



Lindsay Island story and FAQ

Lindsay Island is one of nine ecologically significant floodplains in north-west Victoria earmarked for restoration under the Victorian Murray Floodplain Restoration Project (VMFRP). Visit vmfrp.vic.gov.au for more information.

Location	Lindsay Island is located 75 km west of Mildura near the New South Wales and South Australian borders. Lindsay island is part of the Chowilla-Lindsay-Wallpolla floodplain in the Murray-Sunset National Park.
Landscape	Large floodplain complex with nationally important wetlands, streams, and Red Gum, Lignum and Black Box communities.
Examples of threatened animal species	Murray Cod, Silver Perch, Murray–Darling Rainbowfish, Unspecked Hardyhead, Freshwater Catfish, Giles' Planigale, South-Eastern Long-Eared Bat, Growling Grass Frog, Beaked Gecko, Carpet Python, Eastern Hooded Scaly-Foot, Red-Naped Snake, Samphire Skink, Broad-Shellled Turtle, and 21 birds, including the Regent Parrot, Painted Honeyeater and Intermediate Egret.



Watering at Ned's Corner near Lindsay Island (Photo: Mallee Catchment Management Authority)

Why do we need these floodplain restoration works?

Over time, we have changed the way the Murray flows to suit our needs, building weirs, dams and levees. Regional communities have benefited in many ways from river regulation, but we continue to see serious ecological impacts to floodplain health.

The Murray River and its floodplains depend on intermittent flooding to stay healthy. River regulation has caused blockages to flow and reduced the frequency, duration and extent of flood events. It also causes increasingly long dry periods between floods, making it harder for floodplains to bounce back.



Lindsay Island is formed by the Lindsay River branching off the Murray River and returning further downstream. It is part of a large and relatively flat floodplain complex intersected by numerous small creeks that carry floodwaters from the Murray River into swamps, billabongs and floodplains. It has permanent and temporary (ephemeral) wetlands, some of which are listed as nationally important.

River regulation has had a significant impact on the health of this floodplain. As well as shorter, less frequent and less extensive flooding, the interval between floods has doubled, making it much harder for the floodplain to regenerate when the water finally does return. We are seeing dry periods of between 10 and 18 years. This is too long for floodplain plants and animals to persevere – its longer than the Millennium drought.

Water recovered under the Murray–Darling Basin Plan is very effective for the river channel and low-lying floodplain areas but has little impact higher on the floodplains where we are seeing trees such as Black Box and Red Gum and vegetation such as Lignum under severe stress and even dying.

The works planned under VMFRP will allow us to manage this floodplain over the long-term. The infrastructure we build will allow us to hold water across the floodplain for as long as needed to support the environment, before returning it to the river.

More importantly, if the floodplain goes too long between natural floods, we'll be able to give the environment a 'top up' to keep it healthy, making the floodplains more resilient as we face a future with less water.

Bringing these floodplains back to life will benefit all our river communities – people, plants and animals – as we restore them for generations to come.

This work builds on the builds on the environmental works built at Horseshoe Lagoon, Mullaroo Creek, Websters Lagoon and Lake Wallawalla under The Living Murray (TLM) program.

What happens if we don't restore our floodplains?

The Murray River and its floodplains are part of a highly interconnected ecosystem where wet and dry cycles infuse the river with carbon and nutrients and support an extraordinarily rich tapestry of life on the floodplain. Rivers need their floodplains as much as a floodplain needs the river.

Varying degrees of stress are already apparent across our floodplains. The tree canopy lacks vigour and flood dependant vegetation are stressed, which reduces habitat and food for floodplain-dependent animals.

If we do not intervene, these iconic landscapes will continue to decline, probably beyond the point of rejuvenation. We risk losing areas that are vital to biodiversity, to Traditional Owners, and to regional communities.

Returning to pre-regulation flows would be devastating for the towns, cities, agriculture and industries along the river. The Basin Plan recovers significant amounts of water for environmental use. Infrastructure helps us use this water to bring our ecologically significant floodplains back to health, without impacting river communities.

Why choose Lindsay Island?

Lindsay Island consists of a variety of habitats including Red Gums, Black Box, Lignum shrubland and Saltbush. These habitats support both water-dependent species such as catfish, rainbowfish, waterbirds such as egrets, blue billed ducks, frogs and turtles, and many species that are not water dependant but rely on or use healthy floodplain habitat for all or parts of their lifecycle. At Lindsay Island, this includes De Vis' banded snake, carpet python, Giles' planigale, the beaked gecko, and many bush birds like the regent parrot, honeyeaters, robin and wrens.

