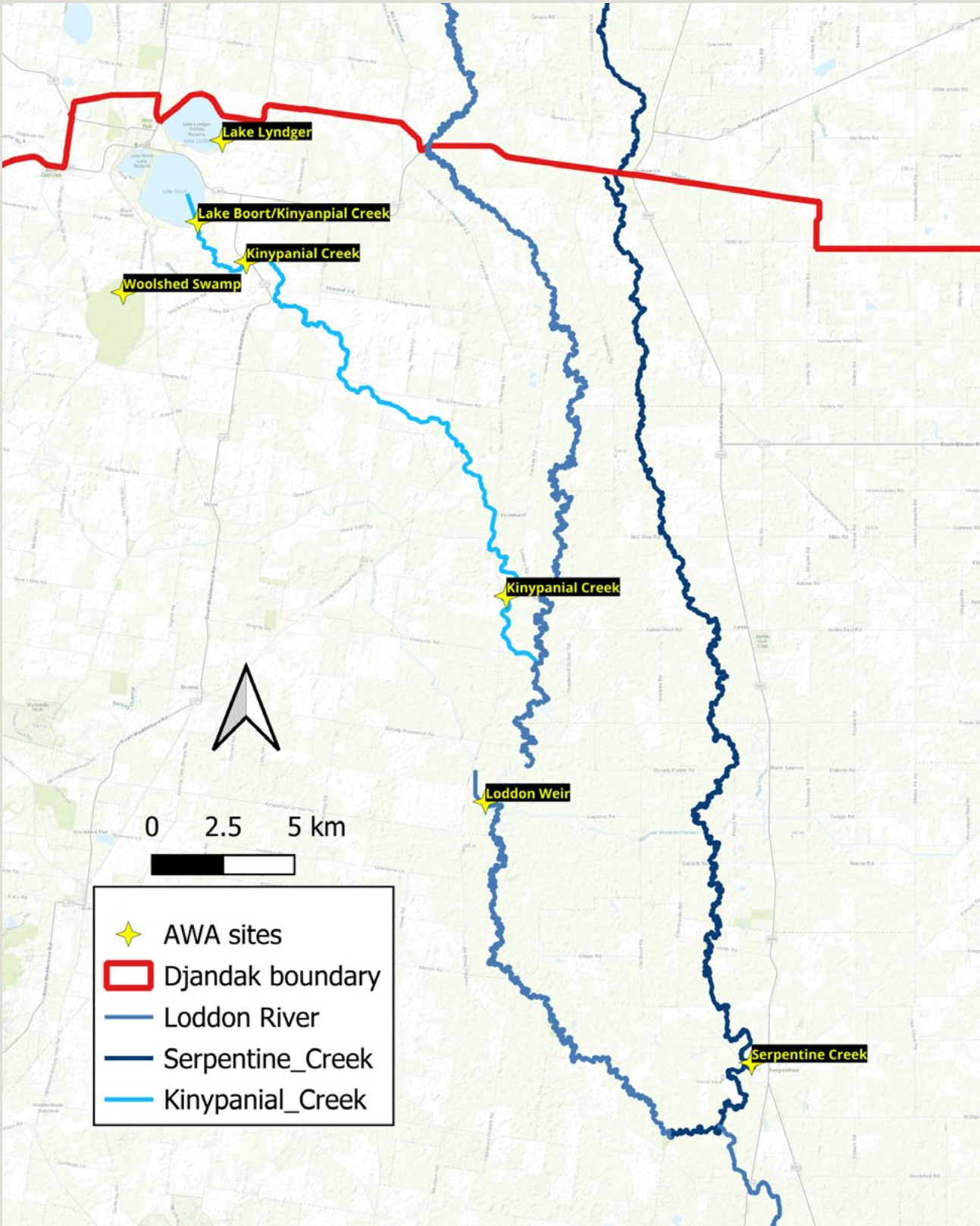


Figure 12: Northern Loddon Catchment AWA locations

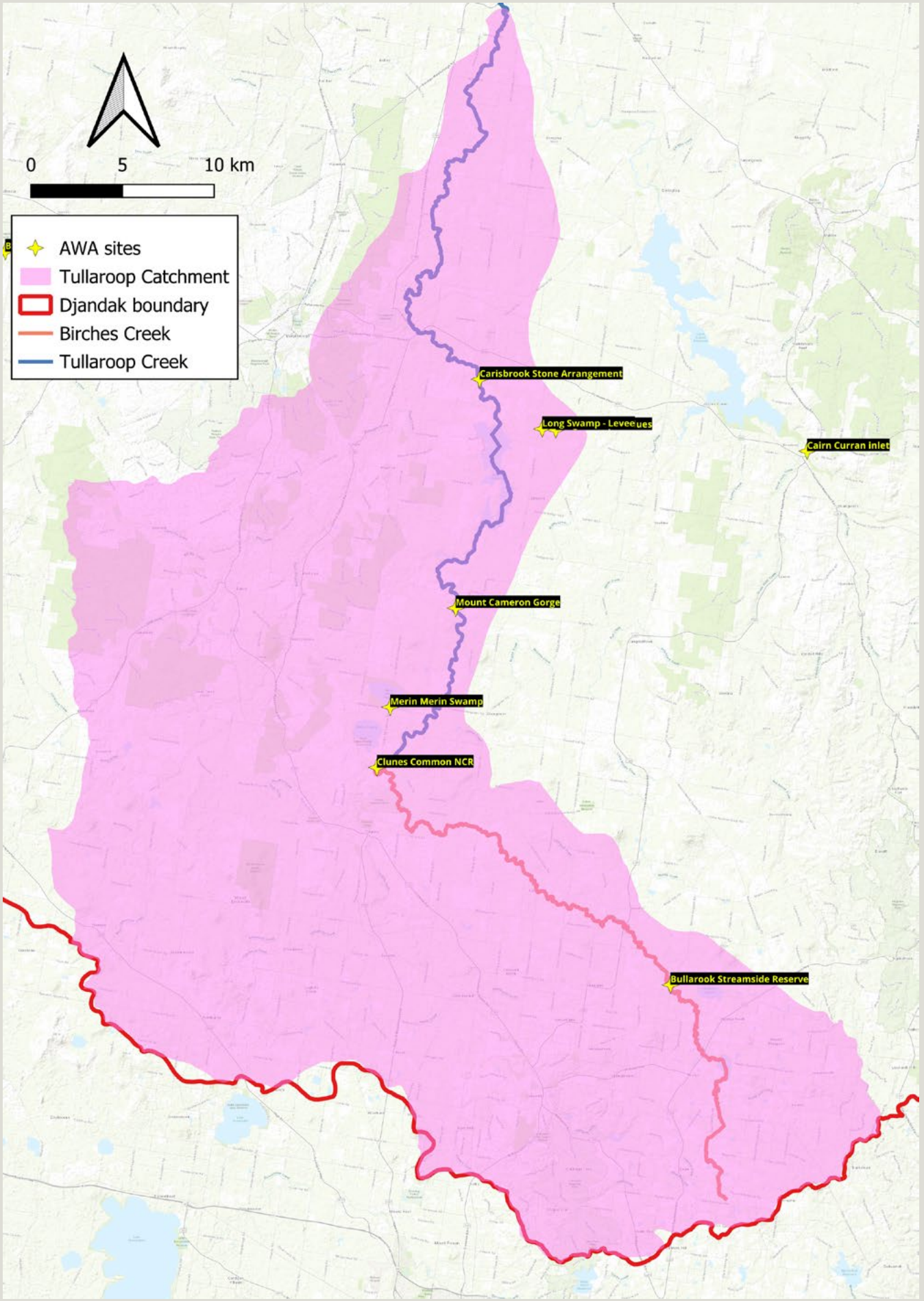


Figure 13: Tullaroop catchment with locations of AWA's completed



Figure 14: Bees and Butterflies walk and talk

## 2.3) Reflections

A Djandak **Wi** (Country Fire) cultural burn was conducted at Long Swamp on 28 October 2025, led by Djandak **Wi** team. This burn was a Trust for Nature and DJAARA collaboration, with priority for cultural burn set by the **Kapa Gatjin** members reflecting cultural and ecological needs. The burn was a success with it being the first cultural burn at Long Swamp by DJAARA corporation. It is now being followed by joint monitoring undertaken by Djaara members and Trust for Nature. Monitoring outcomes will inform whether additional follow-up burns are required to further suppress weed species and support increased biodiversity across the site.

Thunder Swamp and Tang Tang Swamp also received a cultural burn in Autumn 2025. Thunder Swamp has been the focus of work by the **Gatjin** team, leading consultants Nature Glenelg Trust to conduct an eco-hydrological assessment of the swamp and conduct stakeholder engagement to navigate the best restoration options for the swamp. Working with neighbouring landholders, agencies and the community, the project aims to come to a joint restoration plan. The Thunder Swamp Wartaka has met with Nature Glenelg Trust on multiple occasions out at site and online. Their work has contributed to the development of a DJAARA- led restoration plan aiming for completion by July 2026.

**Kapa Gatjin** completed AWA's at Laanecoorie Reservoir to support Goulburn Murray Water in their Recreational Area Management Plans. This work by Kapa Gatjin reviewing Recreational values and amenities, has informed recommendations for Djaara spaces within the reservoirs, and safety of sites including the protection of cultural heritage and vulnerable vegetation.

Groundwater investigations have been conducted in the Tullaroop creek and Larni Barramul **Yaluk** catchment's. Groundwater is an important component of the water cycle in these areas and is being investigated to understand how best to manage the resource to support flows in the waterways in conjunction with existing extraction that supports urban and agricultural needs.

In December 2025 **Kapa Gatjin** members participated in the Djaara Butterfly and Bee On Country Day in Trentham and Lyonville, an end-of-year event focused on pollinators and their habitats, facilitated by Hepburn Shire Council. The day explored cultural connections between butterflies, Country, women and children, followed by workshops and on-Country walks led by ecologist Brian Bainbridge and Clancy "The Bee Man" Lester. The connection between butterfly and bee behaviours as seasonal indicators and the Djaara Seasonal Calendar was discussed. Members also learned how to create pollinator habitats for future plantings and wetland restoration and built native bee homes from timber blocks and reed bundles wrapped in paperbark.

In September 2025, two **Kapa Gatjin** members supported the North Central CMA in releasing River Blackfish at the Municipal Baths Site in Bendigo after 33 were found and translocated from channels near Shepparton. River Blackfish have been in Bendigo Creek in living memory of locals, but are currently extinct to the area. This translocation aims to re-introduce these significant species to the area of Bendigo.

In 2025 various waterway monitoring activities have been conducted, many with **Kapa Gatjin** members. These include eDNA sampling (22/09/25); Waterbugs monitoring (19/11/25); and monthly Waterwatch.



Figure 15: Djaara and NCCMA conducting eDNA sampling 25/09/2025



