



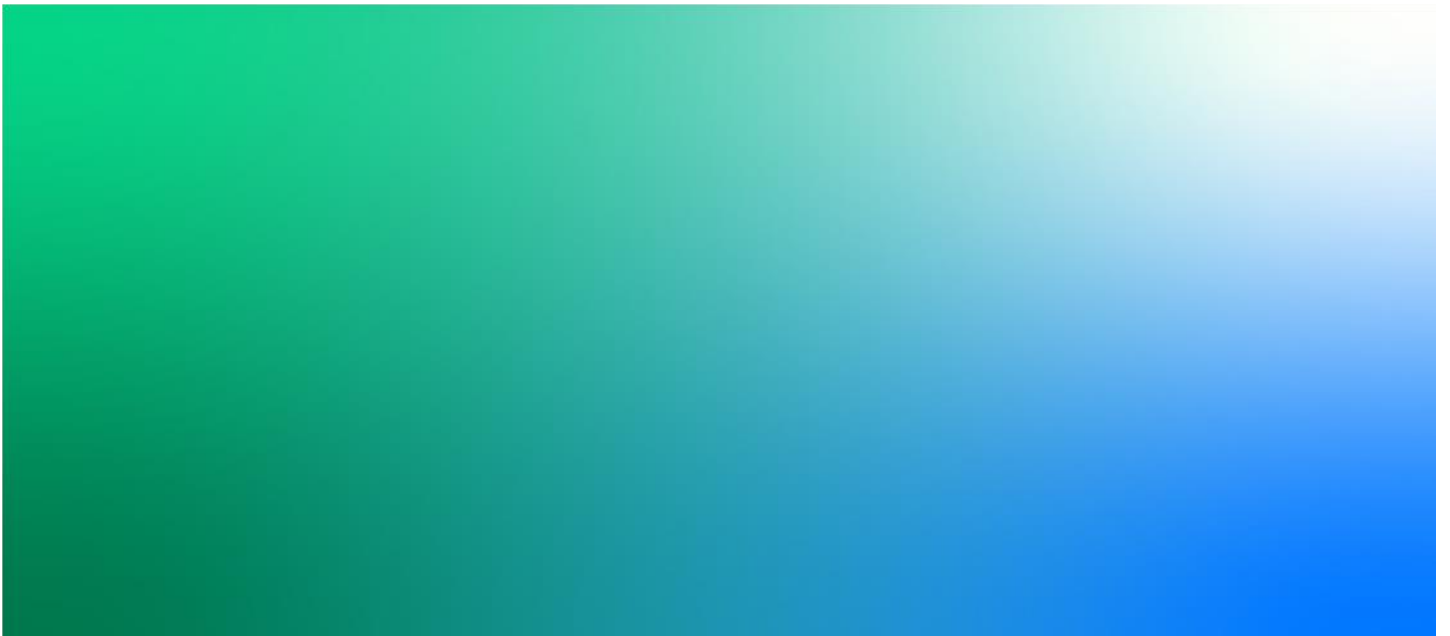
# **Victorian Murray Floodplain Restoration Project**

**Desktop Land Use Planning Assessment - Lindsay Island Floodplain Restoration Project**

**IS297792-AP-AP-RP-0001 | REV 1**

**13 August 2020**

**Lower Murray Urban and Rural Water Corporation**



## Victorian Murray Floodplain Restoration Project

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### Document history and status

Revision	Date	Description	Author	Reviewed	Approved
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## **Appendix A: Site Description**



## Acronyms and abbreviations

Acronym / Abbreviation	Definition
BMO	Bushfire Management Overlay
CMA	Catchment Management Authority
DAWE	Commonwealth Department of Agriculture, Water and the Environment (formerly DoEE)
DELWP	Victorian Department of Environment, Land, Water and Planning
DoEE	Commonwealth Department of the Environment and Energy (now DAWE)
DSE	Victorian Department of Sustainability and Environment (now DELWP)
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
ESO	Environmental Significance Overlay
Ha	hectares
HO	Heritage Overlay
km	kilometre/s
LMW	Lower Murray Urban and Rural Water Corporation
LPPF	Local Planning Policy Framework
LSIO	Land Subject to Inundation Overlay
M	metres
Mallee CMA	Mallee Catchment Management Authority
mm	millimetres
MNES	Matters of national environmental significance as defined under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
MPS	Municipal Planning Strategy
North Central CMA	North Central Catchment Management Authority
PCRZ	Public Conservation and Resource Zone
planning scheme	Mildura Planning Scheme
PPF	Planning Policy Framework
the project	Lindsay Island Floodplain Restoration Project
R8	Joint venture between Jacobs Group (Australia) Pty Ltd and GHD Pty Ltd
RDZ1	Road Zone, Category 1
VCAT	Victorian Civil and Administrative Tribunal
VHI	Victorian Heritage Inventory
VHR	Victorian Heritage Register
VMFRP	Victorian Murray Floodplain Restoration Project
VPP	Victoria Planning Provisions

## Important note about your report

The purpose of R8's engagement under the Victorian Murray Floodplain Rehabilitation Project (VMFRP) is to design infrastructure for VMFRP including regulators, levees, roads, access tracks and culverts. The designs are required to be suitable for construction pricing to inform business case prioritisation. The purpose of this infrastructure is to allow floodplains to be watered at the hydraulic design levels nominated by VMFRP. R8 is also engaged to provide Regulatory Approvals and Cultural Heritage Services. The purpose of these services is for VMFRP to lodge the necessary approvals documents for the project with the relevant approval authorities.

The sole purpose of this report and the associated services performed by R8 is to complete a Desktop Land Use Planning Assessment for VMFRP in accordance with the scope of services agreed between R8 and VMFRP in accordance with the scope of services agreed between R8 and VMFRP.

R8 has prepared this report in accordance with the usual care and skill expected of the consulting profession, for the sole purpose described above and by reference to applicable standards, guidelines, procedures and practices at the date of issue of this report. However, no other warranty or guarantee, whether expressed or implied, is made as to the data, observations and findings expressed in this report, to the extent permitted by law.

In preparing this report, R8 has relied on the information provided by VMFRP. In particular, R8 is reliant on VMFRP's prior flood modelling work to define inundation levels and extents. R8 is not responsible for achievement of the project's desired operational ecological outcomes.

This report should be read in full and no excerpts are to be taken as representative of the findings. No responsibility is accepted by R8 for use of any part of this report in any other context. This report has been prepared on behalf of, and for the exclusive use of VMFRP, and is subject to, and issued in accordance with, the provisions of the agreement between R8 and VMFRP. R8 accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this report by any third party.

# 1. Introduction

## 1.1 Project background

The Lindsay Island Floodplain Restoration Project (the project) is one of nine discrete environmental works projects being undertaken as part of the Victorian Murray Floodplain Restoration Project (VMFRP), which is being implemented as part of Victoria's obligations under the Murray Darling Basin Plan. The VMFRP aims to restore a more natural inundation regime across more than 14,000 ha of high ecological value Murray River floodplain in Victoria through the construction of new infrastructure and modification of existing infrastructure.

The VMFRP is being implemented in partnership between Lower Murray Urban and Rural Water Corporation (LMW), Goulburn Murray Rural Water Corporation (GMW), Mallee Catchment Management Authority (Mallee CMA), North Central Catchment Management Authority (North Central CMA), Parks Victoria and the Department of Environment, Land, Water and Planning (DELWP), and is funded by the Commonwealth Department of Agriculture, Water and Environment (DAWE). LMW has been nominated by the partnership as the project proponent for the purpose of submitting referrals and approval applications.

R8 is a joint venture formed between Jacobs and GHD, which has been engaged by LMW to deliver design, cultural heritage and approvals services for the VMFRP. This desktop land use planning assessment has been prepared for the project to support the preparation of referrals under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and Victorian *Environment Effects Act 1978*.

## 1.2 Project description

The project is located in north west Victoria, approximately 75 km west north west of Mildura and 30 km east of Renmark, South Australia. The project involves works to facilitate managed inundation of approximately 4,845 ha of high ecological value floodplain in Victoria, mostly located on Lindsay Island and floodplain areas south of the Lindsay River, including Lake Wallawalla. Lindsay Island is approximately 28 km long east to west and is enclosed by the Murray River in the north and the Lindsay River anabranch in the south. In order to engage inflows to the Lindsay River, operation of the project would involve raising water levels along the Murray River behind Lock 7, which would also inundate some lower-lying billabongs and creeks on the NSW side of the Murray River. Approximately 263 ha of inundation would occur within NSW, mostly along the Murray River and a number of billabongs on the northern side of the Murray River, however these inundation areas are not specifically targeted for restoration as part of the project. The total inundation area for the project is approximately 5,108 ha including inundation in Victoria and NSW. By restoring a more natural inundation regime, the project aims to mimic the impact of prior to river regulation natural flood events, improving the condition of vegetation communities, and providing seasonal aquatic habitat for native fauna.

The project is located entirely within the Victorian local government area of Mildura Rural City Council, except for the minor works and inundation located within the NSW local government area of Wentworth Shire Council (Figure 1.2). The project is predominantly located within the Murray-Sunset National Park and in the localities of Murray-Sunset, Lindsay Point and Neds Corner in Victoria and the locality of Rufus in NSW.

### 1.2.1 Proposed inundation

The project would involve managed inundation across the following six water management areas (WMAs) (see Appendix A: Site Description):

- Berribee WMA (3,507 ha (Victoria), 263 ha (NSW)) – This WMA encompasses the Lindsay River east / upstream of the proposed regulator near Berribee Homestead, along with Mullaroo Creek and associated tributaries, Lake Wallawalla and the central parts of the Lindsay River floodplain north to Toupnein Creek (but not including the creek). Includes areas of NSW inundation. Except for Lake Wallawalla, this WMA is located on the northern side of Old Mail Road.

- Crankhandle WMA (Upper Tier (299 ha) and Lower Tier (17 ha)) – This WMA is located on the floodplain in the north west portion of Lindsay Island, north of the Lindsay River and extending to the Murray River, downstream of Berribee Homestead and the Berribee WMA, encompassing Billgoes and Scotties Billabongs.
- Crankhandle West WMA (Upper Tier (23 ha) and Lower Tier (72 ha)) – This WMA is located on the floodplain in the far north west portion of Lindsay Island, north of the Lindsay River but not extending to the Murray River, downstream of the Crankhandle WMA.
- Lindsay South WMA (140 ha) – This WMA is located on the floodplain south of the Lindsay River and north of Old Mail Road, connects to the Lindsay South Creek upstream of Wallawalla East WMA, on private land known as Neds Corner.
- Wallawalla East WMA (164 ha) – This WMA is located on the floodplain south of the Lindsay River and mostly north of Old Mail Road, connects to the Lindsay River downstream of Lindsay South WMA.
- Wallawalla West WMA (623 ha) – This WMA is located on the highest part of the floodplain west of Lake Wallawalla and south of Old Mail Road, connects to the Lindsay River via Lake Wallawalla.

Each WMA has a different target inundation water level and the areas are designed to cascade water to extend the inundation benefits by reusing water (see Table 1.1). Inundation of the proposed inundation areas requires the coordinated operation of the Lock 7 weir pool and the proposed Berribee Regulator. To achieve the design water level at Berribee WMA, the Lock 7 weir pool needs to be raised by up to 1.1 m to provide the necessary driving head of water. All other WMAs are filled from the inundation area of the Berribee WMA either by gravity release (Crankhandle, Crankhandle West) or pumping (Lindsay South, Wallawalla East, Wallawalla West).

Table 1.1: Summary of proposed inundation for each water management area

WMA	Proposed frequency	Proposed duration	Proposed timing
Seasonal Fresh	Annual	3 months	September to December
Berribee – Intermediate (22.1 mAHD to 23.1 m AHD) (Flood Capture or Regulated)	4 in 10 years (excludes Berribee - Maximum)	Maintain at target water level for 2 months (for 1 event) and 4.5 months (for 3 events). After 2 months, drawdown water levels to Crankhandle WMA or the Lindsay River. Close Wallawalla Regulators when receding below 22.35 mAHD to retain water in Lake Wallawalla and allow to fall through evaporation and seepage.	June to February
Berribee – Maximum (23.2 mAHD) (Flood Capture or Regulated)	3 in 10 years	Maintain at target water level for 2 months. After 2 months, drawdown water levels to Crankhandle WMA or the Lindsay River. Close Wallawalla Regulators when receding below 22.35 mAHD to retain water in Lake Wallawalla and allow to fall through evaporation and seepage.	June to February
Crankhandle (Upper - 22.6 mAHD, Lower – 21.6 mAHD) (Flood Capture or Regulated)	5 in 10 years	Maintain at target water level for 2.5 months, then drawdown water levels in Crankhandle (Upper Tier) to Crankhandle West WMA or Lindsay River. Water is retained in Crankhandle (Lower Tier) and allowed to fall through evaporation and seepage.	June to February
Crankhandle West (Upper – 22.2 mAHD, Lower – 21.7 mAHD)	5 in 10 years	Maintain at target water level for 2.5 months, then drawdown water levels to Lindsay River.	June to February

WMA	Proposed frequency	Proposed duration	Proposed timing
(Flood Capture or Regulated)			
Wallawalla East (25.2 mAHD) (Flood Capture or Pumped)	2 in 10 years	Maintain at target water level for 1 month, then drawdown water levels to the Lindsay River.	September to February
Lindsay South (24.4 mAHD) (Flood Capture or Pumped)	2 in 10 years	Maintain at target water level for 1 month, then drawdown water levels to the Lindsay South Creek.	September to February
Wallawalla West (24.7 mAHD) (Flood Capture or Pumped)	2 in 10 years	Maintain at target water level for 1 month, then allow to fall through evaporation and seepage.	September to February

Operating scenarios described in Table 1.1 would be subject to change and refinement in response to the findings of hydrological modelling, ecological monitoring and adaptive management to achieve the project's ecological objectives.

### 1.2.2 Main project components

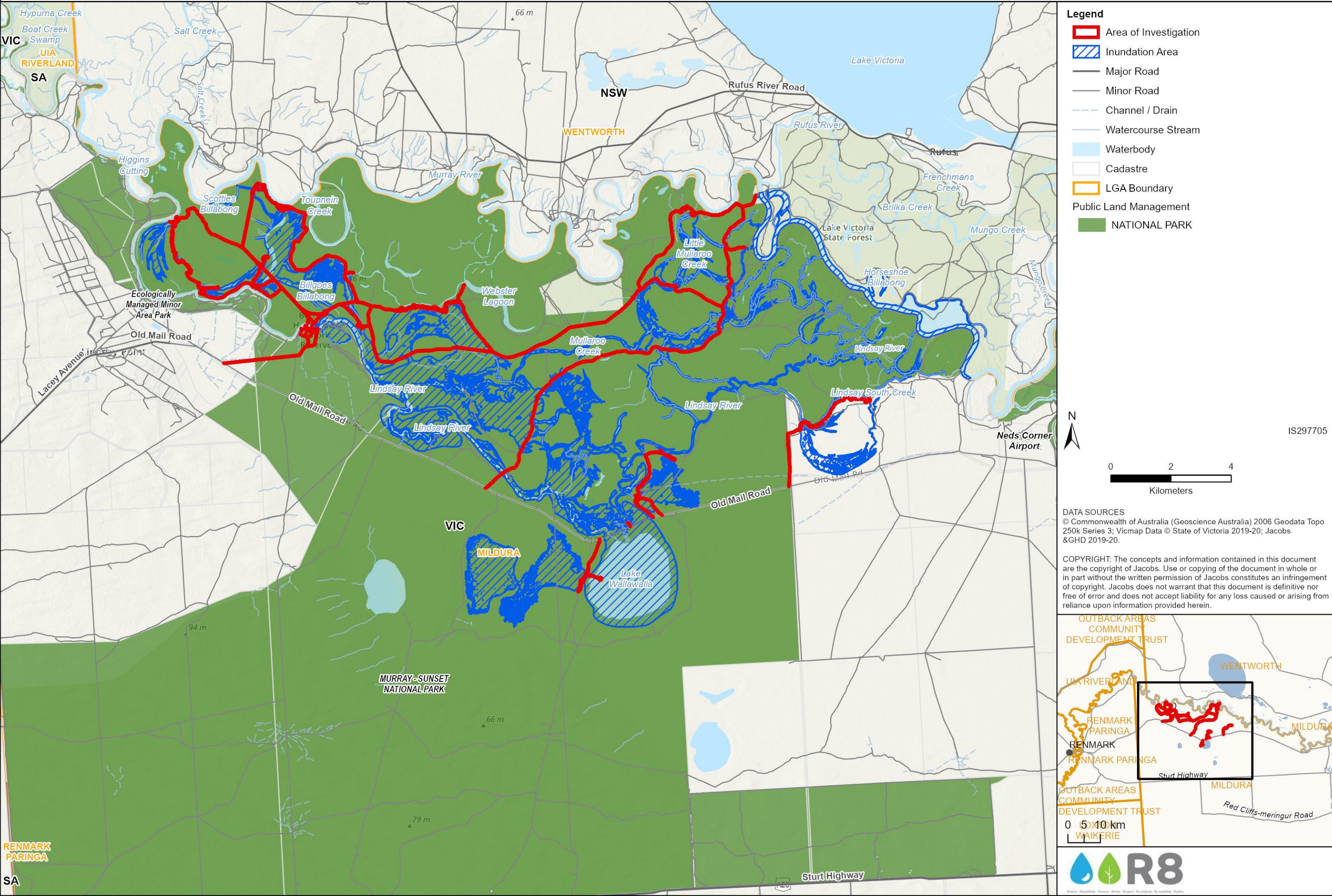
The project involves the construction of:

- Four large regulators (Regulator BERR\_A also referred to as Berribee Regulator, and Regulators BERR\_F, CR\_A and CW\_B1)
- Sixteen small regulators (Regulators BERR\_B, BERR\_C, BERR\_D, BERR\_E, CR\_B, CR\_C, CR\_D, CR\_E, CR\_F, CW\_A, CW\_B2, LS\_A, LS\_B, WE\_A, WW\_A1 and WW\_A2)
- Two un-gated culverts (BERR\_G, WE\_D)
- Two drop structures into the Lindsay River (CW\_A and CW\_B1) and one drop structure into the Murray River (CR\_D)
- Approximately 9 km of containment banks incorporating overflow spillways where required
- Approximately 1.6 km of new excavated channel (CR\_G and CW\_D)
- Three hardstands for temporary pumping (WE\_D, WW\_B, LS\_C), and one permanent suction line into Lake Wallawalla (WW\_B)
- Approximately 5 km of new access track and maintenance / upgrades to other existing access tracks
- A 50 metre by 50 metre secure, fenced compound on the northern bank of the Lindsay River at the Berribee Regulator site to provide for the storage of equipment and materials during maintenance and operation of the Berribee Regulator
- Three temporary laydown areas near the Berribee Regulator, two on the southern side of the Lindsay River and one on the northern side of the Lindsay River, which would provide the primary location for site offices, vehicle parking, storage of equipment and materials, during construction of the project.

Each of the above components are located in the area of investigation identified in Figure 1.1.



Figure 1.1 Lindsay Island Floodplain Restoration Project – Regional Context





The project includes provision for fish passage through regulator bays, across the spillways and across the containment banks and natural ground when submerged. The Berribee Regulator specifically provides for fish passage via a vertical slot fishway in the south abutment. Other regulators will allow for passive fish passage during operation. Fish will have passage when regulators gates are fully open. These structures have been designed to have flow velocities to support fish passage.

New power supply connections are not required to facilitate operation of the project.

No redundant structures are required to be removed or decommissioned as part the project.

Refinements to the preliminary design and location of project structures, laydown areas and extent of access track upgrades may occur through the design process, along with further consideration of the location of some other temporary construction activities, including additional, smaller, construction laydown areas, the location of boat ramps / barge wharves required to enable construction of the Berribee Regulator, and the location of temporary pump stations to supply water for construction purposes. Where practicable, it is understood that design changes to the proposed infrastructure and temporary construction activities will be contained within the area of investigation. However, where this is not able to be achieved and for other activities such as borrow pits where the location is currently unknown, further land use planning assessment will be required.

### 1.3 Area of investigation, development footprint and construction footprint

The following terms are used throughout this report for the purposes of describing the project:

- Area of investigation - this includes the development footprint, as well as a buffer around the construction footprint and access tracks.
- Development footprint - this is the area that the project infrastructure (e.g. regulators, drop structures, pump hardstands, containment banks, channels, spillways) will occupy, along with currently identified construction laydown areas. No construction working buffer or access tracks are included in the development footprint.
- Construction footprint - this includes the project infrastructure as well as the land required to construct the infrastructure. This includes a 5 m wide corridor for access tracks.
- Inundation area - area of land subject to flooding during managed events, up to a specific design water level.

Design is currently being refined as part of the design process and in response to environmental and heritage studies. The area of investigation that has been established and assessed in this report provides a buffer around the current design of the development footprint and access tracks to allow for future changes. Any changes occurring outside of this area of investigation or any additional project activities for which land use definitions have not been assigned, would require further assessment to identify potential land use impacts and approval requirements.

### 1.4 Purpose of this report

This report identifies Victorian and NSW land use and planning attributes associated with the area of investigation and surrounds to inform an assessment of potential effects of the proposed works. The report is based on the Issue for Review (IFR) Design dated April 2020.

### 1.5 Limitations

The report relies on public information and data available online. The following limitations apply to the assessment:

- This report has been prepared using desktop sources of information. No site visit has been undertaken

- No discussions have been held with state and local government planning departments for the purposes of this report
- No review of land use planning applications or recently issued land use and planning permits has been undertaken for the purposes of this report
- Design is currently being refined as part of the design process and in response to environmental and heritage studies. The area of investigation that has been established and assessed in this report provides a buffer around the current design of the development footprint and access tracks to allow for future changes. Any changes occurring outside this area of investigation would require further assessment to identify their potential to impact on land use
- VMFRP has recently received advice from the Murray-Darling Basin Authority (MDBA) around the raising of the Lock 7 weir pool and how the proposed Lock 7 operating regime compares to the current operating regime. Impacts associated with changes to the operating regime of Lock 7 and the resultant inundation area in NSW have not yet been assessed. This assessment identifies current land tenure and zoning within the NSW inundation areas. Further assessment, including further consultation with NSW regulatory authorities, will need to be carried out in relation to the potential for land use impacts to occur in the NSW inundation area and approval requirements (if any) relating to inundation in NSW.
- This assessment does not include project activities such as boat ramps / wharves and temporary construction water supply pumping facilities, that may form part of the Project but are not confirmed as required nor have a known location.
- Planning schemes are dynamic and are subject to change.
- The review of legislative requirements in this report is based on legislation current at the date of this report. Note that amendments to the Victorian *Environment Protection Act 1970* are due to come into effect in July 2021 and have been taken into account to the extent possible based on publicly available information. The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* is also known to be currently undergoing a statutory review.
- As the location of any proposed quarrying activities / borrow pits proposed as part of the project is not currently known, an assessment of legislative requirements, and relevant planning policy and controls is not included in this report. An overview of approval requirements for such activities under the Victorian *Mineral Resources (Sustainable Development) Act 1990* is included in the VMFRP Interim Approvals Strategy (R8, 2019). It is understood that quarrying activities / borrow pits would be located on private land in proximity to the project area.



## 2. Key legislation

### 2.1 Commonwealth legislation

Table 2.1 provides an overview of key Commonwealth legislation relevant to this land use planning assessment.

Other environmental and heritage legislation relevant to the project is considered in other technical reports including the Flora and Fauna Assessment and the Historical Heritage Assessment.

Table 2.1: Summary of relevant Commonwealth legislation

Description	Relevance to this project
<b><i>Environment Protection and Biodiversity Conservation Act 1999</i></b>	
<p>The <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) provides the legal framework to protect and manage nine matters of national environmental significance (MNES) - world heritage properties; national heritage places; wetlands of international importance (Ramsar); listed threatened species and communities; listed migratory species; Commonwealth marine areas; the Great Barrier Reef Marine Park; nuclear actions; and water resources, in relation to coal seam gas and large coal mining development.</p> <p>Any project that is likely to have a significant impact on MNES, must be referred to the Commonwealth Minister for Environment via the Department of the Environment and Energy (DoEE) for a decision on whether the project is a 'controlled action' requiring assessment and approval under the EPBC Act.</p>	<p>The Lindsay Island Floodplain Flora and Fauna Assessment (R8 2020) provides a current assessment of the potential presence and impacts on MNES.</p> <p>A referral to the Commonwealth Minister for Environment via the DAWE will be prepared for a decision on whether the project is a 'controlled action' requiring assessment and approval under the EPBC Act.</p>
<b><i>Native Title Act 1993</i></b>	
<p>The <i>Native Title Act 1993</i> provides for the recognition and protection of the traditional rights and interests to the land and waters of the Aboriginal and Torres Strait Islander people. Victorian Crown Land is subject to compliance with either the land Use Activity Regime (LUAR) under the Traditional Owner Settlement Act 2010 or the future act regime of the <i>Native Title Act 1993</i>. Any dealings with Crown land must follow government policies in respect of Native Title and the provisions of the <i>Native Title Act 1993</i> and any agreements or court orders made under that act.</p> <p>If the land is outside a determination area under the Act it is required that an extinguishment assessment be undertaken in accordance with the Victorian Native Title Future Act Assessment Manual. Even if land is retained in the Crown estate but a change in land status is sought, procedural rights under a LUAR or the future act regime of the <i>Native Title Act 1993</i> may apply.</p>	<p>The project is located on Victorian and NSW Crown land. Further assessment is required to determine requirements to comply with the <i>Native Title Act 1993</i>. Review of the NNTT (June 2020) shows there are no Native Title determinations over the area of investigation or proposed inundation areas. There is however an active Native Title claim over the whole of the area of investigation and all of the Victorian inundation area, lodged by the First Peoples of the Millewa-Mallee on 10/8/2015 (VC2015/001). This claim covers a large part of north west Victoria.</p> <p>There are two Native Title determinations in the near vicinity of the proposed inundation areas in NSW: one determination is that native title does not exist (NPD2004/001) and applies to land in NSW along the Rufus River and over Lake Victoria, and the other determination is that native title does exist (NCD2015/001) and applies to land in NSW adjacent to the Rufus River and Lake Victoria.</p> <p>There are no Indigenous Land Use Agreements registered over the area of investigation or proposed</p>

Description	Relevance to this project
	inundation areas. Further information on Native Title interests is provided in Section 3.4.
<b>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</b>	
The <i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i> protects areas and objects that are of particular significance to Aboriginal people. The Act allows the Environment Minister, on application of an Aboriginal person or persons, to make declaration to protect an area, object or class of objects from a threat of injury or desecration.	Aboriginal cultural heritage exists within the area of investigation and proposed inundation areas. This Act allows the Commonwealth to intervene in any decision for the protection of this heritage if requested by an Aboriginal person or persons.
<b>Water Act 2007</b>	
<p>The <i>Water Act 2007</i> established the Murray-Darling Basin Authority (MDBA), which is responsible for managing the water resources within the basin in a sustainable way. The proposed works would be part of the works and measures that are being delivered under the <i>Water Act 2007</i>.</p> <p>Clause 49 of Schedule 1 of the <i>Water Act 2007</i> outlines that a Contracting Government or a public authority is required to inform the MDBA of any proposal which may significantly affect the flow, use, control or quality of any water in the upper River Murray. There is a requirement to provide the MDBA with all necessary information and data to permit it to assess the potential impacts on the river resulting from the proposal. The <i>Water Act 2007</i> does not expressly provide that approval of the MDBA is required for any such works, but states that the Authority may approve such works subject to conditions.</p>	The MDBA has confirmed that the project requires notification under clause 49 of Schedule 1 of the <i>Water Act 2007</i> . This notification process is required to be completed before construction commences.