Lignum shrubland vegetates extensive areas of Lindsay Island. Flooded Lignum provides both nesting platforms for waterbirds and an underwater playground with abundant food and habitat for small native fish species and frogs. When dry, Lignum shrublands provide cover and a source of prey for small mammals, lizards and snakes, and are the preferred habitat of the Giles' Planigale.



Giles Planigale (Photo: Colleen Barnes, Conservation Officer, Neds Corner Station)

Lindsay Island includes a semi-permanent wetland called Lake Wallawalla. When the lake is full, it is populated by thousands of pelicans and water birds. Some 210 bird species, 49 of which depend on water habitats, use the floodplain for breeding, feeding and roosting. Some of these birds are listed under international migratory bird agreements.

The area is an important biodiversity corridor between the floodplain and drier Mallee landscape. Many mammals and birds live in both, including the fat-tailed dunnart, regent parrot, Major Mitchell's cockatoo carpet python, bats and bush birds.

Because of its ecological significance, Lindsay was chosen for floodplain restoration works under TLM at the Chowilla-Lindsay-Wallpolla floodplain icon site.

Lindsay Island is culturally significant to Traditional Owners. It is also a much-loved recreational hotspot with wonderful camping sites, fishing spots and creeks to explore by kayak.

How are Traditional Owners involved?

Traditional Owners have cared for and sustainably managed the cultural landscapes of the Murray River and its floodplains for thousands of years and their connection to Country continues to the present.

The nine VMFRP sites are culturally significant with many registered heritage sites. The *Aboriginal Heritage Act 2016* describes a legislative pathway for protection of Aboriginal cultural heritage in Victoria. The process requires detailed on-ground assessments to document cultural heritage sites and consultation with Traditional Owner on the proposed works and their potential impacts.

The outcomes of this assessment along with proposed measures to protect sites are documented in a Cultural Heritage Management Plan. First Peoples – State Relations is the regulatory approver at Lindsay Island with significant collaboration from the Registered Aboriginal Party, First People of the Millewa-Mallee Aboriginal Corporation (FPMMAC).

VMFRP partners have long-standing relationships with Traditional Owners and a strong desire and intent to continue to build stronger and more meaningful relationships.

We recognise the strength and courage of Traditional Owners which has enabled continued connections to Country and culture. As well as our work with these groups to preserve cultural heritage, we are exploring opportunities to support their rights and obligations to progress their aspirations for Country.

How will you get water onto the floodplain at Lindsay?

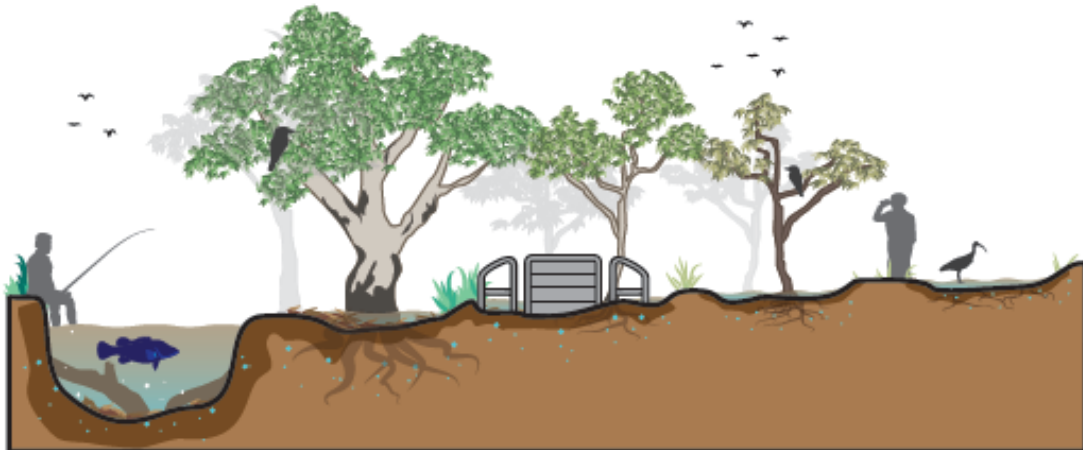
Water will be delivered through a combination of natural inflows, raising of Lock 7 and by temporary pumping using environmental water entitlements.

Lock 7 controls the flow of water into Mullaroo Creek and the Lindsay River. We can raise Lock 7 to push water through Lindsay Island. When we need to get water onto the higher reaches of the floodplain, we can raise the Lock 7 weir and operate a regulator to be built just downstream of Berribee Homestead. Even higher reaches of the floodplain can be watered from additional pumping.

The works at Lindsay will operate under three potential watering scenarios, as shown in Figure 1.



Scenario 1: Infrequently, when the river is high and flowing into the forest, and the water will stay on the floodplain for long enough, we will open the regulators and leave the water to flow naturally.



