



Victorian Murray Floodplain Restoration Project

Desktop Land Use Planning Assessment - Burra Creek Floodplain Restoration Project

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Lower Murray Urban and Rural Water Corporation



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Document history and status

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Acronyms and abbreviations

Acronym / Abbreviation	Definition
AHIP	Aboriginal Heritage Impact Permit under the NSW <i>National Parks and Wildlife Act 1974</i>
BMO	Bushfire Management Overlay
CHMP	Cultural Heritage Management Plan
CLRA	Victorian <i>Crown Land (Reserves) Act 1978</i>
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)
EES	Environment Effects Statement prepared under the Victorian <i>Environment Effects Act 1978</i> .
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPL	Environment Protection Licence (EPL) under the NSW <i>Protection of the Environment Operations Act 1997</i>
ESO	Environmental Significance Overlay
FFG Act	Victorian <i>Flora and Fauna Guarantee Act 1988</i>
FZ	Farming Zone
GMID	Goulburn-Murray Irrigation District
GMW	Goulburn Murray Rural Water Corporation
ha	hectare/s
HO	Heritage Overlay
ILUA	Indigenous Land Use Agreement under the Commonwealth <i>Native Title Act 1993</i> .
km	kilometre/s
LEP	Local Environmental Plan
LMW	Lower Murray Urban and Rural Water Corporation
LPPF	Local Planning Policy Framework
LSIO	Land Subject to Inundation Overlay
m	metre/s
mm	millimetre/s
MNES	Matters of national environmental significance as defined under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
MPS	Municipal Planning Strategy
NNTT	National Native Title Tribunal
NSW	New South Wales

Acronym / Abbreviation	Definition
NSW DPI	NSW Department of Primary Industries
NSW DPIE	NSW Department of Planning, Industry and Environment
NSW NRAR	NSW Natural Resources Access Regulator
NSW OEH	NSW Office of Environment and Heritage
SEPP (NSW)	State environmental planning policies under the NSW <i>Environmental Planning and Assessment Act 1979</i>
PCRZ	Public Conservation and Resource Zone
planning scheme	Swan Hill Planning Scheme
PPF	Planning Policy Framework
project	Burra Creek Floodplain Restoration Project
RDZ1	Road Zone, Category 1
SEPPs	State Environment Protection Policies under the Victorian <i>Environment Protection Act 1970</i> .
TIA	Torrumbarry Irrigation Area
VCAT	Victorian Civil and Administrative Tribunal
VEA	Visitor Experience Area
VHI	Victorian Heritage Inventory
VHR	Victorian Heritage Register
VMFRP	Victorian Murray Floodplain Restoration Project
VPO	Vegetation Protection Overlay
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 approvals authorities.

The sole purpose of this report and the associated services performed by R8 is to complete a desktop review of the planning and environmental controls associated with the proposed works for the Burra Creek Floodplain Restoration Project for VMFRP in accordance with the scope of services agreed between R8 and VMFRP. 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*.

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 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 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 Burra Creek 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.

1.1 Project description

The project aims to restore a more natural inundation regime and improve ecological condition across approximately 330 ha of high ecological value Murray River floodplain at Burra North and a further 73 ha of creek habitats at Burra South, through the construction of new infrastructure, the modification of existing infrastructure and removal of some existing barriers to flow within Burra Creek. The project is designed to enable managed inundation up to a design water level of 58.7 mAHD at Burra North and up to the top of bank of Burra Creek at Burra South using water from both natural flood events and pumping from the Murray River.

Specifically, the project involves the following main components:

- Regulator B1 – A large regulator will be installed in Burra Creek at the northern / downstream end of the Burra North managed inundation area, and is designed to enable inflows (backflow) from the Murray River into the creek, the retention of water in the managed inundation area and the return of managed floodwaters to the Murray River on completion of a managed event.
- Regulator B2 – A small regulator will be installed in Burra Creek at the southern / upstream end of the Burra North managed inundation area, and is designed to enable the retention of water in Burra North and to prevent flows into private land at Burra South during a managed event.
- Regulator B4 – A small regulator will be installed within an existing containment bank in Burra Creek at the southern / upstream end of the creek near its junction with the Murray River near Tooleybuc, and is designed to allow flow into Burra Creek for supply of water during a natural event and to enable pumping through the regulator when required.
- Drop structure – A drop structure will be installed at the northern / downstream confluence of Burra Creek and the Murray River, to control erosion during managed releases from Burra Creek to the river, including some modification of the western bank of the Murray River and placement of 0.3 m thick reno mattress down the river bank to approximately 50 mAHD.
- Containment banks – Approximately 2.48 km of containment bank (four sections, Section A, B, C and D) will be constructed by raising existing access tracks at Burra North to a constant level of 59.12 mAHD to facilitate a managed water level of 58.7 mAHD with 300 mm freeboard and 120 mm wearing course. Proposed containment banks will supplement the existing river levee to retain water at the design water level.
- Spillways – Four spillways (approx. 400 m total combined length) at an upstream level of 58.8 mAHD will be incorporated into the containment banks to enable controlled release of larger flows prior to overtopping of the containment banks.
- Temporary pump hardstands – A 6 m x 6 m hardstand area will be constructed at Regulator B4 to support temporary pump infrastructure, and an existing private pump station site at Spillway 4 will be modified to make it suitable for temporary pumping by installing a 6 m x 6 m hardstand and rock-lining in the existing

pump discharge pool for erosion control. 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.

- Blockage removal – Four existing blockages (Banks 1, 2, 3 and 4) within Burra Creek at Burra North will be removed and one existing block bank (Bank 5) within Burra Creek at Burra North will be modified. Removal of blockages is proposed where there is considered to be no adverse impact on existing water licence holders, while modification rather than removal of Bank 5 is proposed to enable an existing water licence holder to continue to pump suction water from pooled water in the creek.

Access tracks will be reinstated on top of the proposed containment banks and surfaced with gravel, with passing bays at necessary locations. Access track dimensions on the containment banks will be consistent with Parks Victoria access track design and maintenance guidelines, with the concept design assuming a total carriageway width of 5 m, including shoulders (from Parks Victoria Class 5D Access Track/Road Design Standard).

Access during construction and operation of the project will use existing access tracks, which will require some maintenance to allow for construction and operational vehicles. Maintenance works will involve grading and applying additional road base to the track surface.

Temporary construction work sites will include laydown areas at Regulator B1 (approx. 50 m north east of the regulator work site), Regulator B2 (two alternative locations: approx. 15 m north west of the regulator work site on public land and 40 m south east of the regulator work site on private land) and Bank 5 (approx. 50 m west of the work site).

This report has been prepared based on the Issue for Review (IFR) Design dated March 2020.

1.2 Project location

The project is located on the western side of the Murray River approximately 25 km north of the township of Nyah, 50 km north west of Swan Hill and 60 km south east of Robinvale in north west Victoria (see Figure 1.1). The project is located along Burra Creek and its associated floodplain. Burra Creek is a 54 km long anabranch of the Murray River that diverges from the River near Piangil, Victoria (opposite the township of Tooleybuc, NSW) and re-joins the Murray River approximately 10 km upstream of its junction with the Wakool River. The area enclosed between Burra Creek and the Murray River is known as Macredie Island. The northern part of Macredie Island is known as Burra Forest.

The Burra Creek floodplain is divided into two areas by the Piambie (formerly Timbercorp) Irrigation Channel, these being referred to throughout this report as:

- Burra North – floodplain north of Piambie Channel through to the northern / downstream end of Burra Creek
- Burra South – floodplain south of Piambie Channel through to the southern / upstream end of Burra Creek.

The majority of proposed project infrastructure and the majority of the proposed inundation area (approx. 330 ha) are located in the area referred to as Burra North. A minor component of the proposed inundation area (approx. 73 ha) associated with the Burra Creek channel and one of the proposed regulating structures (Regulator B4) are located in the area referred to as Burra South.

The project is located almost entirely in the State of Victoria, within the Rural City of Swan Hill local government area. A small portion of the proposed works associated with the drop structure, extends down the western bank of the Murray River into NSW and the Murray River Council local government area.

The project is located entirely in the Mallee CMA region and the Murray Fans bioregion.

