



# **Victoria Murray Floodplain Restoration Project**

## **Desktop Land Use Planning Assessment - Belsar-Yungera Floodplain Restoration Project**

**IS297762-AP-AP-RP-0006 | REV 2**

**19 June 2020**

**Lower Murray Urban and Rural Water Corporation**



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**Appendix A: Site Description**

**Appendix B: Section 173 Agreements, Caveats and Covenants of land in the Area of Investigation**



## 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)
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
ESO	Environmental Significance Overlay
Ha	Hectares
HO	Heritage Overlay
Km	kilometre
LMW	Lower Murray Urban and Rural Water Corporation
LPPF	Local Planning Policy Framework
LSIO	Land Subject to Inundation Overlay
M	Metres
MCMA	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
PCRZ	Public Conservation and Resource Zone
planning scheme	Swan Hill Planning Scheme
PPF	Planning Policy Framework
Project	Belsar -Yungera Floodplain Restoration Project
RDZ1	Road Zone, Category 1
VCAT	Victorian Civil and Administrative Tribunal
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 Restoration Project (VMFRP) is to design infrastructure for the VMFRP including regulators, levees, roads, access tracks, containment banks 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 are also engaged to provide Regulatory Approvals and Cultural Heritage Services. The purpose of these services is to support 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 the Belsar-Yungera Floodplain Restoration Project. This report will support the preparation of referrals under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and Victorian *Environment Effects Act 1978* (EE Act). This report for VMFRP has been prepared in accordance with the scope of services set out in the contract between R8 and VMFRP. That scope of services, as described in this report, was developed with VMFRP.

R8 has prepared this report in accordance with the usual care and thoroughness 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 the data handover pack at the commencement of the project. In particular, VMFRP has developed ecological objectives and, based on these, has proposed inundation levels and extents. R8 is reliant on VMFRP's prior flood modelling work and has designed the infrastructure in response to the VMFRP defined inundation levels and extents.

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 contract 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

The Belsar-Yungera 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 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.

### 1.1 Project overview

The project aims to restore a more natural inundation across approximately 2,374 ha of high ecological value Murray River floodplain within Belsar and Yungera Islands. Works will include the construction of new infrastructure and the modification of existing infrastructure to allow natural inundation to mimic the impact of natural flood events, improving the condition of vegetation communities, and provide habitat for native fish, birds, frogs and reptiles

The main components of the project are designed replicate a natural flood regime that will trigger a range of ecological responses across a representative area of flood dependent communities. This will occur over the following four different areas (see Figures in Appendix A):

- Area 1: Primary Inundation
- Area 2: Lower J1 Creek
- Area 3: Upper J1 Creek
- Area 4: Lake Powell and Lake Carpul

The proposed works to support functional design of these areas include a primary option to target widespread inundation across much of the floodplain, as well as secondary options which focus on improving the efficiency of flow being disturbed across the floodplain and works that target specific areas for additional flooding opportunities.

#### 1.1.1 Main project components

The following main components per area are described below:

##### Area 1: Primary Inundation

- 3 main regulator structures (ER1, ER3 and S7) are used to isolate a large portion of Narcooyia Creek and Yungera Creek from the Murray River to manage breakout areas. A vertical slot fishway will be constructed at Regular ER1.
- Seven small regulator structures (ER1 South, ER1 North, S4, S105, S5, S108, S109) in Area 1 to enable smaller breakouts to be contained within the system. These minor regulators will be operated in either a fully opened or fully closed position, with all works designed to minimise the impact on the distribution of natural flood flows.

- Realignment and extension of irrigator pipeline which discharges water into Narcooyia Creek after the ER3 regulator is constructed.
- A series of containment banks to enable water to be held at the design inundation level.
- A permanent pump hard stand and a permanent underground pipeline from the hard stand to the downstream side of ER3 to facilitate the pumping of environmental water from the Murray River into the system. Temporary pump infrastructure will include a trailer-mounted rig with a suction pipe extending into the Murray River, which would be brought onto site as required.
- Potential removal of the existing block bank at the entrance of Narcooyia Creek and the waterway reshaped to enable the ER3 Regulator to be the control point for inflows.

#### **Area 2: Lower J1 Creek**

- 2 small regulators (J1a 1 and 2) on the downstream end of J1 creek, primary purpose to retain water within inundation Area 2 and regulating passing flows through the system from inundation Area 2 to inundation Area 1.
- Four small regulators (J1b, J1d, J1e, J1f) included in containment banks that are required to prevent water flowing out through secondary flood runners, to contain water in Area 2 and allow for inflows from Narcooyia Creek in flood events.
- A series of containment banks to enable water to be held at the design inundation level.

#### **Area 3: Upper J1 Creek**

- Two small regulators (J1c and J1g) included in containments banks to allow for the inundation and containment of water in Area 3, release of water to Area 2 and allow flood flows through the system.
- A hard stand for a temporary pump arrangement provides a secondary location for delivering water from the Murray River to all four inundation areas identified in this project. The hardstand will be located at the site previously used by the Mallee Catchment Management Authority (MCMA) for pumping in the past. There are no pipes or other assets at this site. Temporary pump infrastructure will include a trailer-mounted rig with a suction pipe extending into the Murray River, which would be brought onto site as required.

#### **Area 4: Lake Powell and Lake Carpul**

- A 1.8 km long pipeline will be constructed between Bonyaricall Creek and Lake Powell. The pipeline, together with a temporary pump installation, provides the ability to inundate Lake Powell and Lake Carpul.
- A small regulator (Lake Powell) will be located on the southern side of the Murray Valley Highway to hold water to the design inundation level.
- A new culvert will be installed across the Murray Valley Highway to increase the flow capacity at this location, improving the ability for natural flood flows to enter and exit the lakes at a lower commence to flow level.
- A small regulator (Lake Carpul) will be constructed south of Lake Powell within the cutting to improve hydraulic connectivity between Lake Powell and Lake Carpul and prevent Lake Carpul being drawn down too quickly following an environmental watering event.

Containment banks approximately 2.7 km in Area 1, 1.4 km in Area 2, 0.2 km in Area 3 and 0.7 km in Area 4 of will also be constructed by raising existing access tracks to enable water to be held to the design level. Seven spillways, each 20 m in length, will be incorporated into the construction of the small regulators and containment banks. They will include rock beaching with concrete sills and will be trafficable.

A channel between Lake Powell and Lake Carpul is currently being investigated as part of the design process, the requirement of this channel will be confirmed in later stages of the design process for the project. The project may also include the decommissioning of the existing regulator on Narcooyia Creek and upgrade to existing access to the structure. The requirement for decommissioning of this structure would be confirmed through the project detailed design stage. Given the uncertainty around the requirement for these works, they have not been included in the proposed area of impact (i.e. Construction Footprint) however have been included in the Area of Investigation for the project for completeness.

### 1.1.2 Ancillary components

Ancillary components of the project will include:

- Containment bank alignments designed to correspond to existing access tracks to minimise disturbance to vegetation and areas of potential cultural heritage significance.
- Access via existing tracks. Existing tracks and passing bays will be upgraded for operational or construction purposes. Access track dimensions on levee crests are to be consistent with Parks Victoria access track design and maintenance guidelines.
- Construction sites and laydown areas.
- Borrow pits to acquire material (clay/rock) required for construction. VMFRP is in the process of identifying possible locations, with the objective of selecting locations as close as possible to the project, on private land outside of Belsar and Yungera Islands, while also avoiding and minimising impacts. As the location of these is not yet known, land use impacts and approval requirements for borrow pits, such as may be required under the *Mineral Resources (Sustainable Development) Act 1990* (Vic) have not been assessed in this report.

Construction machinery required for the project will include trucks and excavators. A 10 m wide construction corridor for proposed structures and 3 m for proposed containment banks, laydown areas and minor works sites has been adopted for the project and will form part of the project construction footprint. It is considered that environmental effects from construction will be within a narrower corridor.

### 1.1.3 Inundation activities

The proposed works are intended to inundate the project area with inflows from the Murray River and with additional pumping when required. The filling methods include:

- Capturing a natural flooding event
- Pumping into the creek system over a period of time, or
- Pumping into the creek system on top of a natural flooding event, extending the natural event in size and duration

The method of draining the floodplain is through managed release from regulators at specified/controlled release rates.

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

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

- Development footprint - this is the area that the project infrastructure will occupy. This does not include tracks used for access during construction and operation.
- Construction footprint - this includes the project infrastructure as well as the land required to construct the infrastructure. This includes access tracks.
- Inundation area – area of land subject to flooding during managed inundation events, up to a specific design water level. The inundation area comprises the majority of the proposed Murray River Park on Belsar and Yungera Islands, land north of the Murray Valley Highway, and land surrounding Lakes Powell and Carpul.
- Area of investigation - this includes the development footprint, as well as a buffer around the development footprint and access tracks. The area of investigation extends along the Murray River north of the Murray Valley Highway, with a small section south of the highway between Lakes Powell and Carpul. For the purpose of this report.

The majority of the area of investigation lies within the State of Victoria. A small portion of the area does, however extend into the southern bank of the Murray River within the State of NSW (Figure 1.1)

### **1.3 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 on land use. The report is based on the Issue for Review (IFR) Design dated March 2020.