## 2.2 Victorian legislation

Table 2.2 provides an overview of key Victorian planning and environmental legislation including approval requirements for the project.

Table 2.2: Relevant Victorian legislation

Description	Relevance
<b>Primary Legislation</b>	
<b>Environment Effects Act 1978</b>	
<p>The <i>Environment Effects Act 1978</i> provides for the assessment of projects that are capable of having a significant effect on the environment.</p> <p>A project is required to be referred to the Victorian Minister for Planning for a decision on whether an Environment Effects Statement (EES) is required, if the project triggers the referral criteria specified in the 'Ministerial guidelines for assessment of</p>	A referral to the Minister for Planning under the Act will be undertaken. The project may trigger criteria listed in the Guidelines in relation to the potential for significant effects of regional or state significance on the environment.

Description	Relevance
<p><i>environmental effects under the Environment Effects Act 1978</i> (DSE, 2006) (Ministerial Guidelines).</p> <p>The Minister will make one of three decisions in relation to a referral under the Act:</p> <ul style="list-style-type: none"> <li>▪ EES is required</li> <li>▪ EES is not required</li> <li>▪ EES is not required subject to conditions.</li> </ul> <p>The assessment process under this Act is not an approval process itself, rather it enables statutory decision-makers to make decisions about whether a project with potentially significant environmental effects should proceed. If an EES is required, statutory approval decisions are put on hold until the EES process is complete.</p> <p>The Ministerial Guidelines set out the process for an EES.</p>	
<p><b><i>Planning and Environment Act 1987</i></b></p> <p>The <i>Planning and Environment Act 1987</i> (P&amp;E Act) regulates the use and development of land in Victoria. The P&amp;E Act sets out the framework and procedures for preparing and amending planning schemes, obtaining planning permits, settling disputes, enforcing compliance with planning schemes, and other administrative procedures.</p>	<p>The area of investigation and proposed inundation areas in Victoria are on land that is subject to the provisions of the Mildura Planning Scheme, which is prepared and administered under the <i>Planning and Environment Act 1987</i>. Use and development of the project must meet the requirements of the planning scheme.</p> <p>The Act provides for two processes for obtaining planning approval that are relevant to this project, including:</p> <ul style="list-style-type: none"> <li>▪ Amendment of the planning scheme</li> <li>▪ Application for a planning permit under.</li> </ul> <p>Section 4 describes the planning policy and provisions, including permit triggers, referral and notice requirements that will need to be addressed in the application for planning approval.</p>
<p><b><i>Crown Land (Reserves) Act 1978</i></b></p> <p>The <i>Crown Land (Reserves) Act 1978</i> (CLRA) provides for reservation of Crown land for a variety of public purposes without foregoing the intrinsic natural values, and for leasing and licensing of reserves for purposes approved by the Minister for Environment and Climate Change. The CLRA authorises a range of leases and licences for commercial and non-commercial purposes on Crown land.</p>	<p>Title information identifies land within the area of investigation reserved for public purpose and managed by Parks Victoria. Some of this land may be reserved under the CLRA. Parks Victoria will need to confirm the most current reservation and the consents required in relation to the appropriate Act that applies. It is expected that consent will be required from Parks Victoria under section 17 of the CLRA to authorise the use and development of land for the project.</p> <p>If licences on the land exist, VMFRP will need to consult with licence-holders to ensure any existing rights of licences issued under the CLRA are not adversely affected by the project.</p>
<p><b><i>National Parks Act 1975</i></b></p>	

Description	Relevance
<p>The <i>National Parks Act 1975</i> and associated <i>National Parks Regulations 2013</i> seek to preserve and protect the natural environment and wilderness areas, its indigenous flora and fauna, its scenic and archaeological features and remote nature areas. This is achieved through the development of certain protected areas, which include national parks, state parks, marine national parks and coastal parks. In these areas activities and access are restricted and require specific written approval in the form of leases, licences and agreements from Parks Victoria, declared management authority under the Parks Victoria Act 2018.</p> <p>Under s27 of the <i>National Parks Act 1975</i> and clause 184 of the associated regulations, Parks Victoria can give consent to a public authority to perform its functions in a park.</p>	<p>A large percentage of the area of investigation is within the Murray Sunset National Park, a 'national park' described in a part of Schedule Two of the Act', and under the ownership and management of Parks Victoria. Section 17(2) of the Act identifies the controls and management of a National Park.</p> <p>Consent under s27 of the Act will be required from Parks Victoria for the proposed works to occur.</p>
<p><b><i>Parks Victoria Act 2018</i></b></p> <p>The <i>Parks Victoria Act 2018</i> repeals and re-enacts with amendments the <i>Parks Victoria Act 1998</i>, establishing Parks Victoria as an independent statutory authority and strengthening Park Victoria's role in protecting, conserving and enhancing Victoria's parks and waterways.</p>	<p>Parks Victoria is the land manager of the national park and reference areas which support the project. Consents will be required from Parks Victoria under the <i>National Parks Act 1975</i> and potentially the CLRA for use and development of land within the Murray-Sunset National Park and other reserved Crown land under Parks Victoria control.</p> <p>Parks Victoria is responsible for preparing management strategies and management plans for the land it manages. The project will be required to comply with these management strategies and management plans as relevant. The Murray-Sunset National Park is managed under the <i>River Red Gum Parks Management Plan</i> (Parks Victoria, 2018).</p>
<p><b><i>Reference Areas Act 1978</i></b></p> <p>Under the <i>Reference Areas Act 1978</i> the Minister can proclaim that any area of public land be preserved in its natural state as a 'reference area'.</p> <p>The Minister has a Reference Areas Advisory Committee (RAAC) to advise on how reference areas (areas of public land of ecological interest and significance) should be protected, controlled and managed for the purpose of comparative studies. The protection, control or management of the reference area shall comply with any directives published by the Minister.</p>	<p>The Wallawalla West WMA inundation area is located within the Lake Wallawalla Reference Area, while the area of investigation for the BERR_D containment bank and regulator adjoins the Toupnein Creek Reference Area (see Figure 3.3). These reference areas are part of the Murray-Sunset National Park and therefore under the ownership and management of Parks Victoria. VMFRP will need to engage with :Parks Victoria and the Reference Areas Advisory Committee (RAAC) to confirm any requirements in relation to the proposed managed inundation of land within the Lake Wallawalla Reference Area and potential effects of works adjacent to the Toupnein Creek Reference Area.</p>
<p><b><i>Aboriginal Heritage Act 2006</i></b></p> <p>The <i>Aboriginal Heritage Act 2006</i> is the primary legislation dictating Aboriginal cultural heritage management in Victoria. The <i>Aboriginal Heritage</i></p>	<p>The project will involve a high impact activity in an area of cultural heritage sensitivity. As such, a mandatory Cultural Heritage Management Plan will be required for</p>

Description	Relevance
<p><i>Regulations 2018</i> (the Regulations) are designed to generally give effect to the Act. Key objectives of the Regulations are to:</p> <ul style="list-style-type: none"> <li>Specify the circumstances in which a cultural heritage management plan (CHMP) is required for an activity or class of activity</li> <li>Prescribe standards for the preparation of a CHMP including the carrying out of assessments.</li> </ul> <p>Regulation 6 of the Regulations prescribes that a CHMP is required for an activity if:</p> <ul style="list-style-type: none"> <li>All or part of the activity area is defined as an area of cultural heritage sensitivity; and</li> <li>All or part of the activity is a high impact activity.</li> </ul> <p>Section 49 of the <i>Aboriginal Heritage Act 2006</i> specifies that if an EES is required for an activity under the <i>Environment Effects Act 1978</i>, then a CHMP is mandatory.</p>	<p>the project. No statutory approvals (e.g. planning permit, works on waterways permit) can be granted by the responsibility authority until a CHMP is approved.</p> <p>A draft CHMP was prepared for the project in 2018 and is currently being updated to reflect changes to the activity area. The CHMP is being prepared in consultation with the First People of the Millewa-Mallee Aboriginal Corporation / <i>Ngintait</i> peoples. As the CHMP was commenced when there was no RAP for the project area, Aboriginal Victoria are the evaluators for the CHMP for this project under the <i>Aboriginal Heritage Act 2006</i>.</p>
<p><b><i>Traditional Owner Settlement Act 2010</i></b></p> <p>The <i>Traditional Owner Settlement Act 2010</i> provides for an out-of-court settlement of native title. The Act allows the Victorian Government to recognise traditional owners and certain rights in Crown land. In return for entering into a settlement, traditional owners must agree to withdraw any native title claim, pursuant to the <i>Native Title Act 1993</i> (Cth) and not to make any future native title claims.</p>	<p>The project area is subject to the First Peoples of the Millewa-Mallee Traditional Owner Group request to negotiate a Recognition and Settlement Agreement with the State of Victoria under the Act.</p>
<p><b><i>Water Act 1989</i></b></p> <p>The <i>Water Act 1989</i> (Water Act) provides the legal framework for managing Victoria's water resources with the purpose of promoting the orderly, equitable and efficient use of water resources to make sure that water resources are conserved and properly managed for sustainable use for the benefit of present and future Victorians. The Water Act regulates impacts to surface water and groundwater resources.</p> <p>Administration of the Water Act is shared between CMAs and water authorities. Works in, on, under or above a designated waterway requires either a licence under section 67 or a works on waterways permit, administered by the relevant CMA under a by-law established under the Water Act. A licence under section 51 of the Water Act is required to take and use water, including surface and groundwater.</p>	<p>Works on designated waterways are proposed as part of this project, including work in the Lindsay River, Little Mullaroo Creek and Lindsay South Creek, and possibly other designated waterway such as Mullaroo Creek depending on track crossing works required. A works on waterways permit in accordance with section 188 of the Water Act and/or a water licence under section 67 of the Water Act will be required to construct works within these designated waterways. A licence may also be required under section 51 of the Water Act to authorise the take and use of water for the project, and for the installation of groundwater monitoring bores / dewatering bores.</p>
<p><b>Secondary Legislation</b></p> <p><b><i>Flora and Fauna Guarantee Act 1988</i></b></p>	



Description	Relevance
<p>The <i>Flora and Fauna Guarantee Act 1988</i> (FFG Act) establishes the legal framework for biodiversity conservation in Victoria. The FFG Act provides for the listing of threatened species and communities, and other prescribed flora species, as well as listing threatening processes. A Permit to Take is required to remove protected flora not on private land.</p>	<p>The majority of the area of investigation is not located on private land. A number of protected flora species, including one threatened flora species, have been recorded within the area of investigation and may need to be removed from the construction footprint to enable development of the project. A permit will be required to authorise the removal of protected flora on Crown land (i.e. not private land).</p>
<b>Road Management Act 2004</b>	
<p>The <i>Road Management Act 2004</i> establishes the statutory framework for management of the Victorian road network by Regional Roads Victoria and councils to facilitate the coordination of the various uses of road reserve for roadways, pathways, infrastructure and similar purposes, for the purpose of delivering safe and efficient state and local public road networks.</p> <p>Under the RM Act, Regional Roads Victoria is the responsible road authority for declared arterial roads and freeways, while councils are the responsible road authority for municipal roads within their local government area and Parks Victoria are the responsible road authority for roads within national parks.</p> <p>Consent may be required from the relevant responsible road authority for development and use of land within a road reserve, including occupation and/or construction works in, on or under a road.</p>	<p>Main access to the site from the east and west is via Old Mail Road. This road is managed by Mildura Rural City Council. Any required project works or managed inundation affecting this road or within the road easement will require approval from council.</p> <p>Parks Victoria is the relevant road authority for tracks in the Murray-Sunset National Park. Proposed works to existing tracks within the national park will require consent from Parks Victoria and will be undertaken in accordance with Parks Victoria requirements.</p>
<b>Heritage Act 2017</b>	
<p>The <i>Heritage Act 2017</i> (Heritage Act) is administered by Heritage Victoria and aims to 'provide for the protection and conservation of the cultural heritage of the State'. The Heritage Act protects all categories of cultural heritage relating to the non-Aboriginal settlement of Victoria including shipwrecks, buildings, structures, objects and archaeological sites. There are two categories of listing provided for under the Heritage Act:</p> <ul style="list-style-type: none"> <li>▪ Victorian Heritage Register (VHR)</li> <li>▪ Victorian Heritage Inventory (VHI).</li> </ul> <p>Under Section 87 and 88 of the Heritage Act, it is an offence to knowingly, or negligently, remove, relocate, demolish, damage, despoil, develop, alter or excavate any part of a registered place on the VHR, without a permit.</p> <p>Under Section 123 of the Heritage Act, it is an offence to knowingly or negligently deface, damage, or otherwise interfere with an archaeological site,</p>	<p>No heritage places currently listed on the VHR or VHI are located within the area of investigation (R8, 2020b). Two VHI listed heritage places are located in the inundation area and may be impacted by inundation: Lindsay Creek North Ferry Crossing (VHI H7129-0001) and Lindsay Creek South Ferry Crossing (VHI H7129-0002). These heritage sites may also be impacted by the boat ramps / barge wharves required for construction of the Berribee Regulator, depending on their locations (which are not yet determined).</p> <p>The Lindsay Island Historical Heritage Desktop Assessment describes further investigations, management recommendations and consent requirements in relation to known heritage places listed on the VHI within the project area and unregistered archaeological sites that may be found within proposed work areas during the detailed historical heritage investigations or during construction, operation and decommissioning of the project.</p>

Description	Relevance
<p>whether it is included in the VHI or not, without a consent.</p> <p>Archaeological sites are defined as a place (other than a shipwreck) which: contains an artefact, deposit or feature which is 75 or more years old<sup>1</sup>; and provides information of past activity in the State; and requires archaeological methods to reveal information about the settlement, development or use of the place; and is not associated only with Aboriginal occupation of the place.</p>	
<p><b>Environment Protection Act 1970</b></p> <p>The Environment Protection Act 1970 (EP Act) provides the legal framework for protecting the environment in Victoria, having regard to the principles of environment protection as set out in the Act. The Act establishes the powers, duties and functions of the Environment Protection Authority (EPA), which include administration and enforcement of the Act, recommending State Environment Protection Policies (SEPPs) and industrial waste management policies, issuing works approvals, licences, permits, pollution abatement notices and implementing National Environment Protection Measures.</p> <p>SEPPs are subordinate legislation made under the provisions of the EP Act to provide more detailed requirements and guidance. The SEPPs seek to safeguard environmental values and human activities (beneficial uses) from the effect of pollution and waste, including values relating to surface waters, groundwaters, air quality, noise and contamination of land.</p>	
	<p>Based on currently available information, the project is not likely to require works approval or licensing under the EP Act.</p> <p>However, discharges and emissions during construction, operation and decommissioning of the project must comply with the applicable SEPPs, including:</p> <ul style="list-style-type: none"> <li>• SEPP (Waters)</li> <li>• SEPP (Prevention and Management of Contamination of Land)</li> <li>• Noise from industry in regional Victoria: Recommended maximum noise levels from commerce, industry and trade premises in regional Victoria (NIRV; EPA publication 1411)</li> <li>• SEPP (Ambient Air Quality)</li> <li>• SEPP (Air Quality Management).</li> </ul> <p>Depending on the final method of saline water discharge proposed during construction and operation of the project, approval may be required under the EP Act if discharges are not able to comply with the relevant SEPP requirements.</p> <p>The <i>Environment Protection Act 2017</i> will fully come into effect on 1 July 2021 and will establish a new 'permissions' framework and a new general environmental duty introduced through the <i>Environment Protection Amendment Act 2018</i>. The new general environmental duty will require that:</p> <p><i>"A person who is engaging in an activity that may give rise to risks of harm to human health or the environment from pollution or waste must minimise those risks, so far as reasonably practicable."</i></p> <p>Design, construction, operation and decommissioning of the project will need to implement measures to comply with the new general environmental duty and any new Regulations that are introduced to support the</p>

<sup>1</sup> Archaeological sites that are less than 75 years old may also be listed on the VHI, if it is determined that the site is of archaeological value.

Description	Relevance
	<i>Environment Protection Act 2017</i> when it commences in full.
<p><b><i>Catchment and Land Protection Act 1994</i></b></p> <p>The <i>Catchment and Land Protection Act 1994</i> (CaLP Act) defines requirements to: avoid land degradation; conserve soil; protect water resources; and to eradicate and prevent the establishment and spread of noxious weeds and pest animals. The CaLP Act provides the power to declare 'pest animal' species and 'noxious weed' species and defines four categories of noxious weeds: State Prohibited Weeds; Regionally Prohibited Weeds; Regionally Controlled Weeds; and Restricted Weeds. Noxious weed species and the category they are placed in is specific to individual catchment management authority (CMA) regions.</p> <p>Under the CaLP Act, all landowners (or a third party to whom responsibilities have been legally transferred) have legal obligations regarding the management of declared noxious weeds and pest animals on their land.</p>	<p>No approval is required for the project under the CaLP Act. However, construction and operation of the project will need to be managed to prevent the spread of noxious weeds and pest animals.</p>
<p><b><i>Wildlife Act 1975</i></b></p> <p>The <i>Wildlife Act 1975</i> establishes procedures to protect and conserve Victoria's wildlife. It specifically seeks to prohibit and regulate the conduct of persons engaged in activities concerning or related to wildlife. Section 28A of this Act empowers the Secretary of DELWP (or delegate) to provide an individual written authorisation to capture and release wildlife. Such authorisation generally comes with strict terms and conditions which the individual must comply with.</p>	<p>To facilitate construction of the project, it may be necessary to relocate wildlife to a suitable habitat outside of the construction footprint. Any persons engaged by the project to relocate or otherwise handle wildlife will need to hold the appropriate authorisation under the <i>Wildlife Act 1975</i>.</p>
<p><b><i>Fisheries Act 1995</i></b></p> <p>The <i>Fisheries Act 1995</i> (Fisheries Act) provides a legislative framework for the regulation, management and conservation of Victorian fisheries. A person must not take fish from marine waters or inland waters; or use or possess recreational fishing equipment in or next to Victorian water unless authorised to do so by a licence.</p> <p>Section 119 of the Fisheries Act requires that a person must not create an obstruction across a watercourse or water body that would obstruct the free passage of fish, leave fish stranded, or destroy immature fish without authorisation under the Act.</p>	<p>Design, construction and operation of the project should seek to avoid creating obstructions to fish passage otherwise authorisation may be required under the Fisheries Act.</p> <p>If the capture, handling or translocation of fish is required during construction (e.g. dewatering work sites) or operation of the project, persons undertaking these activities will need to hold the appropriate permit or licence under the Fisheries Act.</p>

## 2.3 New South Wales legislation

Table 2.3 provides an overview of key NSW planning and environmental legislation relevant to this land use planning assessment, including identifying likely approvals for the project. This assessment is limited to



assessment of the proposed construction works to be undertaken in NSW, which are limited to a drop structure downstream of Regulator CR\_D which will extend below the normal operating water level of the Murray River. VMFRP are engaging with and have recently received advice from the MDBA around the raising of the Lock 7 weir pool and how the proposed Lock 7 operating regime compares to the current operating regime. Further assessment will be required to confirm approval requirements (if any) under NSW legislation in relation to this component of the project.

Table 2.3: Summary of relevant NSW legislation

Description	Relevance to this project
<b><i>Environmental Planning and Assessment Act 1979</i></b>	
<p>Development in NSW is assessed in accordance with the <i>Environmental Planning and Assessment Act 1979</i> (EP&amp;A Act), which institutes a system for environmental assessment, including approvals and environmental impact assessment. It requires the relevant planning authority to take into consideration the impacts to the environment (both natural and built) and the community of proposed development or land-use change.</p> <p>The three parts relating to planning approval requirements are:</p> <ul style="list-style-type: none"> <li>Part 4 provides for control of 'local development' that requires development consent from the local Council. State significant development is also assessed under Part 4 (Division 4.7).</li> <li>Part 5 provides for control of 'activities' that do not require approval or development consent under Part 4.</li> <li>Part 5 Division 5.2 provides for control of State significant infrastructure.</li> </ul> <p>The need or otherwise for development control is set out in environmental planning instruments – state environmental planning policies (SEPP (NSW)), regional environmental plans (now deemed SEPPs (NSW)) or local environmental plans (LEPs).</p>	<p>The project works in NSW are part of a water reticulation system and are permissible with consent under Part 4 of the EP&amp;A Act due to the application of clause 126A of <i>State Environmental Planning Policy (Infrastructure) 2007</i>. A development application would need to be submitted to the consent authority which is the Wentworth Shire Council. The development application is 'integrated development' because a permit is also required under section 201 of the <i>Fisheries Management Act 1994</i>.</p> <p>The development application would need to include a Statement of Environmental Effects that would consider the provisions of relevant environmental planning instruments, including the Murray Regional Environmental Plan No.2 – Riverine Land, and the Wentworth Local Environmental Plan 2011.</p>
<b><i>Crown Lands Management Act 2016</i></b>	
<p>The <i>Crown Lands Management Act 2016</i> sets out how Crown land is to be managed in NSW. The Act is administered by Crown Lands Division within the NSW Department of Planning, Industry and Environment (NSW DPIE).</p> <p>Under the <i>Crown Lands Management Act 2016</i>, it is an offence to erect a structure, clear or dig up public land without a lawful authority.</p>	<p>NSW DPIE Crown Lands has advised that the proposed works in NSW would be undertaken on Crown land. Works on NSW Crown land would require authorisation by a lease, license or other permit to allow the use of Crown land.</p> <p>NSW DPIE Crown Lands has advised that a short term licence will be required to construct the drop structure at Regulator CR_D.</p>
<b><i>Water Management Act 2000</i></b>	
<p>The <i>Water Management Act 2000</i> (WM Act) controls extracting and using water, constructing works such as dams and weirs, and carrying out activities in or near water sources in NSW. 'Water sources' are defined very broadly and include any river, lake,</p>	<p>R8 consulted with the NSW Natural Resources Access Regulator (NSW NRAR), who advised that the project would not require a Controlled Activity Approval because the work would be undertaken on Crown land.</p>

Description	Relevance to this project
<p>estuary or place where water occurs naturally on or below the surface of the ground, and NSW coastal waters.</p>	<p>NRAR confirmed that the project does not require a Water Supply Work Approval.</p>
<p><b>National Parks and Wildlife Act 1974</b></p>	
<p>The <i>National Parks and Wildlife Act 1974</i> (NPW Act) promotes and regulates the management of national parks and historic sites or places of cultural value within the landscape and the conservation of certain fauna, native plants and Aboriginal objects and places.</p> <p>The NPW Act provides the basis for legal protection and management of Aboriginal sites in NSW. All Aboriginal objects within NSW are protected under Part 6 of the NPW Act. The implementation of the Aboriginal heritage provisions is the responsibility of the NSW DPIE.</p> <p>Section 87 of the NPW Act states that a permit may be issued to disturb or excavate archaeological sites or objects. Under section 90 of the NPW Act, it is an offence to knowingly destroy, deface or damage an object, except in accordance with an approval granted under that section.</p>	<p>An Aboriginal heritage assessment will need to be undertaken in accordance with the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW to confirm whether the proposal would impact on any items of heritage significance and whether an Aboriginal Heritage Impact Permit (AHIP) is required under Section 90 of the NPW Act.</p>
<p><b>Aboriginal Land Rights Act 1983</b></p>	
<p>The NSW <i>Aboriginal Land Rights Act 1983</i> (ALR Act) recognises the traditional ownership and occupation of the land by Aboriginal peoples and the importance of their connection to land. This means the ALRA recognises the spiritual, social, cultural and economic importance of land to the state's Aboriginal peoples.</p> <p>Section 3 states the purposes of the ALR Act are:</p> <ul style="list-style-type: none"> <li>▪ To provide land rights for Aboriginal persons in New South Wales</li> <li>▪ To provide for representative Aboriginal Land Councils in New South Wales</li> <li>▪ To vest land in those Councils</li> <li>▪ To provide for the acquisition of land, and the management of land and other assets and investments, by or for those Councils and the allocation of funds to and by those Councils</li> <li>▪ To provide for the provision of community benefit schemes by or on behalf of those Councils.</li> </ul> <p>Since the introduction of the ALR Act, many of the powers within its provisions, and the right to make decisions, have been gradually transferred to Aboriginal Land Councils which are constituted under this Act.</p>	<p>Register searches are to be undertaken to confirm whether an Aboriginal Land Claim has been lodged over the part of NSW that is within the construction footprint. This section will be updated once this advice is received.</p>
<p><b>Fisheries Management Act 1994</b></p>	

Description	Relevance to this project
<p>The <i>Fisheries Management Act 1994</i> (FM Act) aims to conserve, develop and share the fishery resources of NSW for the benefit of present and future generations.</p> <p>Under Section 201(1) of the FM Act, a person must not carry out dredging or reclamation except under the authority of a permit issued by the Minister for Agriculture.</p>	<p>The project will involve activities that meet the definition of 'dredging' or 'reclamation' under Clause 198A of the FM Act and will therefore require a permit under section 201 of the FM Act. However, section 201(2) indicates that a permit is not required if the work is authorised under the <i>Crown Land Management Act 2016</i>. Consultation with NSW Department of Primary Industries (NSW DPI) Fisheries and NSW DPIE Crown Lands will be required to confirm this permit exemption.</p>
<b><i>Biodiversity Conservation Act 2016</i></b>	
<p>The <i>Biodiversity Conservation Act 2016</i> (BC Act) provides the statutory framework for the conservation of biota of significance in NSW. The BC Act aims to, amongst other things, 'conserve biological diversity and promote ecologically sustainable development'. It provides for:</p> <ul style="list-style-type: none"> <li>▪ The listing of threatened species under Schedule 1</li> <li>▪ The listing of threatened ecological communities listed under Schedule 2</li> <li>▪ The preparation and implementation of Recovery Plans and Threat Abatement Plans</li> <li>▪ Requirements or otherwise for the preparation of a Species Impact Statement.</li> </ul> <p>The above factors assist within determining whether a proposal is likely to significantly impact on threatened species, populations or ecological communities or their habitats. If a proposal is likely to have a significant impact on a threatened species, population or ecological community, a Species Impact Statement is required.</p>	<p>The project will involve works on only a very small area of land in which the drop structure at Regulator CR_D will be located, and this will be limited to the southern bank of the Murray River. As such, construction of CR_D for the project is not likely to significantly impact on a threatened species, population or ecological community.</p>
<b><i>Local Land Services Act 2013</i></b>	
<p>The <i>Local Land Services Act 2013</i> regulates the clearing of native vegetation on rural land in NSW. However, the Act does not apply to any clearing that is authorised under other legislation, including clearing authorised by a development consent under Part 4 of the EP&amp;A Act after compliance with that Part (section 600(a)).</p>	<p>As this project would be authorised by a development consent under Part 4 of the EP&amp;A Act, clearing of native vegetation does not require authorisation under the <i>Local Land Services Act 2013</i>.</p>
<b><i>Heritage Act 1977</i></b>	
<p>The <i>Heritage Act 1977</i> identifies and protects heritage items and is administered by the Heritage Council of NSW and Heritage NSW (part of the Department of Premier and Cabinet). Any development that would impact on an item listed on the State Heritage Register requires approval from the Heritage Council under section 60 of the Act. The relic provisions in the Act also require that an excavation permit be obtained from the Heritage</p>	<p>According to the Lindsay Island Historical Heritage Desktop Assessment (R8, 2020) the proposed works within NSW are not located on land containing any known heritage items.</p> <p>Potential impacts on heritage items would be considered during the environmental assessment required under the EP&amp;A Act.</p>

Description	Relevance to this project
Council prior to commencement of works if disturbance to a site with known or potential archaeological relics is proposed.	
<b><i>Protection of the Environment Operations Act 1997</i></b>	
The <i>Protection of the Environment Operations Act 1997</i> (POEO Act) regulates noise, air, land and water pollution. Schedule 1 of the POEO Act defines Scheduled Activities that require an Environment Protection Licence (EPL) under the POEO Act. Section 120 of the POEO Act makes it an offence to pollute waters.	The project does not involve a Scheduled Activity. Provided the construction and operation of the project is able to be carried out without causing water pollution, an EPL will not be required, although this will need to be confirmed with the NSW EPA.
<b><i>NSW National Park Estate (Riverina Red Gum Reservations) Act 2010 No 22</i></b>	
The <i>National Park Estate (Riverina Red Gum Reservations) Act 2010</i> converted about 100,000 hectares of state forest into national park, regional park, state conservation area and land proposed for Aboriginal management.	The proposed works would inundate land in the Lock 7 weir pool in NSW that was formerly within the Lake Victoria State Forest. Due to the <i>National Park Estate (Riverina Red Gum Reservations) Act 2010</i> , this land is no longer state forest and ownership of land within the boundaries of the former Lake Victoria State Forest is intended to be transferred to traditional owners. This land is owned by the Minister administering the NSW NPW Act until such time as ownership is transferred to traditional owners.