Figure 16: Thunder Swamp Wartaka with consultants from Nature Glenelg Trust at Thunder Swamp Wildlife Reserve

2.4) Cultural Values

Table 4 shows a table of Cultural Values on **Bulatjal Yaluk** from AWA’s completed in the area. For a fully compiled list of Cultural Values across all the environmental water systems on Djandak and their associated cultural uses, cultural indicators, water requirements and Djimbunang (right way) indicators & objectives see Appendix 2.

Table 4: **Bulatjal Yaluk** Cultural Values

| Theme/<br>Category       | Quotes/Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Cultural Value          |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Murrun Djaa<br>(Animals) | “There was good cover for some waterbirds, platypus, water rats, frogs and fish. There were plenty of rocks that had been placed in the water that would be ideal for yabbies and small native fish like gudgeon.”<br><br>“There was an abundance of tree on each bank that was being used as habitats for birds and marsupials. The water ribbon would be used by fish for protection”<br><br>“With plenty of logs in the Creek, it is ideal cover for waterbirds, platypus mammals, frogs and fish.”<br><br>“NCCMA put in nets to show us some of the variety of fish, including shellfish. There was a lot of introduced fish fingerlings found, which can prove to be a danger to our native species. From the nets were also yabbie, shrimp and native fish.” | Water birds             |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Watjarang (Platypus)    |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Fish                    |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Waterbugs               |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Dum (Frogs)             |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Gurri (Kangaroo)        |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Giranal (Golden perch)  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Rakali (Water rat)      |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Yapitj (Yabby)          |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Bandjal (Murray cod)    |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Djalup (Mussels)        |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Rakali                  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Bandjal (Murray cod)    |
| Malak (Plants)           | Yellow gum; Silver Box, Cumbungi; Kangaroo Grass<br><br>“Sheep grazing has occurred at this landscape site.”<br><br>“Spiny BullRush; Grey box; Yellow Box; Gum Tree; bush tomato; kangaroo grass, Red Gum”<br><br>“River Red Gums are plentiful on or near the water’s edge – a lot collapsed into the water many, many years ago. There have been efforts to “patch” the banks to ensure the trees do not collapse into the water.”                                                                                                                                                                                                                                                                                                                               | Wararak (Silver box)    |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Cumbungi                |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Medicine plants         |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Water ribbon            |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Yellow gum              |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Phragmite               |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Biyal (River red gum)   |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Buwatj (Kangaroo grass) |