1.3 Area of investigation, construction footprint and development 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 (e.g. regulators, drop structures, pump hardstands, containment banks, spillways) will occupy based on the IFR design, along with proposed construction laydown areas. No construction working buffer or access tracks are included in the development footprint.
- **Construction footprint** - this includes the footprint of the project infrastructure as well as the land required to construct the infrastructure, including access tracks. The construction footprint typically includes a 10 m construction buffer around the development footprint of proposed structures (regulators, drop structure, pump hardstands), a 3 m construction buffer around the development footprint of proposed containment banks, laydown areas and minor work sites (blockage bank removals/modifications), and a typical access track width of approximately 5 m.
- **Area of investigation** - this includes the development footprint, as well as a substantial buffer around the development footprint. The area of investigation typically includes a 20 m buffer around the development footprint of proposed infrastructure (e.g. regulators, drop structures, pump hardstands, containment banks), a 15 m buffer around the development footprint of minor work sites (e.g. blockage bank removals/modifications), a 10 m buffer around the development footprint of laydown areas and a 20 m wide corridor along access tracks proposed to be used for construction and / or operation of the project (10m either side of centreline for existing tracks).
- **Inundation area** - area of land subject to flooding during managed events, up to a specific design water level.

The comparative location of these areas is illustrated in Figure 1.2.

1.4 Purpose of this report

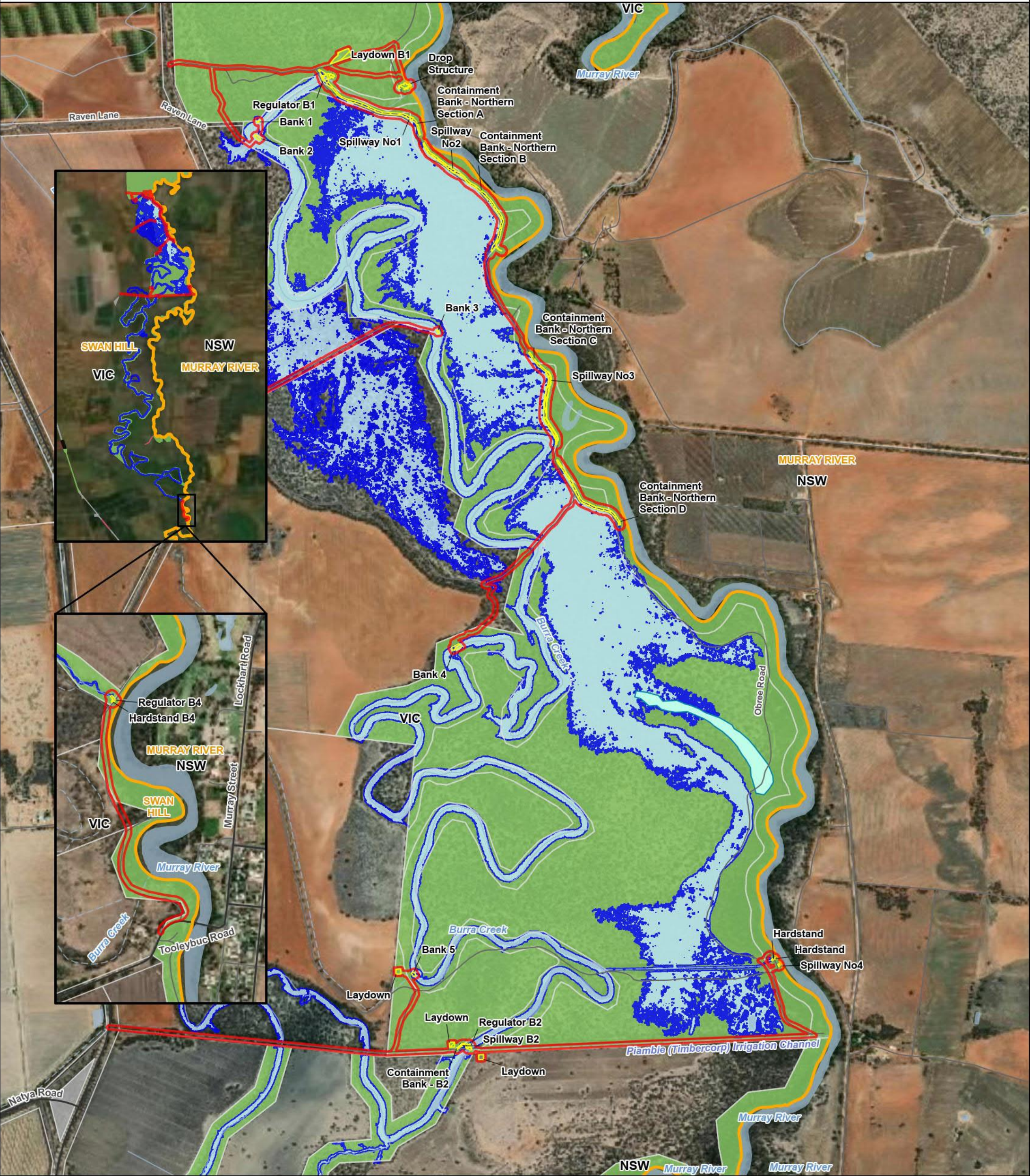
This report identifies Victorian and NSW land use and planning attributes associated with the area of investigation and surrounds to inform an assessment of potential effects of the proposed works.