## 3. Existing conditions

### 3.1 Land use and development

#### 3.1.1 Area of Investigation, construction footprint and inundation area

The project is located within the Rural City of Mildura under the governance of the Mildura Rural City Council. The relevant floodplain management authority is the Mallee CMA.

The area of investigation is mostly located on Lindsay Island approximately 75 km west north west of the regional town of Mildura on the NSW/Victoria border, and less than 10 km east of the Victorian/South Australian border. The area of investigation lies between 10 km and 20 km north of the Sturt Highway and extends to the banks of the Murray River. The Sturt Highway is the national highway of the area and major road network link between Victoria and South Australia.

A small part of the area of investigation associated with drop structure CR\_D extends into the Murray River and therefore into NSW, with proposed inundation also occurring along a section of the Murray River and land on the northern side of the river in NSW.

#### Victoria

Lindsay Island is some 28 km long and forms part of the mid-Murray River system and the Lower Murray floodplain downstream of the Murray River junction with the Darling River. The island supports a network of permanent waterways including Lindsay River (Upper and Lower), Lindsay Creek South, Mullaroo Creek, Little Mullaroo Creek, Toupnein Creek and Webster's Lagoon. Lake Wallawalla is located south of the Lindsay River. Large floods still occur in this area, however major storages in the upper reaches of the Murray River system have reduced the frequency of small to moderate-sized floods.

The area of investigation and proposed inundation areas in Victoria include the following key water features:

- Lindsay River
- Lindsay South Creek
- Mullaroo Creek
- Little Mullaroo Creek
- Lake Wallawalla
- Crankhandle Wetland
- Scotties Billabong
- Billgoes Billabong.

The majority of the project area is located in the Murray-Sunset National Park, which is one of the largest national parks in Australia, having an area of approximately 665,400 ha. The national park is one of the few remaining semi-arid regions in the world where the environment is relatively untouched (Parks Victoria, 2020). The project area is located within the Lindsay Island Visitor Experience Area, which is managed by Parks Victoria to enable 'visitors to enjoy a remote river-based experience with minimal impact on natural and cultural values'. Recreational activities include camping, fishing, kayaking and canoeing, and bird watching.

Designated camping areas are dispersed across Lindsay Island and around Lake Wallawalla, with most camping areas being located along the Murray River, Lindsay River or Mullaroo Creek. According to data supplied by Parks Victoria, the following park visitor sites are intersected by the area of investigation or inundation area:

- A small portion of the Berribee Camping Area at the western extent is located within the area of investigation associated with the Berribee Regulator

- The Lock 7 Boat Ramp Camping Area along the Murray River is located within the area of investigation associated with an access track
- Berribee Camping Area, Mullaroo Creek Access 1, 2, 3, 4, 5, 6 Camping Area, Mullaroo Creek Boat Ramp Camping Area, The Caravan Camping Area, Channel Track Camping Area, Mullaroo Creek Camping Area, Lindsay River Pump Shed Camping Area, Army Bridge Camping Area 1 and 2, Walla Walla Track Camping Area, Little Mullaroo Creek Junction Camping Area and Circuit Track Camping Area are partly or wholly located within the proposed inundation area.

No designated camping areas or other recreational facilities are located within the permanent footprint of proposed infrastructure.

Areas on and near Lindsay Island are registered under the *Reference Areas Act 1978* as 'reference areas' known specifically as the Lake Wallawalla Reference Area and Toupnein Creek Reference Area (see Figure 3.3). Lindsay Island and Lake Wallawalla are recognised nationally for their high environmental and cultural values (Mallee Catchment Management Authority 2014), and are listed on A Directory of Nationally Important Wetlands in Australia (Environment Australia 2001). Lindsay Island is also part of the Chowilla-Lindsay-Wallpolla Icon Site, one of six icon sites identified under the Murray-Darling Basin Ministerial Council's, The Living Murray Initiative (TLM) Environmental Works and Measures Program.

The main parcel of private land within the area of investigation and proposed inundation area, is located to the south of Lindsay River and is known as Neds Corner. Although included in the Farming Zone, this former grazing property is currently owned by Trust for Nature and managed for conservation purposes.

A large parcel of private land is located in the central northern part of Lindsay Island between the Murray River in the north and Sandford Track in the south. This property does not contain any dwellings or other notable development, with only a shed and caravan, and is not affected by the area of investigation or proposed inundation areas.

Areas to the east and south west of the national park (including Lindsay Point) are within a Farming Zone. These areas support orchard farming of nuts (mostly almonds and pistachios) and citrus. The Berribee State Forest is located south west of the area of investigation.

The project is accessible from the Sturt Highway which is the main arterial road running east - west connecting Mildura to the South Australian border. In Victoria, the road is managed by Regional Roads Victoria. Other main access roads include Lindsay Point Road in South Australia (managed by Renmark Paranga Council) and Old Mail Road (managed by Mildura Rural City Council).

## NSW

Proposed works associated with drop structure CR\_D are located in the Murray River, while part of the proposed inundation area in the north east region of the Berribee WMA is located within the Murray River and on rural zoned land in NSW. The proposed works would inundate land in NSW that was formerly within the Lake Victoria State Forest. Due to the *National Park Estate (Riverina Red Gum Reservations) Act 2010*, this land is no longer state forest and ownership of land within the boundaries of the former Lake Victoria State Forest is intended to be transferred to traditional owners. This land is owned by the Minister administering the NSW NPW Act until such time as ownership is transferred to traditional owners.

Waterbodies in the proposed inundation area include:

- Murray River
- Horseshoe Billabong
- Lock 7 Billabong
- A small anabranch of the Murray River.



### 3.1.2 Surrounding area

The project is located approximately 75 km west north west of Mildura. Mildura has a population of around 33,000 people (ABS, 2016) and is the largest settlement of the Sunraysia region. The western extent of the project area is located within approximately 10 km of the Victorian/ South Australian border and is only some 30 km from the South Australian regional town of Renmark.

The project area supports two 'locality' or 'rural district' areas – Lindsay Point and Neds Corner - identified in the Mildura Rural City Suburb and Rural District Names and Boundaries (Department of Sustainability and Environment, 2011). There is no township within either of these locality areas, however there are a number of dwellings at Lindsay Point. The nearest town to the area is Paringa, a small town in the Riverland of South Australia. The town supports vineyards, almonds, citrus and stone fruit orchards, and is a tourist town which acts as a base for houseboats and paddlesteamers. The latest census for the town (2006) recorded a population of 946 people.

The wider Renmark Paringa Council area supports a population of 9,475 (ABS, 2016). The area is one of Australia's major horticulture and viticulture areas. Both the international and domestic market provide significant employment opportunities in the local community. It is a long-term goal of the Renmark Paringa Council to increase the population over the next 30 years in the larger towns of the region.

In NSW, land surrounding the proposed inundation areas consists of rural zoned land. Lake Victoria is a dominant feature of the surrounding area in NSW. The lake covers 12,200 ha and is one of the smallest of the Murray River's four major storages. The lake forms as a 'off-river' storage that assists in regulating flow and salinity in the Murray River as it flows into South Australia. Embankments and regulators control water entering the lake from the Murray River via Frenchman's Creek (upstream of Lock 9). Water released through the outlet regulator flows from the lake into the Rufus River and returns to the Murray River downstream of Lock 7.

The nearest settlement in NSW to the proposed works and inundation is the rural city of Wentworth located approximately 60 km east of the project area, however a number of rural dwellings / stations within the NSW rural locality of Rufus are scattered along the northern side of the Murray River opposite Lindsay Island.

## 3.2 Land tenure

The project comprises of both Crown land and freehold land in Victoria and NSW. Almost all of the Crown land in Victoria is reserved for national park (i.e. Murray-Sunset National Park) and under the ownership and management of Parks Victoria. A small part of the area of investigation associated with an access track extends into land reserved for temporary public purposes, which is managed by DELWP and contains SA Water facilities adjacent to Lock 7. One private land parcel in Victoria supports proposed infrastructure and inundation areas (Neds Corner) while one other private land parcel supports part of the Berribee Homestead Track to be used for construction and operation of the project. Private land and land owned by the Minister administering the NSW NPW Act in NSW is also subject to inundation as a result of the project.

A summary of land parcels affected by the area of investigation and proposed inundation areas in Victoria and NSW is provided in Table 3.1 and illustrated by Figure 3.1.

Table 3.1: Land parcels affected by area of investigation and inundation areas

SPI	Tenure	Address	Instruments on Title	Owner/land manager	Project component
<b>Victoria</b>					
3\PS539437	Freehold	Old Mail Road, Lindsay Point	<u>Encumbrances</u> E-2, E-3, E-7, E-14, E-20, E-44 – Drainage	Private Ownership	Access track

SPI	Tenure	Address	Instruments on Title	Owner/land manager	Project component
			E-10, E-14, E-21 – Water Supply E-19, E-20, E-21, E-22, E-23 – Power Line E-1, E-23 – Carriage way, water supply, irrigation and drainage		
2004\PP3881	Government Road (Old Mail Road)	Old Mail Road, Lindsay Point	<u>Encumbrances</u> E-2, E-3 – Power supply	Mildura Rural City Council	Inundation area
33\PP3881	Freehold	6578 Old Mail Road, Neds Corner	Crown Grant Vol 6258 Fol 498	Trust for Nature (Victoria) (private ownership)	Regulator LS_A1, LS_A2, LS_B, Hardstand LS_C, containment banks and spillways, inundation area, access track
33B\PP3881	Crown land	Old Mail Road, Neds Corner	Reservation Permanent National Park	Parks Victoria	Inundation area
2006\PP3881	Crown land	Old Mail Road, Lindsay Point	Reservation Permanent National Park	Parks Victoria	Regulator WW_A1, Hardstand WW_B, containment banks and spillways, inundation area, access track
2007\PP3881	Crown land	Old Mail Road, Lindsay Point	Reservation Permanent National Park	Parks Victoria	Containment bank BERR_A, inundation area, access track
21B\PP3881	Crown land	Old Mail Road, Lindsay Point	Reservation Permanent National Park	Parks Victoria	Containment bank BERR_A, inundation area, access track
2005\PP3881	Crown land	Old Mail Road, Lindsay Point	Reservation Permanent National Park	Parks Victoria	Regulator WE_A, containment banks and spillways, Hardstand WE_D, inundation area, access track
32D\PP3881	Crown land	Old Mail Road, Neds Corner	Reservation Permanent National Park	Parks Victoria	Inundation area, access track



SPI	Tenure	Address	Instruments on Title	Owner/land manager	Project component
32E\PP3881	Crown land	Old Mail Road, Murray Sunset	Reservation Permanent National Park	Parks Victoria	Containment banks and spillways, inundation area, access track
2002\PP3741	Crown land	Lock 7 Road, Murray Sunset	Reservation Temporary Public Purpose	DELWP	Inundation area, access track
21A\PP3881	Crown land	Old Mail Road, Lindsay Point	Reservation Permanent National Park	Parks Victoria	Access track
2003\PP3741	Crown land	Old Mail Road, Lindsay Point	Reservation Permanent National Park	Parks Victoria	Regulator CW_A, CR_D, CR_E, CR_C, CR_F, CW_B2, CW_B1, CR_A, CR_B, BERR_A, BERR_B, BERR_C, BERR_D, BERR_E, BERR_F, Drop structure CW_A, CR_D, CW_B1, containment banks, channels and spillways, fishway BERR_A, inundation area, access track
2021\PP3881	Crown land	N/A	Reservation Permanent National Park	Parks Victoria	Inundation area
<b>NSW</b>					
NA	Crown land – waterway	Murray River	Unallocated / unreserved Crown land	Murray-Darling Basin Authority	Drop structure downstream of Regulator CR_D
7731\DP1183 857	Crown land	Former Lake Victoria State Forest	State Forest vested in NPW Minister under Schedule 6 <i>National Park Estate (Riverina Red Gum Reservations) Act 2010</i>	Minister administering the NSW NPW Act	Inundation area
7732\DP1183 857	Crown land	Former Lake Victoria State Forest	State Forest vested in NPW Minister under Schedule 6	Minister administering the NSW NPW Act	Inundation area

SPI	Tenure	Address	Instruments on Title	Owner/land manager	Project component
			<i>National Park Estate (Riverina Red Gum Reservations) Act 2010</i>		
17\DP756188	Crown land	Former Lake Victoria State Forest	State Forest vested in NPW Minister under Schedule 6 <i>National Park Estate (Riverina Red Gum Reservations) Act 2010</i>	Minister administering the NSW NPW Act	Inundation area
18\DP756188	Freehold	N/A	DP1217266 Right of carriageway (16 metres) wide appurtenant to Lot 18 DP756188	Private Ownership	Inundation area

### 3.2.1 Instruments on Title

The following general encumbrances exist on land within the area of investigation:

- A number of allotments associated with the area of investigation contain easements on title relating to water supply, the protection of drainage and water supply infrastructure, and in some cases power infrastructure.
- Freehold land parcel at 6578 Old Mail Road, Neds Corner, owned by Trust for Nature, is subject to a Crown Grant allowing the owner rights to water to any depth on the land while reserving to the Crown any rights to the extraction of gold, silver or minerals, and petroleum from the land. The Crown grant is also subject to a condition requiring the owner to 'protect or cause to be protected from any other destruction whatsoever all indigenous trees growing on an area of not less than three per centum of total area of the land'.

On initial review, it is not expected that the project will contravene the intentions of these instruments. It is however a requirement of the Crown Grant for 6578 Old Mail Road, Neds Corner that all affected parties be notified of the project.

No Section 173 Agreements under the *Planning and Environment Act 1987*, Caveats or Covenants apply to land within the area of investigation.

### 3.2.2 Reserved Crown land

Crown land parcels associated with the area of investigation are reserved under either the *Crown Land (Reserves) Act 1978* or the *National Parks Act 1975*. The majority of the land is reserved as 'Permanent National Park', associated with the Murray-Sunset National Park. One parcel is reserved 'Temporary Public Purpose'. This land is on the Victorian side of the Murray River adjacent to Lock No 7.

Parks Victoria will need to confirm the most current reservation and the consents required in relation to the appropriate Act that applies.

### 3.2.3 Land owned by Minister administering the NSW NPW Act

Land in NSW subject to inundation was formerly part of the Lake Victoria State Forest. Due to the *National Park Estate (Riverina Red Gum Reservations) Act 2010*, this land is no longer state forest and ownership of land within the boundaries of the former Lake Victoria State Forest is intended to be transferred to traditional owners. The land is currently being held by the Minister administering the *National Parks and Wildlife Act 1974*. It is understood that VMFRP has commenced engagement with the National Parks and Wildlife Service on the Lindsay Island project in relation to navigating a pathway to engagement with the traditional owners on the project.

## 3.3 Access

Old Mail Road will be used for access during construction and operation of the project. Old Mail Road is a dry weather unsealed road typically maintained in fair condition. However, the road is currently inaccessible in wet conditions. Old Mail Road provides access to Lake Wallawalla via an unsealed causeway and is approximately 100 mm above the proposed inundation level in Lake Wallawalla. Further investigation is being undertaken to determine whether upgrades to the Wallawalla Causeway and Old Mail Road are required to facilitate the project. Possible works along Old Mail Road and Wallawalla Causeway have not been assessed in this land use planning assessment to determine approval requirements or land use impacts, as the need for, or the nature and extent of any works is not yet known.

Access for works will use the following existing roads and tracks:

- Sturt Highway
- Lindsay Point Road (South Australia)
- Old Mail Road
- Neds Corner Road
- Berribee Homestead Track
- Wallawalla Track
- Wallawalla Circuit Track
- Bridge Track
- Berribee Tank Track
- Kulkurna Cliffs Track
- Sandford Track
- Channel Track.

The project will also involve construction of approximately 5 km of new access track connecting the existing track network to some more remote work sites. In addition, approximately 82 km of existing access tracks have been identified as part of the access plan for the project and will require upgrading works for use during construction and operation. The extent of works along access tracks will be confirmed following outcomes of geotechnical investigations, complex cultural heritage assessment and ecological investigations.

## 3.4 Native title interests

A search of the National Native Title Tribunal online register and maps shows:

- Native title determination NSD6167/1998 under the *Native Title Act 1993* applies to land in NSW just north of the Murray River. The determination applies to the Barkandji (Paakantyi) People #11 and is dated 16/2/2004. Determination is that Native Title does not exist on the land (Figure 3.2).

- Native title determination NSD6084/1998 under the *Native Title Act 1993* applies to land in NSW just north of the Murray River. The determination applies to the Barkandji Traditional Owners #8 (Part A) and is dated 16/6/2015. Determination is that Native Title exists over the entire determination area (Figure 3.2).
- Native title claim VID630/2015 under the *Native Title Act 1993* is active in the area of investigation in Victoria. The claim was lodged by the First Peoples of the Millewa-Mallee (FPMM) on 10/8/2015 (Figure 3.2) and registered by the High Court. FPMM therefore have procedural rights in relation to any activities in this area that would extinguish or be inconsistent with native title rights and interests.
- Indigenous Land Use Agreement NI2018/007 was registered in 2018 and relates to interim licences for extraction on land associated with the Native title determination NSD6084/1998.
- Indigenous Land Use Agreement SI2011/025 was registered in 2012 and relates to interim licences for extraction on land associated with the Native title determination NSD6084/1998 The River Murray and Crown Lands agreement.

The Native Title determination NSD6084/1998 and two related ILUAs (NI2018/007 and SI2011/025) that apply to the Barkandji Traditional Owners #8 (Part 8) is on land just outside the inundation area in NSW. Native Title Claim VID630/2015 applies to the entire area of investigation and inundation area in Victoria.

The project area is subject to the FPMM Traditional Owner Group request to negotiate a Recognition and Settlement Agreement (RSA) with the State of Victoria under the *Traditional Owner Settlement Act 2010*. The State's decision on whether to commence settlement negotiations is currently pending.

FPMM must be notified and be given the opportunity to comment on any activity on the land subject to FPMM native title claim and RSA, and an agreement must be reached before the activity can occur.

### 3.5 Other relevant features

The region also supports other features that form an important part of the general land use of the project area and surrounds (Figure 3.3).

#### 3.5.1 Irrigation districts

The project is located within the Mallee/Sunraysia irrigation area as declared under the *Water Act 1989*.

Lindsay River downstream of the proposed Berribee Regulator provides water supply extraction points for irrigation water supply to the Lindsay Point irrigation area, which supports growing of almonds and citrus (Figure 3.3). Further assessment is required to determine whether any licensed water supply offtakes are located in the NSW inundation area (e.g. along the Murray River).

#### 3.5.2 Apiary

Current public data indicates the location of 27 apiary sites located in close proximity to the area of investigation and proposed inundation areas (see Figure 3.3). Approximately 17 of these could be directly impacted by project works and inundation.

The hives are part of annual licence agreements that are dependent on seasonal flowering of River Red Gum forests. Although bees rely on adequate water source to thrive, and it is expected that the objectives of the project will increase the regularity and reliability of flowering, further investigation into possible effects of inundation of apiary sites may be required to determine measures for management of potential impacts.

#### 3.5.3 Horticulture and agriculture

The project area is located in proximity to and to the east of South Australia's Riverland horticultural region known for its citrus, stonefruit and almonds, and producing approximately 186,500 tonnes of citrus and 16,000 tonnes of almonds annually (PIRSA, 2019). To the east, the area of Mildura also supports a major horticultural

centre notable for its grape production, supplying approximately 80% of Victoria's grapes. Land to the south of the Sturt Highway, that is not contained within the Murray-Sunset National Park supports mostly broad-acre cropping activities.

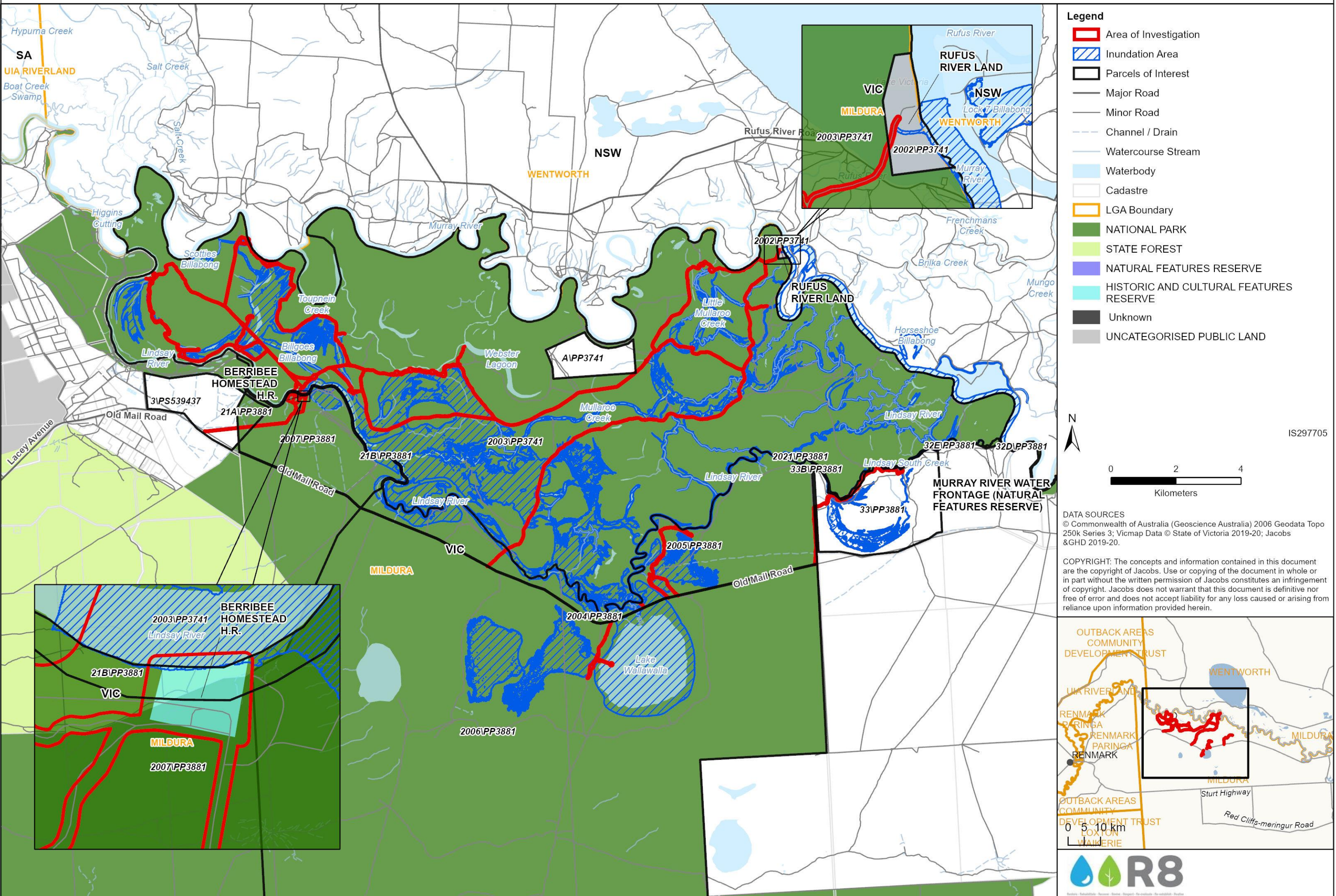
#### **3.5.4 Recreational activities**

Lindsay Island is a popular recreational area for tourists to the region as well as for its local communities. Recreational use includes fishing, camping, boating, canoeing, bird and wildlife watching, photography, horse riding, motor biking and four-wheel driving. Designated camping areas are located along the Murray River, Lindsay River, Mullaroo Creek and other locations on Lindsay Island.

The area also forms part of the Murray River Trail for tourism and recreation purposes and provides direct access to the Murray River for water-based activities and river/bush camping. It is understood that some larger boats, including houseboats, occasionally use the lower Lindsay River between the downstream confluence with the Murray River and Lindsay Bridge. Lindsay Bridge is approximately 12 km upstream of the proposed Berribee Regulator and currently prevents boat access further upstream along the upper Lindsay River.



Figure 3.1 Lindsay Island Floodplain Restoration Project – Land Tenure Map





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## 4. Victorian planning framework

The project is on land subject to the Mildura Planning Scheme (the scheme). This section provides a brief assessment of the area of investigation and proposed works against state and local policy and provisions of the scheme.

### 4.1 Planning policy

Table 4.1 lists the relevant clauses of the Planning Policy Framework of the scheme in relation to the project.