| Theme/<br>Category | Quotes/Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Cultural Value                           |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| Gatjin             | “The weir disrupts the flow “<br><br>“Water bugs present during monitoring this morning. Fish presence must be decent. Sediment making water cloudy so many appear less clear than it is. Check Water Quality for area.”<br><br>“Water a bit murky and has a slight smell”<br><br>“Looks very clear from on the banks and close to edge. There did not seem to be any unusual smells”<br><br>“From upstream through to here - logs in water; mini weir would alter the flow and needed to be monitored by humans.”                                                                                                                           | Water quality                            |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Water flow without regulation (Dams etc) |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Reliable water source                    |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Water smell & aesthetic                  |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Snags in the water (i.e. logs)           |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Water disturbances                       |
| Continuing Culture | “In many ways – getting our people outside and maintaining good health through bushwalking/river walking.”<br><br>“a waterway - fishing, swimming, native birds and animals”                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Fishing + swimming                       |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Walking on Country                       |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Djandak Wi (Cultural burn)               |
| Cultural Heritage  | “It is important to make this place healthier. A lot of cultural heritage along this creek, so it proves our people occupied these waterways regularly. “<br><br>“As stated, before for Cultural/social gatherings – to inform and teach, deliver and maintain such an asset.”<br><br>“Place to connect to country, nearby cultural sites, good condition to support medicine for collection, potential bush foods, permanent and constant delivery of water gives good reliability for species to be present regularly.”<br><br>“Feels like home in a way and it’s a Djaara place/land and first occupation has been here river-plain area” | Connection to Country                    |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Cultural activities - ceremony, teaching |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Cultural landscape                       |



### 3 Yaluk (Campaspe River)

**Yaluk** is a culturally significant waterway on Djandak having been cared for by Djaara for thousands of years. It acts as a boundary between Djaara and Taunguarang Countries, ultimately flowing downstream onto Yorta Yorta Country. Djaara continue to have relationships with and deep connection to these neighbouring clans. It forms part of a broader cultural landscape that encompasses more than physical features, holding stories, knowledge, Lore and ongoing cultural responsibilities.

The river has long been a place of travel, connection and maintaining livelihoods, providing **gatjin**, food resources and places for gathering and continuing culture. Today, well known places on **Yaluk** show signs of Djaara in the landscape with a Birthing tree and Ring trees at English's Bridge, and possum trees at Rocky Crossing.

For Djaara, all elements of Djandak are understood as having a **murrup** (spirit), including **gatjin**, Malak (plants), Murrun Djaa (animals), landforms and people. The health of **Yaluk** is inseparable from the health of the surrounding Country. Djaara continue to care for the river today through enduring cultural obligations passed down through generations

Figure 17: Campaspe River at Redesdale Bridge  
(22/3/2024)

*There are some positives about the Campaspe, it's never been de-snagged, we have done fish releases there recently, and we have a good partnership with the CMA here. There also good sized fish, platypus, it's all there in the Campaspe.*

– E-water Wartaka member (6/2/2026)

### 3.1) Truth telling

Since colonisation, the Campaspe River has been extremely altered, with ongoing consequences for Country and community. The river quickly became central to pastoral expansion, the 1850s gold rush, and settlement. These developments occurred with little understanding of, or regard for the river's natural behaviour or Djaara knowledge systems that had guided life on Djandak for thousands of years.

Flooding is a natural and essential process for the **Yaluk** and its floodplains. Seasonal floods allow water to spread across the landscape, releasing fine sediments rich in nutrients from the river onto surrounding floodplains. These processes sustain highly fertile soils, support diverse ecosystems, and maintain the health of the river and Country as a whole. For Djaara, floods are a vital natural occurrence that nourish the land and sustain life.

However, European settlement patterns increasingly ignored this knowledge. Towns, roads and agricultural infrastructure have been built on floodplains, placing people and assets at risk of damage and harm from flooding events. Rather than floods being able to perform restorative ecological functions they are needing to be managed to protect property and communities often resulting in further river modification and harm. Additionally, climate change has resulted in a prevalence of summer floods. These can have catastrophic consequences on waterways with the warm temperatures resulting in blackwater low oxygen events.

### 3.2) Aboriginal Waterways Assessments

A Campaspe River AWA was conducted in 2019 which saw 10 AWA's completed on the river. Only one of these is downstream of Lake Eppalock, at Doaks Reserve.

The construction of Lake Eppalock in 1963 fundamentally changed **Yaluk's** flow regime. Regulation has reduced natural flood frequencies and altered the timing, volume and duration of flows. While the dam supports irrigation, urban water supply and controlled environmental releases it has limited the river's ability to connect with its floodplain, disrupting sediment movement, ecological processes and cultural landscape functions that Djaara understood and managed for generations.

Additionally, cold water pollution is a problem in **Yaluk**, with the water outlet from Lake Eppalock at the bottom of the dam where it is coldest. This has shown to heavily impact native fauna, stressing fish and negatively affecting their processes which rely on specific ranges of temperatures for survival, breeding and growth.

The management of **Yaluk** fails to meaningfully incorporate Djaara knowledge about where floodwaters go, how water moves across Country, and why floods are an important ecological process. This knowledge is critical to addressing ongoing flood risk, restoring floodplain function and healing **Yaluk**. Without centring Djaara perspectives, future decisions risk repeating the same mistakes that have caused harm to **Yaluk** and the communities that have come to rely on it.

### 3.3) Reflections

**Kapa Gatjin** conducted AWA's at Lake Eppalock to support Goulburn Murray Water in their Recreational Area Management Plans.

In October 2024, two **Kapa Gatjin** members supported North Central CMA to release Catfish into the Campaspe at Campaspe Weir in Elmore. These Catfish were brought from the Glenelg River where there is an overabundance. This along with other fish releases into **Yaluk** has shown a positive partnership in this region.