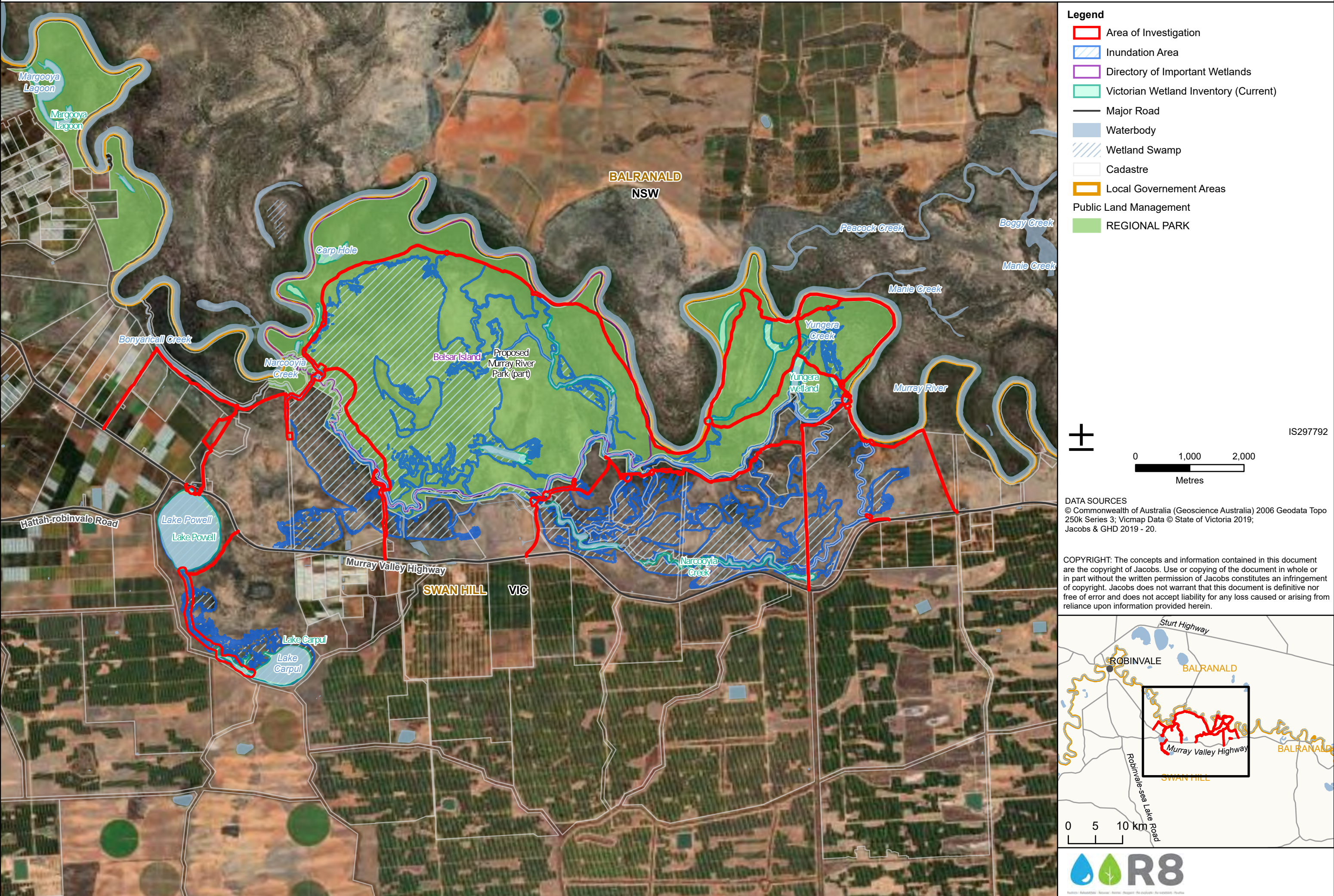
### **1.4 Limitations**

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 with state and local government planning departments.
- A review of land use planning applications or recently issued land use and planning permits has not 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. Any changes occurring outside of this area of investigation would require further assessment to identify their potential to impact on land use.



Figure 1.1 Belsar-Yungera Floodplain Restoration Project – Regional Context





## 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 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>Environment Protection and Biodiversity Conservation Act 1999</b>	
<p>The Environment Protection and Biodiversity Conservation Act 1999 (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 Belsar-Yungera Floodplain Restoration Project Flora and Fauna Assessment (R8 2020) contains further 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>Native Title Act 1993</b>	
<p>The Native Title Act 1993 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 Native Title Act 1993. Any dealings with Crown land must follow government policies in respect of Native Title and the provisions of the Native Title Act 1993 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 Native Title Act 1993 may apply.</p>	<p>The project is located on Crown land therefore must follow government policies of native title.</p> <p>Latest public data shows there are no Native Title determinations or claims over the area of investigation and inundation area.</p>
<b>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</b>	
<p>The Aboriginal and Torres Strait Islander Heritage Protection Act 1984 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.</p>	<p>Significant Aboriginal cultural heritage exists on the site. This Act allows the Commonwealth to intervene in any decision for the protection of this heritage.</p>



## 2.2 Victorian legislation

Table 2.2 provides an overview of key Victorian legislation relevant to this land use planning assessment. Other relevant environmental and heritage legislation is considered in other technical reports including the Flora and Fauna Assessment and the Historical Heritage Assessment.

Table 2.2: Relevant Victorian legislation

Description	Relevance
<b><i>Environment Effects Act 1978</i></b>	
<p>The Environment Effects Act 1978 provides for the assessment of projects that are capable of having a significant effect on the environment</p> <p>The process is called an Environment Effects Statement (EES) - It is not an approval process itself, rather it is an assessment process that enables statutory decision-makers to make decisions about whether a project with potentially significant environmental effects should proceed.</p> <p>If a project requires assessment under the Act and the EPBC Act, the EES process can be accredited under the Assessment Bilateral Agreement between the Commonwealth and Victoria. This means that two separate assessment processes are not required.</p> <p>'Ministerial guidelines for assessment of environmental effects under the Environment Effects Act 1978' (the Guidelines) (DSE, 2006) outline the triggers for referral of a project to the Minister for Planning and describes the process of preparing an EES.</p>	<p>A referral to the Minister for Planning under the Act will be undertaken as 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.</p> <ul style="list-style-type: none"> <li></li> </ul>
<b><i>Planning and Environment Act 1987</i></b>	
<p>The Planning and Environment Act 1987 regulates the use and development of land in Victoria. It 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 construction footprint and area of investigation are on land that is subject to the provisions of the Swan Hill Planning Scheme, which has been developed and implemented under the Planning and Environment Act 1987. Use and development of the project site must meet the requirements of the planning scheme.</p> <p>Projects can be approved via two processes – the issue of a planning permit or the amendment of the planning scheme.</p>
<b><i>Crown Land (Reserves) Act 1978</i></b>	
<p>The Crown Land (Reserves) Act 1978 (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. It is expected that this land has been 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>VMFRP will need to consult with any licence-holders to ensure any existing rights of licences issued under the CLRA are not adversely affected by the project.</p>
<b><i>Environment Protection Act 1970</i></b>	
<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</p>	<p>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> <p>State Environment Protection Policy (Waters)</p>

Description	Relevance
<p>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>State Environment Protection Policy (Prevention and Management of Contamination of Land)</p> <p>Noise from industry in regional Victoria: Recommended maximum noise levels from commerce, industry and trade premises in regional Victoria (NIRV; EPA publication 1411)</p> <p>State Environment Protection Policy (Ambient Air Quality)</p> <p>State Environment Protection Policy (Air Quality Management).</p> <p>The Environment Protection Amendment Act 2018 will fully come into effect on 1 July 2021 and will establish a new general environmental duty introduced through the Environment Protection Amendment Act 2018. The new general environmental duty will require that:</p> <p>“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.”</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 2018 Act.</p>
<b>National Parks Act 1975</b>	
<p>The National Parks Act 1975 and associated National Parks Regulations 2013 seeks 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 National Parks Act 1975 and clause 184 of the associated regulations, Parks Victoria can give consent to a public authority to perform its function in a park.</p>	<p>A large percentage of the area of investigation is within a Regional Park classified as 'other park, Schedule 3' under the Act, and under the ownership and management of Parks Victoria.</p> <p>Land consent under s27 of the Act will be required from Parks Victoria for the proposed works to occur.</p>
<b>Parks Victoria Act 1998</b>	
<p>The Parks Victoria Act 1998 is a new act which re-creates Parks Victoria as an independent statutory authority and strengthens Park Victoria's role of protecting, conserving and enhancing Victoria's parks and waterways.</p>	<p>Parks Victoria is the land manager of the regional park area and areas of nature reserve which supports most of the project works. Consents will be required from Parks Victoria.</p>
<b>Road Management Act 2004</b>	
<p>The Road Management Act 2004 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.</p> <p>Consent may be required from the relevant responsible road authority for development and use of and within a road reserve, including occupation and/or construction works in, on or under a road.</p>	<p>Works within the Murray Valley Highway or council roads leading to the site will require approval from the Regional Roads Victoria or local council. The Lake Powell Pipeline crossing and culvert works will be located in the road reserve. Upgrade works to Belsar Road will also form part of the works and require approval from Council. Proposed works to existing tracks within the Park will be undertaken in accordance with Parks Victoria requirements.</p>

Description	Relevance
<b>Traditional Owner Settlement Act 2010</b>	
The Traditional Owner Settlement Act 2010 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 Native Title Act 1993 (Cth) and not to make any future native title claims.	No Traditional Owner Settlement Agreements apply to the area of investigation.
<b>Water Act 1989</b>	
<p>The Water Act 1989 allows for management of the state's water resources. The main purpose of the Act is to promote the equitable and efficient use of water resources, make sure water resources are conserved and properly managed for the benefit of all Victorians and increase community involvement in conserving and managing our water resources.</p> <p>The administration of the Act is shared between CMAs and water authorities. Any works in declared waterways under the Act requires either a licence under section 67 or a works on waterways permit, administered by CMAs under by-law. A licence under section 51 is required to take and use water</p>	Works on declared waterways are proposed as part of this project. Application for a licence to construct and operate works on a waterway will be sought.

## 2.3 New South Wales legislation

Table 2.3 provides an overview of key NSW legislation relevant to this land use planning assessment, including identifying likely approvals for the project. This assessment is based on the understanding that activities to be undertaken in NSW are limited to the two temporary pumping areas. The permanent hard stands and temporary pumps would be located above the top of bank of the Murray River and so would be located in Victoria and the temporary suction lines would be in the Murray River in NSW.