Table 4.1: Relevant Planning Policy

Relevant clause		Objectives
<b>State Planning Policy</b>		
Clause 12 – Environmental and Landscape Values	Clause 12.01 Biodiversity	<p>Clause 12.01-1S – Protection of Biodiversity</p> <ul style="list-style-type: none"> <li>Take account of impact of land use and development on biodiversity value of national parks and conservation reserves or nationally and internationally significant sites, including wetlands and wetland wildlife.</li> <li>Assist in the identification, protection and management of important area of biodiversity.</li> <li>Assist in the establishment, protection and re-establishment of links between important areas of biodiversity.</li> </ul> <p>Clause 12.01-2S Native Vegetation Management</p> <ul style="list-style-type: none"> <li>Avoid the removal, destruction or lopping of native vegetation.</li> <li>Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.</li> <li>Provide an offset to compensate for the biodiversity impact from the removal, destruction or lopping of native vegetation.</li> </ul>
	Clause 12.03 Water Bodies and Wetlands	<p>Clause 12.03-1S River Corridors, Waterways, Lakes and Wetland</p> <ul style="list-style-type: none"> <li>To protect environmentally sensitive areas with significant recreational values from development that would diminish their environmental conservation or recreational values.</li> </ul>
	Clause 12.05 Significant Environments and Landscapes	<p>Clause 12.05-1S Landscapes</p> <ul style="list-style-type: none"> <li>Ensure the development responds to and respects the significant environmental, conservation, cultural, aesthetic, open space, recreation and tourism assets of water.</li> </ul> <p>Clause 12.05-2S Landscapes</p> <ul style="list-style-type: none"> <li>Ensure the development responds to and respects the significant environmental, conservation, cultural, aesthetic, open space, recreation and tourism assets of water bodies and wetlands.</li> <li>Ensure development is sensitively designed and sited to maintain and enhance environmental assets, significant views and landscapes along river corridors and waterways and adjacent to lakes and wetlands.</li> <li>Ensure development does not compromise bank stability, increase erosion or impact on a water body or wetland's natural capacity to manage flood flow.</li> </ul>
Clause 13 Environmental Risks and Amenity	Clause 13.01 Climate Change Impacts	<p>Clause 13.01-1S Natural Hazards and Climate Change</p> <ul style="list-style-type: none"> <li>Integrate strategic land use planning with emergency management decision making.</li> <li>Site and design development to minimise risk to life, property, the natural environment and community infrastructure from natural hazards.</li> </ul>

Relevant clause		Objectives
	Clause 13.03 Floodplains	<p>Clause 13.03-1S Floodplain Management</p> <p>To assist in the protection of:</p> <ul style="list-style-type: none"> <li>Life, property and community infrastructure from flood hazard.</li> <li>The natural flood carrying capacity of rivers, streams and floodways.</li> <li>The flood storage function of floodplains and waterways.</li> <li>Floodplain areas of environmental significance or of importance to river health.</li> </ul>
	Clause 13.04 Soil Degradation	<p>Clause 13.04-3S Salinity</p> <ul style="list-style-type: none"> <li>Promote vegetation retention and replanting in aquifer recharge areas contributing to groundwater salinity problems.</li> <li>Prevent inappropriate development in areas affected by groundwater salinity.</li> </ul>
	Clause 13.07 Amenity and Safety	<p>Clause 13.07-1S Land Use Compatibility</p> <ul style="list-style-type: none"> <li>Ensure the compatibility of a use or development as appropriate to the land use functions and character of the area by directing land uses to appropriate locations.</li> </ul>
Clause 14 Natural Resource Management	Clause 14.01 Agriculture	<p>Clause 14.01-1S Protection of Agricultural Land</p> <p>To protect the state's agricultural base by preserving productive farmland, including productive farmland that is of strategic significance in the local and regional context. Strategies include protecting productive agricultural land from planned loss due to permanent changes to land use, and protecting strategically important agricultural and primary production land from incompatible uses.</p>
	Clause 14.02 Water	<p>Clause 14.02-1S Catchment Planning and Management</p> <p>Ensure that development at or near waterways provide for the protection and enhancement of the environmental qualities of waterways and their instream uses.</p>
		<p>Clause 14.02-2S Water Quality</p> <ul style="list-style-type: none"> <li>Discourage incompatible land use activities in areas subject to flooding, severe soil degradation, groundwater salinity or geotechnical hazards where the land cannot be sustainably managed to ensure minimum impact on downstream water quality or flow volumes.</li> </ul> <p>Prevent the establishment of incompatible land uses in aquifer recharge or saline discharge areas and in potable water catchments.</p> <p>Clause 14.02-3S Protection of declared irrigation districts</p> <ul style="list-style-type: none"> <li>Ensure non-agricultural land use does not undermine the integrity of irrigation infrastructure and complements existing and future agricultural production.</li> <li>Ensure land use change within an irrigation district does not negate the potential opportunities for a rural water corporation to make adjustments to the footprint of an irrigation district that are identified under an approved plan or strategy.</li> <li>Ensure land use change does not limit the ability of future investment in irrigation infrastructure that achieves the intended benefits of minimising water loss and improving irrigation service efficiency to the farm gate and overall agricultural production.</li> </ul>
Clause 15 Built Environment and Heritage	Clause 15.01 Built Environment	<p>Clause 15.01-6S Design for Rural Areas</p> <ul style="list-style-type: none"> <li>To ensure development respects valued areas of rural character, cultural identity, natural features, surrounding landscape and climate.</li> </ul>
	Clause 15.03 Heritage	<p>Clause 15.03-1S Heritage Conservation</p>

Relevant clause		Objectives
		<ul style="list-style-type: none"> <li>Encourage appropriate development that respects places with identified heritage values.</li> </ul>
		<p>Clause 15.03-2S Aboriginal Cultural Heritage</p> <ul style="list-style-type: none"> <li>Identify, assess and document places of Aboriginal cultural heritage significance, in consultation with relevant Registered Aboriginal Parties, as a basis for their inclusion in the planning scheme.</li> </ul>
Clause 17 Economic development	Clause 17.04 Tourism	<p>Clause 17.04-1R Tourism – Loddon Mallee North</p> <ul style="list-style-type: none"> <li>Support nature-based tourism and protect these activities from urban encroachment.</li> </ul>
Clause 19 Infrastructure	Clause 19.02 Community Infrastructure	<p>Clause 19.02.-06S Open space</p> <ul style="list-style-type: none"> <li>Ensure that land use and development adjoining regional open space networks, national parks and conservation reserves complements the open space in terms of visual and noise impacts, preservation of vegetation and treatment of waste water to reduce turbidity and pollution.</li> <li>Protect large regional parks and significant conservation areas.</li> </ul>
<b>Local Planning Policy</b>		
<b>Municipal Strategic Statement</b>		
Clause 21.01 Municipal Profile		<p>The environmental characteristics of the municipality vary considerably in climate, soil type, ground and surface water, riparian areas and flora and fauna. Total rainfall is insufficient to fully sustain horticultural, stock and domestic demand and is reducing as a result of climate change. There is high demand on river and stored water to sustain horticulture and domestic needs, particularly in the summer months. The Murray River is a key economic and social driver of the municipality. Environmental flows are important in sustaining the significant amounts of riparian land within the municipality which are of environmental, ecological and economic importance.</p> <p>Most of the large areas of remaining native vegetation are on public land. The municipality hosts approximately 40% of the total area of the Victorian Parks system. The major parks include the Hattah-Kulkyne, Murray-Sunset and Wyperfeld National Parks, Big Desert Wilderness Park and the Murray-Kulkyne Park. Roadsides, Bushland, Flora and Fauna and other reserves contain a significant proportion of remnant vegetation, particularly understorey and ground flora. Roadside vegetation often forms linear corridors that act as important biolinks between more substantial areas of vegetation between the river and inland environs.</p> <p>The protection of agricultural and horticultural land is important, particularly in the Mildura Older Irrigated Areas (MOIA) and Newer Irrigated Areas (NIA). The economic base is diversifying with emerging industries such as mineral sands, salt extraction, boat building, packaging and solar power generation.</p>
Clause 21.02 Key Influences and Issues	Clause 21.02-1 Key influences and issues	<p><u>Land uses</u></p> <ul style="list-style-type: none"> <li>The critical importance of protecting agricultural land for agricultural purposes, in order to support the economic base of the municipality.</li> </ul> <p><u>Environment</u></p> <ul style="list-style-type: none"> <li>The Murray River, which forms Mildura Rural City's northern and eastern municipal boundary, represents a significant environmental, economic and social asset and underpins the vitality of the region.</li> <li>Climate change (including drought and floods) and the deregulation of the water industry have resulted in the removal of land from intensive horticulture, underutilisation of irrigated land and increased pressure for non-agricultural land uses.</li> </ul>

Relevant clause		Objectives
		<ul style="list-style-type: none"> <li>Extensive development along the river has brought with it a series of problems, including increased salinity and nutrient levels; reduced water availability downstream; outbreaks of blue green algae; pollution of the river; changes to flood regimes; the threat of floodwaters overtopping levees; and the loss of habitats and flora and fauna species.</li> <li>Public parks, reserves and forests play an important role in protecting significant landscape, flora, fauna, cultural and scientific values.</li> <li>There is a need to manage issues associated with the interface between public and private land.</li> </ul> <p><u>Economic development</u></p> <ul style="list-style-type: none"> <li>Tourism is expected to be a steadily growing contributor to the retail market.</li> </ul> <p><u>Infrastructure</u></p> <ul style="list-style-type: none"> <li>Extensive irrigation infrastructure is located within the horticultural districts of the municipality.</li> <li>Extensive piped and channelled stock and domestic water supply systems are located throughout the municipality in areas including Hattah, Nowingi, Carwarp and Millewa.</li> </ul>
Clause 21.03 Vision and Strategic Framework	Clause 21.03-1 Vision	<p><u>Environment</u></p> <ul style="list-style-type: none"> <li>The natural resources of the municipality and surrounding region will be protected and maintained to provide a diversity of species and development that is ecologically sustainable.</li> <li>Salinity and nutrient levels in the municipality's water system will be at their lowest concentration in 40 years.</li> <li>Remnant vegetation and habitat on both private and public land will be preserved and enhanced.</li> <li>Public land in the municipality and surrounding region will be recognised, protected and promoted for its significant environmental, cultural and economic value.</li> </ul> <p><u>Economic development</u></p> <ul style="list-style-type: none"> <li>Tourism visitation will be at their highest level and visitors will be enjoying a wide range of leisure activities, both passive and active, throughout the entire municipality.</li> <li>Agricultural and horticultural production will be the foundation of the municipality's strong and prosperous economy and will be uninhibited by urban encroachment.</li> </ul> <p><u>Infrastructure</u></p> <ul style="list-style-type: none"> <li>Land, water and physical infrastructure in agricultural and horticultural areas will be utilised for their productive agricultural or horticultural use and will be managed in a sustainable manner.</li> </ul>
	Clause 21.03-2 Strategic Framework Plans	<p><u>Figure 1: State Context and Key Land Uses Maps</u></p> <ul style="list-style-type: none"> <li>Lindsay Island identified as a High Impact Salinity Area</li> <li>Area south of Lindsay Point identified as Dryland/Broad Acre Farming.</li> </ul>
Clause 21.05 Environment	Clause 21.05-1 River and wetland health	Objective 1 – To improve river and wetland health within the Rural City of Mildura
	Clause 21.05-2 Flora and Fauna	Objective 2 – To protect flora and fauna within the Rural City of Mildura.
	Clause 21.05-3 Flooding	Objective 3 – To reduce the impacts of flooding within the Rural City of Mildura.
	Clause 21.05-4 Public land	Objective 4 – To protect the environmental, landscape, cultural heritage and archaeological value of public land.

Relevant clause		Objectives
		Objective 5 – To improve the interface between public and private lands.
Clause 21.06 Natural Resource Management	Clause 21.06-1 Protection of rural land	Objective 1 – To protect rural land for agriculture and horticulture.
Clause 21.08 Economic Development	Clause 21.08-3 Tourism	Objective 6 – To strengthen the role and return from tourism development particularly based on the area's natural and cultural heritage base.
Clause 21.09 Infrastructure and Transport	Clause 21.09-1 Infrastructure	Objective 2 – To protect and expand irrigation infrastructure.

The project supports both state and local planning policy, particularly in relation to the protection and enhancement of biodiversity, waterbodies and wetlands and significant landscapes of the area. The objectives of Clause 21.05 of the Mildura Planning Scheme Municipal Strategic Statement in relation to the management of the environmental values and resource capacity of the Murray River are particularly relevant to the project.

The aim of improving on the health of these riverine environments will also support the economic development of the region which is already focused on nature-based tourism activities associated with ecological value. There are also key objectives around ensuring the economic viability of surrounding agricultural land is not jeopardised by adjoining land use. This includes the need to maintain and enhance extensive irrigation infrastructure that supports the agricultural and horticultural industry – the primary land use key economic driver of the region. Any impact to this agricultural land use from inundation activities should be minimised and managed. Although land at Neds Corner within the proposed inundation area is zoned for farming purposes, this property is owned by Trust for Nature and currently managed for conservation, therefore inundation of this land is likely to support the current land use without jeopardising future use of the land for agricultural purposes consistent with the current zoning.

## 4.2 Land use definitions

Land use of proposed works are defined in Clause 73 of the planning scheme and summarised in Table 4.2. These definitions will be used in the assessment of the applications under the planning scheme.

Table 4.2: Planning scheme land use definitions

Project works	Clause 73 General term/ use	Definition
Spillway Containment bank Inundation Temporary pump hardstands	Utility Installation	Land used: <ul style="list-style-type: none"> <li>for telecommunications</li> <li>to transmit or distribute gas or oil</li> <li>to transmit, distribute or store power, including battery storage</li> <li>to collect, treat, transmit, store or distribute water; or</li> <li>to collect, treat, or dispose of storm or flood water, sewage, or sullage</li> </ul> It includes any associated flow measurement device or a structure to gauge waterway flow
Regulator Box culvert Channel Drop structure	Minor Utility Installation	Land used for a utility installation comprising any of the following: <ul style="list-style-type: none"> <li>Sewerage or water mains</li> <li>Storm or flood water drains or retarding basins</li> <li>Flow measurement device or a structure to gauge waterway flow</li> <li>Siphons, water storage tanks, disinfection booster stations and channels</li> <li>Gas mains providing gas directly to consumers</li> </ul>

Project works	Clause 73 General term/ use	Definition
		<ul style="list-style-type: none"> <li>A sewerage treatment plant, and any associated disposal works, required to serve a neighbourhood</li> <li>A pumping station required to serve a neighbourhood</li> <li>Powerlines designed to operate at less than 220,000 volts but excluding any power lines directly associated with an Energy generation facility or Geothermal energy extraction; or</li> <li>An electrical sub-station designed to operate at no more than 66,000 volts but excluding any sub-station directly associated with an Energy generation facility or Geothermal energy extraction</li> </ul>
Storage compound	Store	Land used to store goods, machinery, or vehicles
Access tracks Roadworks Containment bank Temporary pump hardstands Temporary construction laydown areas Drop structure Channels	Earthworks	<b>Land forming</b> , laser grading, <b>levee banks</b> , <b>raised access road and tracks</b> , building pads, <b>storage embankments</b> , channel banks and drain banks and associated structures
Native Vegetation	Native Vegetation	Plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses.

Conservation is the current primary purpose of the area of investigation. However, the Murray-Sunset National Park already contains water management infrastructure associated with the TLM program. The proposed works will however, significantly increase the use of infrastructure to achieve a much larger inundation area that may introduce new impacts on surrounding land use. The approach is therefore to consider a new use in the planning assessment of this project.

### 4.3 Relevant zones and overlays

The following zones and overlays from the Mildura Planning Scheme apply to the area of investigation (Figure 4.2 and Figure 4.3):

- Public Conservation and Resource Zone (PCRZ)
- Farming Zone (FZ)
- Environmental Significance Overlay (Schedule 1 – Murray River Corridor) (ESO1)
- Land Subject to Inundation Overlay (LSIO)
- Bushfire Management Overlay (BMO).

A summary of zones and overlays applying to the proposed project components is provided in Table 4.3.

Table 4.3: Summary of zones and overlays relevant to project components

Zone ID	Zone Name	Project component
<b>Berribee WMA</b>		
PCRZ	Public Conservation and Resource Zone	Containment Bank BERR_A, BERR_B, BERR_C, BERR_D, BERR_E, BERR_F, BERR_G and associated spillways Regulator BERR_A, BERR_B, BERR_C, BERR_D, BERR_E

Zone ID	Zone Name	Project component
		<p>Culvert BERR_G</p> <p>Construction laydown areas (Laydown Areas BERR_A1, BERR_A2 and BERR_A3)</p> <p>Permanent storage compound (Laydown Area BERR_A2)</p> <p>Access tracks</p> <p>Inundation area</p>
FZ	Farming Zone, Schedule to the Farming Zone	Access tracks
ESO1	Environmental Significance Overlay (Schedule 1 – Murray River Corridor)	<p>Containment Bank BERR_A, BERR_B, BERR_C, BERR_D, BERR_E, BERR_F, BERR_G and associated spillways</p> <p>Regulator BERR_A, BERR_B, BERR_C, BERR_D, BERR_E</p> <p>Culvert BERR_G</p> <p>Construction laydown areas (Laydown Areas BERR_A1, BERR_A2 and BERR_A3)</p> <p>Permanent storage compound (Laydown Area BERR_A2)</p> <p>Access tracks</p> <p>Inundation area</p>
LSIO	Land Subject to Inundation Overlay	<p>Containment Banks BERR_A, BERR_B, BERR_C, BERR_D, BERR_E, BERR_F, BERR_G and associated spillways</p> <p>Regulator BERR_A, BERR_B, BERR_C, BERR_D, BERR_E</p> <p>Culvert BERR_G</p> <p>Construction laydown areas (Laydown Areas BERR_A1, BERR_A2 and BERR_A3)</p> <p>Permanent storage compound (Laydown Area BERR_A2)</p> <p>Access tracks</p> <p>Inundation area</p>
BMO	Bushfire Management Overlay	<p>Containment Bank BERR_E, BERR_F and associated spillways</p> <p>Regulator BERR_E, BERR_F</p> <p>Access tracks</p> <p>Inundation area</p>
<b>Crankhandle WMA</b>		
PCRZ	Public Conservation and Resource Zone	<p>Containment Bank CR_A, CR_B, CR_C, CR_D, CR_E, CR_F, CR_H and associated spillways</p> <p>Regulators CR_A, CR_B, CR_C, CR_D, CR_E, CR_F</p> <p>Channel CR_G</p> <p>Drop Structure CR_D</p> <p>Access tracks</p> <p>Inundation area</p>
ESO1	Environmental Significance Overlay (Schedule 1 – Murray River Corridor)	<p>Containment Bank CR_A, CR_B, CR_C, CR_D, CR_E, CR_F, CR_H</p> <p>Regulators CR_A, CR_B, CR_C, CR_D, CR_E, CR_F</p> <p>Channel CR_G</p> <p>Drop Structure CR_D</p> <p>Spillways</p> <p>Access tracks</p> <p>Inundation area</p>
LSIO	Land Subject to Inundation Overlay	<p>Containment Bank CR_A, CR_B, CR_C, CR_D, CR_E, CR_F, CR_H and associated spillways</p> <p>Regulators CR_A, CR_B, CR_C, CR_D, CR_E, CR_F</p> <p>Channel CR_G</p> <p>Drop Structure CR_D</p>



Zone ID	Zone Name	Project component
		Access tracks Inundation area
BMO	Bushfire Management Overlay	Containment bank CR_C, CR_E Regulator CR_C, CR_E Access tracks Inundation area
<b>Crankhandle West WMA</b>		
PCRZ	Public Conservation and Resource Zone	Containment Bank CW_A, CW_B1, CW_B2, CW_C and associated spillways Regulator CW_A, CW_B1, CW_B2 Drop structure CW_A, CW_B1 Channel CW_D Access tracks Inundation area
ESO1	Environmental Significance Overlay (Schedule 1 – Murray River Corridor)	Containment Bank CW_A, CW_B1, CW_B2, CW_C and associated spillways Regulator CW_A, CW_B1, CW_B2 Drop structure CW_A, CW_B1 Channel CW_D Access tracks Inundation area
LSIO	Land Subject to Inundation Overlay	Containment Bank CW_A, CW_B1, CW_B2, CW_C and associated spillways Regulator CW_A, CW_B1, CW_B2 Drop structure CW_A, CW_B1 Channel CW_D Access tracks Inundation area
<b>Lindsay South WMA</b>		
PCRZ	Public Conservation and Resource Zone	Containment Bank LS_A2 and associated spillway Access tracks Inundation area
FZ	Farming Zone, Schedule to the Farming Zone	Containment Bank LS_A1, LS_A2, LS_B Regulator LS_A1, LS_B Temporary pump hardstand and pump LS_C Temporary pipeline LS_C Spillway LS_A1 Access tracks Inundation area
ESO	Environmental Significance Overlay (Schedule 1 – Murray River Corridor)	Containment Bank LS_A1, LS_A2, LS_B Regulator LS_A1, LS_B Temporary pump hardstand and pump LS_C Temporary pipeline LS_C Spillway LS_A1, LS_A2 Access tracks Inundation area
LSIO	Land Subject to Inundation Overlay	Containment Bank LS_A1, LS_A2, LS_B Regulator LS_A1, LS_B Temporary pump hardstand and pump LS_C

Zone ID	Zone Name	Project component
		Temporary pipeline LS_C Spillway LS_A1, LS_A2 Access tracks Inundation area
<b>Wallawalla East WMA</b>		
PCRZ	Public Conservation and Resource Zone	Containment Bank WE_A, WE_B, WE_C and associated spillways Regulator WE_A Temporary pump hardstand and pump WE_D Temporary pipeline WE_D Culverts WE_D Access tracks Inundation area
ESO1	Environmental Significance Overlay (Schedule 1 – Murray River Corridor)	Containment Bank WE_A, WE_C Temporary pump hardstand and pump WE_D Temporary pipeline WE_D Culvert WE_D Spillway WE_C Access tracks Inundation area
LSIO	Land Subject to Inundation Overlay	Containment Bank WE_A, WE_C Temporary pump hardstand and pump WE_D Temporary pipeline WE_D Culvert WE_D Spillway WE_C Access tracks Inundation area
<b>Wallawalla West WMA</b>		
PCRZ	Public Conservation and Resource Zone	Containment Bank WW_A and associated spillway Regulator WW_A1, WW_A2 Permanent pump hardstand and pump WW_B Permanent pipeline WW_B Access tracks Inundation area
ESO1	Environmental Significance Overlay (Schedule 1 – Murray River Corridor)	Containment Bank WW_A and associated spillway Regulator WW_A1 Permanent pipeline WW_B Access tracks Inundation area
LSIO	Land Subject to Inundation Overlay	Containment Bank WW_A and associated spillway Regulator WW_A1 Permanent pipeline WW_B Access tracks Inundation area

A review of the purpose of the zones and overlays associated with the area of investigation is provided in Table 4.4.

Table 4.4 Purpose of zones and overlays

Relevant zone/overlay	Purpose	Project response
Clause 36.03 Public Conservation and Resource Zone (PCRZ)	<ul style="list-style-type: none"> <li>To implement the Municipal Planning Strategy and the Planning Policy Framework.</li> <li>To protect and conserve the natural environment and natural processes for their historic, scientific, landscape, habitat or cultural values.</li> <li>To provide facilities which assist in public education and interpretation of the natural environment with minimal degradation of the natural environment or natural processes.</li> <li>To provide for appropriate resource-based uses.</li> </ul>	<p>The PCRZ covers the majority of the area of investigation and the proposed inundation area.</p> <p>The project is considered to be consistent with the purpose of the PCRZ "to protect and conserve the natural environment and natural processes".</p> <p>The aim of the project is to restore a more natural inundation regime to improve the ecological condition of high ecological value floodplain habitats mostly located within the Murray-Sunset National Park, which is managed primarily for conservation and recreational purposes by Parks Victoria.</p>
Clause 35.07 Farming Zone (FZ)	<ul style="list-style-type: none"> <li>To implement the Municipal Planning Strategy and the Planning Policy Framework.</li> <li>To provide for the use of land for agriculture.</li> <li>To encourage the retention of productive agricultural land.</li> <li>To ensure that non-agricultural uses, including dwellings, do not adversely affect the use of land for agriculture.</li> <li>To encourage the retention of employment and population to support rural communities.</li> <li>To encourage use and development of land based on comprehensive and sustainable land management practices and infrastructure provision.</li> <li>To provide for the use and development of land for the specific purposes identified in a schedule to this zone.</li> </ul>	<p>The area of investigation and proposed inundation area associated with Lindsay South WMA is mostly within Farming Zone (FZ). This land parcel (SPI 33\PP3881 known as Neds Corner) is currently owned by Trust for Nature Pty Ltd and used for conservation purposes.</p> <p>The location of access tracks and construction laydown areas has not been confirmed. Even though the land is not used for agricultural purposes, location of structures such as access tracks and laydown areas should be located to maximise potential use of the land for agricultural use.</p> <p>It is understood that the project can be operated to manage inundation of privately owned land within the FZ through control of the proposed regulating structures and pumping rates, and that inundation of privately owned land within the FZ will only be undertaken in accordance with flood easements or agreements with affected landowners. On this basis, the project is considered to be consistent with the purpose of the FZ in that managing inundation in accordance with landowner agreements should ensure that any current use of the land will not be adversely affected by the project. It is understood that VMFRP is currently negotiating required agreements with Trust for Nature as the owner of the Neds Corner property within the Farming Zone.</p>
Clause 42.01 Environmental Significance Overlay (Schedule 1 – Murray River Corridor) (ESO1)	<ul style="list-style-type: none"> <li>To implement the Municipal Planning Strategy and the Planning Policy Framework.</li> <li>To identify areas where the development of land may be affected by environmental constraints.</li> <li>To ensure that development is compatible with identified environmental values.</li> </ul> <p><u>Schedule 1 Environmental objectives</u></p>	<p>The ESO1 covers the majority of the area of investigation and proposed inundation area across all WMAs, as well as covering all of Lindsay Island and most of the Murray-Sunset National Park. The extent of the ESO1 in this locality aligns with the extent of the LSIO. Due to the nature of their role in diverting, retaining and releasing floodwaters, construction of these proposed infrastructure components on floodplain areas encompassed by the ESO1 is unavoidable.</p> <p>The project aims to restore a more natural inundation regime to improve the ecological condition of high ecological value floodplain habitats, mostly located within the Murray-</p>

Relevant zone/overlay	Purpose	Project response
	<ul style="list-style-type: none"> <li>▪ To protect the environs of the Murray River recognising its importance for nature conservation, flooding, economic development, recreation and tourism</li> <li>▪ To prevent use and development of land adjoining the river from degrading water quality.</li> <li>▪ To promote consistent planning and management along the River corridor.</li> <li>▪ To prevent the loss of riparian flora and fauna, biodiversity, habitat and wetland environments.</li> <li>▪ To protect the values and role of the Murray River reserves and other public land as floodplains and as buffer areas for nutrients and other pollutants.</li> <li>▪ To restrict inappropriate use and development on land adjoining and near the River</li> <li>▪ To assess the use and development of land adjoining the Murray River corridor according to the capacity of the proposal to protect the environmental and landscape qualities of the River environs in accordance with sustainable development principles</li> <li>▪ To specifically address land degradation processes including erosion, native vegetation decline, pollution of ground or surface water, groundwater accession, salinization and soil acidity, and adverse effects on the quality of land and water habitats</li> </ul>	<p>Sunset National Park, which is managed primarily for conservation and recreational purposes by Parks Victoria. As such, the project is considered to be consistent with the purpose and objectives of the ESO1, specifically those aiming to:</p> <ul style="list-style-type: none"> <li>▪ prevent the loss of riparian flora and fauna, biodiversity, habitat and wetland environments</li> <li>▪ protect the environs of the Murray River important for nature conservation, flooding, recreation, economic development, recreation and tourism</li> <li>▪ protect the environmental and landscape qualities of the Murray River corridor.</li> </ul>
Clause 44.04 Land Subject to Inundation Overlay (LSIO)	<ul style="list-style-type: none"> <li>▪ To implement the Municipal Planning Strategy and the Planning Policy Framework</li> <li>▪ To identify land in a flood storage or flood fringe area affected by the 1 in 100 year flood or any other area determined by the floodplain management authority.</li> <li>▪ To ensure that development maintains the free passage and temporary storage of floodwaters, minimises flood damage, is compatible with the flood hazard and local drainage conditions and will not cause any significant rise in flood level or flow velocity.</li> </ul>	<p>The LSIO covers the majority of the area of investigation and proposed inundation area across most WMAs, as well as covering all of Lindsay Island and most of the Murray-Sunset National Park. Some parts of the proposed inundation area south of the Lindsay River and around Lake Wallawalla, mostly within the Wallawalla West, Wallawalla East and Lindsay South WMAs, are located outside the LSIO.</p> <p>The project aims to restore a more natural inundation regime by installing infrastructure to manage the frequency and duration of managed inundation events to more closely align with natural conditions. The project is designed to provide for erosion protection where necessary based on modelled flow velocities.</p> <p>The project is designed to facilitate changes to flood levels and velocities compared to existing conditions. However, provided the works are operated in accordance with private and public land manager agreements and consents with affected land and infrastructure owners, the project is not likely to be inconsistent with the purpose of the LSIO.</p>

Relevant zone/overlay	Purpose	Project response
Clause 44.06 Bushfire Management Overlay (BMO)	<ul style="list-style-type: none"> <li>▪ To implement the Municipal Planning Strategy and the Planning Policy Framework.</li> <li>▪ To ensure that the development of land prioritises the protection of human life and strengthens community resilience to bushfire.</li> <li>▪ To identify areas where the bushfire hazard warrants bushfire protection measures to be implemented.</li> <li>▪ To ensure development is only permitted where the risk to life and property from bushfire can be reduced to an acceptable level.</li> </ul>	<p>The area of investigation is not largely affected by the BMO.</p> <p>The project does not conflict with the primary purpose of the BMO which is to minimise risk of bushfire to life and property. The project is consistent with the purpose of the BMO.</p>

## 4.4 Particular and general exemptions

Table 4.5 provides a summary of particular and general provision exemptions under the planning scheme that apply to works for the project.