In late 2025, the **Gatjin** team attended the Fosterville Gold Mine to better understand DJAARA's new agreement with the mine and to explore opportunities to heal Country nearby to the site and to work together with environmental coordinators at the mine. The Campaspe River and Axe Creek are nearby waterways to Fosterville and opportunities are being explored to work towards a coordinated approach to managing the waterways near to the mine. Given the risk in a mine's nearby proximity to **Yaluk** and the catchment, a coordinated effort will be crucial in ensuring no adverse impact on Country.

Figure 18: Kayaking on the Campaspe near Doaks Reserve (14/5/26)



3.4) Cultural Values

Table 5 shows a table of Cultural Values on **Yaluk** from AWA's completed in the area.  
For a fully compiled list of Cultural Values across all the environmental water systems on Djandak and their associated cultural uses and cultural indicators, water requirements and Djimbunang (right way) indicators & objectives see Appendix 2.

Table 5: Cultural Values table of **Yaluk**

| Theme/<br>Category              | Quotes/Data                                                                                                                                                                                                          | Cultural Value                  |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| <b>Murrun Djaa</b><br>(Animals) | “Healthy platypus population, platypus breeding, wallabies and kangaroos common in area”                                                                                                                             | Birds                           |
|                                 |                                                                                                                                                                                                                      | <b>Djimbongurri</b> (Wallabies) |
|                                 |                                                                                                                                                                                                                      | <b>Gurri</b> (Kangaroos)        |
|                                 | “Very good habitat for animals and birds. Native vegetation, tree hollows, rocks, frogs, fish, platypus, wren, crimson rosella, cockatoo”                                                                            | Native Fish                     |
|                                 |                                                                                                                                                                                                                      | Ducks                           |
|                                 |                                                                                                                                                                                                                      | <b>Watjarang</b> (Platypus)     |
|                                 |                                                                                                                                                                                                                      | <b>Dum</b> (Frogs)              |
| <b>Malak</b> (Plants)           | “Native grasses,<br><br>“E-water has helped to re-stabish native vegetation to the site (after the millennial drought took its effects), lots of natives in river (instream Native veg supported through E-watering” | <b>Buwatj</b> (Kangaroo grass)  |
|                                 |                                                                                                                                                                                                                      | Buttercups                      |
|                                 |                                                                                                                                                                                                                      | Eel grass                       |
|                                 |                                                                                                                                                                                                                      | Wattle                          |
|                                 | “Buttercups, eel grass, some water ribbon, wattle, tussock, black wattle, grey wattle, bottlebrush. Re-vegetation of a variety of gums on the other side of the bank”                                                | Water ribbon                    |
|                                 |                                                                                                                                                                                                                      | Grey wattle                     |
|                                 |                                                                                                                                                                                                                      | Reeds                           |
|                                 |                                                                                                                                                                                                                      | Gum trees                       |
| <b>Gatjin</b>                   | “widened and narrowed in areas - straightened (stepped meandering) -shape has changed to accommodate the bridge and its infrastructure”                                                                              | Water quality                   |
|                                 |                                                                                                                                                                                                                      | Water Flow                      |
|                                 | “Fairly shallow, running slowly upstream, vegetation overgrown”                                                                                                                                                      | Shallow                         |
|                                 | Water is dark and murky                                                                                                                                                                                              | Pass on clean water             |

| Theme/<br>Category        | Quotes/Data                                                                                                                                                                                                                                                                               | Cultural Value               |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| <b>Continuing Culture</b> | “The river, our eating places, our connection to our native plants and trees- health of our waterway”<br><br>“When cleaned up- gatherings, ceremonies and rights, get youth ‘outdoors’, with adequate signage and ‘art’ throughout”<br><br>“It’s a relaxing place to camp, hunt and fish” | Ceremony                     |
|                           |                                                                                                                                                                                                                                                                                           | Fishing & hunting            |
|                           |                                                                                                                                                                                                                                                                                           | Manage Country appropriately |
| <b>Cultural Heritage</b>  | “The river, our eating places, our connection to our native plants and trees- health of our waterway”                                                                                                                                                                                     | Tangible Cultural Heritage   |
|                           |                                                                                                                                                                                                                                                                                           | Cultural landscape           |



## 4 Birches Creek

Birches Creek represents a vast cultural landscape where Djaara continue Culture, ceremony, lore and have done so for thousands of years. This cultural landscape includes **Gurutjanga** (Mt Kooroocheang), and Mount Moorookyle. **Gurutjanga** has ceremonial earth rings, and oven mounds, and many other markers of Djaara in the landscape; once pristine waterfalls, gorges and creeks, is an area of utmost importance. The area around Birches Creek is now well known for it's agricultural fertility due to geologically recent volcanic activity, where **Murnong** (Yam Daisy) and other indigenous plants were an important food source for Djaara.

Figure 19: Bullarook Streamside Reserve (27/5/24)

4.1) Truth telling

The arrival of European squatters in the late 1830s, such as Captain John Hepburn at **Gurutjanga**, led to the immediate dispossession of land from Djaara. Djandak **Wi**, that had maintained the fertile, park-like savanna was stopped, leading to significant changes in vegetation and the loss of traditional food and fibre sources. The area became littered with sheep and cattle runs, resulting in soil compaction and the destruction of important complex Aboriginal croplands.

Historians have said that due to the incredibly fertile lands and exposed landscape of this volcanic region Djaara suffered appallingly. Colonisers were attracted to the productive lands and Djaara were unable to hide, resulting in a brutal result for Djaara.

The area is also well known for gold mining which ravaged the ground, with it being left as upside down Country. Extensive sludge was released into Birches Creek and other local waterways, with this toxic sediment filling the deep pools many fish sought refuge in during drying periods, and destroying critical habitat for other aquatic species. Important wetlands in the region including the Mooloort Plains were drained for agriculture, wreaking havoc on the natural landscape which indigenous flora and fauna relied upon.

Two Massacre sites are found nearby Birches Creek, one at Glengower Station near Campbelltown and Tullaroop Creek, where 6 Aboriginal people were killed via poison and firearms and one further west on Mount Mitchell next to Lexton which resulted in 10 Aboriginal deaths via firearms due to the alleged “flock of sheep driven from” a run.

Birches Creek has more recently become plagued by infestations of weeds and willows, which DJANDAK and North Central CMA with support of partners are actively working to remove. Birches Creek holds a regionally significant population of **watjarang** (Platypus) and **wulk** (River Blackfish), and efforts to maintain these populations are critical.