Scenario 2: Often, when the river is high and flowing into the forest, but the flood won't last as long as it's needed, we will raise lock 7, shut the regulators and hold the water on the floodplain, before returning the water to the



Scenario 3: If the floodplain is too dry, we can use a temporary pump to get environmental water onto the floodplain and close the regulators to hold the water there for as long as needed, before returning the water to the river.

Figure 1: Watering scenarios planned for Lindsay Island

What infrastructure will you build?

Lindsay is the largest of the nine VMFRP projects. Most of the infrastructure will be located on Lindsay Island, but regulators will also be built on the floodplain areas south of the Lindsay River, including near Lake Wallawalla.

We will manage water across the floodplain complex with one very large regulator with a fishway across the Lindsay River downstream of Berribee Homestead, and 16 additional regulators. Containment banks will be built to hold water on the floodplain for as long as needed.

Three hardstands will enable us to bring in temporary pumps to deliver water to the higher reaches of the floodplain. We will also upgrade about 50 km of existing access tracks.

These works will complement the existing environmental infrastructure built under TLM between 2006 and 2015.

The infrastructure we build will allow us to target different parts of the floodplain to improve the condition of over 4,700 hectares of wetlands, Red Gum forests, Lignum shrubland and Black Box woodland.

In addition, about 500 hectares of lower-lying billabongs and creeks in New South Wales will also be watered when we raise water levels behind Lock 7.

Figure 2 shows the extent of vegetation we can reach with different flows in Victoria.



Figure 2: Extent of vegetation that can be reached with VMFRP works (based on conceptual design from October 2021)

What will the infrastructure look like at Lindsay Island?

We have designed infrastructure to deliver environmental water that is tailored to the site conditions, the landscape being targeted and the species that live there.

As much as possible, new infrastructure will be sited on areas that are already disturbed, such as existing access tracks. This helps us minimise ecological impacts during construction.

We've been building environmental water infrastructure for more than 15 years. This experience has taught us what works best to deliver water to the largest area to get the greatest ecological results.

The very large regulator on the Lindsay River will be similar in size to the TLM Chowilla Creek Weir in South Australia (Figure 3).



Figure 3: Example of a very large regulator (Chowilla Creek Weir) in South Australia

The smaller regulators and containment banks will be similar in size to the infrastructure shown in Figure 4.



Example of a raised track containment bank at Hattah Lakes



Example of a small regulator (Horseshoe Lagoon regulator) at Wallpolla Island

Figure 4: The scale of infrastructure at Lindsay Island



Will access to the park be restricted during flood events?

Watering events will mostly occur in winter and spring over 2 to 4 months.

The smaller (more regular) flows will fill the creeks and temporary and semi-permanent wetlands, which means no tracks will be inundated and full access to the park will be maintained.

With larger natural flows, many tracks do get flooded by water escaping the banks of Lindsay River, which restricts vehicle access. In the years that we need to top up these natural floods with environmental water, additional internal tracks may be affected and could be impassable for a few months after the environmental flow peak has receded.

Parks Victoria will provide information to park users to plan their visits when environmental water occurs. Check the [Parks Victoria website](#) for the latest information and closures in Murray-Sunset National Park.

Will the VMFRP improve access tracks at Lindsay Island?

The VMFRP will upgrade about 50 km of existing access tracks. Any tracks used during construction to transport equipment and materials will be restored and left in good condition at project completion. Improving access tracks beyond this is outside the scope of this project.

Parks Victoria will maintain tracks to ensure visitors can access the park, including the wetlands and healthy floodplains. Check the [Parks Victoria website](#) for the latest conditions and closures in Murray-Sunset National Park.

To support the delivery of environmental water, Parks Victoria will manage pest, plant and animals to ensure the best ecological outcomes are achieved.

How does it fit in with the other VMFRP sites?

The infrastructure at Lindsay Island is one part of a package of works to be delivered in Victoria under the Murray-Darling Basin Plan.

Floodplain infrastructure is designed to target specific ecological results at each site. The decision to release water at a site is based on monitoring of floodplain conditions and is part of a holistic approach to keeping the Murray and its floodplains healthy.

Floodplains are interconnected with the river and the greater Murray-Darling ecosystem. Operations at individual sites can influence ecological outcomes in others. For example, release of water from one site may trigger a fish migration and breeding event to repopulate other sites, or watering at multiple sites concurrently could ensure plentiful food supply for colonial nesting waterbirds.

The Basin States and the Australian Government work together each year to work out how to operate the river system as a whole, and how to coordinate and prioritise environmental water delivery across all the different regions. This process has been in place for more than a decade.

How is this different to existing environmental water programs?

Planning and delivery of environmental water operations is coordinated via catchment management authorities, in consultation with stakeholders including Traditional Owners, land managers, water authorities and the local community, and informed by the results of ecological monitoring programs.