Table 2.3: Summary of relevant NSW legislation

Description	Relevance to this project
<b>Environmental Planning and Assessment Act 1979</b>	
<p>Development in NSW is assessed in accordance with the Environmental Planning and Assessment Act 1979 (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 State Environmental Planning Policy (Infrastructure) 2007. A development application would need to be submitted to the consent authority which is the Balranald Shire Council. The development application is 'integrated development' because a permit is also required under section 201 of the Fisheries Management Act 1994.</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 Balranald Local Environmental Plan.</p>
<b>Crown Lands Management Act 2016</b>	

Description	Relevance to this project
<p>The Crown Lands Management Act 2016 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). Under the Crown Lands Management Act 2016, 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 Crown Lands License will be required for the temporary pumping areas</p>
<p><b>Water Management Act 2000</b></p> <p>The Water Management Act 2000 (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, estuary or place where water occurs naturally on or below the surface of the ground, and NSW coastal waters.</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> <p>NSW NRAR also confirmed that the take of water relating to temporary pumps located on the Victorian side of the border would not require a licence under the WM Act because NRAR does not licence pumps that are located in Victoria. NRAR confirmed that the project does not require a Water Access Licence or a Water Supply Work Approval.</p>
<p><b>National Parks and Wildlife Act 1974</b></p> <p>The National Parks and Wildlife Act 1974 (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 Aboriginal Land Rights Act 1983 (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>

Description	Relevance to this project
<b>Fisheries Management Act 1994</b>	
<p>The Fisheries Management Act 1994 (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>If construction of the temporary pumping areas requires excavation of the bed or bank of the river, this would meet the definition of 'dredging' or 'reclamation' under Clause 198A of the FM Act and would 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 Crown Land Management Act 2016. 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>Biodiversity Conservation Act 2016</b>	
<p>The Biodiversity Conservation Act 2016 (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> <p>The listing of threatened species under Schedule 1</p> <p>The listing of threatened ecological communities listed under Schedule 2</p> <p>The preparation and implementation of Recovery Plans and Threat Abatement Plans</p> <p>Requirements or otherwise for the preparation of a Species Impact Statement.</p> <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 temporary suction lines from the temporary pumping areas will be located, this will be limited to the western bank of the Murray River. As such, the project is not likely to significantly impact on a threatened species, population or ecological community.</p>
<b>Local Land Services Act 2013</b>	
<p>The Local Land Services Act 2013 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 60O(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 Local Land Services Act 2013.</p>
<b>Heritage Act 1977</b>	
<p>The Heritage Act 1977 identifies and protects heritage items and is administered by the Heritage Council of NSW and NSW Heritage Office (part of NSW Office of Environment and Heritage). 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.</p> <p>The relic provisions in the Act also require that an excavation permit be obtained from the Heritage Council prior to commencement of works if disturbance to a site with known or potential archaeological relics is proposed.</p>	<p>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>
<b>Protection of the Environment Operations Act 1997</b>	
<p>The Protection of the Environment Operations Act 1997 (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.</p>	<p>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 EPA.</p>

### **3. Existing conditions**

#### **3.1 Land use and development**

##### **3.1.1 Area of Investigation**

Land that supports the development footprint and construction footprint is identified as the area of investigation.

The area of investigation extends both to the north and south of the Murray Valley Highway between the banks of the Murray River and horticultural farming land to the south in the area of the Lake Powell and Carpul wetlands. The area forms part of the Lower Murray floodplain. The majority of the area is public land associated with the protected wildlife reserves and wetland areas, managed by Parks Victoria. Areas of private land to the south of Narcooyia Creek fall also fall within the area of investigation.

The area of investigation is comprised of land within the Belsar – Yungera Floodplain Complex. The complex includes the Belsar and Yungera Islands downstream of the Murrumbidgee, Wakool and River Murray junctions, approximately 30 km of the Euston Weir near the town of Robinvale in north western Victoria. The ecological health of the Belsar-Yungera Floodplain Complex has steadily declined due to the altered flow regimes caused by river regulation and drought.

The Belsar and Yungera Islands are formed from southern anabranches of the Murray River and include the Narcooyia Creek, Bonyaricall Creek, and Yungera Creek on Yungera Island. Narcooyia Creek and Bonyaricall Creek are managed as irrigation channels for surrounding land use. The Lake Powell and Lake Carpul Nature Conservation Reserve and Murray River Reserve also form part of the area of the floodplain complex. Lake Powell and Lake Carpul are ephemeral wetlands that are highly dependent on flood waters from the Murray River for inundation. The lakes and surrounds are protected by conservation and are highly dependent on natural inundation from Bonyaricall Creek. Both lakes are recognised for their high ecological value in providing habitat for established stands of black box and river red gum communities.

The system of creeks and waterways in this area are predominantly influenced by water levels in the Euston Weir, which experiences seasonal fluctuations.

##### **3.1.2 Surrounding area**

The project is located approximately 15 km southwest of the township of Robinvale on the Murray River in Victoria. Robinvale has a population of around 3,500 people (ABS, 2016) and is a key recreational area of the region, located on one of the most user-friendly stretches of the Murray River for water activities. The regional area around Robinvale, extending from Mildura south of the Murray River is well known for its large irrigated fruit and vegetable farms and vineyards. The Euston Weir and Lock 15 south of the town provide the water storage that supports irrigated farming of the region.

Directly north of Robinvale, on the other side of the Murray River, is the town of Euston, NSW. Euston is a small service centre with a population of approximately 840 people. Grape growing and other fruit and nut farming are the main industries for the town and surrounds. Euston is the gateway to Balranalk, Yanga National Park, World Heritage Willandra Lakes and Mungo National Park.

The regional towns of Mildura and Swan Hill are both approximately 90 km north-west and south-east of the project.

The project is accessible from the Murray Valley Highway which is the main arterial road running north-south connecting the townships along the Victorian side of the Murray River from as far as Robinvale to Echuca. The road is managed by Regional Roads Victoria.

#### **3.2 Land tenure**

The project comprises of both Crown land and freehold land. Much of the Crown land is associated with Lake Powell and Lake Carpul Nature Conservation Reserve and Murray River Reserve under ownership and



management of Parks Victoria. A number of private land parcels support proposed works and infrastructure as well as area of inundation.

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

### 3.3 Instruments on Title

Section 173 Agreements, Caveats, Covenants and general encumbrances exist on land within the area of investigation and inundation area.

#### 3.3.1 Agreements, Caveats and Covenants

A total of eight (8) allotments of freehold land within the area of investigation and inundation area are subject to one of the following Section 173 Agreements, Caveats and Covenants (see Appendix B for copies of relevant documentation):

- 1) **Instrument AL467113N:** Section 173 Agreement between the landowner, Swan Hill Rural City Council. The following actions form part of the agreement:
  - Development of a 10 year Offset Management Plan (Offset Plan)
  - The landowner is to complete the management actions specified in the Offset Plan to the satisfaction of the Responsible Authority.
  - Allow officers, employees and agents of the Responsible Authority access to and entry onto the site.
  - Except with the prior consent of the Responsible Authority, adhere to conditions associated with maintaining the environmental condition of the land, with the aim to prevent degradation, in accordance with the Offset Management Plan.
- 2) **Instrument AJ645849L:** Section 173 Agreement between the landowner, Swan Hill Rural City Council and The Secretary to the Department of Sustainability and Environment. The following actions on the land generally form part of each agreement:
  - The Floodplain Land will be managed, maintained and protected for the conservation of floodplain land habitat and, for the continuing presence of water supply infrastructure.
  - The Floodplain Land will not be used for any purpose including cropping or grazing which is inconsistent with the primary purpose of conservation and protection of native flora and fauna without formal approval.
  - Removal or burning of native vegetation will not be permitted on the Floodplain Land without formal approval.
  - The water supply infrastructure exists on the Floodplain Land to provide water to the freehold land.
- 3) **Instrument J349236:** Queens Caveat between the landowner and the Minister for Conservation and Environment in relation to a Crown Grant which states that the land described shall not be subdivided without the consent of the Minister of Lands. A Certificate of Consent of the Minister for Conservation and Environment allows for the creation of two separate lots as per an approved plan.
- 4) **Instrument AD684358N:** Deed of Covenant between landowner and Trust for Nature (Victoria) enabling the Trust to enforce obligations and duties associated with conservation of the land.

The intention of each instrument is focused on enforcing conservation practice on the land and ensuring general management of the floodplain. This project supports these intentions. It is important that the proposed works comply with the conditions of each instrument.

#### 3.3.2 General encumbrances

A number of allotments associated with the area of investigation contain easements on title relating to the protection of drainage and water supply infrastructure.

Four (4) freehold land parcels associated with the area of investigation include reserve land associated with waterways.

Location of easements and reserved land in relation to proposed works will be considered and avoided where relevant and if practicable as part of detailed design.

### **3.3.3 Reserved Crown land**

Crown land parcels associated with the area of investigation are reserved under either the *Crown Land (Reserves) Act 1978*, *Forests Act 1958*, or the *Wildlife Act 1975*. Most parcels are reserved as 'Permanent Public Purpose' for uses such as camping grounds, parks and other public purposes. One parcel is also reserved as 'Temporary Forest' and another is reserved for the 'Permanent Management of Wildlife'. Parks Victoria will need to be consulted to confirm the most current reservation and the consents required in relation to the appropriate act that applies.



Table 3.1: Land parcels affected by project works and inundation areas

SPI	Tenure	Description	Instruments on Title	Owner/land manager	Project component
<b>Victoria</b>					
<b>Area 1</b>					
1\TP898018	Freehold	3 Belsar Road, Lake Powell	<u>Encumbrances</u> Marked on plan as A	Private ownership	Inundation area, Containment bank Belsar Road, Belsar Road Culvert 1 and 2
1\TP217653	Freehold	86 O'Connor Lane, TolTol	<u>Encumbrances</u> E-1	Private ownership	Buffer to access track
1\LP89793	Freehold	55 O'Connor Lane, Tol Tol	<u>Encumbrances</u> 2 easements	Private ownership	Buffer to access road
2\PS802020	Freehold	86 O'Connor Lane, Tol Tol	Section 173 Agreement between Swan Hill Rural City Council and landowner (AL467113N)	Private ownership	Buffer to access road
2\PS306128	Freehold	2780 Murray Valley Highway, Robinvale	<u>Encumbrances</u> E1- E6 Water Supply and Drainage E6-E7 Electricity	Private ownership	Buffer to access road
2\PS337657	Freehold	2734 Murray Valley Highway, Robinvale	Conservation Covenant (AD684358N)	Private ownership	Containment bank ER1, Inundation area
2\PS613258	Freehold	2267A Murray Valley Highway, Lake Powell	<u>Encumbrances</u> E1 - E6	Private ownership	Inundation area
3C\PP3296	Crown land	Murray Valley Highway, Lake Powell	n/a	Parks Victoria	Lake Powell Pipeline
3D\PP3296	Crown land	Murray Valley Highway, Lake Powell	n/a	Parks Victoria	Inundation area, Access road and buffer to access road, Hardstand,