In recent years the flows into Newlyn Reservoir which feeds Birches Creek have not recovered over the winter months as it used to. Anecdotally, groundwater extractions and land management practices are leading to less water flowing into the rivers. These concerns must be addressed early to mitigate long term or even irrevocable harm in Birches Creek, and to sustain the already struggling ecosystem.

4.2) Aboriginal Waterways Assessments

In 2021 **Kapa Gatjin** conducted AWA's along Birches Creek at two locations: Bullarook Streamside Reserve and the junction of Birches Creek and Creswick Creek. The series of AWA's explored the wider Tullaroop catchment including the Mooloort Plains as well as Merin Merin Swamp as can be seen in Figure 10.

These AWA's are a starting point in conveying DJAARA's cultural values for Birches Creek. It is hoped that in the future Birches Creek can be the subject of a Cultural Water Management Plan which better incorporates DJAARA's cultural values and objectives into environmental water planning and delivery.

Figure 20: Gatjin Team observing Cultural Heritage at Merin Merin Swamp (8/9/25)



4.3) Reflections

In 2024 DJAARA were donated 150ML of water from Central Highlands Water, resulting in a DJAARA led watering event. This was an important milestone for DJAARA and a great achievement with the hope of continued future collaborations with involved agencies and the community.

Groundwater water is heavily relied upon for urban and agricultural water supply in this region. Groundwater is also known to be heavily connected to Birchs creek, providing valuable base flow at times when surface water runoff is low. Investigations are underway in the Forest Hill area to establish a revised groundwater management regime that balances water for urban population, agriculture and Birch’s creek.

DJAARA have an opportunity to source ground water through Victoria’s licencing framework to hold and use defined groundwater volumes for defined purposes. Whilst groundwater is not commonly extracted for environmental benefit groundwater licences could be managed in a way that is cognisant on the interconnectedness of groundwater and waterways to preserve ecological and cultural values.

In 2025 various waterway monitoring activities have been conducted, many with **Kapa Gatjin** members. These include eDNA sampling (23/09/25); Waterbugs monitoring (17/11/25); and monthly Waterwatch.



Figure 21: Water bug monitoring at Birches Creek 19/11/2025



Figure 22: Gatjin Team at the Bullarook Streamside Reserve (22/4/24)

4.4) Cultural Values

Table 6 shows a table of Cultural Values on Birches Creek from AWA’s completed in the area. For a fully compiled list of Cultural Values across all the environmental water systems on Djandak and their associated cultural uses, cultural indicators, water requirements and Djimbunang (right way) indicators & objectives see Appendix 2.

Table 6: Cultural Values Table for Birches Creek

| Theme/ Category       | Quotes/Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Cultural Value                  |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Murrun Djaa (Animals) | “For black fish there is lots of reeds. Native birds e.g. white face crane and small birds there is a lot of rushes for nest. Lots of water bugs for food and fresh water to drink.”<br><br>“Platypus, blackfish. Habitat looks good for native animals & birds. Trees scattered around. Reeds for birds & fish life”<br><br>“Birds and water bugs - The habitat in this local area is good for waterbirds and water bugs due to the reeds, rushes and nesting sites. Cranes and ducks were noted.” | Birds                           |
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Fish                            |
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Watjarang (Platypus)            |
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Water bugs                      |
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Wulk (Blackfish)                |
| Malak (Plants)        | River Red Gums, willows, briar rose, and other weed species<br><br>Extensive weed removal and revegetation is required using a range of techniques such as manual removal, cultural burning, or spraying to get through the overgrown areas. This could be done in stages to prevent erosion.                                                                                                                                                                                                       | Water ribbon                    |
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Biyal (River red gum),          |
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Darrk (manna gum) and swamp gum |
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Instream vegetation             |
| Gatjin                | “This is a beautiful creek, clean and natural.”<br><br>“Water quality is good at this place. There are a few introduced species but with maintenance this site would be the best I have seen out of all the AWA’s.”<br><br>“Water quality at the junction is very good, clear and has no smell.”                                                                                                                                                                                                    | Good water quality              |
| Continuing Culture    | “There is a lot of Cultural resources at this site for cultural talks e.g. – rushes for weaving with, stone pebbles and rocks for tool making or trading.”<br><br>“Good fishing, swimming and food sources. Weaving plants. Social area to meet.”<br><br>“Needs a good cleanup - cultural burn, tree removal, water testing”                                                                                                                                                                        | Djandak Wi (Cultural burn)      |
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Weaving                         |
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Gathering place                 |
| Cultural Heritage     | “A great place to spend time at.”<br><br>“All waterways are important for Aboriginal people for camping & resources”<br><br>Tachylyte, used make stone tools, was quarried nearby by Djaara in Hepburn lagoon                                                                                                                                                                                                                                                                                       | Cultural sites                  |



## 5 Lake Boort

Lake Boort is a place of cultural importance to Djaara and the **Yung Balug** Clan, with the area surrounding the lake containing more than 400 scarred trees and cooking mounds, providing tangible evidence of thousands of years of cultural activity and ongoing relationships with Djandak.

The scarred trees show the bark and trees were used by Djaara in many ways, including making drinking vessels, coolamons, shelters, frames for drying possum skins, canoes and possum trees, goanna trees. These cultural ways demonstrate deep knowledge of the landscape and sustainable use of resources passed down through generations. The cooking mounds and scarred trees around Lake Boort highlight the lake's long-standing role as a place of gathering, nourishment and culture. Together, these features form a living cultural landscape where stories, skills and knowledge remain deeply embedded in the land

The name Boort comes the **Djali** word meaning “smoke from the hill”, referring to Bald Hill near Lake Boort. This elevated site was used by Djaara as a signalling place, where smoke could be seen across the flat northern plains to communicate to neighbouring clans, often to inform that trading season had begun.

Figure 23: Lake Boort western end with water (16/11/2023)

## 5.1) Truth telling

Prior to European invasion, the Lake Boort area was a place of significant cultural activity and care. The highest concentration of scarred trees in Victoria, cooking mounds and other cultural features around the lake reflects a long history of occupation, sustainable resource use and deep cultural connection.

The arrival of European squatters in the late 1830s led to the rapid dispossession of Djaara from the Boort landscape. Access to Lake Boort and surrounding Country was restricted or denied, and culture connected to water, food gathering, ceremony and communication were disrupted. Traditional land management systems that had maintained the health of the lake and its wetlands for thousands of years were replaced with grazing, logging and agricultural development.