Table 4.5: Approval exemptions

Relevant land use/activity	Clause of the planning scheme	Exemption	Relevant condition
Minor utility installation	Clause 62.01 Uses not Requiring a Permit	Use	Does not apply to use of land in the PCRZ.
Minor utility installation	Clause 62.02-1 Buildings and works not requiring a permit	Buildings and works/earthworks	Does not apply to buildings and works within the PCRZ.
Roadworks	Clause 62.02-2 Buildings and works not requiring a permit unless specifically required by the planning scheme	Buildings and works	Does not apply to buildings and works within the PCRZ.
Native vegetation	Clause 52.17-1 Permit requirement	Remove, destroy or lop native vegetation	If the table to Clause 52.17-7 specifically states that a permit is not required.  To the removal, destruction or lopping of native vegetation specified in the schedule to this clause.
	Clause 52.17-2 Application requirements	Remove, destroy or lop native vegetation	An application to remove, destroy or lop native vegetation must comply with the application requirements specified in the <i>Guidelines for the removal, destruction or lopping of native vegetation</i> (DELWP, 2017)
	Clause 52.17-7 Table of exemptions	Remove, destroy or lop native vegetation	<u>Conservation work</u> To the minimum extent necessary to enable the carrying out of conservation work: <ul style="list-style-type: none"> <li>Which provides and overall improvement for biodiversity; and</li> <li>With written agreement of the Secretary to the DELWP (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i>)</li> </ul>
			<u>Crown land</u> To the minimum extent necessary to manage Crown land: <ul style="list-style-type: none"> <li>By or on behalf of the Secretary to the DELWP (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i>), or Parks Victoria, and in accordance with the Procedure for the removal, destruction or lopping of native vegetation on Crown land; or</li> <li>With written permission from the Secretary to the DELWP (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i>).</li> </ul>
			<u>Dead native vegetation</u> Native vegetation that is dead. This exemption does not apply to a standing dead tree with a trunk diameter of 40 cm or more at a height of 1.3 m above ground level
			<u>Grasses</u>

Relevant land use/activity	Clause of the planning scheme	Exemption	Relevant condition
			<p>Native grass that is to be mowed or slashed for maintenance only, provided that the grass is:</p> <ul style="list-style-type: none"> <li>Located within a lawn, garden or other landscaped area; or</li> <li>Maintained at a height of at least 10 cm above ground level.</li> </ul> <p><u>Lopping and pruning native vegetation, for maintenance</u></p> <p>Lopping or pruning native vegetation, for maintenance only provided no more than 1/3 of the foliage of each individual plant is lopped or pruned. This exemption does not apply to:</p> <ul style="list-style-type: none"> <li>The pruning or lopping of the trunk of a native tree; or</li> <li>Native vegetation on a roadside or railway reservation.</li> </ul> <p><u>Pest animal burrows</u></p> <p>Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary to enable the removal of pest animal burrows in the Farming Zone or the Rural Activity Zone:</p> <ul style="list-style-type: none"> <li>In accordance with written agreement of an officer of the department responsible for administering the <i>Flora and Fauna Guarantee Act 1988</i>; or</li> <li>Provided the maximum extent of native vegetation removed, destroyed or lopped on contiguous land in the same ownership in a five year period does not exceed any of the following: <ul style="list-style-type: none"> <li>1 ha of native vegetation which does not include a tree; or</li> <li>15 native trees with a trunk diameter of less than 20 cm at a height of 1.3 m above ground level.</li> </ul> </li> </ul> <p><u>Planted vegetation</u></p> <p>Native vegetation that is to be removed, destroyed or lopped that was either planted or grown as a result of direct seeding. This exemption does not apply to native vegetation planted or managed with public funding for the purpose of land projection or enhancing biodiversity unless the removal, destruction or lopping of the native vegetation is in accordance with written permission of the agency (or its successor) that provided the funding.</p> <p><u>Regrowth</u></p> <p>Native vegetation this is to be removed, destroyed or lopped that has naturally established or regenerated on land lawfully cleared of naturally established native vegetation, and is:</p> <ul style="list-style-type: none"> <li>Less than 10 years old; or</li> <li>Bracken (<i>Pteridium esculentum</i>); or</li> <li>Within the boundary of a timber production plantation, as indicated on a Plantation Development Notice or other documented record, and has established after the plantation; or</li> <li>Less than ten years old at the time of a property vegetation plan being signed by the Secretary to the DELWP (as constituted under Part 2 of the <i>Conservation Forests and Lands Act 1987</i>), and is: <ul style="list-style-type: none"> <li>Shown on that plan as being 'certified regrowth; and</li> <li>On land that is to be used or maintained for cultivation or pasture during the term of that plan.</li> </ul> </li> </ul>



Relevant land use/activity	Clause of the planning scheme	Exemption	Relevant condition
			<p>This exemption does not apply to land where native vegetation has been destroyed or otherwise damaged as a result of flood, fire or other natural disasters.</p> <p><u>Road Safety</u> Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary by and on behalf of a public authority or municipal council to maintain the safe and efficient function of an existing road in accordance with the written agreement of the Secretary to the DELWP (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i>).</p> <p><u>Surveying</u> Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary by, or on behalf of, a licenced surveyor (with the meaning of section 3 of the <i>Surveying Act 2004</i>) using hand-held tools to establish a sightline for the measurement of land.</p> <p><u>Utility Installations</u> Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary:</p> <ul style="list-style-type: none"> <li>▪ To maintain the safe and efficient function of a Minor Utility Installation; or</li> <li>▪ By or on behalf of a utility service provider to maintain or construct a utility installation in accordance with the written agreement of the Secretary to the DELWP (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i>).</li> </ul> <p><u>Vehicle access from public roads</u> Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary to enable the construction or maintenance of a vehicle access across a road reserve from a property boundary to a public road. This exemption only applies to properties which share a common boundary with the road reserve, and the total width of clearing must not exceed 6m. This exemption does not apply where there is a practical opportunity to site the accessway to avoid the removal, destruction or lopping of native vegetation. In this exemption, roadside and public road have the same meanings as in section 3 of the <i>Road Management Act 2004</i>. <i>Note: Under the Road Management Act 2004, the written consent of the coordinating road authority is required to conduct any works, including removing a tree or other vegetation, in, on, under or over a road.</i></p> <p><u>Weeds</u> Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary to enable the removal or destruction of a weed listed in the schedule to Clause 52.17. The maximum extent of native vegetation that may be removed, destroyed or lopped under this exemption on contiguous land in</p>

Relevant land use/activity	Clause of the planning scheme	Exemption	Relevant condition
			<p>the same ownership in a five year period must not exceed any of the following:</p> <ul style="list-style-type: none"> <li>1 hectare of native vegetation which does not include a tree.</li> <li>15 native trees with a trunk diameter of less than 20 cm at a height of 1.3 m above the ground level.</li> </ul>

Exemptions for use and development under Clause 62.01, Clause 62.02-1 and Clause 62.02-2 of the planning scheme do not apply to the majority of project components as they are located within the PCRZ, but do apply to project components in all other zones, including the FZ.

There is some potential for small-scale exemptions listed in Clause 52.17-7 to apply to the removal, destruction or lopping of native vegetation for the project (e.g. regrowth, weeds, planted vegetation). Some wide-scale exemptions may also apply in relation to 'Conservation Work' and 'Crown Land', however the application of these exemptions would require written agreement from the Secretary to DELWP.

## 4.5 Zone and overlay exemptions

Table 4.6 identifies the relevant zone and overlay approval exemptions that apply or may apply to the proposed project works.

Table 4.6: Zone and overlay exemptions

Relevant Zone / Overlay	Exemption	Relevant condition
<p>Clause 36.03 Public Conservation and Resource Zone (PCRZ)</p> <p>Clause 36.03-2 Permit requirement</p>	Buildings and works	<p>A building or works shown in an Incorporated plan which applies to the land.</p> <p>A building or works specified in Clause 62.02-1 or 62.02-2 carried out by or on behalf of a public authority or municipal council, if the public authority or municipal council is carrying out functions, powers or duties conferred by or under the <i>Local Government Act 1989</i>, the <i>Reference Areas Act 1978</i>, the <i>National Parks Act 1975</i>, the <i>Fisheries Act 1995</i>, the <i>Wildlife Act 1975</i>, the <i>Forests Act 1958</i>, the <i>Water Industry Act 1994</i>, the <i>Water Act 1989</i>, the <i>Marine Act 1988</i>, the <i>Port of Melbourne Authority Act 1958</i> or the <i>Crown Land (Reserves) Act 1978</i>.</p> <p>A building or works carried out by or on behalf of a public land manager or Parks Victoria under the <i>Local Government Act 1989</i>, the <i>Reference Areas Act 1978</i>, the <i>National Parks Act 1975</i>, the <i>Fisheries Act 1995</i>, the <i>Wildlife Act 1975</i>, the <i>Forests Act 1958</i>, the <i>Water Industry Act 1994</i>, the <i>Water Act 1989</i>, the <i>Marine Act 1988</i>, the <i>Port of Melbourne Authority Act 1958</i> or the <i>Crown Land (Reserves) Act 1978</i>.</p>
<p>Clause 32.07 Farming Zone (FZ)</p> <p>Clause 32.07-1 Table of uses, Section 1 Permit not required</p>	Use (minor utility installation)	Any use listed in Clause 62.01
<p>Clause 35.07 Farming Zone (FZ)</p> <p>Clause 35.07-4 Buildings and works</p>	Buildings and works (earthworks)	Earthworks specified in a schedule to this zone, if on land in a schedule (see below).
Schedule to the Farming Zone	Buildings and works (earthworks)	Permit required for the following earthworks on all land.
<p>Clause 42.01 Environmental Significance Overlay</p> <p>Clause 42.01-2 Permit requirement</p>	Buildings and works	If a schedule to this overlay specifically states that a permit is not required (see below for Schedule 1 to the Environmental Significance Overlay).

Relevant Zone / Overlay	Exemption	Relevant condition
Schedule 1 to the Environmental Significance Overlay Clause 3.0 Permit requirement	Buildings and works	No relevant exemptions.
Clause 42.01 Environmental Significance Overlay Clause 42.01-2 Permit requirement	Remove, destroy or lop any vegetation, including dead vegetation	If a schedule to this overlay specifically states that a permit is not required
Schedule 1 to the Environmental Significance Overlay Clause 3.0 Permit requirement	Remove, destroy or lop any vegetation, including dead vegetation	A permit is not required for the removal, destruction or lopping of vegetation for public works, including public roads and water authority works.
Clause 42.01-3 Table of exemptions	Remove, destroy or lop any vegetation, including dead vegetation	<u>Noxious weeds</u> Vegetation that is a noxious weed subject of a declaration under section 58 or section 58A of the <i>Catchment and Land Protection Act 1994</i> . This exemption does not apply to the Australian Dodder ( <i>Cuscuta australis</i> ).
		<u>Pest animal burrows</u> Vegetation that is to be removed, destroyed or lopped to the minimum extent necessary to enable the removal of pest animal burrows. In the case of native vegetation, the written agreement of an officer of the department responsible for administering the <i>Flora and Fauna Guarantee Act 1988</i> is required before the vegetation can be removed, destroyed or lopped.
		<u>Planted vegetation</u> Vegetation that is to be removed, destroyed or lopped that was either planted or grown as a result of direct seeding for Crop raising or Grazing animal production.
		<u>Regrowth</u> Vegetation that is to be removed, destroyed or lopped that has naturally established or regenerated on land lawfully cleared of naturally established vegetation, and is: ▪ Bracken ( <i>Pteridium esculentum</i> ) This exemption does not apply to land on which vegetation has been destroyed or otherwise damaged as a result of flood, fire or other natural disaster.
		<u>Road safety</u> Vegetation that is to be removed, destroyed or lopped to the minimum extent necessary by or on behalf of a public authority of municipal council to maintain the safe and efficient function of an existing public road in accordance with the written agreement of the Secretary to DELWP (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i> ).
		<u>Surveying</u> Vegetation that is to be removed, destroyed or lopped to the minimum extent necessary by, or on behalf of, a licenced surveyor (within the meaning of section 3 of the <i>Surveying Act 2004</i> ) using hand-held tools to establish a sightline for the measurement of land.
Clause 44.04 Land Subject to Inundation Overlay 44.04-2 Buildings and works	Buildings and works	If a schedule to this overlay specifically states that a permit is not required. To flood mitigation works carried out by the responsible authority or floodplain management authority.

## 4.6 Planning triggers

Table 4.7 identifies the planning approval triggers for the project under the Mildura Planning Scheme. Relevant exemptions identified in report sections 4.4 and 4.5 may apply.

Table 4.7: Summary of potential planning approval triggers under the Mildura Planning Scheme

Mildura Planning Scheme	Planning approval trigger (Y/N/NA)		
Planning control	Use	Buildings and works	Vegetation removal
Clause 36.03 Public Conservation and Resource Zone (PCRZ)	Y	Y	NA
Clause 35.07 Farming Zone (FZ)	Y	Y	NA
Schedule to the Farming Zone	N	Y (including earthworks)	N
<b>Overlays</b>			
Clause 42.01 Environmental Significance Overlay (Schedule 1 – Murray River Corridor) (ESO1)	NA	Y	N
Clause 44.04 Land Subject to Inundation Overlay, Schedule to the Land Subject to Inundation Overlay (LSIO)	NA	Y	N
Clause 44.06 Bushfire Management Overlay (BMO)	NA	N	N
<b>Particular provisions</b>			
Clause 52.17 Native Vegetation	NA	NA	Y

In accordance with the triggers identified in Table 4.7, the project will require planning approval in relation to:

- Use
- Buildings and works, including earthworks;
- Removal, destruction or lopping of native vegetation.

### Clause 36.03 (Public Conservation and Resource Zone)

Planning approval will be required for:

- Use of land for a utility installation (including minor utility installation) in accordance with Clause 36.03-1 Table of Uses of the PCRZ. The use does not meet the Section 1 (Permit not required) condition requiring the work to be conducted by or on behalf of a public land manager or Parks Victoria. It therefore falls into a Section 2<sup>2</sup> use triggering a planning permit.
- Buildings and works for a utility installation in the PCRZ triggered under Clause 36.03-2 as the proposed use does not meet the exemption condition for this use requiring the buildings and works to be conducted by or on behalf of a public land manager or Parks Victoria. However, no planning approval is required for buildings and works associated with a minor utility installation and roadworks, or any other buildings and works specified in Clause 62.02-1 or Clause 62.02-2 in the PCRZ, as the proposed works will be undertaken by a public authority (i.e. LMW) carrying out its functions under the *Water Act 1989*.

### Clause 35.07 (Farming Zone)

Planning approval will be required for:

- Use of land for a utility installation in the FZ as it is specified as a Section 2 (Permit required) use in Clause 35.07-1. Planning approval will not be required for the use of land for a minor utility installation in the FZ in accordance with the general exemption in Clause 62.01 (Uses not requiring a permit).

<sup>2</sup> 'Utility installation' is not described as 'Any other use not in Section 2 or 3' under Section 3 Prohibited use as it is listed separately in Section 1 of the use table.

- Building and works for a utility installation in the FZ under Clause 35.07-4 as a utility installation is a Section 2 use and no relevant exemptions apply. Planning approval will not be required for buildings and works for a minor utility installation in the FZ in accordance with the general exemption in Clause 62.02-1.
- Buildings and works for earthworks in the FZ under Clause 35.07-4 and the Schedule to the Farming Zone if the earthworks will change the rate of flow or the discharge point of water across a property boundary or increase the discharge of saline groundwater.

#### Clause 42.01 (Environmental Significance Overlay)

Planning approval will be required for:

- Building and works in the ESO1 under Clause 42.01-2 unless an exemption in Schedule 1 to this overlay applies. Most relevantly under Schedule 1, no planning approval will be required for buildings and works in the ESO1 associated with a minor utility installation or the removal, destruction or lopping of vegetation for public works, including public roads and water authority works. As the works are considered public works, the removal of vegetation is exempt from requiring planning approval under the ESO1.

#### Clause 44.04 (Land Subject to Inundation Overlay)

Planning approval will be required for:

- Building and works in the LSIO under Clause 44.04-2 unless an exemption in the schedule to this overlay applies. There are no exemptions under the schedule.

#### Clause 52.17 (Native Vegetation)

Planning approval will be required:

- To remove, destroy or lop native vegetation under Clause 52.17 unless all native vegetation to be removed, destroyed or lopped is subject to an exemption. An exemption from planning approval for all native vegetation impacted by the project would only be available if the written agreement of the Secretary to the DELWP (as constituted under Part 2 of the *Conservation, Forests and Lands Act 1987*) is obtained in relation to the conservation work or utility installation exemption.

## 4.7 Referral requirements

Referral to a determining referral authority<sup>3</sup> and/or recommending referral authority<sup>4</sup> may be required.

Table 4.8 lists the referral and notice requirements that apply to the works in accordance with the relevant provisions of the planning scheme, and what this means for the planning approvals process.

Table 4.8: Referral and Notice Requirements

Planning controls	Notice and referral requirements	Referral body
<b>Referral requirements</b>		
Clause 44.04 Land Subject to Inundation Overlay (LSIO)	An application must be referred to the relevant floodplain management authority under Section 55 of the Act <sup>5</sup> unless in the opinion of the responsible authority, the proposal satisfies requirements or conditions previously agreed in writing	Mallee Catchment Management Authority as a recommending referral authority

<sup>3</sup> Determining referral authority: If a determining referral authority objects then the responsible authority must refuse to grant a permit, and if a determining referral authority specifies conditions, those conditions must be included in any permit granted.

<sup>4</sup> A responsible authority must consider the recommending referral authority's advice but is not obliged to refuse the application or to include any recommended conditions.

<sup>5</sup> In this case, the Act refers to the *Planning and Environment Act 1987*.

Planning controls	Notice and referral requirements	Referral body
	between the responsible authority and the floodplain management authority.	
Clause 66.02-2 Native vegetation	<p>An application must be referred to the Secretary to DELWP to:</p> <ul style="list-style-type: none"> <li>Remove, destroy or lop native vegetation in the Detailed Assessment Pathway as defined in the guidelines for the removal, destruction or lopping of native vegetation (DELWP 2017).</li> <li>Remove, destroy or lop native vegetation if a property vegetation plan applies to the site.</li> <li>Remove, destroy or lop native vegetation on Crown land which is occupied or managed by the responsible authority.</li> </ul>	Secretary to the DELWP (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i> ) as a recommending referral authority
<b>Notice requirements</b>		
Clause 67.03 Notice Requirements – Native Vegetation	<p>Notice on an application for a permit to remove, destroy or lop native vegetation under Clause 52.17, which, except for the provisions of Clause 67, would be made to the Minister in accordance with section 96 of the Act. This does not apply if the application is of a kind which must be referred to the Secretary under section 55 of the Act.</p>	The Secretary to the Department administering the <i>Flora and Fauna Guarantee Act 1988</i> .

## 4.8 Incorporated documents

The following documents incorporated at Clause 72.04 of the planning scheme are likely to be relevant to the planning, design and operation of the project:

- Code of Practice for Bushfire Management on Public Land, 2012
- Construction Techniques for Sediment Pollution Control, Environment Protection Authority, May 1991
- Guidelines for the removal, destruction or lopping of native vegetation (DELWP, 2017)
- Local Government Planning Guide for Dry Land Salinity - Department Conservation and Natural Resources, 1995.

## 4.9 Other relevant management plans, strategies and policies

### 4.9.1 River Red Gum Parks Management Plan

The project area is mostly located within the Murray-Sunset National Park, in which land use and development activities are managed by Parks Victoria primarily for conservation and recreational purposes in accordance with the River Red Gum Parks Management Plan (July 2018). The River Red Gum Parks include more than 100 parks and reserves managed by Parks Victoria along the Murray, Goulburn and Ovens river corridors, between Wodonga and the South Australian border. The River Red Gum Parks Management Plan applies to management of the northern part of the Murray-Sunset National Park (approximately 57,472 ha of the total park area of 666,615 ha), including the project area, while the Mallee Parks Management Plan (September 1996) continues to apply to the remainder of the Murray-Sunset National Park.

The project area is located in the following management zones under management plan:



## Conservation Zone

This zone includes: *areas of high conservation value defined through conservation action planning (Parks Victoria 2017a), including sensitive ecological communities, habitat for threatened and rare species and other important environmental attributes, where a very strong management emphasis is on protection of the environment. Recreation and nature-based tourism are permitted subject to close management to minimise the impact on park and reserve values and natural processes. They usually involve low-key, dispersed recreation with basic facilities.*

This zone covers the majority of Lindsay Island (except land in the Toupnein Creek Reference Area Zone) and Lake Wallawalla, and therefore applies to the majority of the project area (Figure 4.1).

## Conservation and Recreation Zone

This zone includes: *areas where the management emphasis is on protecting environmental and cultural values while allowing for low-impact recreation. Dispersed recreation and nature-based tourism activities are encouraged. The level of activities and the small-scale recreation facilities provided do not have a significant impact on natural processes.*

This zone applies to land south of the Lindsay River that is not within or immediately surrounding Lake Wallawalla, and not within the Lake Wallawalla Reference Area Zone (Figure 4.1).

## Reference Area Zone

This zone includes: *areas proclaimed under the Reference Areas Act 1978. Reference areas are areas where human interference is minimised so that, as far as practicable, the only long-term change results from natural processes. No access is permitted except that associated with protecting natural processes, emergency operations and approved research. They may then be used for comparative studies against land where human interaction and activities happen, showing the effects of human utilisation of land. There are seven reference areas in the River Red Gum Parks: Toupnein Creek and Lake Walla Walla (Murray–Sunset National Park), Tarpaulin Bend (Murray–Kulkyne Park), Chalka Creek and Kia (Hattah–Kulkyne National Park), and Killawarra and Warby Range (Warby–Ovens National Park).*

The proposed Wallawalla West WMA inundation area is partially located in the Lake Walla Walla reference area. The area of investigation for the BERR\_D containment bank and regulator is immediately south of the southern boundary of the Toupnein Creek reference area (see Figure 3.3). These reference areas are included in the Reference Area Zone (Figure 4.1).

## Visitor Experience Area

VEAs are: *management overlays and apply to areas that are popular for a range of specific visitor activities, from remote hiking and camping to highly developed areas catering for large numbers of visitors. They provide a management focus for ensuring that the visitor experience can continue without damaging underlying environmental and cultural values. These are a priority for visitor management programs and actions to protect their unique settings which support a range of defined visitor experiences.*

The majority of the project area is located within the Lindsay Island VEA, which is characterised by a number of creeks meandering from the rivers into swamps, billabongs and floodplains. The VEA is largely zoned Conservation for its natural values; it also contains significant cultural values. Several tracks lead to shady sites along the creeks where bush camping, fishing and picnicking are enjoyed, and provide access to a variety of picturesque locations, including Kulcurna Cliffs and the mouth of Mullaroo Creek (Parks Victoria, 2018).

The following priorities for environmental management specified in the River Red Gum Parks Management Plan aim to halt the decline and build resilience of natural systems, and will inform decisions about resource allocation to achieve the best outcomes for the parks at the scale required with the available resources:

- 1) *Improving the health of wetlands and other water-dependent ecosystems through restoring natural flows and delivering environmental water by managing inappropriate timing frequency, duration, depth and extent of water inundation in regulated areas*
- 2) *Maintaining appropriate fire regimes*
- 3) *Reducing total grazing pressure (from rabbits, kangaroos, goats, pigs, deer, and wandering and feral stock)*
- 4) *Reducing aquatic pest impacts*
- 5) *Improving terrestrial predator control (foxes and cats)*
- 6) *Reducing weed invasion and impacts*
- 7) *Partnering to integrate programs and address key knowledge gaps*
- 8) *Supporting habitat restoration programs and recovery of priority threatened species.*

The project has specifically been developed to address environmental management Priority 1, and by *improving the health of wetlands and other water-dependent ecosystems through restoring natural flows*, implementation of the project would be consistent with the conservation objectives of management plan, provided potential impacts to park values (natural, cultural, recreational, landscape), particularly during construction of infrastructure, are avoided or minimised to the satisfaction of Parks Victoria.

As members of the VMFRP project partnership, it is understood that Mallee CMA (as waterway manager responsible for planning and implementation of environmental watering) and Parks Victoria (as the park manager) would work together to adaptively manage project implementation to address other priority issues that may arise in response to environmental watering (e.g. weed and pest invasion, increased grazing pressure).

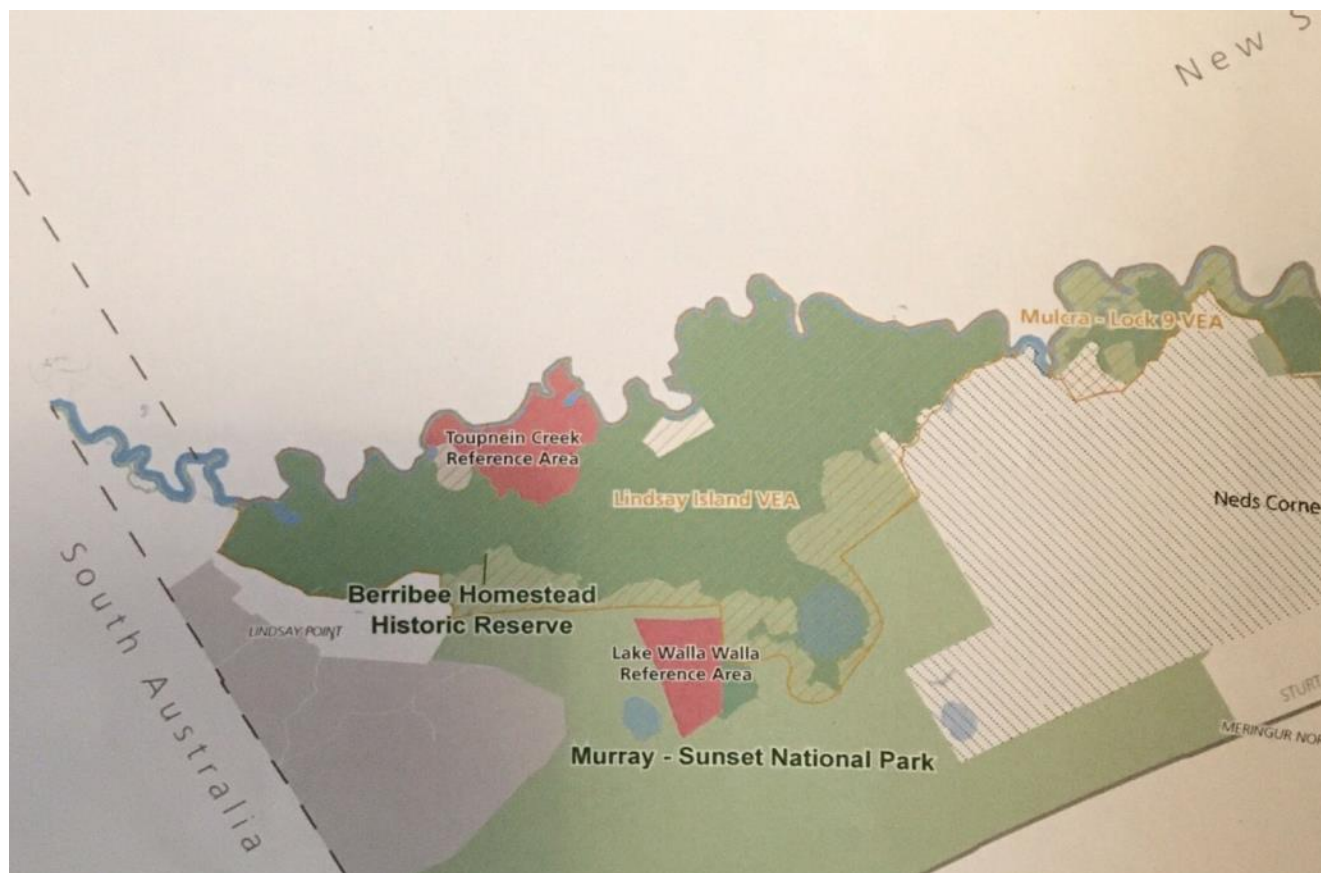


Figure 4.1: Extract of national park zone map supplied by Parks Victoria

#### 4.9.2 Conservation Action Plan for River Red Gum Parks

The Conservation Action Plan for River Red Gum Park (December 2019) (CAP) more comprehensively describes the strategies and actions required to manage the conservation assets of the River Red Gum Parks Landscape, and provides a more robust framework for evaluating the health of the landscape and include targeted goals based on condition of ecosystems which complement actions in the park management plans.