SPI	Tenure	Description	Instruments on Title	Owner/land manager	Project component
					Lake Powell Pipeline laydown area, Containment bank ER1, Containment bank Belsar Road, Containment bank ER3, Regulator ER, ER1 No 2, ER1 No. 3,
4B\PP3296	Crown land	River Track, Lake Powell	n/a	Parks Victoria	Inundation area, Containment bank ER1, Spillway ER1 No 1
2001\PP3296	Crown land	Murray Valley Highway, Lake Powell	n/a	Parks Victoria	Inundation area, Containment Bank – S104, S4, S5, S7, S106, S14, S108, S109, ER3; Regulator ER1-No. 3; laydown area, Spillway ER1 No. 2, ER3; Hardstand; Fishway ER1 No. 1, Regulator S4, S5, S7, S105, S108, S109, ER3 Pipeline 1, ER3 Pipeline 2
2003\PP3296	Crown land	River track, Lake Powell	n/a	Parks Victoria	Buffer to access track
2004\PP3296	Crown land	River Track, Lake Powell	n/a	Parks Victoria	Inundation area, containment bank – ER1, Laydown area
<b>Area 2</b>					
28\PP3296	Freehold	I575 Murray Valley Highway, Lake Powell	n/a	Private ownership	Inundation area, access road and buffer
1\LP98014	Freehold	1267 Murray Valley Highway, Boundary Bend	Reserve (waterway)	Private ownership	Inundation area, Laydown area for ER3

SPI	Tenure	Description	Instruments on Title	Owner/land manager	Project component
					Pipeline 2, buffer for laydown area and access road
2\LP98014	Freehold	1267 Murray Valley Highway, Boundary Bend	<u>Encumbrances</u> E1 – water supply, Reserve (waterway)	Private ownership	Inundation area
1B\PP4002	Freehold	1267 Murray Valley Highway, Boundary Bend	Reserve (waterway)	Private ownership	Inundation Area
1\PP3296	Freehold	1575 Murray Valley Highway, Lake Powell	n/a	Private ownership	Regulator J1A No1
2\PP3296	Freehold	1575 Murray Valley Highway, Lake Powell	n/a	Private ownership	Access track
1\TP217679	Freehold	1575 Murray Valley Highway, Lake Powell	Section 173 Agreement between Swan Hill Rural City Council and landowner (AJ645849L) Queens Caveat (J349236)	Private ownership	Inundation area, access road and buffer
2\TP217679	Freehold	1575 Murray Valley Highway, Lake Powell	Section 173 Agreement between Swan Hill Rural City Council and landowner (AJ645849L) Queens Caveat (J349236)	Private ownership	Inundation area, access road and buffer, Containment bank J1B, Regulator J1B
3\TP217679	Freehold	1575 Murray Valley Highway, Lake Powell	Section 173 Agreement between Swan Hill Rural City Council and landowner Caveat also on title	Private ownership	Inundation Area

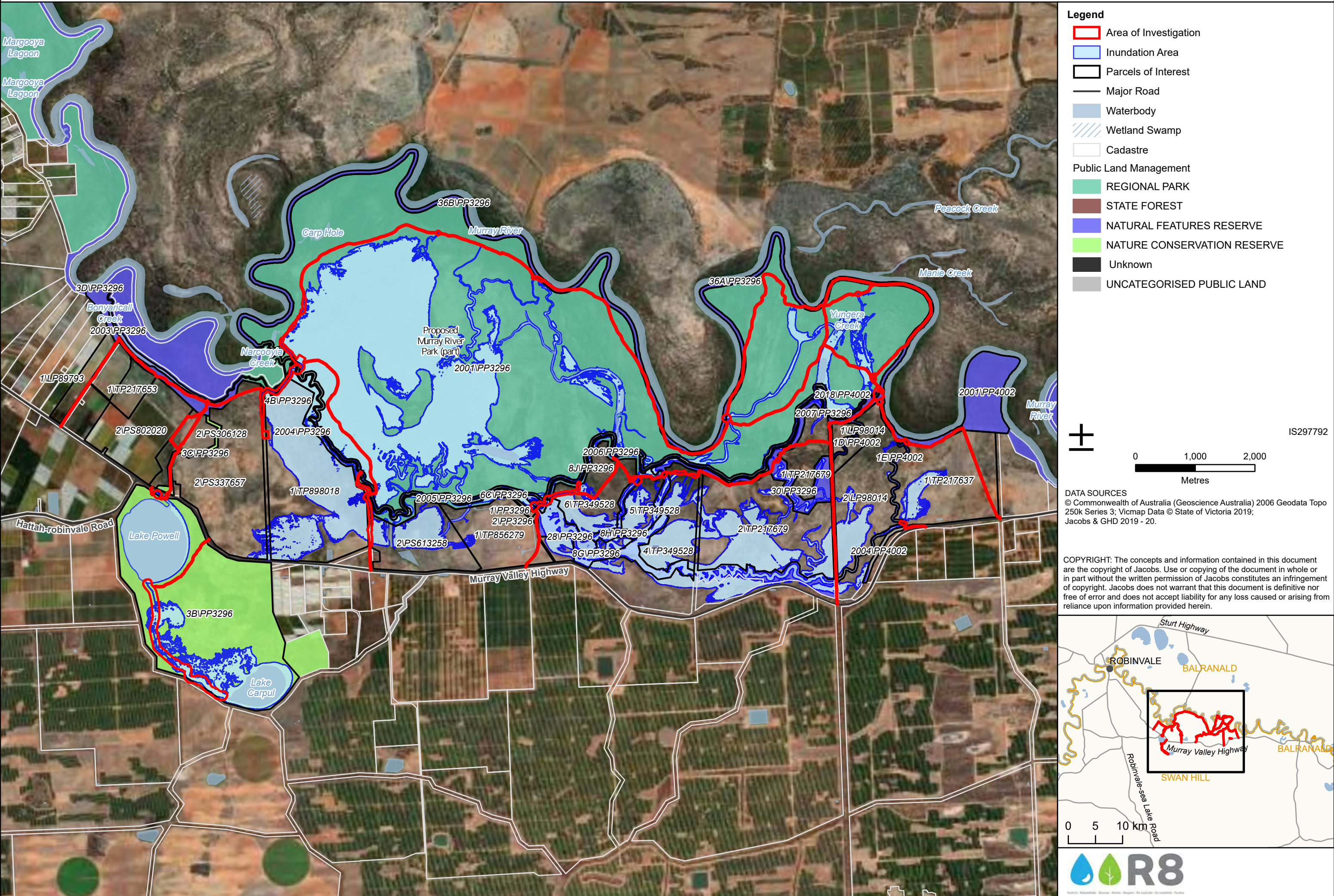
SPI	Tenure	Description	Instruments on Title	Owner/land manager	Project component
3\TP349528	Freehold	I575 Murray Valley Highway, Lake Powell	Section 173 Agreement between Swan Hill Rural City Council and landowner (AJ645849L)	Private ownership	Inundation area
4\TP349528	Freehold	I575 Murray Valley Highway, Lake Powell	Section 173 Agreement between Swan Hill Rural City Council and landowner (AJ645849L)	Private ownership	Inundation area, Containment bank J1H, J1F, Spillway J1H, Regulator J1F
5\TP349528	Freehold	I575 Murray Valley Highway, Lake Powell	Section 173 Agreement between Swan Hill Rural City Council and landowner (AJ645849L)	Private ownership	Inundation area, Regulator J1D
6\TP349528	Freehold	I575 Murray Valley Highway, Lake Powell	Section 173 Agreement between Swan Hill Rural City Council and landowner (AJ645849L)	Private ownership	Inundation area, Containment bank J1A, Spillway J1A No 1
7\TP349528	Freehold	I575 Murray Valley Highway, Lake Powell	Section 173 Agreement between Swan Hill Rural City Council and landowner (AJ645849L)	Private ownership	Inundation area
8G\PP3296	Crown land	Murray Valley Highway, Lake Powell	Reservation Permanent Public Purposes	DELWP	Inundation Area, Regulator J1A No. 1, J1A No. 2
8H\PP3296	Crown land	Murray Valley Highway, Lake Powell	Reservation Permanent Public Purposes	DELWP	Inundation Area, Regulator J1D

SPI	Tenure	Description	Instruments on Title	Owner/land manager	Project component
8JPP3296	Crown land	Murray Valley Highway, Lake Powell	Reservation Permanent Public Purposes	DELWP	Inundation Area, Regulator J1E
6C\PP3296	Crown land	Belsar Road, Lake Powell	Reservation Permanent Public Purposes	Parks Victoria	Inundation Area, Regulator J1E
2004\PP4002	Crown land	Centre Track, Lake Powell	Reservation Permanent Public Purposes	Roads Corporation	Regulator ER1 No.1, ER1 No.3, Containment bank, Inundation area, culvert, access track
2005\PP3296	Crown land	River Track, Lake Powell	Reservation Permanent Public Purposes	Parks Victoria	Inundation area, Containment bank Belsar Road, Containment bank J1A, Regulator J1A No 1
2006\PP3296	Crown land	River Track, Lake Powell	Reservation Permanent Public Purposes	DELWP	Regulator J1A No.2, Containment Bank
30\PP3296	Crown land	Murray Valley Highway, Lake Powell	Reservation Permanent Public Purposes	DELWP	Inundation area, Regulator J1B, Containment bank J1B
31A\PP3296	Crown land	Murray Valley Highway, Lake Powell	Reservation Permanent Public Purposes	Parks Victoria	Inundation area
<b>Area 3</b>					
1\TP217637	Freehold	1267 Murray Valley Highway, Lake Powell	<u>Encumbrances</u> E1, E2 Water Supply	Private ownership	Inundation area, Containment bank J1G, Containment bank J1C, Regulator J1C, J1G, Temporary pumping infrastructure
2\LP98014	Freehold	1267 Murray Valley Highway, Lake Powell	Reserve (waterway)	Private ownership	Inundation area, buffer to access road,