1.5 Limitations

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

- No site visit has been undertaken.
- No discussions with state and local government planning departments have been undertaken.
- No review of land use planning applications or recently issued land use and development planning permits has been undertaken.
- 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 *Flora and Fauna Guarantee Act 1988* and Victorian *Environment Protection Act 1970* are due to come into effect in June and July 2020 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).

Figure 1.1 Burra Creek Floodplain Restoration Project – Project Location



- Legend**
- Area of Investigation
 - Development footprint
 - Inundation Area
 - Major Road
 - Minor Road
 - Channel / Drain
 - Watercourse Stream
 - Waterbody
 - Cadastre
 - Local Government Areas
 - Public Land Management
 - NATURAL FEATURES RESERVE
 - UNCATEGORISED PUBLIC LAND
 - Victorian Wetland Inventory (Current)



IS297752

Name: GDA 1994 MGA Zone 55

0 400 800 Metres

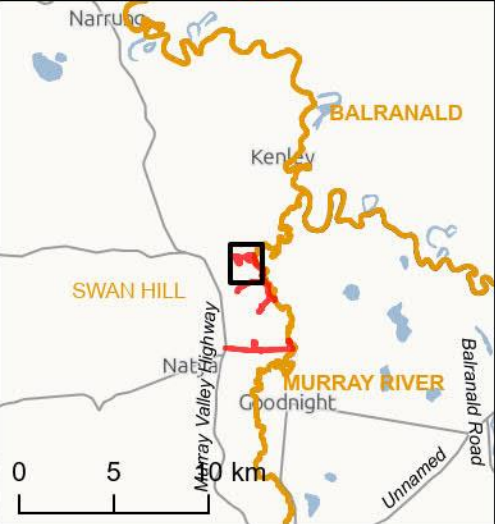
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Figure 1.2 Burra Creek Floodplain Restoration Project – Project Infrastructure Overview, 1 of 8



- Legend**
- Area of Investigation
 - Development footprint
 - Construction footprint
 - Minor Road
 - Watercourse Stream
 - Waterbody
 - Cadastre
 - Parcels of Interest
 - State Border



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Name: GDA 1994 MGA Zone 55

0 100 200
Metres

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Figure 1.2 Burra Creek Floodplain Restoration Project – Project Infrastructure Overview, 2 of 8