The CAP identifies eight key threats to the conservation assets in the River Red Gum Parks Landscape:

- *inappropriate hydrological regimes*
- *fire regimes and management*
- *grazing by introduced mammalian herbivores and overabundant native macropods*
- *invasive exotic fish*
- *introduced terrestrial predators*
- *invasion by introduced and native flora*
- *climate change*
- *recreational activities and resource extraction.*

The following conservation strategies are identified to address these threats:

- *Control introduced terrestrial predators — Implement targeted control of foxes and cats at high-priority sites, integrating available methods of control, to reduce predation.*
- *Manage introduced pest fish — Implement best practice measures to reduce the impact of invasive aquatic fauna and allow for the improvement of the key ecological attributes of inundation-dependent assets.*
- *Manage fire for healthy assets — Undertake communications and compliance activities to reduce the risk of human-induced ignitions, and where possible protect significant values from loss during fires.*
- *Manage total grazing pressure — Control pest and overabundant native herbivores using culturally appropriate methods to improve the quality of native vegetation and riparian zone integrity, and protect culturally important sites across the Park Landscape.*
- *Manage environmental weeds — Control environmental weeds through surveillance and rapid management intervention to prevent the establishment of new and emerging weeds and maintain established weeds at acceptable densities.*
- *Manage water for conservation outcomes — Improve water regimes by implementing on-ground actions and working in partnership with environmental water managers to facilitate the delivery of environmental water and increase the extent of natural floods.*
- *Establish collaborative partnerships to coordinate management strategies and address key knowledge gaps — Integrate research and management activities to improve management effectiveness.*
- *Plan for climate change in the River Red Gum Park Landscape — Incorporate planning for climate change and the transition to drier conditions and more frequent severe weather events into land management practices to facilitate the adaptation of ecosystems to drier conditions.*

The CAP recognises that *an appropriate hydrologic regime is a critical driver of the health of much of the River Red Gum Park Landscape, and the delivery of environmental water has become a key management tool used restore the health of the flood-dependent assets.* And while the governance of environmental water deliveries is driven by two key parties: CMAs (who plan the annual deliveries for individual sites) and the Victorian Environmental Water Holder (who allocates the available water); the CAP indicates that Parks Victoria actively participates in this environmental water planning and delivery process in a supporting partnership role, providing on-ground knowledge and expertise about the sites, identifying risks and mitigation strategies, and planning and implementing on-ground works that complement the environmental water deliveries. The project

aims and objectives, and proposed management measures, are consistent with and complemented by, the conservation strategies outlined in the CAP.

#### 4.9.3 Regional catchment management strategies and policies

A review of relevant regional strategies that apply to the area of investigation is provided in Table 4.9. Key messaging of these strategies/policies are considered in future land use planning for the region.

Table 4.9: Relevant regional strategies

Regional strategy	Purpose	Relevant messages
Mallee Regional Catchment Strategy 2013-2019 (Mallee RCS)	<p>The Mallee RCS is prepared under the <i>Catchment and Land Protection Act 1994</i> and provides an integrated planning framework for land, water and biodiversity management for the Mallee catchment management region.</p> <p>The Mallee RCS supports the integration and coordination of actions by the region's land managers, government agencies and community groups in relation to the following objectives:</p> <ul style="list-style-type: none"> <li>▪ To maintain and enhance long term productivity, while also conserving the environment.</li> <li>▪ To ensure that the quality of the state's land and water resources and associated plant and animal life are maintained and enhanced.</li> <li>▪ To establish processes that can be used to assess the condition of the state's land and water resources and the effectiveness of land protection measures</li> <li>▪ To establish processes to encourage and support participation of landholders, resource managers and other members of the community in catchment management and land protection.</li> </ul> <p>This Mallee RCS establishes a vision, 20-year objectives and 6-year strategic directions. The RCS does not set specific management activities or on ground targets as these are included in the supporting strategies and action plans developed to align to the Mallee RCS.</p>	<p>The wetland and floodplain ecosystems of Lindsay Island are recognised as an Icon site under The Living Murray Program. In addition, the Murray River, Lindsay River, Toupnein Creek, Mullaroo Creek are all identified as 'priority river assets' in the Mallee RCS for which the 20-year objective is:</p> <p><i>"To protect and enhance the environmental values of the Mallee's watercourses, their associated riparian ecosystems and, in turn, the social, economic and environmental services that they provide to the community."</i></p> <p>Key threats to the condition of these assets are identified as:</p> <ul style="list-style-type: none"> <li>▪ Altered flow regimes;</li> <li>▪ Salinity;</li> <li>▪ Invasive plants and animals;</li> <li>▪ Recreational activities; and</li> <li>▪ Adjacent land use practices.</li> </ul> <p>Lindsay Island is identified as a 'priority wetlands' in the Mallee RCS with the objective to protect and enhance the environmental values of the Mallee's wetlands, therefore influencing the social, economic and environmental services that these wetlands provide to the community. The RCS will continue to implement actions from the Northern and Western Region Sustainable Water Strategies that apply to the Mallee wetlands and groundwater dependent ecosystems.</p> <p>The Mallee RCS also identifies objectives and strategic directions in relation to the following assets in the region: threatened species and communities, terrestrial habitats, soils, agricultural land, groundwater, culture and heritage and community capacity.</p>
Mallee Waterway Strategy 2014-2022 (MWS)	<p>The MWS is prepared under the <i>Water Act 1989</i> to outline the Mallee CMA's strategy for performing its functions as a waterway manager under that Act.</p> <p>The MWS provides a regional planning document for the management of waterways and surrounding riparian land in the Mallee region through to 2022 to align with the Victorian Waterway Management Strategy.</p> <p>The MWS:</p>	<p>Lindsay Island and Lake Wallawalla are recognised as nationally important wetlands within A Directory of Important Wetlands in Australia (DIWA). The DIWA requires that the wetlands meet at least six nationally agreed criteria covering biogeographic representativeness, important ecological or hydrological functions, provision of animal habitat during times of vulnerability, supporting more than 1% of the national population of any taxa, support of threatened taxa</p>

Regional strategy	Purpose	Relevant messages
	<ul style="list-style-type: none"> <li>Sets regional goals for waterway management that align with the Mallee RCSs broader objectives</li> <li>Identifies high value waterways and, from these, determines a subset which are a priority for management over the eight year planning period</li> <li>Details strategic work programs for priority waterways to guide investment over the eight year period</li> <li>Identifies the roles and responsibilities of regional stakeholders in the implementation of these work programs</li> <li>Establishes principles to guide the implementation of a seasonally adaptive approach to annual delivery processes.</li> </ul>	<p>or communities and historical or cultural significance.</p> <p>The strategy identifies the quality of Lindsay Island wetlands as of poor to very poor condition as measured by 2009/10 Index of Wetland Condition (IWC).</p>
Mallee Floodplain Management Strategy 2018-2028 (Mallee FMS)	<p>The Mallee FMS provides a regional planning document for floodplain management and a guide for investment priorities to manage local flood risks.</p> <p>The Mallee FMS applies the policies, actions and accountabilities outlined in the Victorian Floodplain Management Strategy, including:</p> <ul style="list-style-type: none"> <li>Applying a regional assessment of flood risks across the region</li> <li>Identifying potential actions to mitigate identified flood risks</li> <li>Documenting regional priorities for the next three years and associated responsibilities, timeframes and costs</li> <li>Establishing a monitoring and evaluation framework to determine the success of implementing the Strategy</li> <li>Providing the framework for collaboration with cross boundary stakeholders (regional and state) for the management of floodplains and flood events.</li> </ul>	<p>The project is included in the Lindsay Regional Works Plan Unit, which is assessed as having a 'low' risk in relation to damage from riverine flooding in rural areas. The main actions identified for this unit relate to using the Murray River flood study to confirm likely flood level and risk to townships; and to then review and update local flood mapping and planning scheme maps based on study results.</p> <p>Hydrodynamic modelling of the project will be required to determine whether the project will increase flood risks and if so, how these risks may be mitigated.</p>
Mallee Region New Irrigation Development Guidelines 2017	<p>These guidelines provide a comprehensive guide for use in the process of assessing and approving irrigation development applications.</p>	<p>Expansion of irrigation is recognised as being a major threat to the riverine environment in relation to river salinity.</p> <p>Lindsay Island is identified as a high impact zone where salinity impacts due to irrigation are high. The means that there are higher risks of impacting on the salinity of the river from irrigating these areas.</p>
Mallee Natural Resource Management Plan for Climate Change 2016	<p>This management plan provides a planning framework to foster adaptation in relation to climate change, with the primary aim being to re-evaluate the region's priority landscapes and management actions to take into account CSIRO and Bureau of Meteorology climate projections.</p>	<p>Lindsay Island is part of the Murray River &amp; Floodplain: Merbein to SA Border catchment assets of the Mallee region.</p> <p>Human induced threatening processes such as inappropriate water use practices and land use change are a key concern for this catchment asset that could be exacerbated through climate adaptation process.</p>

Regional strategy	Purpose	Relevant messages
		Constrained regenerative capacity is also of concern in a changing climate due to the reliance of this catchment asset upon ongoing direct human intervention to maintain appropriate watering regimes aimed at maintaining ecological capacity into the future.



Figure 4.1 Lindsay Island Floodplain Restoration Project - Planning Zones Map

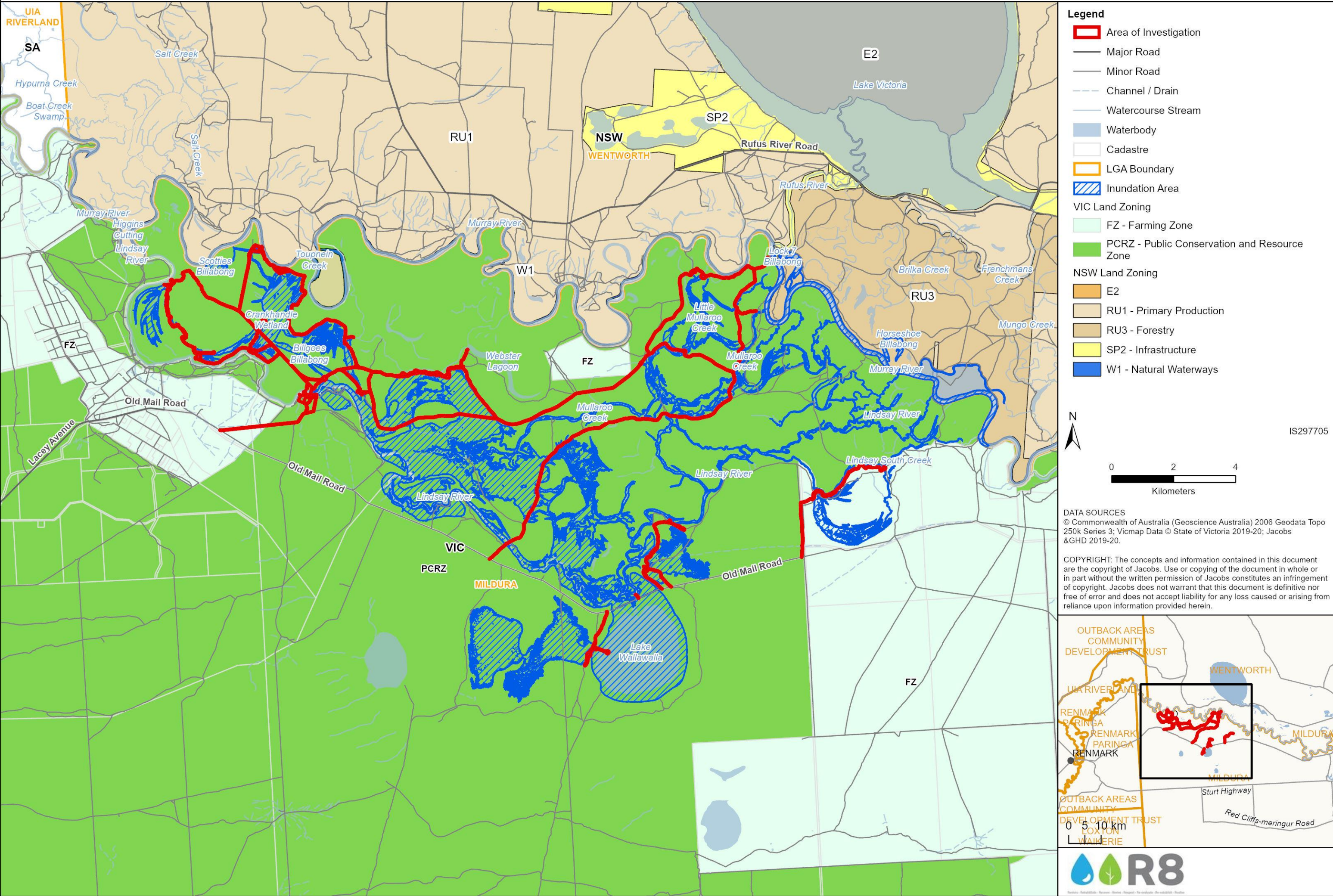




Figure 4.2 Lindsay Island Floodplain Restoration Project - Planning Overlays Map, LSIO

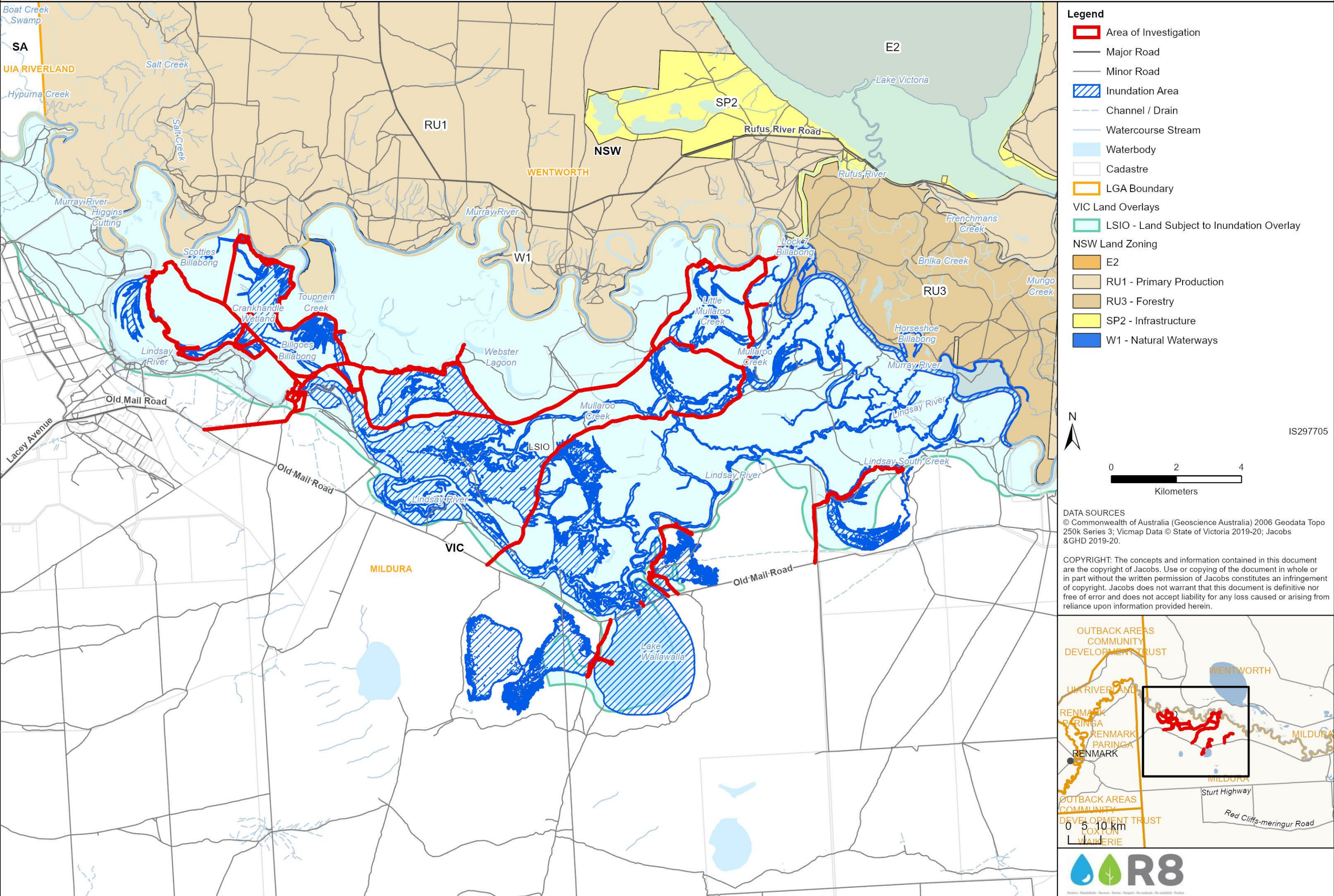
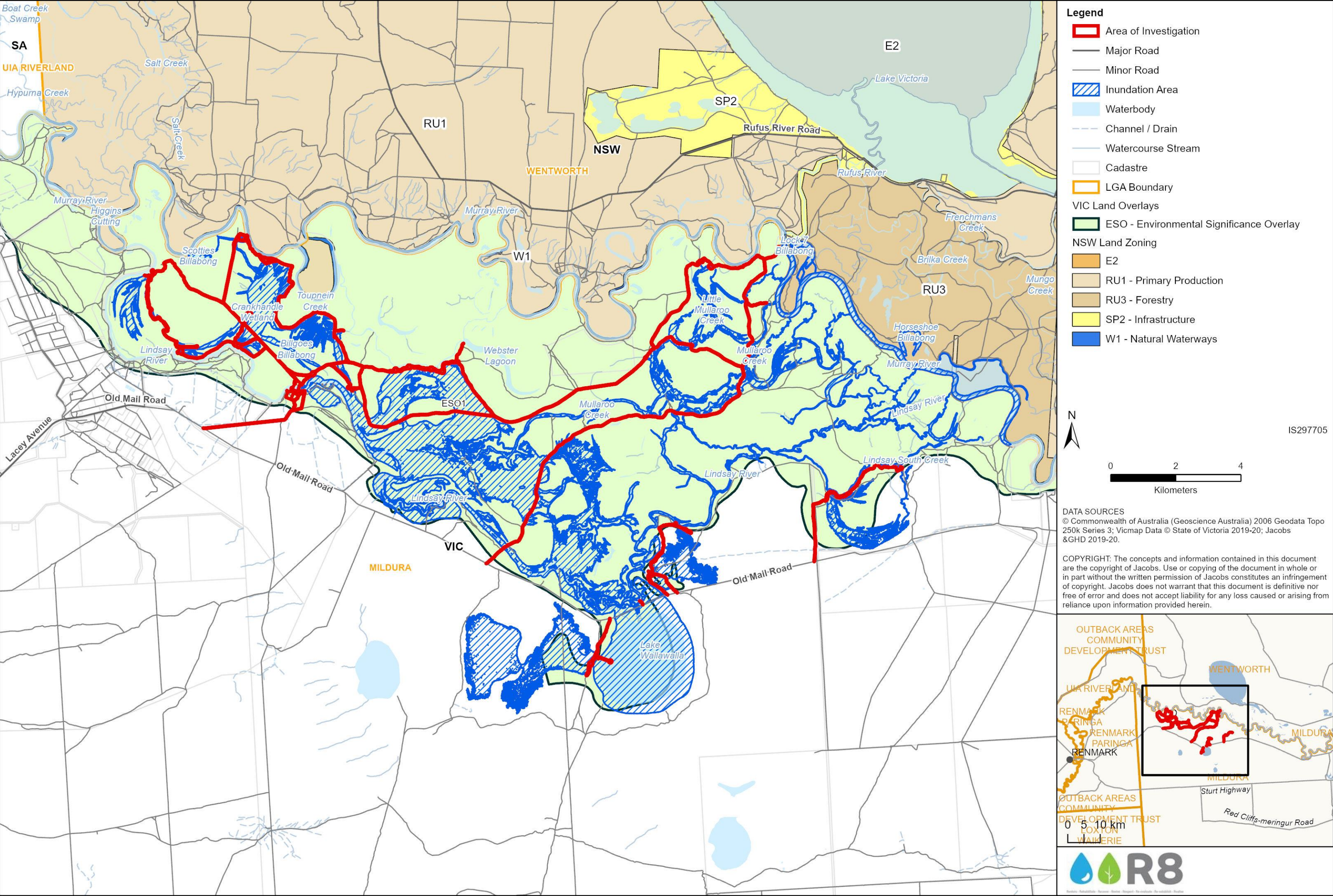




Figure 4.2 Lindsay Island Floodplain Restoration Project - Planning Overlays Map, ESO





VMFRP





## 5. NSW planning framework

### 5.1 NSW Environmental Planning and Assessment Act 1979

Development in NSW is assessed in accordance with the provisions of the *NSW Environmental Planning and Assessment Act 1979* (NSW EP&A Act) and the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation). The EP&A Act institutes a system for environmental assessment, including approvals and environmental impact assessment for proposed developments. The need or otherwise for development control is set out in environmental planning instruments. The key environmental planning instruments that are relevant to the proposed works are discussed below and indicate that the project is permissible with the development consent of the Wentworth Shire Council under clause 126A of the *State Environmental Planning Policy (Infrastructure) 2007* (Infrastructure SEPP (NSW)). It therefore requires approval under Part 4 of the EP&A Act and a Statement of Environmental Effects must be submitted as part of the development application.

#### Integrated development

Under section 4.46 of the EP&A Act, development that requires both development consent and one or more listed approvals or licences is 'integrated development'. This proposal is classified as integrated development as the project requires a permit under section 201 of the *Fisheries Management Act 1994* (refer to section 2.3) in addition to development consent under the EP&A Act. The EP&A Act provides that, upon receipt of an application for integrated development, copies of the application must be forwarded by the consent authority to each 'approval body'. The integrated approval bodies will review the development application and Statement of Environmental Effects and advise the consent authority whether they will grant the relevant approval or licence and identify any general terms of approval. Any development consent granted must be in accordance with the general terms of approval given by the integrated approval bodies.

### 5.2 State environmental planning policies

#### 5.2.1 State Environmental Planning Policy (Infrastructure) 2007

The following sections indicate that the proposal would be permissible with development consent due to the application of Division 4 of Infrastructure SEPP (NSW).

The proposed works will involve construction of a drop structure downstream of CR\_D within the Crankhandle WMA and would extend into the Murray River in NSW. This structure would minimise the risk of erosion as water flows back into the Murray River. A water reticulation system is a type of water supply system and is defined as *a building or place used for the transport of water, including pipes, tunnels, canals, pumping stations, related electricity infrastructure and dosing facilities*.

Under clause 126A of Division 4 of the Infrastructure SEPP (NSW), development for the purpose of water reticulation systems may be carried out by any person with consent on any land.

Under clause 125(5) of Division 4 of the Infrastructure SEPP (NSW), *a reference to development for the purpose of a water supply system of any kind includes a reference to development for any of the following purposes if the development is in connection with the water supply system:*

(e) *water intakes, pumping stations, pipelines, channels, tunnels, canals and aqueducts,*

(k) *environmental management works,*

As the proposed drop structure is associated with Regulator CR\_D which is a facility that is used for the transport of water, it would be part of a water reticulation system (clause 125(5)(i)) and is permissible with development consent under clause 126A.

The proposed work would be undertaken in the Wentworth Shire and the consent authority is Wentworth Shire Council.

A development application would need to be submitted to the Wentworth Shire Council and this would need to be supported by a Statement of Environmental Effects that addresses section 4.15 of the NSW EP&A Act.

### 5.2.2 State Environmental Planning Policy No. 44 – Koala Habitat Protection

*State Environmental Planning Policy No. 44 – Koala Habitat Protection* (SEPP (NSW) 44) aims to encourage conservation and management of areas of natural vegetation that provide habitat for koalas. As the Wentworth Shire is included in Schedule 1 of the SEPP (NSW), SEPP (NSW) 44 potentially applies to the project. SEPP (NSW) 44 does not apply to land dedicated under the *National Parks and Wildlife Act 1974* or *Forestry Act 1916* (refer to Clause 5(2)).

SEPP (NSW) 44 only applies to development that requires consent. The provisions of SEPP (NSW) 44 would need to be considered when preparing the Statement of Environmental Effects.

### 5.2.3 Murray Regional Environmental Plan No.2 – Riverine Land

The proposal would be undertaken on land that is subject to the Murray Regional Environmental Plan No.2 (MREP). The MREP aims to conserve and enhance the riverine environment of the River Murray for the benefit of all users. Under the MREP, the term 'River Murray' refers to the river and its tributaries and this includes the land in NSW upon which the proposed works would be undertaken.

Clause 5 of MREP states that it does not permit development which is prohibited by another environmental planning instrument. Section 5.2.1 indicates that the proposed works are permissible with consent under the Infrastructure SEPP (NSW).

The Statement of Environmental Effects would address relevant provisions of the MREP, including but not limited to those listed in Table 5.1.

Table 5.1: Relevant clauses in the Murray Regional Environmental Plan No.2 Riverine Land to be addressed in the Statement of Environmental Effects

Clause in the MREP	Relevance to the project
12 – General provisions for consultation	<p>This clause lists consultation that is required for certain development, and is additional to consultation required under other clauses in the MREP. Consultation is potentially required under this clause for the following reasons:</p> <ul style="list-style-type: none"> <li>▪ If the development would impact on endangered fauna under the NSW <i>National Parks and Wildlife Act 1974</i> consultation with the Department of Planning, Industry and Environment, Biodiversity Conservation Division is required.</li> <li>▪ If the development would affect boating safety consultation with the NSW Roads and Maritime Services is required.</li> </ul>
13 – Planning Control and Consultation Table	<p>This clause identifies the planning controls for development that is subject to the MREP. The project may trigger planning controls under this clause including:</p> <ul style="list-style-type: none"> <li>▪ 13(3) – Bank and/or bed work. This relates to work that involves excavation, dredging or alteration of the alignment of shape of the bank or bed of the River Murray.</li> <li>▪ 13(8) – Desnagging operations (including snag maintenance). This relates to any work to move or remove trees of woody debris from the water of the River Murray.</li> <li>▪ 13(10) Flood control works. This relates to works which change the natural or existing condition or topography of land (such as the construction or alteration of</li> </ul>



Clause in the MREP	Relevance to the project
	<p>levees, channels and mounds) and which are likely to affect the hydrology of the River Murray system.</p> <p>This clause lists consultation requirements and clause 11 details how that consultation is to be undertaken.</p>

### 5.3 Wentworth Local Environmental Plan 2011

The proposed drop structure at Regulator CR\_D for the project is located on land that is zoned W1 Natural Waterways under the Wentworth Local Environmental Plan 2011 (Wentworth LEP). No activities are permitted without development consent within the W1 zone.