These changes altered the ecology of Lake Boort. Grazing pressure, vegetation removal and changes to hydrology damaged soils, native plant communities and wetland function. The natural wetland process of the lake—its cycles of wetting and drying—came to be viewed as a problem rather than an essential process. Management decisions increasingly prioritised agricultural and settler needs, further disconnecting the lake from its cultural and ecological rhythms.

The local clan group for the region, **Yung** Balug can also be translated to the Quoll people. The Eastern Quoll, once widespread across Victoria, including the northern plains, was a native carnivore that played an important ecological role in regulating insects, small mammals and carrion. Following European invasion, quolls rapidly declined across Djandak due to land clearing, farming, poisoning, targeted killing, and the introduction of foxes and feral cats. By the early 1960s, the species was considered extinct on the Australian mainland, including in the Lake Boort region.

## 5.2) Aboriginal Waterways Assessments

The Lake Boort area had AWA's conducted in 2018, and again along Kinypanial Creek in 2024. These surveys were completed along Kinypanial Creek, at Lake Boort, Woolshed Swamp, and Lake Lyndger. These can be found in Figure 9.

Figure 24: Flying Foxes roosting at Lake Boort (18/12/24)





Figure 25: **Kapa Gatjin** members conducting a bird survey with ARI scientists in February 2025 (taken by Nyill Khawaja)

### 5.3) Reflections

In Autumn 2025 the Arthur Rylah Institute led bird surveys which were accompanied by two **Kapa Gatjin** members. The **Kapa Gatjin** members enjoyed being on Country monitoring birds with western science experts, with a great day of two way knowledge sharing. The following birds were found:

- 4,609 waterbirds of 26 species, including 3,500 Grey Teal, 40 Australasian Shoveler, 4 Sharp-tailed Sandpiper, 4 Eastern Great Egret, 1 Australian Gull-billed Tern and 1 White-bellied Sea-Eagle, 215 Red-kneed Dotterel
- A single female Australian Little Bittern (FFG: EN) was seen on the east side of adjacent Little Lake Boort; this species was first reported at the site by birdwatchers in November.
- The next day (21 February), 6 Freckled Duck (FFG: EN) were found on the south side of Lake Boort

Cultural immersion was led by **Kapa Gatjin** members at Lake Boort and its surrounds for Wanggal Partners (Executive members from four water authorities on Djandak, North Central CMA, VEWH & DEECA) in May 2025. A great day was had sharing culture through traditional feather making and knowledge sharing excursion of Lake Boort that shared the local knowledge of the land with Wanggal, **Gatjin** and **Kapa Gatjin** members.

Figure 26: Flock of 177 Australian Pelican (Feb 2025 - taken by Nyill Khawaja)



### 5.4) Cultural Values

Table 7 shows a table of Cultural Values on Lake Boort from AWA's completed in the area. For a fully compiled list of Cultural Values across all the environmental water systems on Djandak and their associated cultural uses, cultural indicators, water requirements and Djimbunang (right way) indicators & objectives see Appendix 2.

Table 7: Cultural Values Table Lake Boort

| Theme/Category               | Quotes/Data                                                                                                                                                                                                                                                                                                                                                                                                         | Cultural Value                      |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <b>Murrun Djaa</b> (Animals) | "Lots of birds but should be hunting other animals like kangaroos which need water for boom"<br><br>"Birds present. No water so no fish or turtles"                                                                                                                                                                                                                                                                 | <b>Yung</b> (Eastern Quoll)         |
|                              |                                                                                                                                                                                                                                                                                                                                                                                                                     | Native birds                        |
| <b>Malak</b> (Plants)        | "The environment seems to show a lot of native veg, plenty of tree varieties. A lot of young gum trees growing in the lake. Lacking in basket weaving materials. There seems to be a lot of weeds on the outer edges of the lake, not so much in the lake."<br><br>"At this point in time there is evidence of native plants here, but in months to come it would be good to see a lot more due to seasonal water." | <b>Biyal</b> (River Red gum)        |
|                              |                                                                                                                                                                                                                                                                                                                                                                                                                     | Aquatic plants                      |
|                              |                                                                                                                                                                                                                                                                                                                                                                                                                     | Native grasses                      |
| <b>Gatjin</b>                | "Water coming in at the wrong time in"<br><br>"Wrong quantity doesn't allow wildlife and plant life to grow to its best ability."<br><br>"There is no water here. There is no water flow at this place in a natural way. It is all controlled by regulators and farming practices"                                                                                                                                  | Allow for 'right water, right time' |
| <b>Continuing Culture</b>    | "Fishing would be good when there's water in the Lake"<br><br>"Walking, weaving, camping, ceremony"                                                                                                                                                                                                                                                                                                                 | Ceremony, camping, weaving          |
|                              |                                                                                                                                                                                                                                                                                                                                                                                                                     | Fishing                             |
| <b>Cultural Heritage</b>     | "Ancestral history, family history, community"<br><br>"Scarred trees, history"<br><br>You can feel our people here and this is why we do ceremony to let our spirit know to look after us                                                                                                                                                                                                                           | Cultural sites                      |
|                              |                                                                                                                                                                                                                                                                                                                                                                                                                     | Cultural knowledge                  |



## 6 Wimmera Wetlands – Jeffcott Wildlife Reserve & Jesse Swamp

Djandak's most western region, within the Wimmera catchment, is a rich cultural landscape, and has been occupied by Djaara for thousands of years. Well known waterways in the area include the Avon Plains (Walkers Lake, Hancocks and Hollands Lakes), the York Plains along the Avon River, Lake Buloke, and the Richardson River, as well as many other smaller wetlands and lakes. Wetlands in the Wimmera region are rich in cultural heritage, however, much of it has not been officially recorded or surveyed. These waterways form part of **gatjin**, plant, animal and ancestral systems tied to lore, and obligations to care for Country. Wetlands in drier landscapes like the Wimmera are especially important for Djaara as rich places to find resources, places of gathering and holding ceremony, and places that hold ancestral memory and lore.

Predictions for future water availability are far from positive for the Wimmera, where climate change continues to exacerbate drier conditions. With less rainfall, less water will be available for the environment, and ecosystems will be forced to adapt to new conditions. As attempts are made to sure up water security for communities in the region, the environment must also be catered for. Djaara have lived through and navigated climatic changes on Country before. That knowledge is held by Djaara people today, passed down through generations of ancestors through stories, ceremonies, lore and culture. Therefore, DJAARA's role in making decisions for environmental water is critical as we navigate this very real threat of a quickly changing climate.