SPI	Tenure	Description	Instruments on Title	Owner/land manager	Project component
					Laydown areas for ER3 pipeline
26A\PP4002	Freehold	354 Paul Lane, Boundary Bend	n/a	Private ownership	Inundation area
1D\PP4002	Crown land	Murray Valley Highway, Boundary Bend	Reservation Permanent Public Purposes	DELWP	Inundation area
1E\PP4002	Crown land	Murray Valley Highway, Boundary Bend	Reservation Permanent Public Purposes	DELWP	Inundation area
2001\PP4002	Crown land	Murray Valley Highway, Boundary Bend	Reservation Temporary Forest Reservation Permanent Public Purposes	DELWP	Inundation area
2007\PP3296	Crown land	River Track, Lake Powell	Reservation Permanent Public Purposes	DELWP	Regulator ER3, Pipeline
<b>Area 4</b>					
3B\PP3296	Crown land	Lake Powell Road, Lake Powell	Reservation Permanent Management of Wildlife	Parks Victoria	Lake Carpul Regulator, Lake Powell to Lake Carpul Channel
<b>NSW</b>					
<b>Area 3</b>					
NA	Crown land – waterway	Unallocated/unreserved Crown land	Nil	Murray-Darling Basin Authority	Temporary suction lines for the temporary pump



Figure 3.1 Belsar-Yungera Floodplain Restoration Project – Land Tenure Map





### 3.4 Access

Access roads for works will use existing local council roads and tracks where possible. Two new access roads will be required, one to access the proposed pipeline corridor between Lake Powell and Lake Carpul, and one to access Regulator J1A No1 and works further east of this area. Both new access tracks will require a new crossover onto the Murray Valley Highway which will require permissions from Regional Roads Victoria.

### 3.5 Native title interests

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

- No current native title applications under the *Native Title Act 1993* apply over the area of investigation.
- No previous native title claims have been determined under the *Native Title Act 1993* in relation to land within or adjacent to the area of investigation.
- No current applications or registered agreements under the *Traditional Owner Settlement Act 2010* (Vic) apply over land within the area of investigation.
- No Indigenous Land Use Agreements cover the area of investigation and inundation area.

### 3.6 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 3.2).

#### 3.6.1 Irrigation districts

The project is located within the Mallee/Sunraysia Irrigation area as defined by the DELWP.

Narcooyia Creek and Bonyaricall Creek that span across the Belsar and Yungera area are managed as irrigation channels for water users in its middle and upper reaches to the south of the project site (GHD 2012). This irrigation supports the extensive viticulture and fruit and vegetable farming within this area of the Sunraysia region.

#### 3.6.2 Apiary

Current public data indicates the location of 6 apiary sites located across the Belsar and Yungera Islands. 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.

#### 3.6.3 Viticulture

The project is within the Murray Darling and Swan Hill wine region of Victoria. The industry of the region spans from Lake Charm near Kerang in the southeast all the way to Piangil in northwest Victoria, and across the border to Toolybuc in southern NSW. Almost all vineyards in the Robinvale area are irrigated from the Murray River or its tributaries.

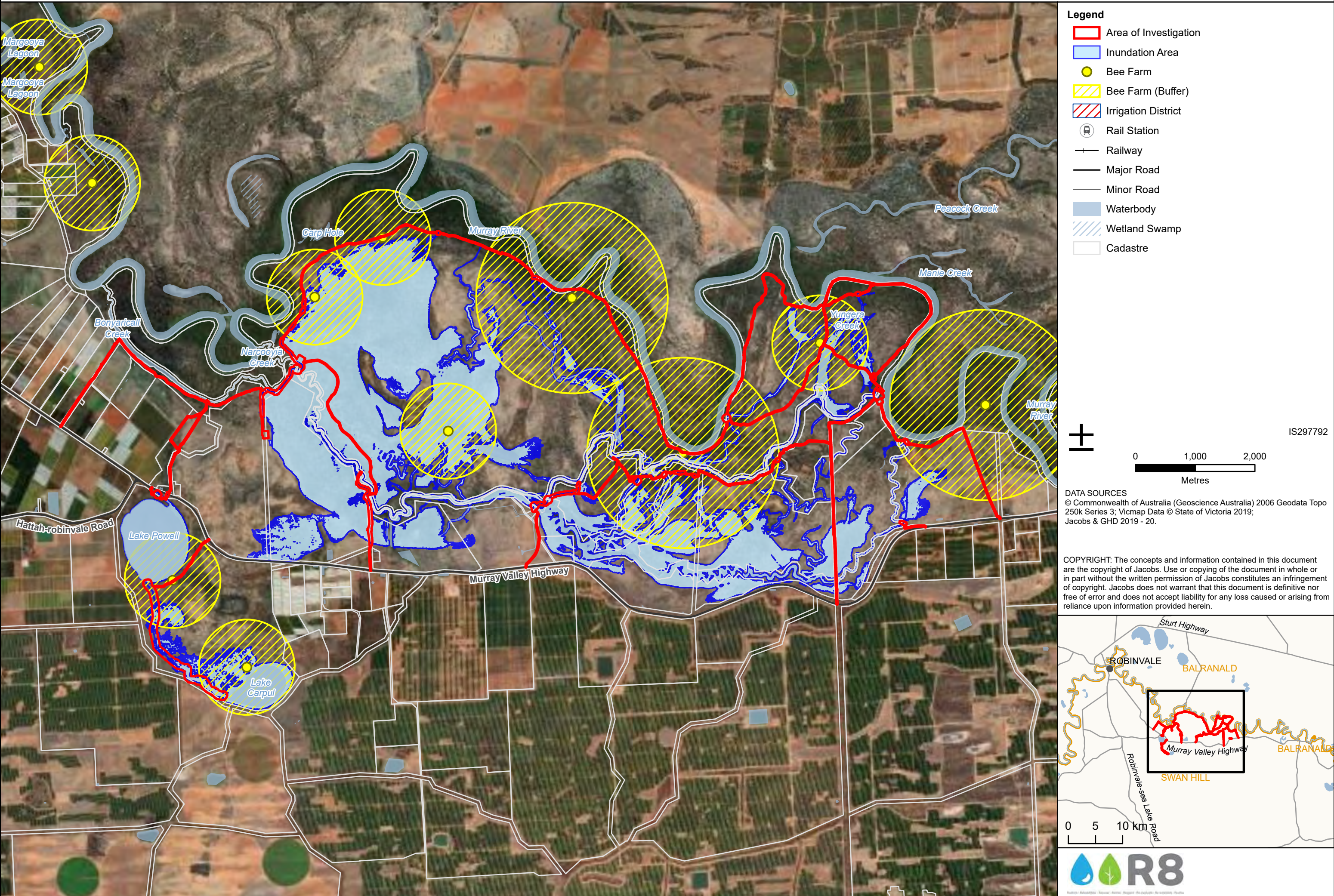
#### 3.6.4 Recreational activities

The Murray River Reserve and Lake Powell and Lake Carpul Nature Reserves, along with surrounding Crown land is managed by Parks Victoria. The area is highly valued for recreation activities such as camping, fishing, canoeing, trail-bike riding and horse riding.

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 camping or caravanning. It forms part of the Murray River Trail for tourism purposes.



Figure 3.2 Belsar-Yungera Floodplain Restoration Project – Other Land Use Features Map





## 4. Victorian Planning Framework

The project is on land subject to the Swan Hill 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 Take account of impact of land use and development on biodiversity.</p> <p>Clause 12.01-2S Native Vegetation Management The removal, destruction or lopping of native vegetation, apply the three-step approach in accordance with the Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment, Land, Water and Planning, 2017).</p>
	Clause 12.03 Water Bodies and Wetlands	<p>Clause 12.03-1S River Corridors, Waterways, Lakes and Wetland Ensure development responds to and respects the significant environmental, conservation, cultural, aesthetic, open space, recreation and tourism assets of water bodies and wetlands.</p>
	Clause 12.05 Significant Environments and Landscapes	<p>Clause 12.05-2S Landscapes Ensure development does not detract from the natural qualities of significant landscape areas.</p>
Clause 13 Environmental Risks and Amenity	Clause 13.01 Climate Change Impacts	<p>Clause 13.01-1S Natural Hazards and Climate Change Integrate strategic land use planning with emergency management decision making.</p>
	Clause 13.02 Bushfire	<p>Clause 13.02-1S Bushfire Planning Ensuring the bushfire risk to existing and future residents, property and community infrastructure will not increase as a result of future land use and development.</p>
	Clause 13.03 Floodplains	<p>Clause 13.03-1S Floodplain Management Avoid intensifying the impact of flooding through inappropriately located use and development.</p>
	Clause 13.04 Soil Degradation	<p>Clause 13.04-3S Salinity Prevent inappropriate development in areas affected by groundwater salinity. Any applicable regional catchment strategy and any associated implementation plan or strategy (particularly salinity management plans and regional vegetation plans). Any special area plan approved under the Catchment and Land Protection Act 1994.</p>

Relevant clause		Objectives
	Clause 13.07 Amenity and Safety	<p>Clause 13.07-1S Land Use Compatibility</p> <p>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.</p>
Clause 14 Natural Resource Management	Clause 14.01 Agriculture	<p>Clause 14.01-3S Forestry and Timber Production</p> <p>Identify areas that may be suitably used and developed for plantation timber production in accordance with the Code of Practice for Timber Production (Department of Environment and Primary Industries, 2014).</p>
	Clause 14.02 Water	<p>Clause 14.02-1S Catchment Planning and Management</p> <p>Ensure planning is coordinated with the activities of catchment management authorities.</p> <p>Clause 14.02-2S Water Quality</p> <p>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.</p>
Clause 15 Built Environment and Heritage	Clause 15.01 Built Environment	<p>Clause 15.01-1S Urban Design</p> <p>Require development to respond to its context in terms of character, cultural identity, natural features, surrounding landscape and climate.</p>
		<p>Clause 15.01-2S Building Design</p> <p>Ensure development is designed to protect and enhance valued landmarks, views and vistas.</p>
		<p>Clause 15.01-6S Design for Rural Areas</p> <p>To ensure development respects valued areas of rural character.</p>
	Clause 15.02 Sustainable Development	<p>Clause 15.02-1S Energy and Resource Efficiency</p> <p>To encourage land use and development that is energy and resource efficient, supports a cooler environment and minimises greenhouse gas emissions.</p>
	Clause 15.03 Heritage	<p>Clause 15.03-1S Heritage Conservation</p> <p>Encourage appropriate development that respects places with identified heritage values.</p>
		<p>Clause 15.03-2S Aboriginal Cultural Heritage</p> <p>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.</p>
Clause 17 Employment	Clause 17.04 Tourism	<p>Clause 17.04-1R Tourism – Loddon Mallee North</p> <p>Support nature-based tourism and protect these activities from urban encroachment.</p>
Clause 19 Infrastructure	Clause 19.02 Community Infrastructure	<p>Clause 19.02.-06S Open space</p> <p>Ensure that land use adjoining conservation reserves complements the open space in terms of visual and noise</p>