Activities that are permitted with consent in the W1 zone are Aquaculture; Boat launching ramps; Boat sheds; Building identification signs; Business identification signs; Community facilities; Emergency services facilities; Environmental facilities; Environmental protection works, Information and education facilities; Jetties; Moorings pens; Recreation areas; Research stations; Roads; Water recreation structures; Water supply systems; Wharf or boating facilities.

A water reticulation system is part of a water supply system and is permissible with consent in the W1 zone.

The Statement of Environmental Effects would address relevant provisions of the Wentworth LEP, including but not limited to those listed in Table 5.2.

Table 5.2: Relevant clauses in the Wentworth LEP to be addressed in the Statement of Environmental Effects

Clause in the Wentworth LEP	Relevance to the project
2.3 – Zone objectives and Land Use Table	The Statement of Environmental Effects would need to address the land use objectives for the W1 Natural Waterways zone.
7.1 – Earthworks	This clause is relevant as earthworks are required for the drop structure. The clause ensures that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land. It also specifies when development consent for earthworks is required and the matters to consider in granting a development consent.
7.3 – Flood planning	The project would be undertaken on land identified on the Flood Planning Map. Clause 7.3 lists matters that Council must consider before granting consent to development on land mapped as Flood Planning.
7.4 Terrestrial Biodiversity	The project would be undertaken on land identified as Terrestrial Biodiversity on the Natural Resources – Terrestrial Biodiversity Map that is part of the LEP. Clause 7.4 lists matters that Council must consider before granting consent to development on land mapped as Terrestrial Biodiversity.
7.5 Wetlands	The project would be undertaken on land identified as Wetlands on the Wetlands Map that is part of the LEP. Clause 7.5 lists matters that Council must consider before granting consent to development on land mapped as Wetlands.
7.7 – Riparian land and Murray River and other water courses – general principles	This clause applies to land identified as 'Waterways' on the Waterways Map that is part of the LEP, and is within 40 m of the top of the bank of that waterway. The project is located on land that is mapped as a waterway on this map. This clause lists matters that Council must consider before granting consent to development on land mapped as a watercourse.

Clause in the Wentworth LEP	Relevance to the project
7.8 – Development on river beds and banks	This clause applies to land comprising the bed of the river and up to the top of the bank of the river and is relevant because the project would involve development on the bed and bank of the Murray River. This clause lists matter that Council must consider before granting consent to development that is on the bed and bank of the river.

VMFRP has recently received advice from MDBA in relation to the proposed operation of Lock 7 relative to the current approved operating regime for Lock 7, which has identified that the project will need to assess potential impacts and approval requirements in relation to the NSW inundation area. This assessment has not yet been undertaken. It is noted that the proposed NSW inundation area is located on land that is zoned W1 Natural Waterways (i.e. along the Murray River), SP2 – Infrastructure, RU3 – Forestry, and RU1 – Primary Production under the Wentworth LEP.

## 6. Potential impacts and mitigation

A summary of potential land use related impacts and proposed mitigation measures is provided in Table 6.1.

Table 6.1: Summary of potential land use impacts and proposed mitigation measures

Potential impacts	Proposed mitigation measures
<b>Construction phase</b>	
Access to private property within the National Park (off Sandford Track) may be disrupted due to works. Access to SA Water facilities at Lock 7 via Bridge Track may also be disrupted due to works.	<p>Review access limitations during construction and identify opportunities to maintain or provide alternative access, where practicable.</p> <p>Continue to engage with private land and asset owners / managers potentially affected by construction works and ensure construction management plans include appropriate measures to avoid or minimise access disruptions to private land and infrastructure.</p> <p>Prepare and implement a stakeholder management strategy to ensure potentially affected private land and infrastructure owners are aware of the extent and timing of construction works, and establish communication protocols to provide adequate notification prior to any access disruptions.</p>
Construction of water management infrastructure on private land zoned for farming purposes but currently used for conservation purposes (Neds Corner) potential limiting area of land available current future land use.	<p>Continue to engage with private landowners and ensure construction management plans include appropriate measures to minimise disruption to ongoing land use activities and avoid permanent degradation of land.</p> <p>Obtain agreements with private landowners prior to commencement of works, including ongoing maintenance responsibilities and access. At this stage, it is understood that the project has obtained in-principle written agreement from the owners of Neds Corner.</p>
Possible disruptions to recreational access for private visitors and commercial operators to parts of the Murray-Sunset National Park due to works.	<p>Undertake further assessment to predict access limitations during construction and in consultation with the public land manager (Parks Victoria) identify opportunities to maintain or provide alternative access, where practicable.</p> <p>Continue to engage with Parks Victoria (a project partner) to ensure construction management plans include appropriate measures to manage access disruptions within the Murray-Sunset National Park.</p> <p>Prepare and implement a stakeholder management strategy to ensure the public land manager (Parks Victoria) is aware of the extent and timing of construction works, and can plan accordingly (e.g. signage, notification to park users).</p>
Possible disruption to recreational use of the Lindsay River, including boating access, during construction of the Berribee Regulator.	<p>Conduct further assessment to determine limitations to use of the river for recreational use during construction. It is noted that the Berribee Boat Ramp would be temporarily closed to the public during construction of the Berribee Regulator, but re-opened to the public in an upgraded condition on completion of works.</p> <p>Continue to engage with Parks Victoria (a project partner) to ensure construction management plans include appropriate measures to control use of the river during the construction period.</p> <p>Prepare and implement a stakeholder management strategy to ensure the public land manager (Parks Victoria) and potentially affected tourism operators are aware of the extent and timing of</p>

Potential impacts	Proposed mitigation measures
	construction works, and can plan accordingly (e.g. signage, notification to park users).
Possible disruption to flows along the Lindsay River during construction of in-stream works at Berribee Regulator potentially affecting water supply and quality available at irrigation pumping sites.	Engage with potentially affected water licence holders to determine potential impacts and associated mitigations and provide adequate notification prior to any potential disruptions to flow during construction.
Displacement of apiary sites located within the construction footprint and possible disruption to other apiary activities during construction.	Engage with apiary licence holders in conjunction with Parks Victoria as the public land manager, to identify opportunities to temporarily or permanently relocate the affected apiary site if it cannot be avoided during construction.
Potential for amenity effects (increased noise, dust etc) from proposed works on residents in proximity to work sites or access tracks during construction.	Prepare and implement a construction environmental management plan including appropriate noise and dust management measures in accordance with EPA Publication 480: Environmental guidelines for major construction sites.
<b>Operational phase</b>	
Inundation of private land zoned for farming and rural purposes but mostly used for conservation purposes during managed inundation events causing possible damage to property improvements and access.	<p>Conduct further modelling of proposed operating scenarios to confirm extent, frequency and duration of inundation potentially affecting private infrastructure based on the latest design.</p> <p>Continue to engage with potentially affected private landowners regarding planned environmental watering events and outcomes, to obtain flood easements or agreements prior to commencing operations that may involve flooding of private land during managed events. At this stage, it is understood that the project has obtained in-principle written agreement from the owners of Neds Corner and verbal support from two of the three owners of property within the NSW inundation area.</p>
Impacts on land not within the LSIO from inundation south of the Lindsay River.	<p>Conduct further modelling of proposed operating scenarios to confirm extent, frequency and duration of inundation potentially affecting land outside LSIO on the latest design.</p> <p>Engage with Council to determine if overlay controls are required to cover areas of inundation outside the current LSIO.</p>
Construction of the Berribee Regulator across the width of Lindsay River will restrict the size of watercraft able to traverse this section of the river to vessels less than 3.5 m wide.	<p>Ensure design includes appropriate navigational aids at the Berribee Regulator and other structures in navigable waterways.</p> <p>Engage with potentially affected tourism operators (e.g. houseboats, scenic cruises) currently using vessels along the Lindsay River (from downstream Murray River confluence up to Lindsay Bridge) to identify opportunities to mitigate potential business impacts.</p> <p>Engage with local recreational fishing and boating groups to identify opportunities to mitigate potential impacts and enhance benefits associated with the project, including potential for upgrade of the existing boat ramp downstream of the proposed Berribee Regulator.</p>
Inundation of NSW land being held by the Minister administering the <i>National Parks and Wildlife Act 1974</i> and in the processes of being transferred to traditional ownership.	Conduct further modelling of proposed operating scenarios to confirm extent, frequency and duration of inundation potentially affecting timber resources and management plans of these reserves, based on the latest design.



Potential impacts	Proposed mitigation measures
	Continue to engage with the NSW National Parks and Wildlife Service to determine the pathway of engagement regarding planned environmental watering events and outcomes with traditional owners of the land, to obtain flood easements or agreements prior to commencing operations.
Possible impacts to operation of Lock 7 to allow inundation in NSW	Conduct further modelling of proposed operating scenarios to confirm extent, frequency and duration of inundation in NSW. Continue to engage with the Murray Darling Basin Authority regarding planned environmental watering events and outcomes in relation to the limits of approvals to operate Lock 7.
Possible disruptions to access to SA Water facilities at Lock 7 via Bridge Track during managed inundation events.	Conduct further modelling of proposed operating scenarios to confirm extent, frequency and duration of inundation potentially affecting access to SA Water facilities and infrastructure based on the latest design. Continue to engage with SA Water regarding planned environmental watering events and outcomes prior to commencing inundation events.
Possible impact to Native Title associated with determination under the <i>Native Title Act 1993</i> on land adjoining proposed NSW inundation areas.	Engage with relevant traditional owners to this determination and subject to the ILUAs that apply to the land to avoid potential impact from inundation.
Possible impact to area of Native Title claim under the <i>Native Title Act 1993</i> over the area of investigation and proposed inundation areas in Victoria.	Continue to engage with relevant traditional owners and appropriate governing bodies to this claim that applies to the land to avoid potential impact from inundation.
Possible damage to private pump infrastructure and / or disruptions to access to private infrastructure during managed inundation events.	Engage with potentially affected private infrastructure owners, to ensure operating plans include appropriate measures to avoid or minimise impacts to infrastructure during managed inundation events. Prepare and implement a stakeholder management strategy, to ensure private infrastructure owners are aware of the extent and timing of upcoming watering events and can plan accordingly.
Possible disruptions to recreational access to the Murray River and other parts of the Murray-Sunset National Park during managed inundation events, which may reduce opportunities for active and passive recreation, potentially reducing tourism expenditure and causing economic loss to small rural communities.	Conduct further assessment of access limitations during planned operating scenarios and in consultation with Parks Victoria as the public land manager (and project partner), identify opportunities to maintain or provide alternative access, where deemed appropriate to do so by Parks Victoria. Liaise with Parks Victoria as the public land manager (and project partner) to ensure operating plans include appropriate measures to avoid or minimise access disruptions during managed inundation events, not in accordance with Parks Victoria's strategies for restricting access to certain park areas at certain times and consistent with Parks Victoria's visitor experience objectives. Prepare and implement a stakeholder management strategy, including Parks Victoria, DELWP and tourism operators, to ensure they are aware of the extent of upcoming watering events and can plan accordingly (e.g. signage / notification of park users).

Potential impacts	Proposed mitigation measures
Possible inundation or disruption to access to apiary sites during managed inundation events.	<p>Where required, operate regulating structures to hold water, minimising inundation to less than the maximum design level where apiary sites may be impacted.</p> <p>Engage with apiary licence holders in conjunction with Parks Victoria as the public land manager (and project partner), to ensure operating plans include appropriate measures to avoid or minimise disruption to apiary activities during managed inundation events.</p> <p>Prepare and implement a stakeholder management strategy, to ensure potentially affected commercial operators, are aware of the extent and timing of upcoming watering events and can plan accordingly.</p>

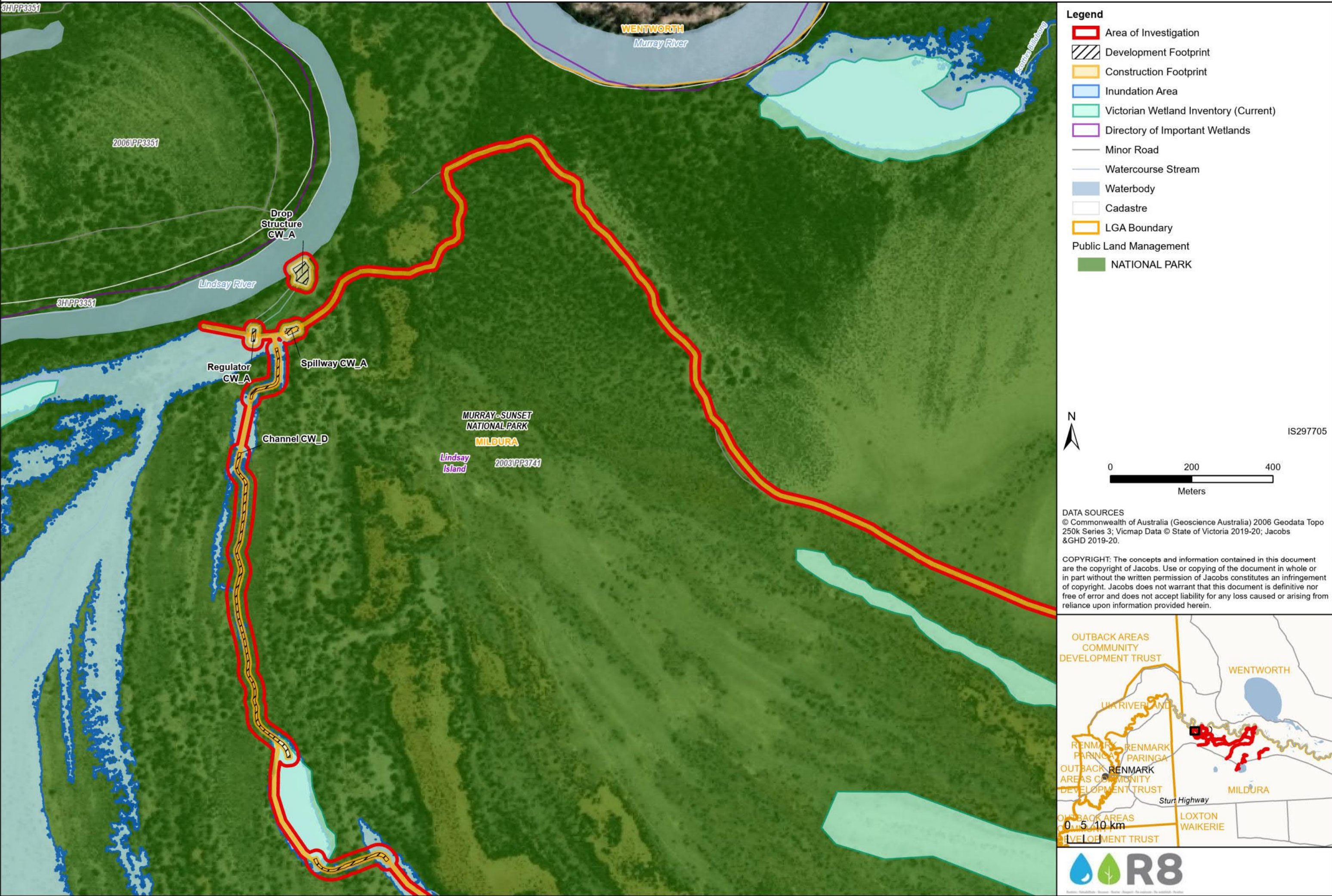
In addition to these potential impacts, operation of the proposed works to restore a more natural inundation regime to Lindsay Island and surrounding floodplains, has the potential to generate benefits to recreational users of the Murray-Sunset National Park by improving the health and structure of floodplain vegetation, and restoring connectivity and improving in-stream habitats for fish and other aquatic fauna.

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## Appendix A: Site Description





**Legend**

- Area of Investigation
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- Directory of Important Wetlands
- Minor Road
- Watercourse Stream
- Waterbody
- Cadastre
- LGA Boundary
- Public Land Management
- NATIONAL PARK

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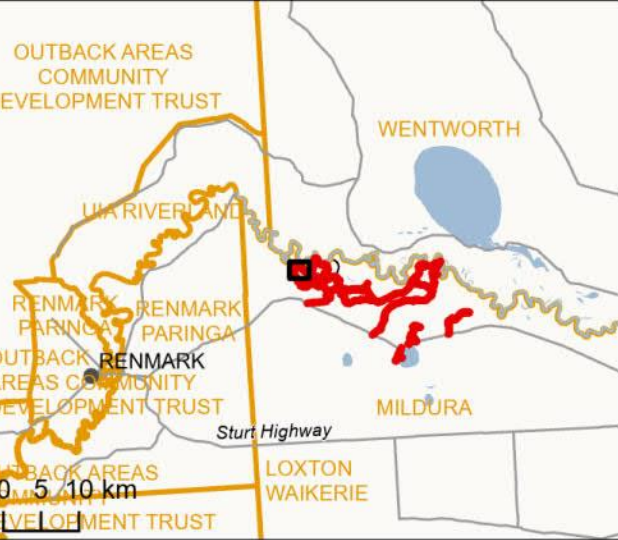
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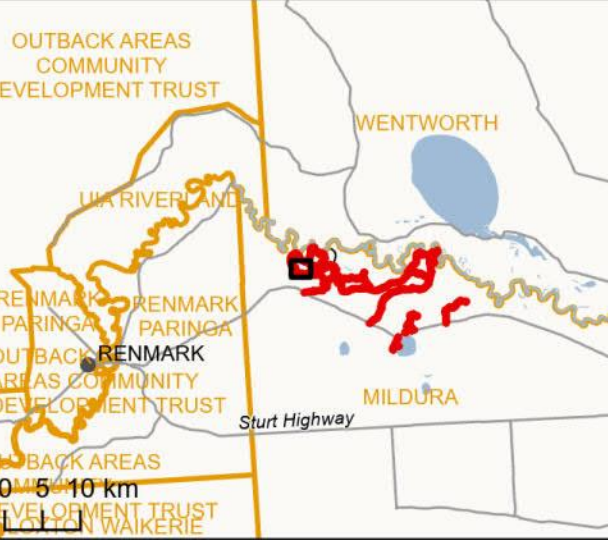
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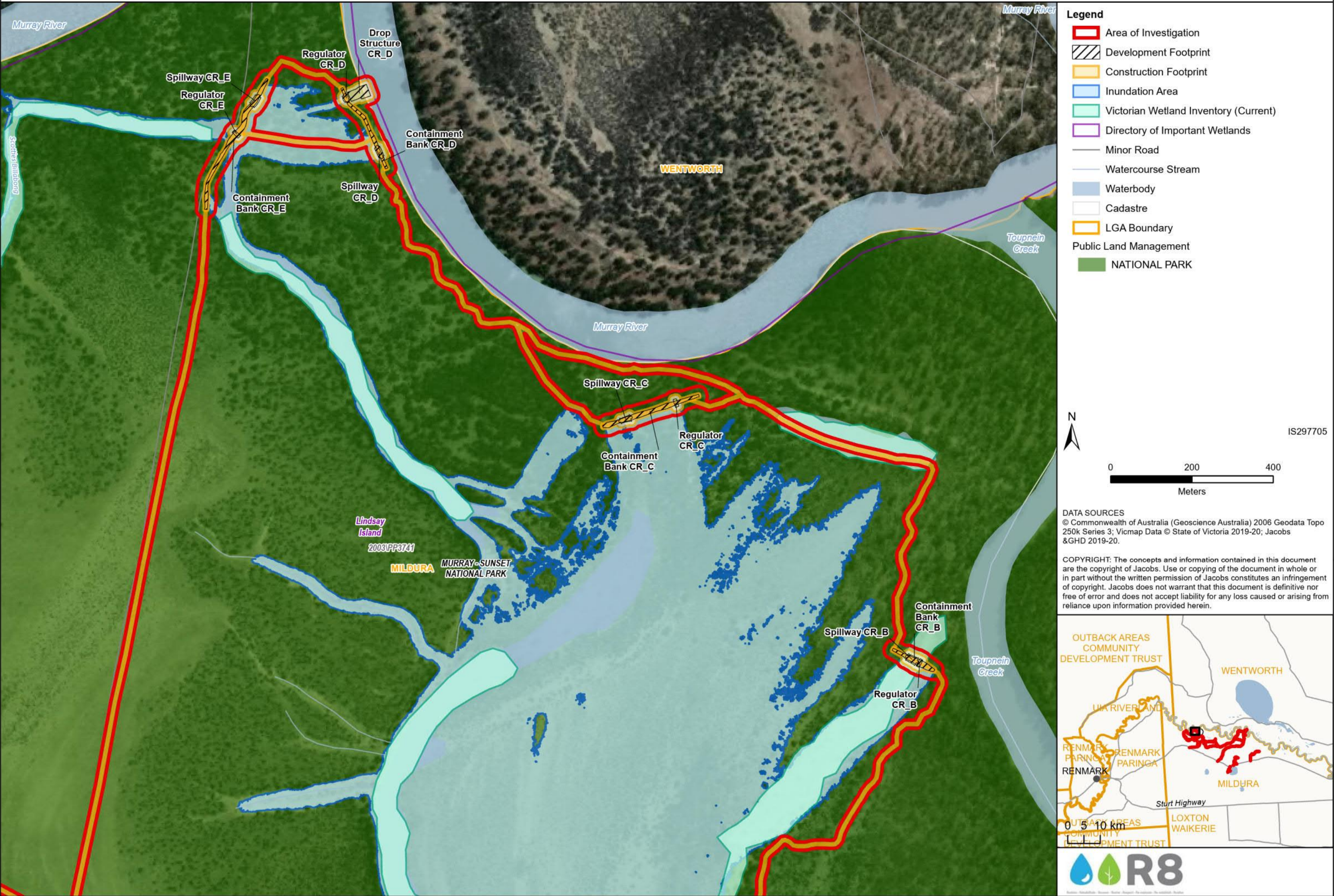
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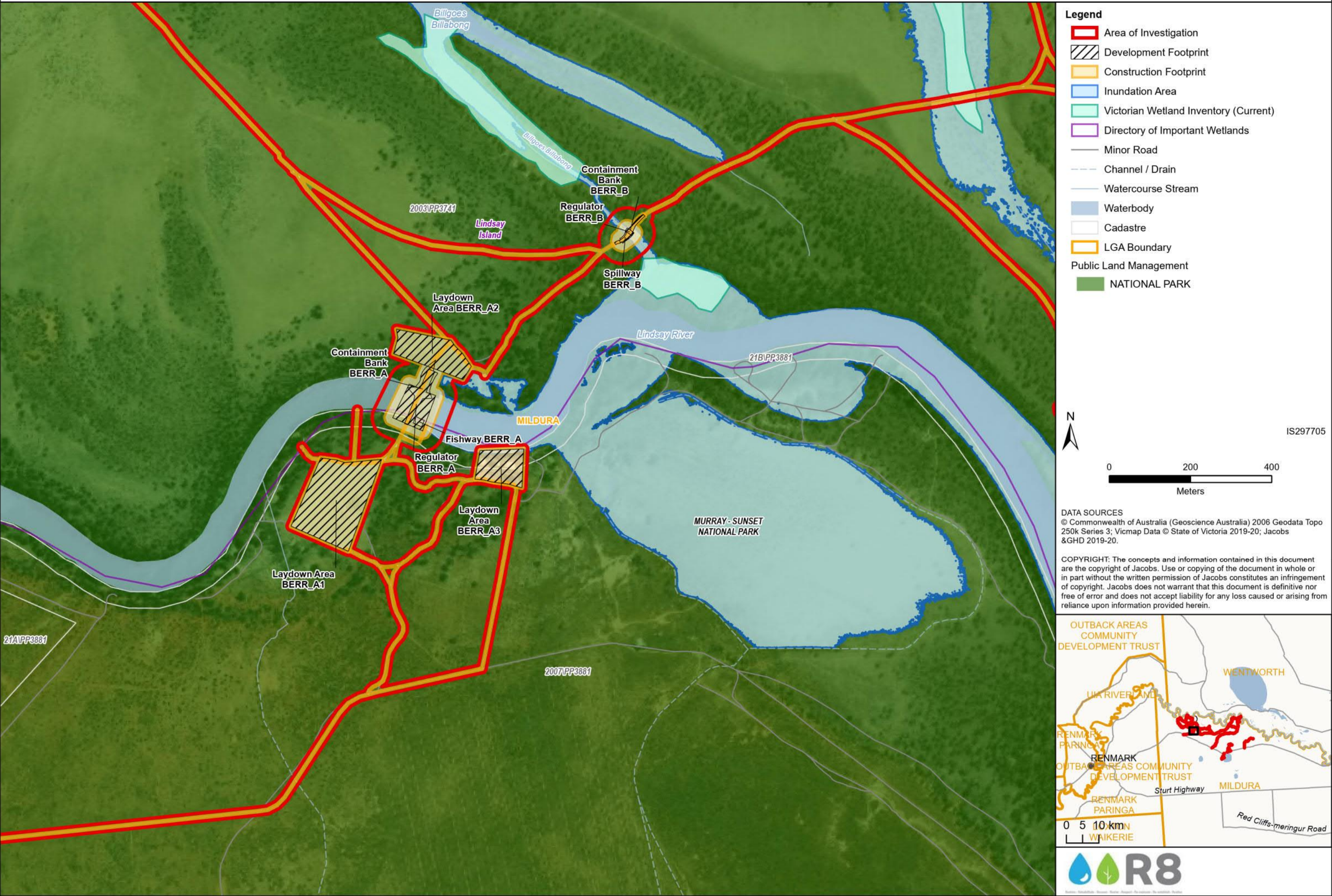
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Red Cliffs-meringur Road