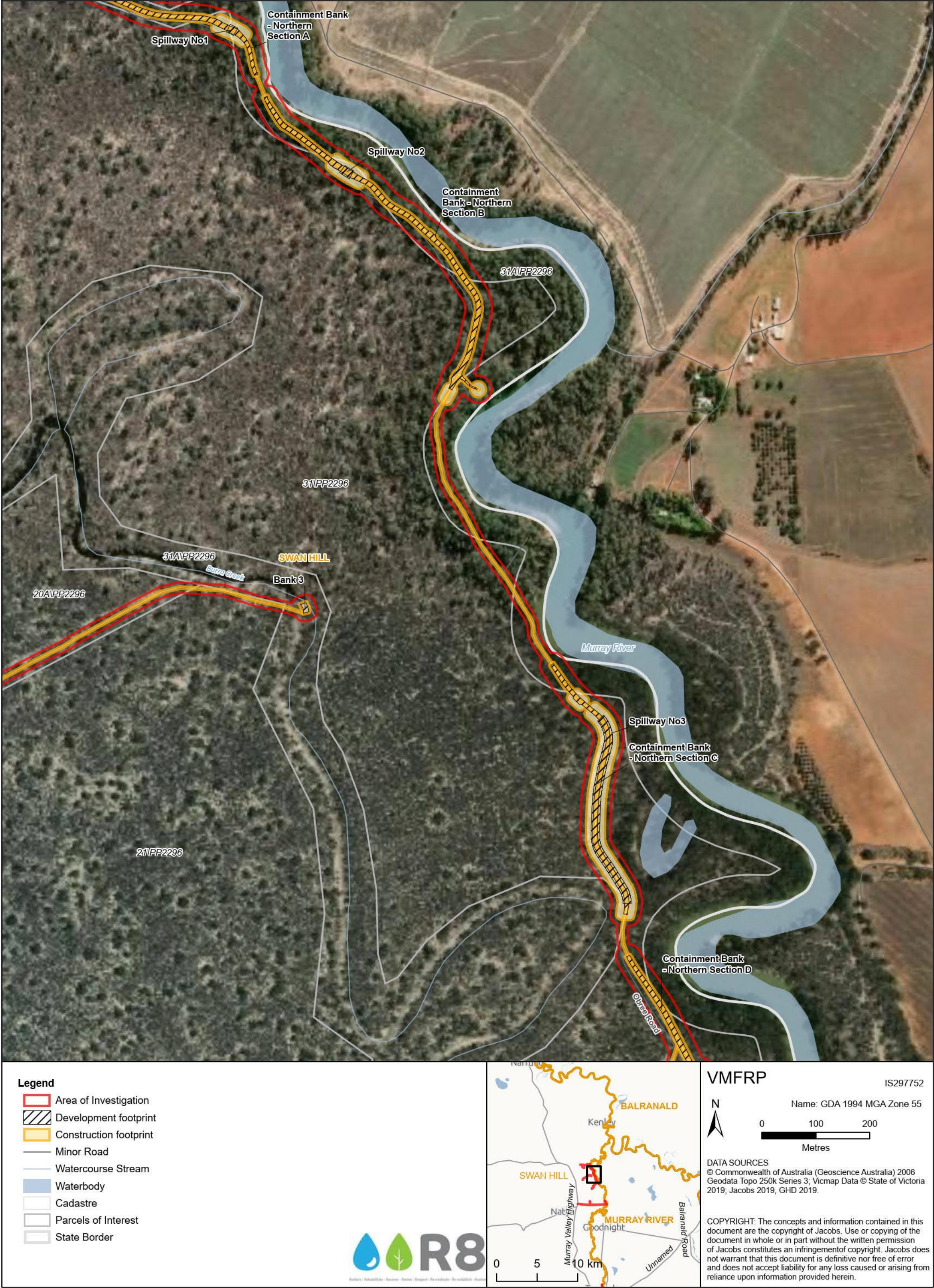
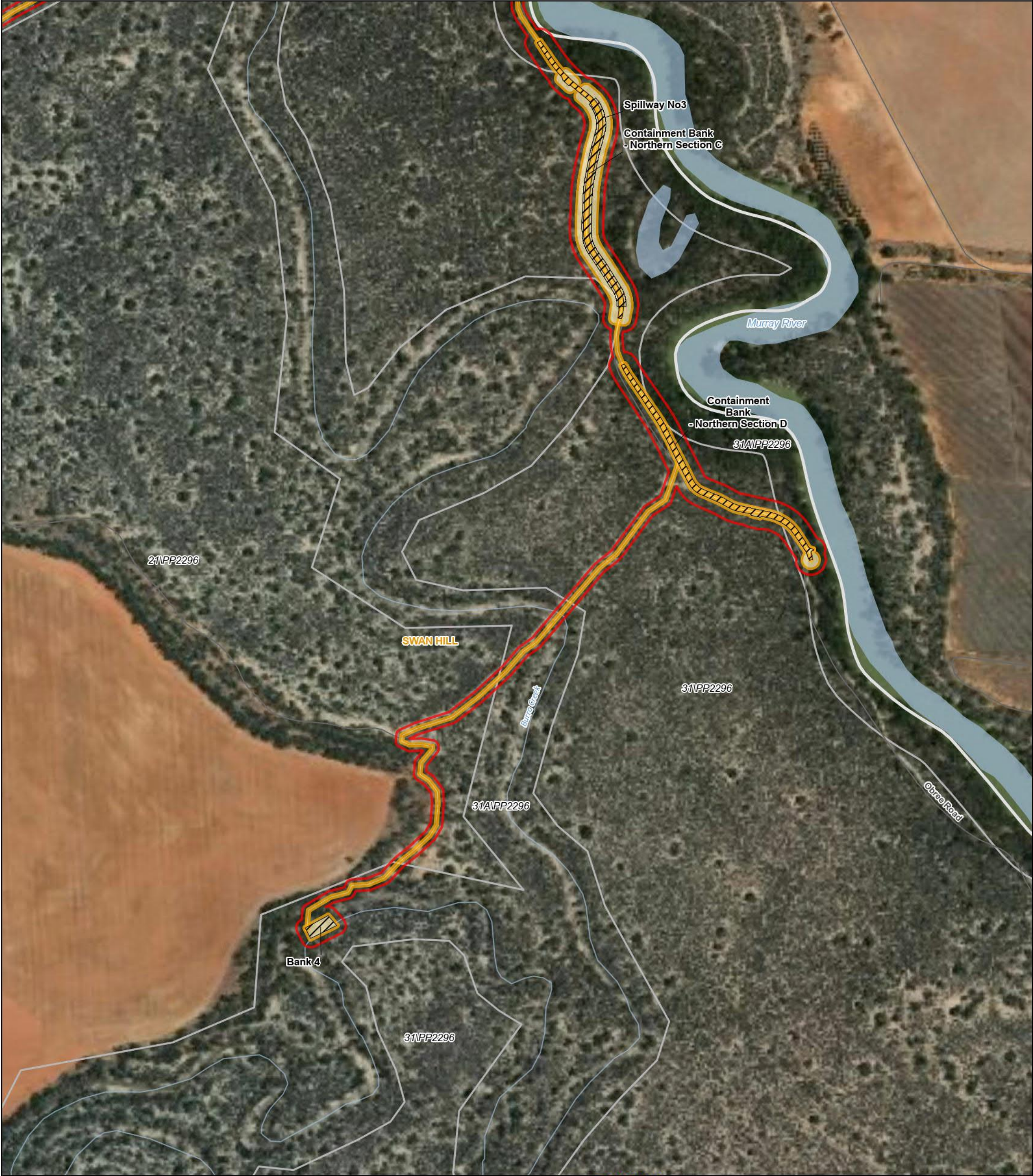
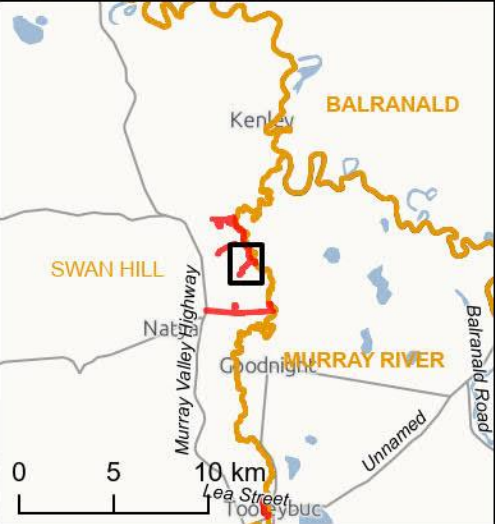