Infrastructure gives us greater reach across more floodplains and helps us get better ecological outcomes at sites that are either difficult or impossible to reach under our current environmental water program.

Will the other wetlands and floodplain spaces still get water?

Murray River floodplains and wetlands will continue to receive naturally occurring floods.

VMFRP and other floodplains across north-west Victoria will also receive environmental water when needed to complement existing natural flows as part of a holistic approach to maintaining healthy rivers and floodplains. Figure 4 shows the sites included in Mallee Catchment Management Authority’s environmental water program, alongside VMFRP sites.

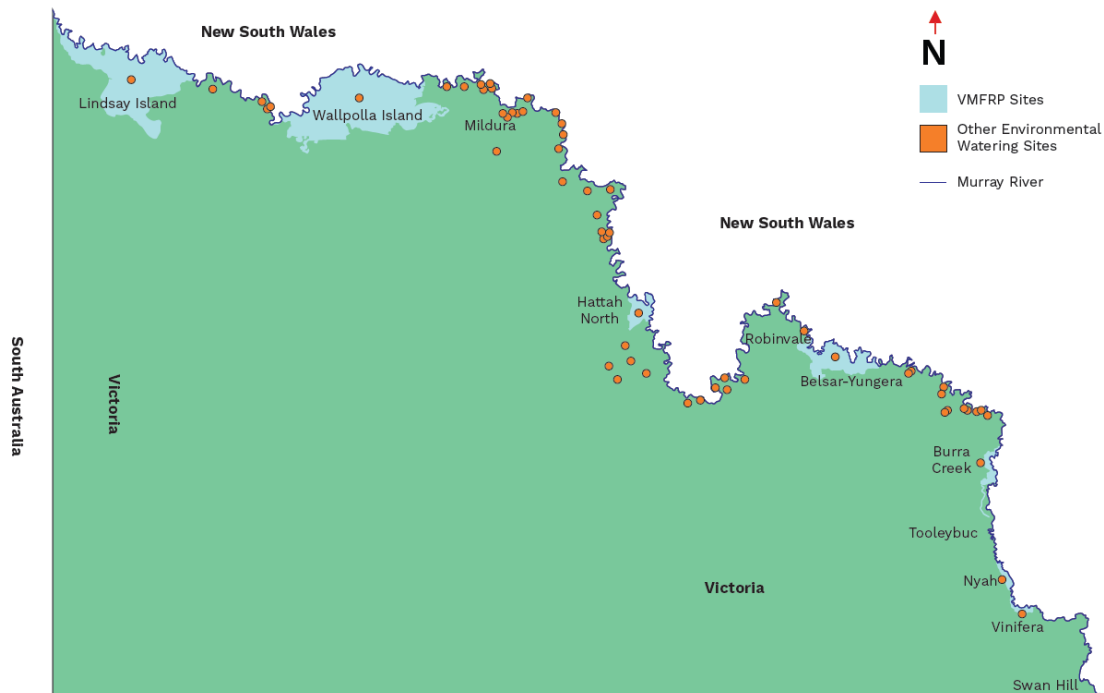


Figure 5: Environmental watering sites in the Mallee Catchment Management Authority area

When will you start building?

Construction is anticipated to start around January 2023, depending on funding, the environment assessment process outcome, and obtaining other legislative approvals. Projects will take about 12 to 18 months to complete. All projects are to be operational by mid-2024 under legislation.

How do you know it will work?

The VMFRP partners have a long history of working with environmental water and using infrastructure to deliver environmental water. Specialist engineers and scientists have been working together on the project design for Lindsay Island since 2012.

Projects are currently undergoing a rigorous, transparent and comprehensive environmental assessment process to assess potential environmental impacts and benefits. We are confident that these works will bring these floodplains back to life and help them to flourish, restoring these valuable landscapes for generations to come.

We already know from infrastructure built at six icon sites under The Living Murray (TLM) program that these types of projects help us restore river connectivity and health and deliver great outcomes for plants and animals.

What is the environmental assessment process?

In December 2020, the Victorian Minister for Planning determined that an Environment Effects Statement (EES) is required to assess any potential environmental impacts at Lindsay Island during construction and beyond. The Commonwealth Government also requires an assessment of potential impacts to threatened species.

Specialist investigations are now under way to assess potential impacts to areas such as biodiversity and habitats, water quality, groundwater, cultural heritage, social, economic and amenity impacts, and waterway use and infrastructure.

Community consultation and advice is a significant part of this assessment process.

The EES will be publicly exhibited in mid-2022, giving the community and stakeholders an opportunity to have their say.

Find out more about the regulatory assessments at www.vmfrp.com.au/planning-approvals and how you can get involved at www.vmfrp.com.au/get-involved.