Relevant clause		Objectives
		impacts, preservation of vegetation and treatment of waste water to reduce turbidity and pollution.
<b>Local Planning Policy</b>		
<b>Municipal Strategic Statement</b>		
Clause 21.01 Municipal Profile		<p>The Murray River corridor accommodates most of the region's population and irrigated agriculture. The municipality is part of a wider region which features an extensive agricultural area and one of the most productive areas of the Murray Darling Basin.</p> <p>Coordination of strategic and land use planning with the State and local governments in New South Wales is particularly important within the Murray River Corridor, including land within the floodplain. Protecting the Murray River's water quality and riverine habitat are major issues for all Murray River Corridor municipal councils.</p> <p>Tourism attractions based on the Murray River, the river towns, recreational opportunities at places like Lake Boga and the Swan Hill Pioneer Settlement are important components of the municipality's tourism role.</p>
Clause 21.02 Key Influences and Issues	Clause 21.02-1 Key influences and issues	<p><u>Environment</u></p> <p>The protection of the environmental values of the Murray River corridor.</p> <p>The river and its wetland provide significant habitat values for flora and fauna.</p> <p>Flooding is a significant environmental risk, particularly along the Murray River.</p> <p><u>Natural resource management</u></p> <p>The continued growth of the horticulture industry.</p> <p>The need to support dry land agriculture</p> <p><u>Built environment and heritage</u></p> <p>The protection of Aboriginal and European heritage is critical to the growth in tourism and sense of place.</p> <p><u>Economic development</u></p> <p>The significant potential for tourism along the Murray River Corridor.</p> <p><u>Infrastructure and transport</u></p> <p>The uptake of improved irrigation practices via projects such as the Northern Victorian Irrigation Renewal Project.</p>
Clause 21.03 Vision and Strategic Framework		<p><u>Map 1: Land Use Framework Plan</u></p> <ul style="list-style-type: none"> <li>Nyah to Robinvale – Continue to develop irrigated horticulture potential, farm processing and value adding in accordance with sustainable land and water management principles.</li> <li>River Corridor – Promote importance of River Corridor and associated wetlands as a key natural resource, recreation, tourism and heritage features.</li> </ul>

Relevant clause		Objectives
		<ul style="list-style-type: none"> <li>Irrigation Areas – Extension of irrigation areas – encourage where there is minimal environmental impact.</li> </ul>
Clause 21.05 Environment	Clause 21.05-1 River and wetland health	Objective 1 – To manage the Murray River corridor's environmental values and resource capacity.
	Clause 21.05-2 Catchment and land protection	Objective 2 – To ensure the sustainable development of natural resources of land, flora, natural ecosystems and water, including groundwater.
	Clause 21.05-3 Conservation of native flora and fauna	<p>Objective 3 – To protect remnant native vegetation, including understorey and vegetation constituting significant habitat and facilitate natural revegetation.</p> <p>Objective 4 – To protect and maintain biodiversity, including native vegetation and habitats for flora and fauna.</p>
Clause 21.07 Built Environment and Heritage	Clause 21.07-3 Heritage	<p>Objective 4 – To protect and conserve all heritage buildings, places, trees and streetscapes.</p> <p>Objective 5 – To recognise the significance of local Aboriginal heritage.</p>
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.
<b>Local Planning Policies</b>		
Clause 22.01 Flooding		<p>Applies to all land affected by the Land Subject to Inundation Overlay.</p> <p>Objectives:</p> <ul style="list-style-type: none"> <li>To maintain the unobstructed passage of floodwaters.</li> <li>To recognise appropriate public and community based flood management organisations and their role in maintenance and development of existing flood protection levee banks.</li> <li>To provide suitable flood plain management which will ensure that any new development is suitably designed to ensure that development is compatible with the identified flood hazard and local drainage characteristics.</li> <li>To protect and encourage the rural and riverine character of the area.</li> <li>To recognise the agricultural value of land within levee protected areas and to support the continued use of these areas for agricultural production.</li> </ul>

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 intention of improving on the health of these riverine environments will also support the economic development of the region which is already focused on tourism-based nature-based activities associated with ecological value.

In particular, the project strongly supports the objectives of Clause 21.05 of the Swan Hill Planning Scheme Municipal Strategic Statement in relation to the management of the environmental values and resource capacity of the Murray River. Objectives for the support of primary land use of dryland agriculture within the municipality

is also strongly recognised. Any impact to this primary land use from inundation activities should be minimised and managed.

## 4.2 Land use definitions

Land use of proposed works are defined in Clause 73 of the 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 Lake Powell Pipeline works	Utility Installation	Land used: a) for telecommunications b) to transmit or distribute gas or oil c) to transmit, distribute or store power, including battery storage <b>d) to collect, treat, transmit, store or distribute water; or</b> <b>e) to collect, treat, or dispose of storm or flood water, sewage, or sillage</b> It includes any associated flow measurement device or a structure to gauge waterway flow
Regulator Box Culvert	Minor Utility Installation	Land used for a utility installation comprising any of the following: a) Sewerage or water mains <b>b) Storm or flood water drains or retarding basins</b> <b>c) Flow measurement device or a structure to gauge waterway flow</b> <b>d) Siphons, water storage tanks, disinfection booster stations and channels</b> e) Gas mains providing gas directly to consumers f) A sewerage treatment plant, and any associated disposal works, required to serve a neighbourhood g) A pumping station required to serve a neighbourhood h) 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 i) 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
Access tracks Roadworks Containment bank Temporary pump hardstands Temporary construction laydown areas	Earthworks	<b>Land forming, laser grading, levee banks, raised access road and tracks, building pads, storage embankments, channel banks and drain banks and associated structures</b>

Project works	Clause 73 General term/ use	Definition
Native Vegetation	Native Vegetation	Plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses.

Conservation is the primary purpose of the area of investigation. Current use of the area of investigation already includes the use of utilities to assist in the management of water for the primary purpose of conservation. The proposed works will however, significantly increase the use of utilities 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 Swan Hill Planning Scheme apply to the area of investigation (Figure 4.1 - Figure 4.8):

- Public Conservation and Resource Zone (PCRZ)
- Farming Zone (FZ)
- Road Zone, Category 1 (RDZ1)
- Environmental Significance Overlay (Schedule 1 – Waterway, Wetlands and Lakes Environs) (ESO1)
- Vegetation Protection Overlay (Schedule 1 – Remnant Vegetation) (VPO1)
- 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. The purpose of the zones and overlays associated with the area of investigation is provided in Table 4.4.



Figure 4.1 Belsar-Yungera Floodplain Restoration Project - Planning Zones Map, Area 1

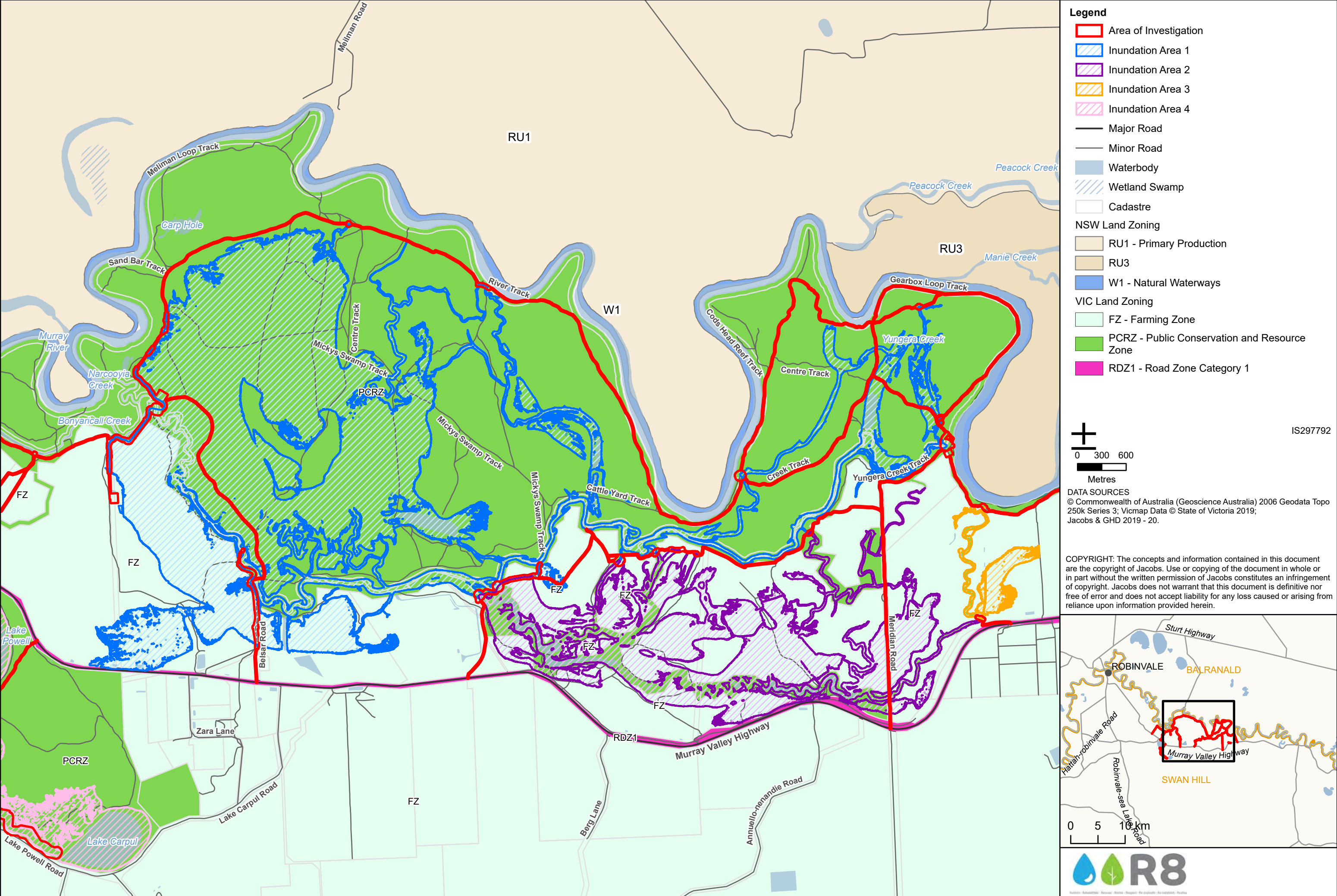




Figure 4.2 Belsar-Yungera Floodplain Restoration Project - Planning Zones Map, Area 2