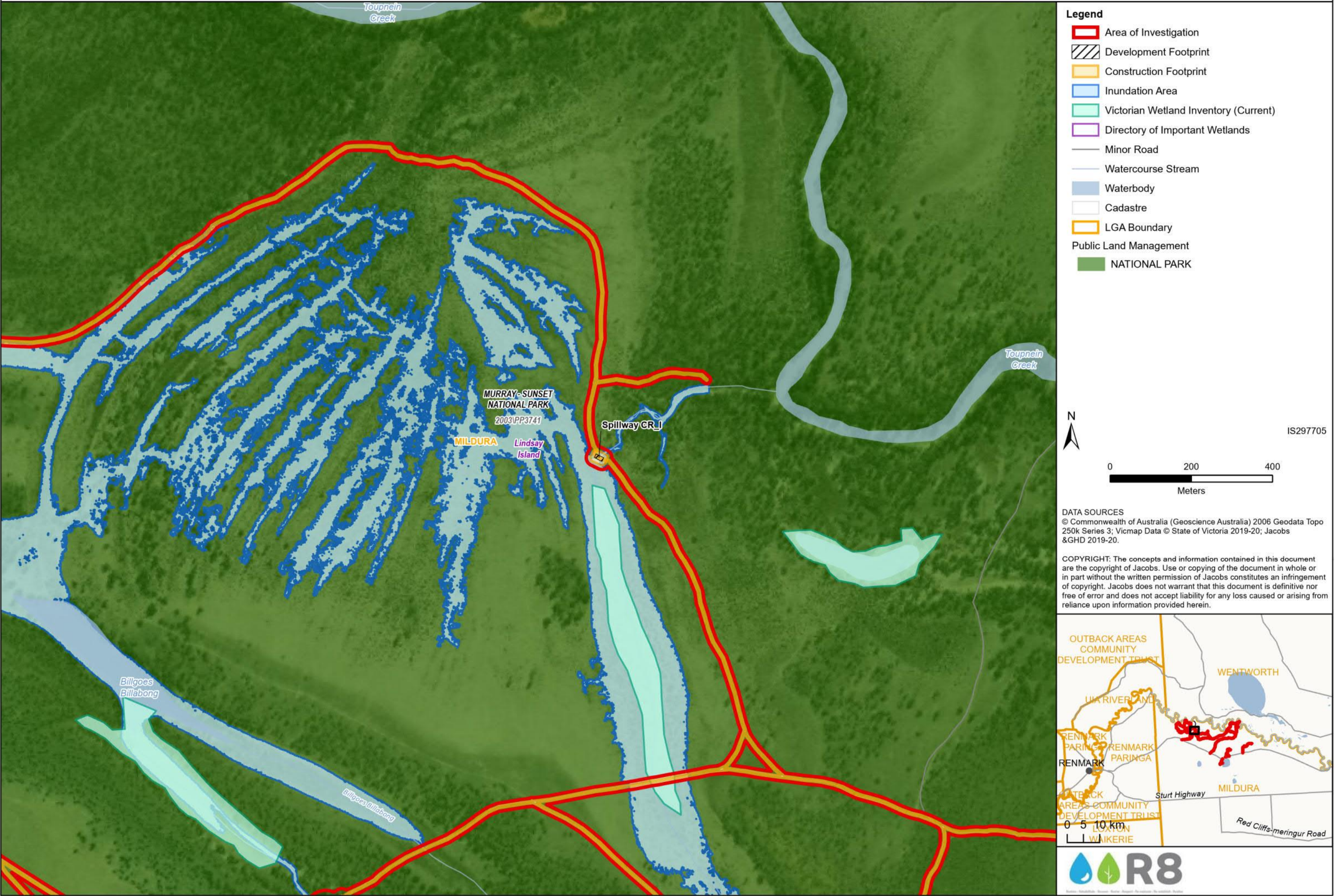




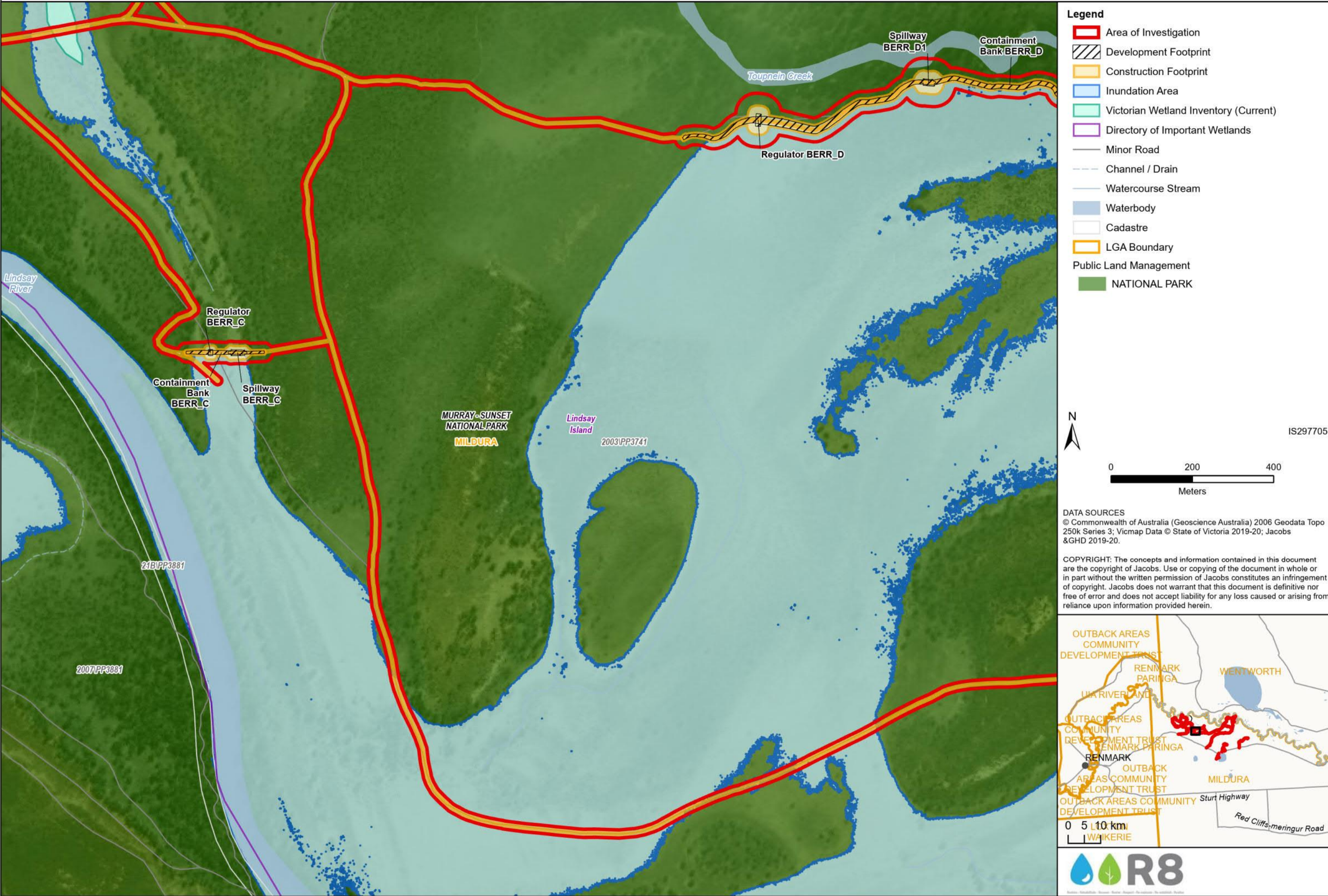








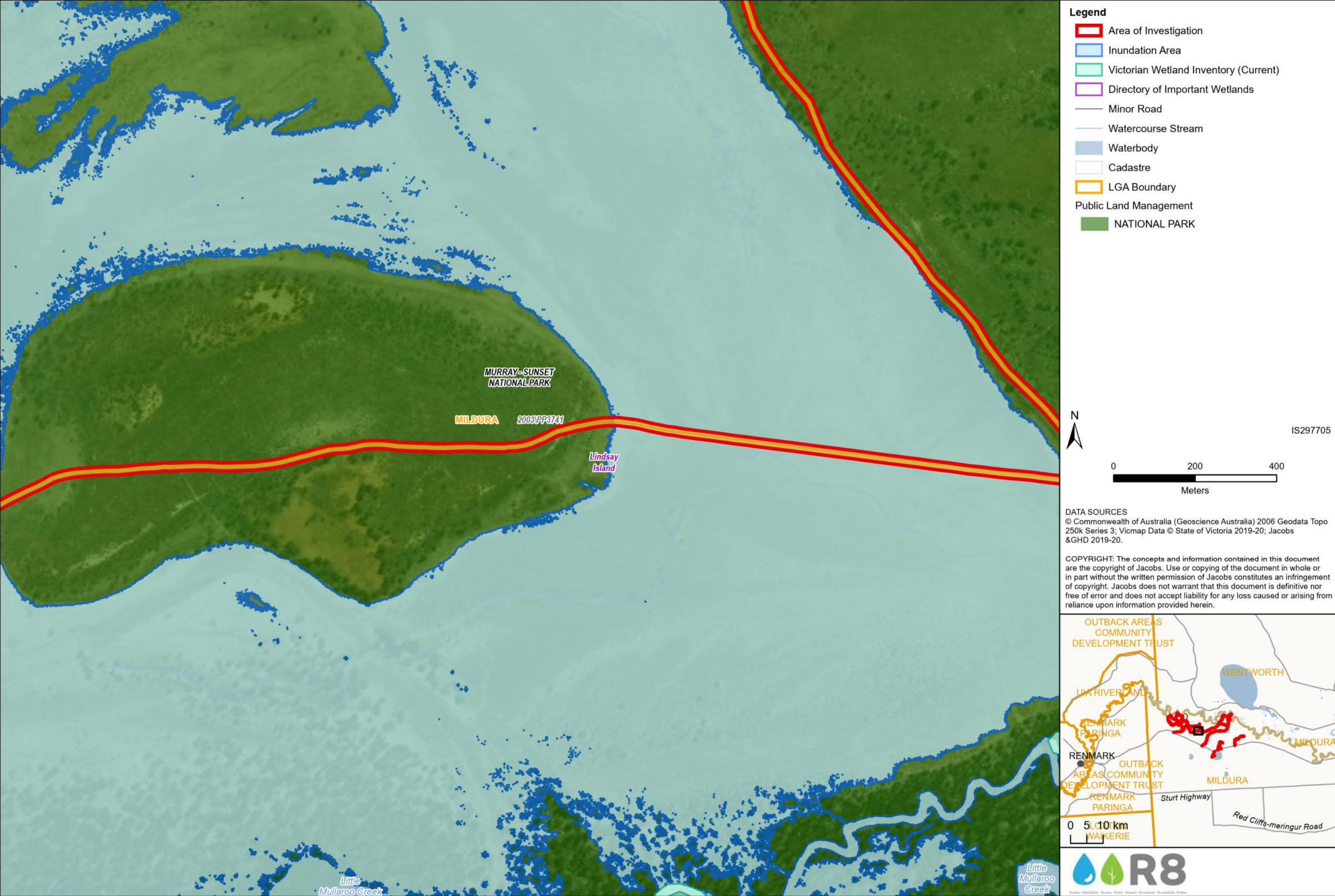




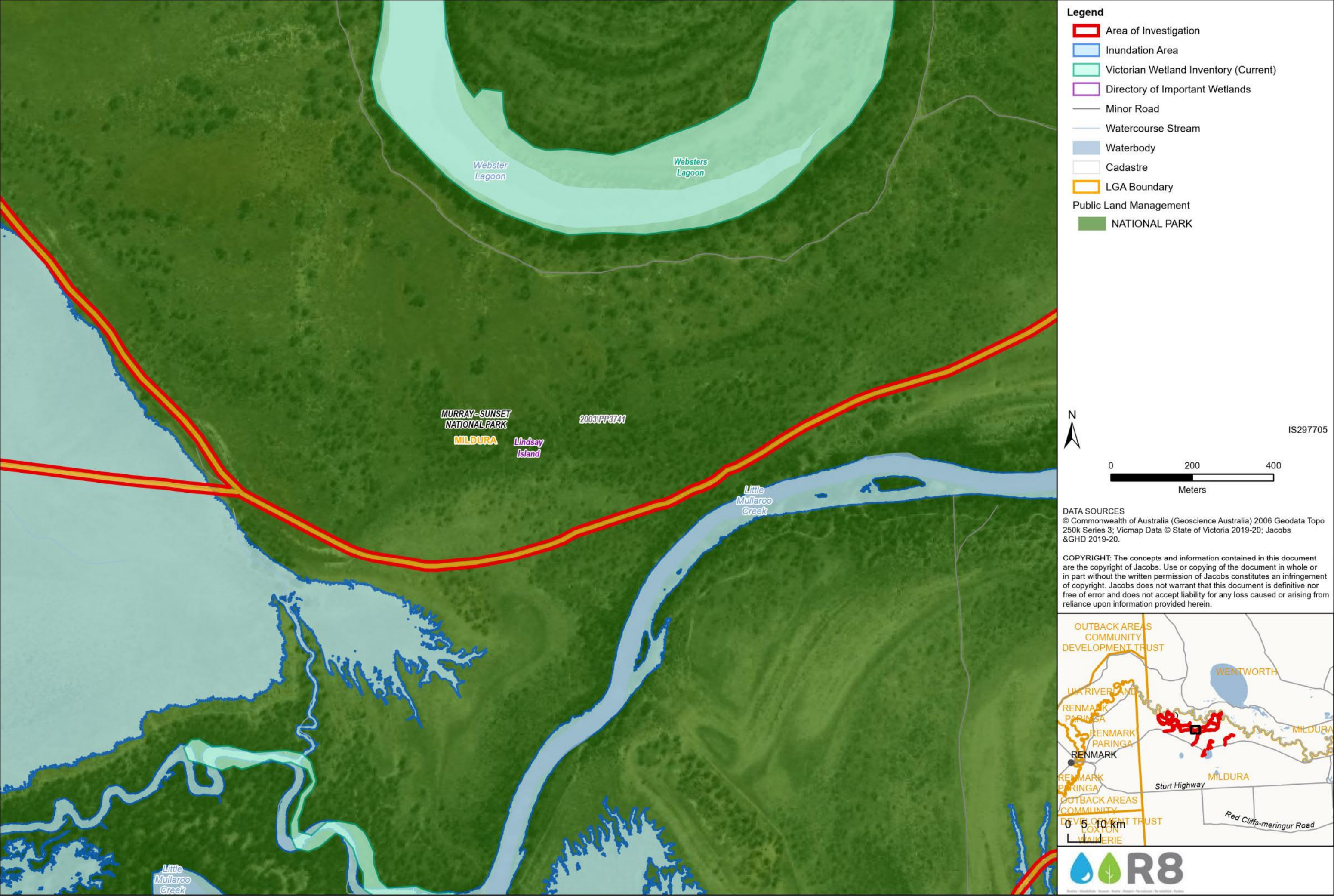




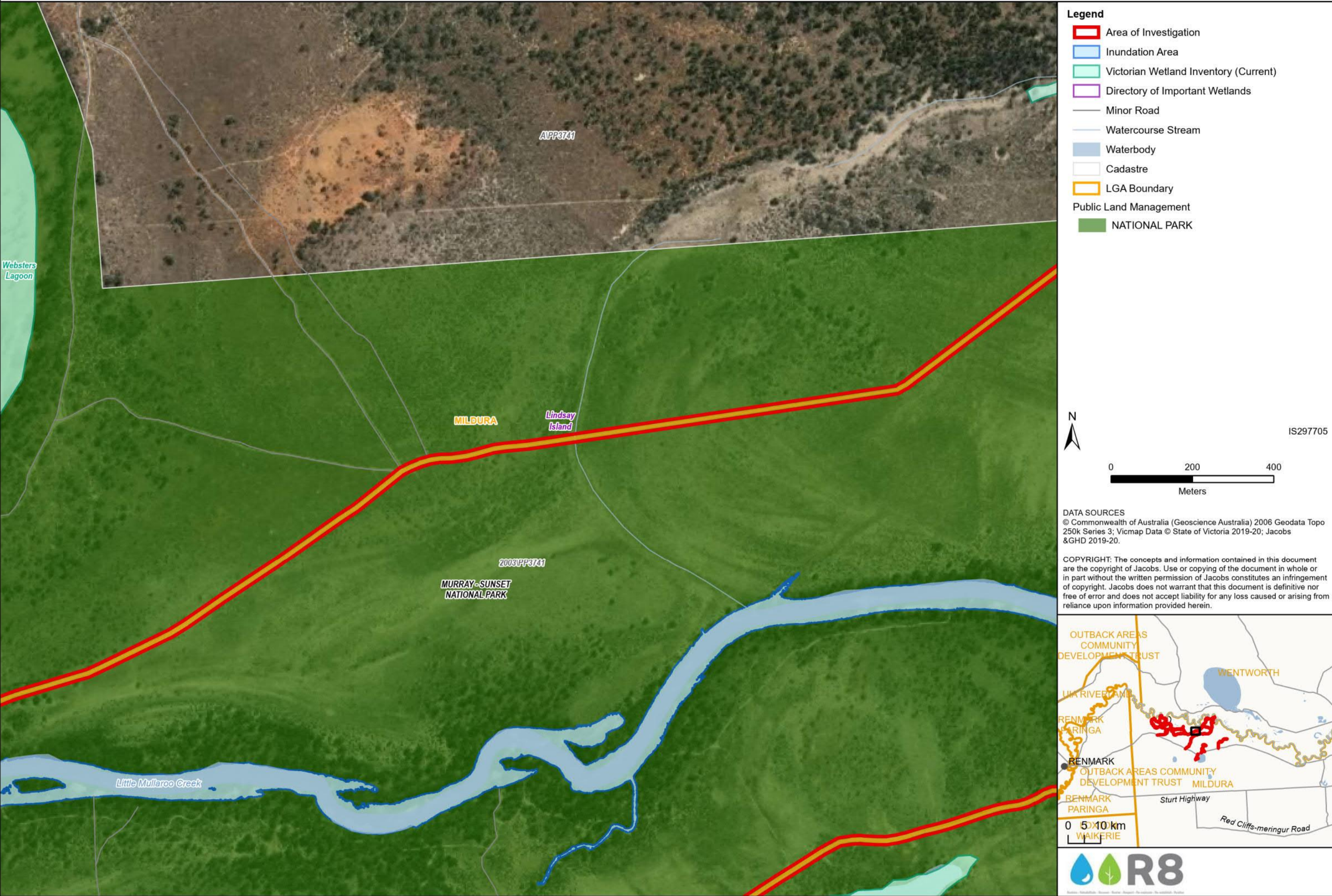




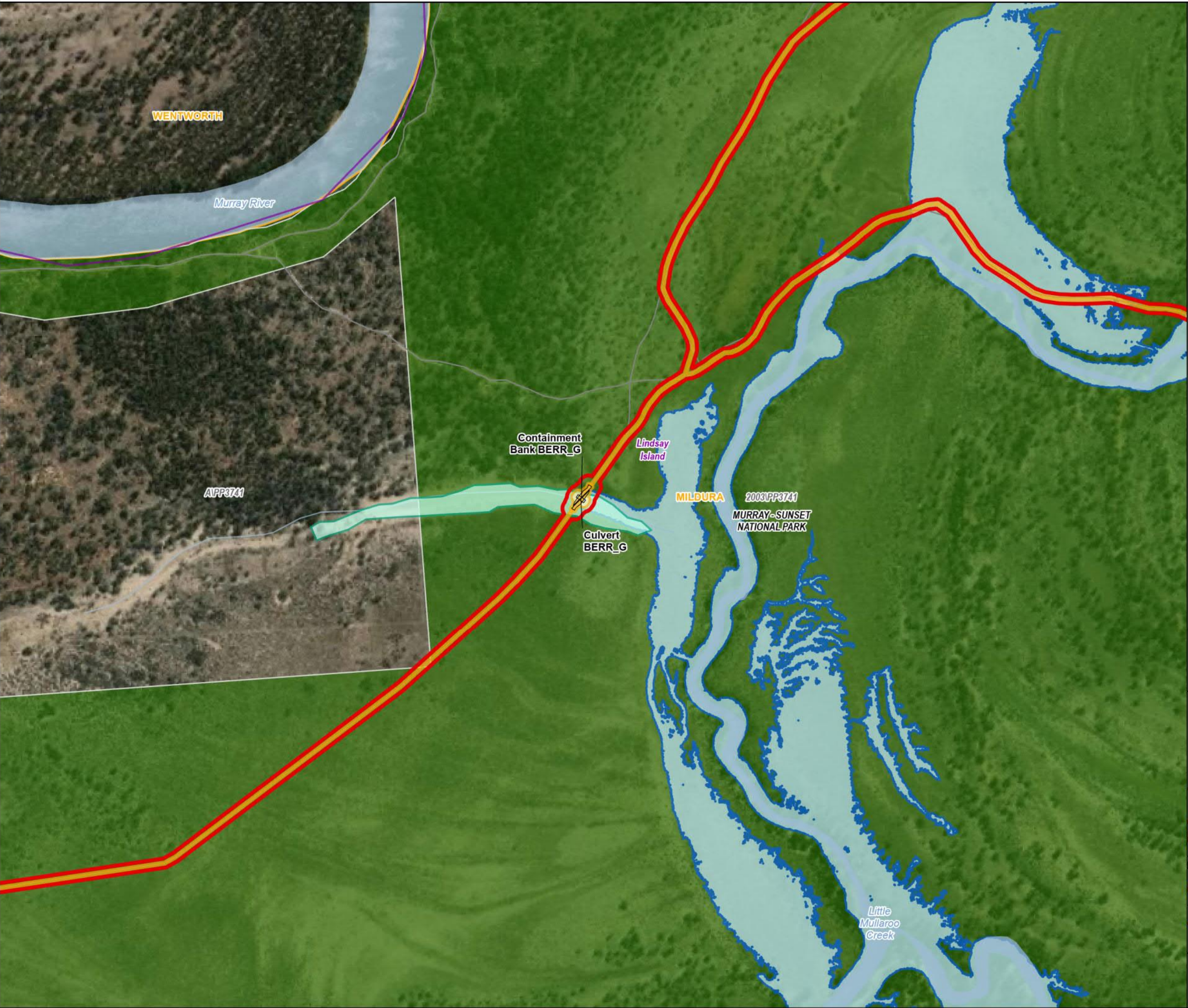












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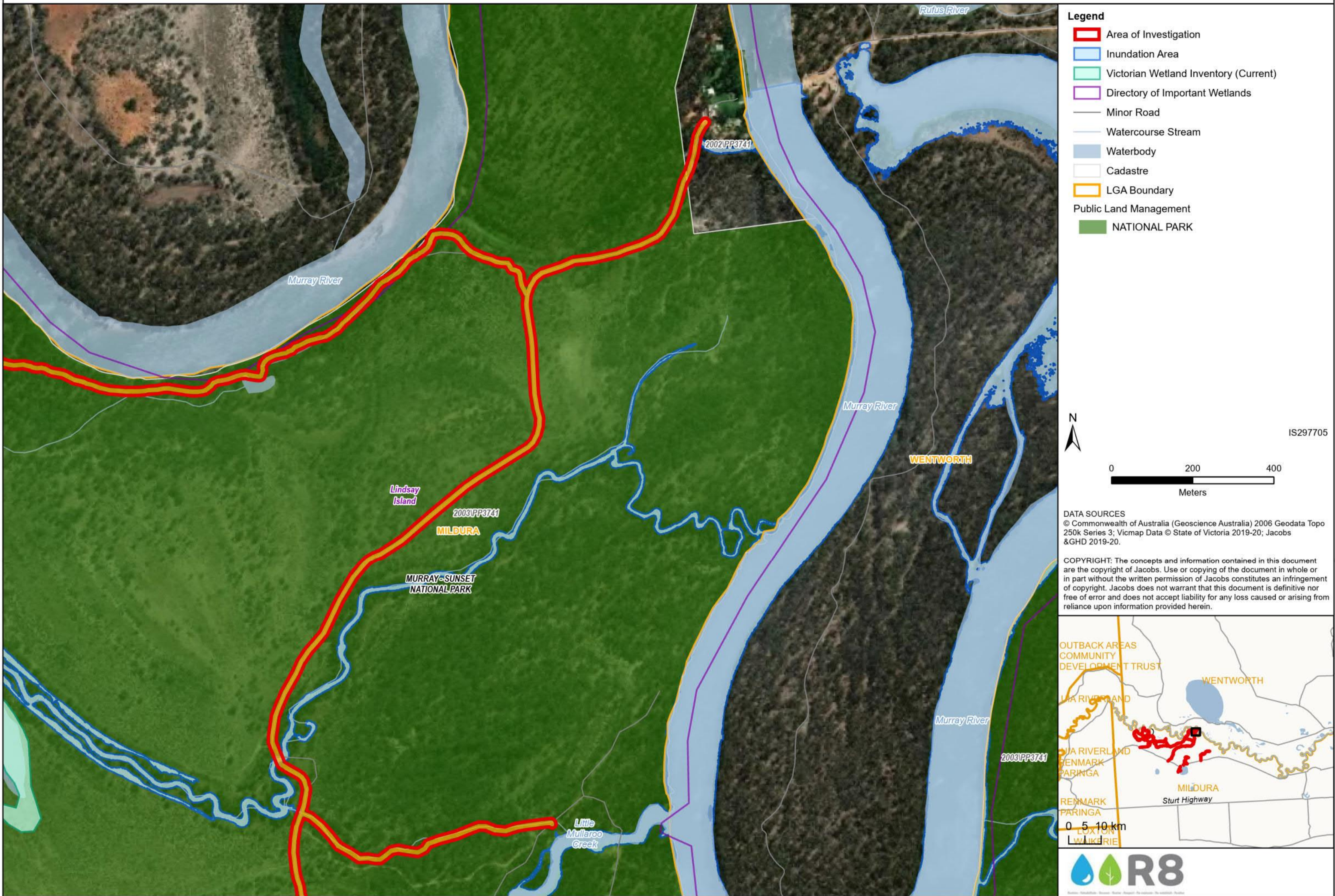








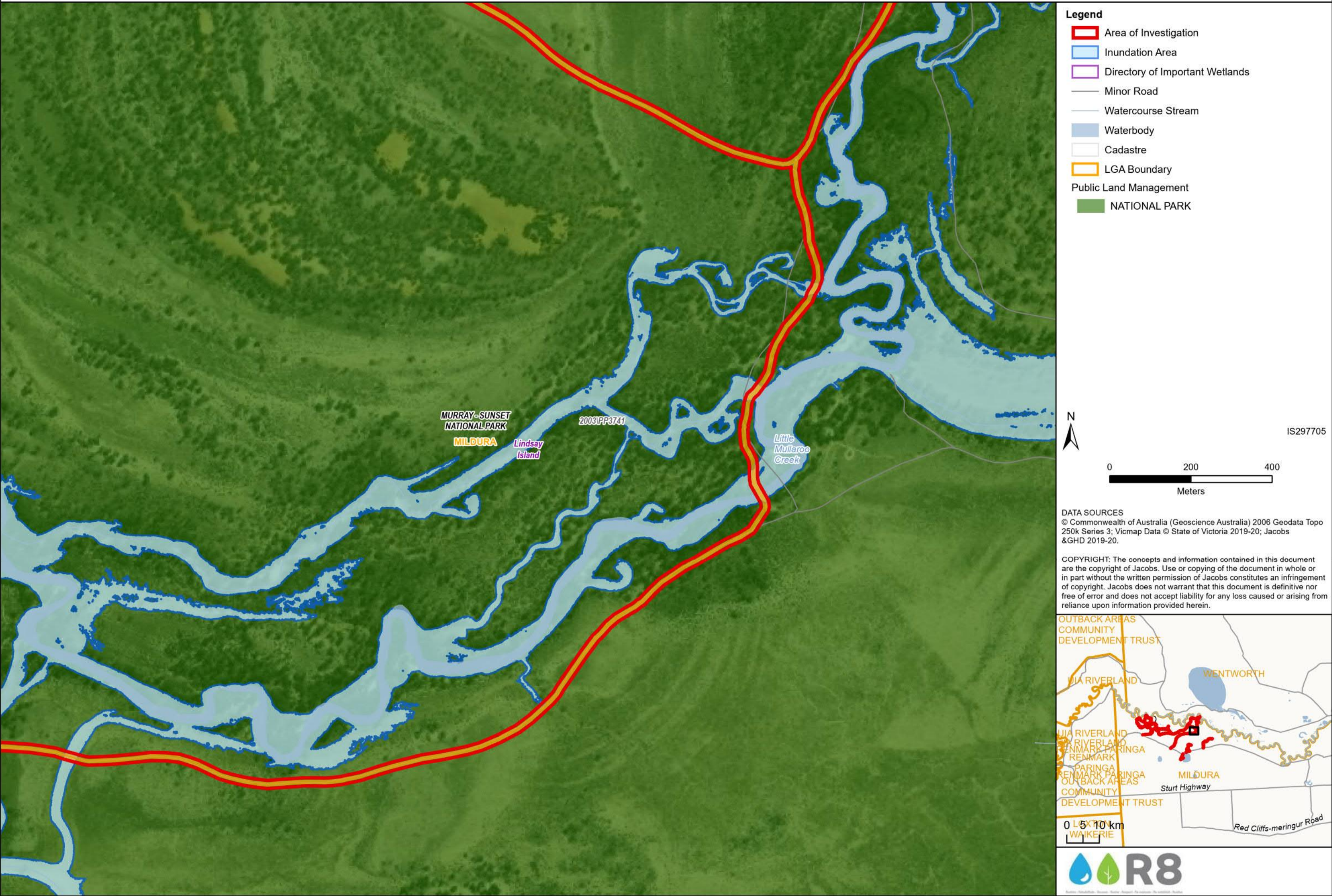
















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