There are two sites on Djandak in the Wimmera that are fed by environmental water, these are Jeffcott Wildlife Reserve and Jesse Swamp.

Figure 27: Jeffcott Wildlife Reserve

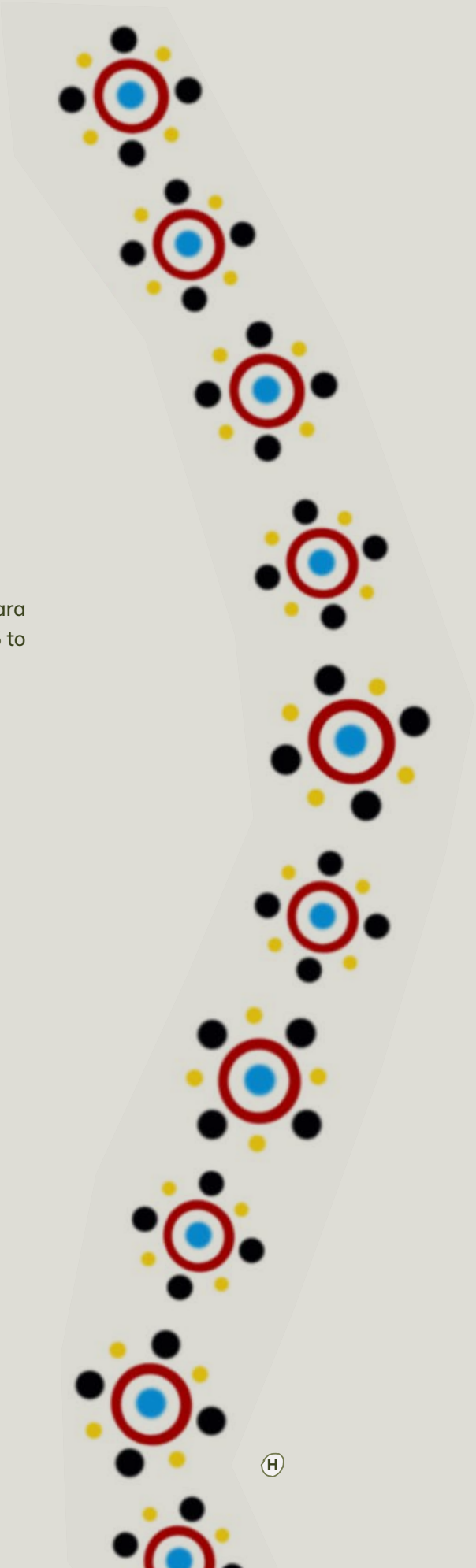
6.1) Truth telling

More research is required to better understand truth telling in this region, however a story of displacement for Djaara is certain.

Environmental Water Wartaka

An environmental water Wartaka consisting of 5 Djaara knowledge holders was developed in November 2025 to provide cultural advice for this DEWP.

Figure 28: Jesse Swamp  
(11/01/2024)



(H)



# Appendix 1 - AI Water Shortfall analysis

## Coliban System

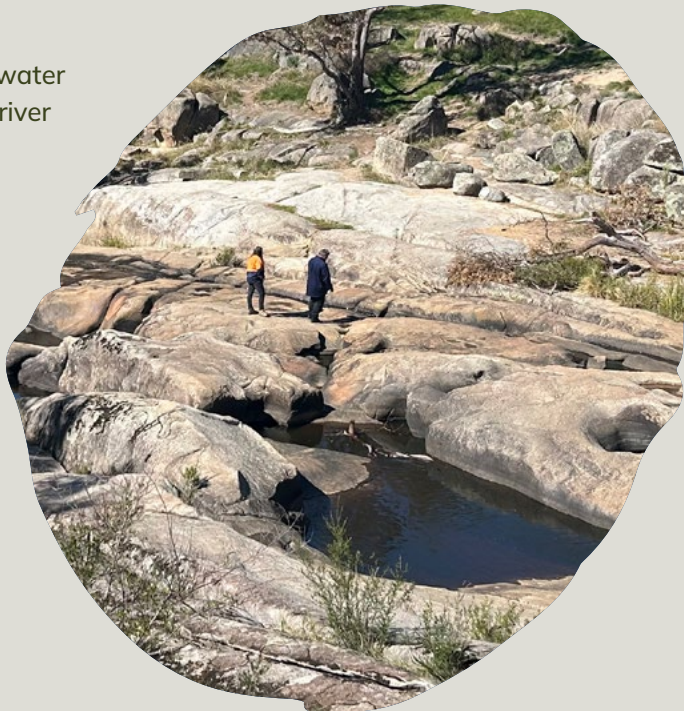
The Environmental Water Management Plan (EWMP) for the Coliban system typically targets:

- **Base flows: ~4–5 GL/year** (Maintain aquatic habitat, water quality, and connectivity for species like platypus and river blackfish)
  - » Target base flow rates: ~10–20 ML/day in summer, ~30–50 ML/day in winter.
  - » Assume ~365 days of flow, but not all days are actively managed (some natural contribution).
  - » Managed component: ~15 ML/day × 300 days ≈ 4,500 ML/year.
- **Spring freshes: ~2 GL/year** (Trigger fish movement, flush organic matter, improve water quality)
  - » Typical fresh: 400–650 ML/day for 3–5 days.
  - » Assume 2–3 events per year:
    - Example: 500 ML/day × 4 days × 2 events = 4,000 ML.
  - » But often scaled down due to water limits → ~2,000 ML/year planned.
- **Autumn freshes: ~1 GL/year** (Support riparian vegetation and platypus recovery after summer stress.
  - » Smaller events: ~700 ML over 3 days.
  - » Assume 1–2 events per year → ~1,000 ML/year.
- **Occasional high flows: ~1–2 GL/year** (Maintain channel form and inundate benches for vegetation)
  - » Bankfull flows are rare (every 2–3 years), so annualized contribution is small.
  - » When delivered, they use ~3,000–5,000 ML in that year, but averaged over time → ~1,000–2,000 ML/year.