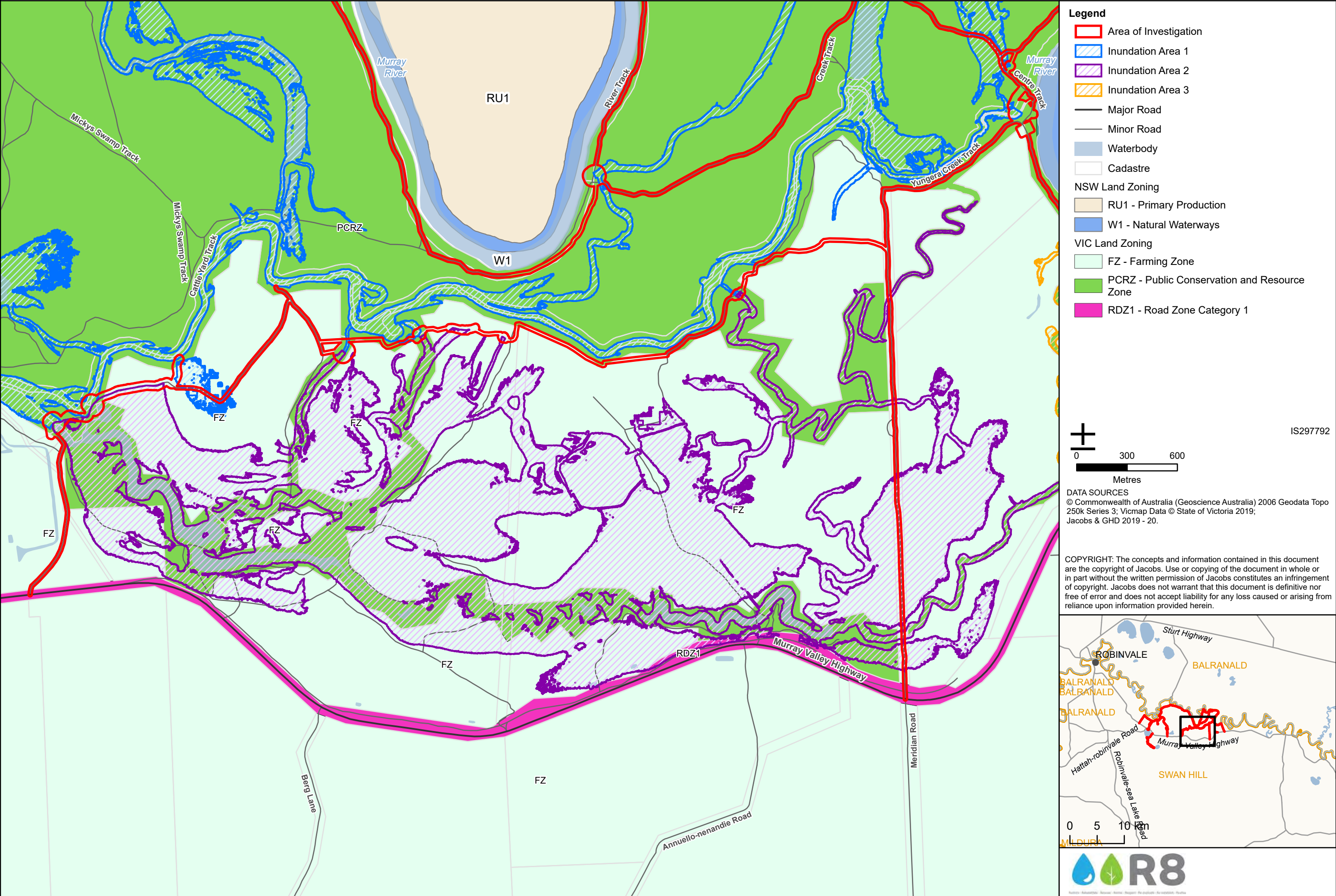


Figure 4.3 Belsar-Yungera Floodplain Restoration Project - Planning Zones Map, Area 3

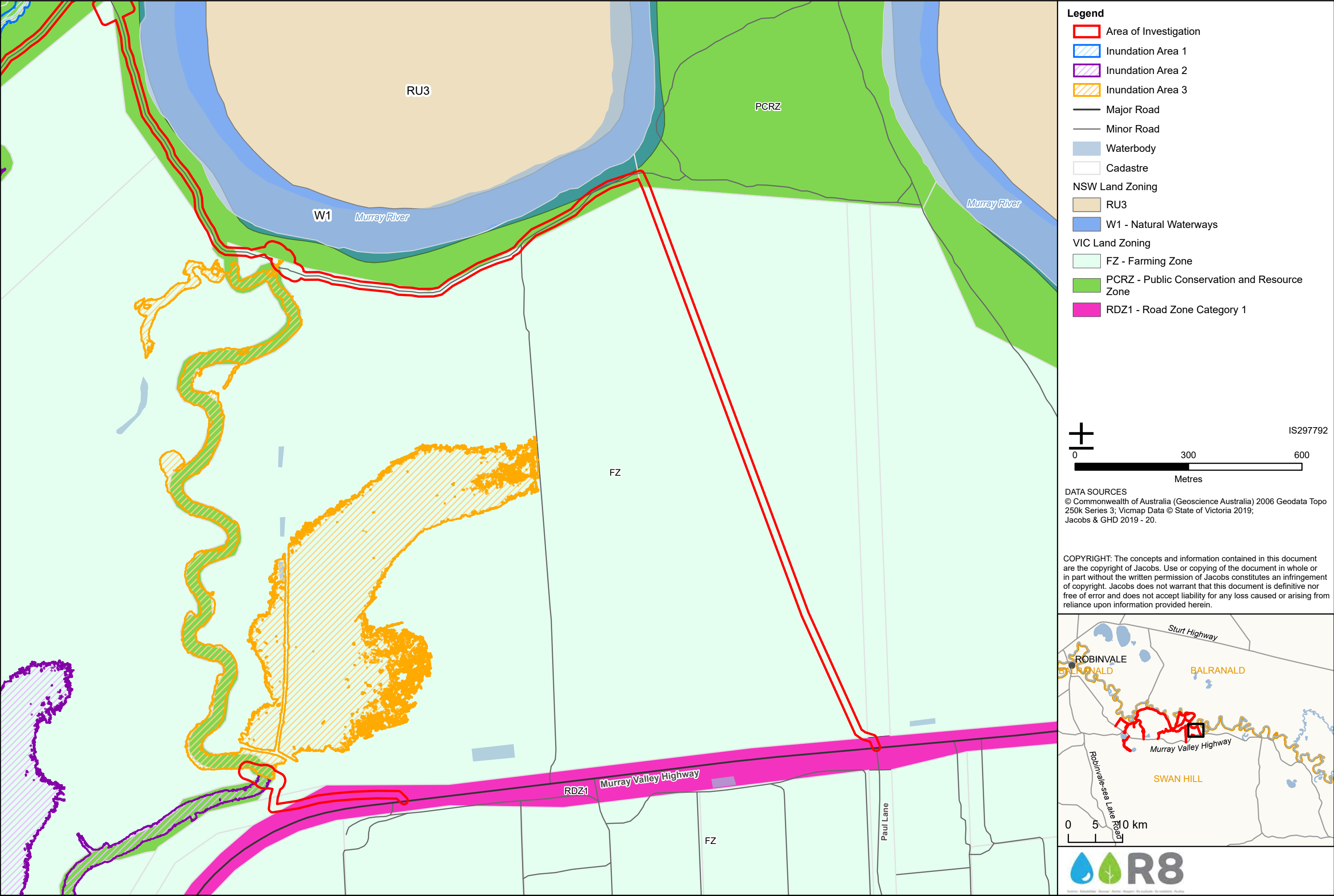




Figure 4.4 Belsar-Yungera Floodplain Restoration Project - Planning Zones Map, Area 4

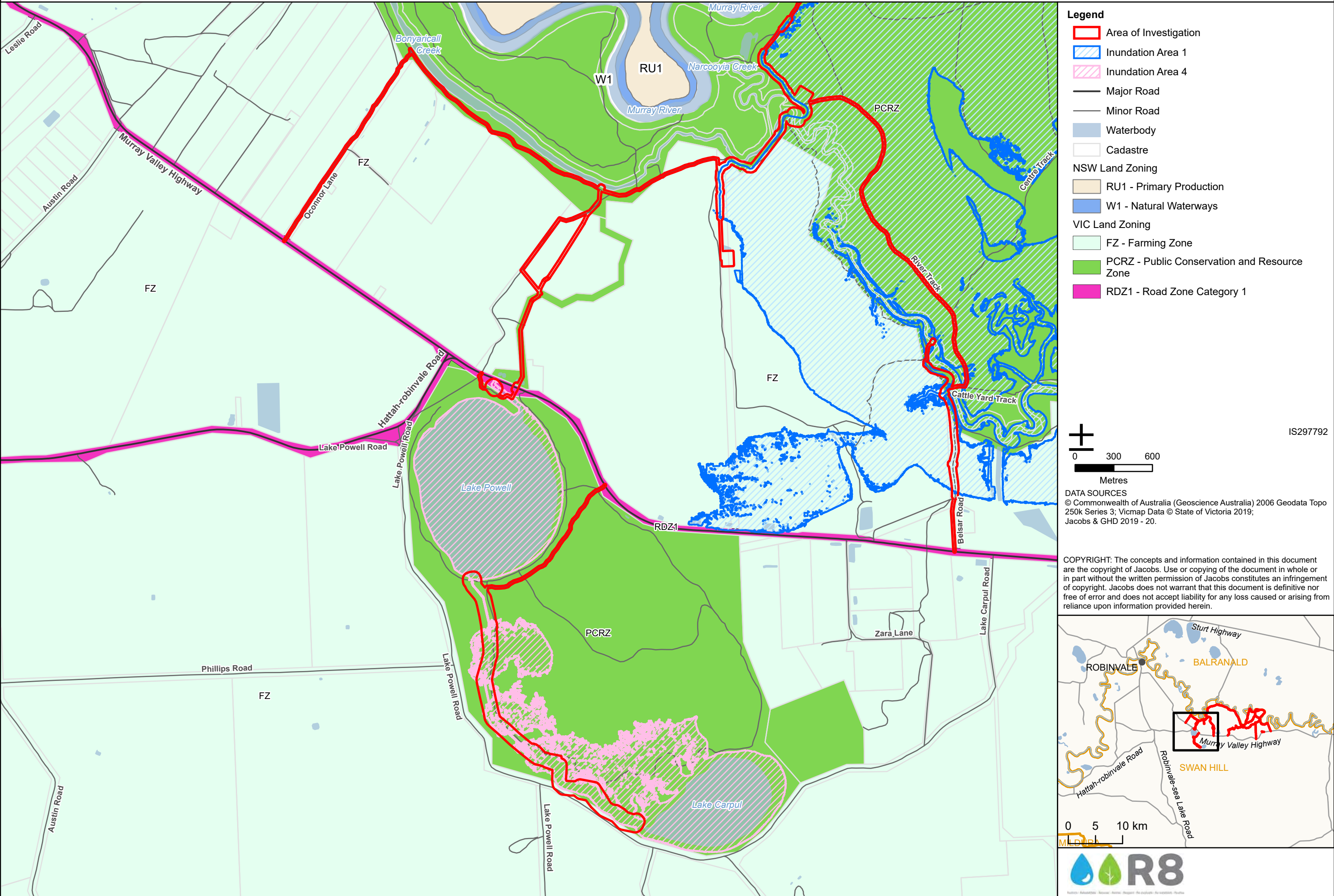




Figure 4.5 Belsar-Yungera Floodplain Restoration Project - Planning Overlays Maps, Area 1

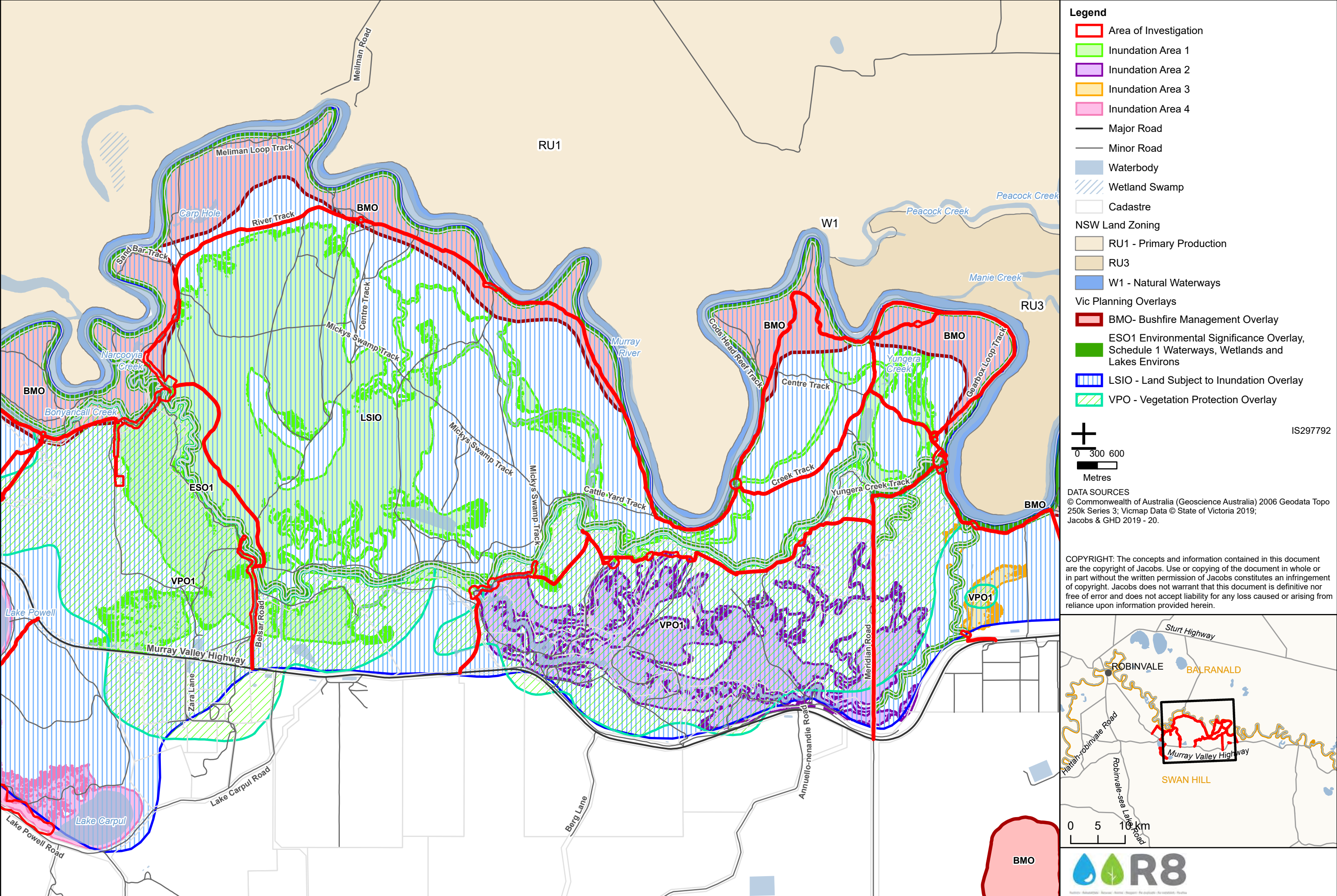




Figure 4.6 Belsar-Yungera Floodplain Restoration Project - Planning Overlays Maps, Area 2

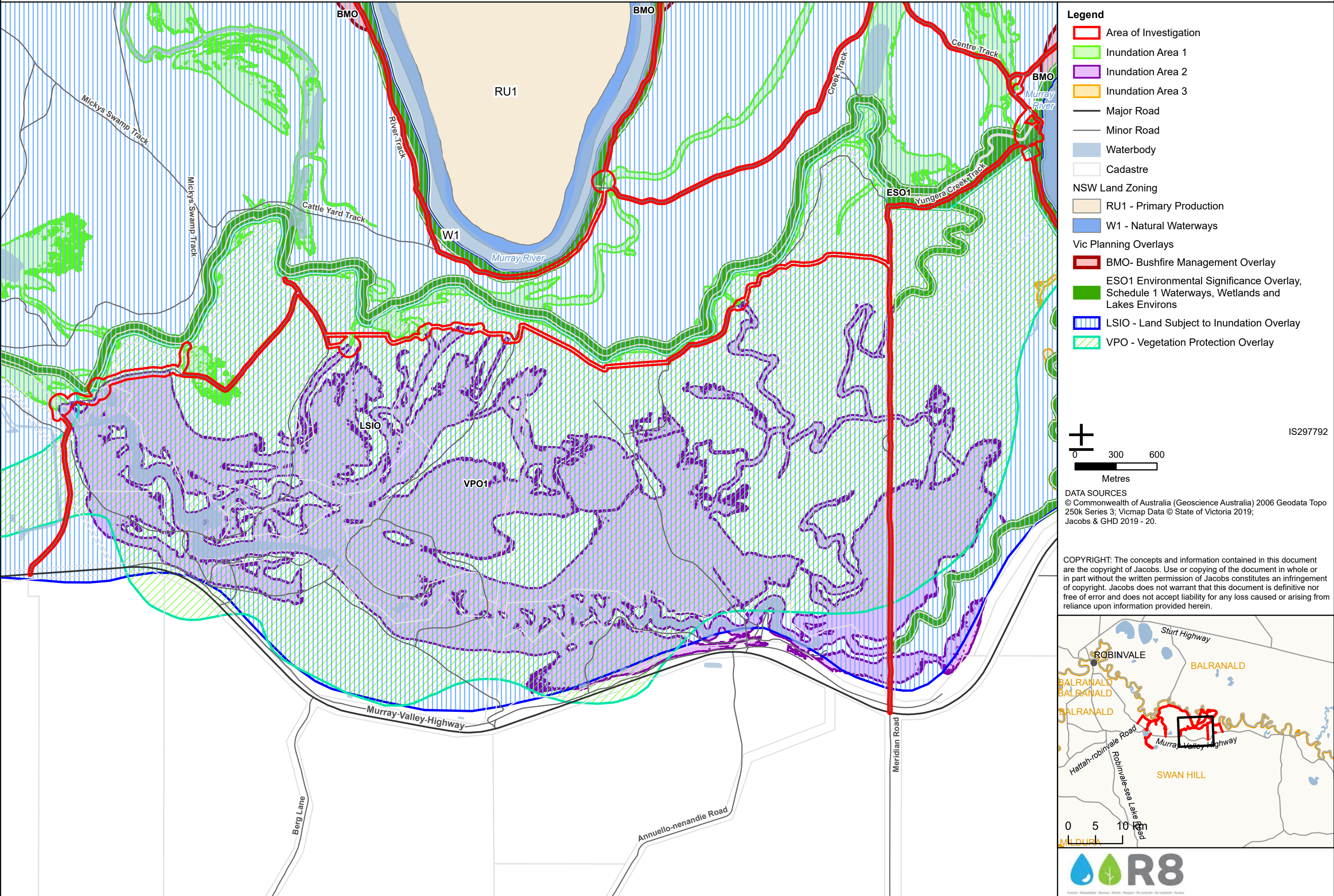




Figure 4.7 Belsar-Yungera Floodplain Restoration Project - Planning Overlays Maps, Area 3