Indicative annual requirement for full ecological function based off EWMP targets is: **~8–10 GL/year**

Held environmental entitlements for the Coliban system are **~3–4 GL/year**

This creates a shortfall of approximately **5.5 GL/yr**



## Loddon system

The Environmental Water Management Plan (EWMP) sets indicative annual targets for the Loddon River system (including Pyramid and Serpentine Creeks). This includes:

- **Base flows: ~10–12 GL/year** (Maintain aquatic habitat, water quality, and connectivity for fish and macroinvertebrates.)
  - » Target base flow rates: ~50–80 ML/day in winter, ~30–50 ML/day in summer.
  - » Assume ~365 days, but some contribution from natural flows.
  - » Managed component: ~35 ML/day × 300 days ≈ 10,500 ML/year.
- **Spring freshes: ~4–5 GL/year** (Trigger fish movement, flush organic matter, improve water quality.)
  - » Typical fresh: 400–650 ML/day for 4–5 days.
  - » Assume 3–4 events per year:
    - » Example: 500 ML/day × 4 days × 3 events = 6,000 ML.
  - » Scaled down due to water limits → ~4,500 ML/year.
- **Autumn freshes: ~2 GL/year** (Support riparian vegetation and platypus)
  - » Smaller events: ~700 ML over 3 days.
  - » Assume 2–3 events per year → ~2,000 ML/year.
- **Occasional high flows: ~3–6 GL/year** (Maintain channel form and inundate benches)
  - » Bankfull flows every 2–3 years, using ~6,000–10,000 ML in that year.
  - » Annualized contribution: ~3,000–6,000 ML/year.

The long-term requirement for full ecological function is roughly **~20–25 GL/year** Loddon River downstream of Cairn Curran to Kerang Weir.

Current held entitlements for the Loddon system are approximately: **~12 GL/year** (combined from Cairn Curran, Tullaroop, and supplementary sources like Goulburn system transfers). This does not include natural flows.

This creates a shortfall of approximately **10 GL/yr**



Campaspe system

The Campaspe River EWMP indicates that full ecological function requires:

- **Base flows: ~8–9 GL/year** (Continuous low flows to maintain aquatic habitat and connectivity for fish and platypus)
  - » Target base flow rates: ~30–50 ML/day in winter, ~10–20 ML/day in summer.
  - » Managed component: ~30 ML/day × 300 days ≈ 9,000 ML/year.
- **Spring freshes: ~3–4 GL/year** (Trigger fish movement, flush organic matter, improve water quality)
  - » Typical fresh: 400–650 ML/day for 3–5 days.
  - » Assume 2–3 events per year → ~3,500 ML/year.
- **Autumn freshes: ~2 GL/year** (Support riparian vegetation and platypus recovery after summer stress)
  - » Smaller events: ~700 ML over 3 days.
  - » Assume 2 events per year → ~2,000 ML/year.
- **Occasional high flows: ~1–2 GL/year** (Maintain channel form and inundate benches for vegetation)
  - » Bankfull flows every 2–3 years → annualized ~1,500 ML/year.
- Indicative annual requirement to meet those functions are ~15–18 GL/year.

Held entitlements for Campaspe are approximately ~8 GL/year (mostly from Lake Eppalock and supplementary sources)

This creates a shortfall of approximately 8.5 GL/yr



Birches Creek

Birches Creek EWMP targets:

- **Base flows: ~700–900 ML/year** (to maintain platypus and river blackfish habitat)
  - » Target base flow: ~2–3 ML/day.
  - » Managed component: ~2.5 ML/day × 300 days ≈ 750 ML/year.
- **Freshes (spring/autumn): ~300–500 ML/yr** (improve connectivity and water quality)
  - » Typical fresh: ~100 ML over 2–3 days.
  - » Assume 3–4 events per year → ~400 ML/year.
- **High flows: rare and opportunistic only**

Indicative annual requirement is: ~1–1.5 GL/year

Environmental entitlement in Newlyn Reservoir: ~100 ML/year

This creates a shortfall of approximately 1.15 GL/yr



Supplementary sources may refer to

- Inter-valley transfers or trade: Water can be temporarily transferred from the Goulburn system or other connected systems to meet environmental objectives.
- Carryover water: Unused water from previous years stored in accounts.
- Opportunistic use of unregulated flows: When natural rainfall/runoff creates high flows, environmental managers may piggyback on these events to achieve ecological outcomes.
- Operational releases: Sometimes water released for consumptive purposes (e.g., irrigation) can be timed to also deliver environmental benefits downstream.

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Lower Coliban Kapa Gatjin Workshop notes, June 2025

Lower Coliban Healthy Catchment Plan, RMCG, 2025

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Tullaroop & Long Swamp AWA, 2021

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3) Yaluk (Campaspe River)

Campaspe AWA, 2019

4) Birches Creek

Tullaroop & Long Swamp AWA, 2021

Final Watering Options Report, Birches Creek, RMCG, June 2024

5) Lake Boort

Lake Boort AWA, 2018

Footnote Index

- 1) From **Bayikina** (reawakening) Dja Dja Wurrung Language – a DJAARA resource
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- 3) (McGukin & Doeg 2001 in SKM 2006a).
- 4) (SKM 2006b)
- 5) Words from Goldfields Track sign - Bulatjal Yaluk
- 6) Yoorrook Justice Commission (2025) Yoorrook for Transformation: Third Interim Report – Volume 2. Published by order of the Parliament of Victoria.

Acknowledgement of Djaara Artists

(in order of appearance)

A Front Page: Peta Hudson

Gatjin Murrup

“White & Blue lines represent the past, present, and future,6 circles represent Djaara seasons.

3 Border lines represent the Commonwealth and Victorian Environmental Water Holders, North Central CMA and DJANDAK’s Partnership.

White specks represent the rain.

Gatjin Murrup represents our dreamtime belief that water is a living entity & flows throughout Djandak. & neighbouring Nations.

Gatjin Murrup (spirit) healing, cleansing and purifying waterways on Djandak.”

B Inside Cover: Alex Cooper

“It’s a story of my life, growing up around the river. The background colours are the sky, river and earth. The footsteps represent the path of my life, the water holes the meeting spots, and the outside of the path representing the ancestors and their cemeteries. I love fishing so the Murray cod is on it too, a big part of our culture.”

C Page 6: Alex Cooper

D Page 7: Andrew Saunders

E Page 8: Andrew Saunders

“Djaara and partnerships walking together to Heal water care for country and strengthen cultural knowledge for future generations”

F Page 20: Andrew Saunders

“Along the waterways, women and men gather to share knowledge, culture and connection to country keeping tradition strong for future generations.”

G Page 50: Andrew Saunders

H Page 56 Andrew Saunders



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