Figure 1.2 Burra Creek Floodplain Restoration Project – Project Infrastructure Overview, 3 of 8



- Legend**
- Area of Investigation
 - Development footprint
 - Construction footprint
 - Minor Road
 - Watercourse Stream
 - Waterbody
 - Cadastre
 - Parcels of Interest
 - State Border



VMFRP

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Name: GDA 1994 MGA Zone 55

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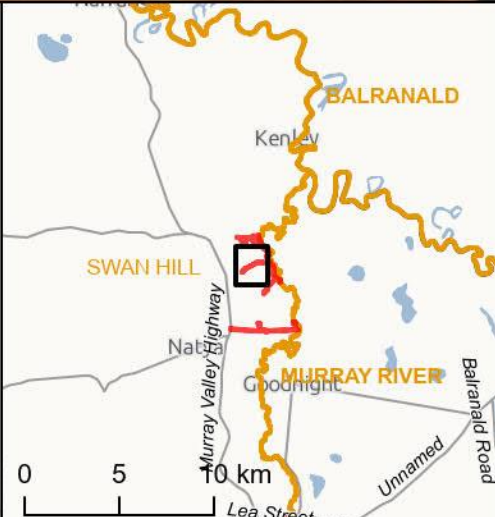
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Figure 1.2 Burra Creek Floodplain Restoration Project – Project Infrastructure Overview, 4 of 8



- Legend**
- Area of Investigation
 - Development footprint
 - Construction footprint
 - Minor Road
 - Channel / Drain
 - Watercourse Stream
 - Waterbody
 - Cadastre
 - Parcels of Interest
 - State Border



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Name: GDA 1994 MGA Zone 55

0 100 200 Metres

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Figure 1.2 Burra Creek Floodplain Restoration Project – Project Infrastructure Overview, 5 of 8

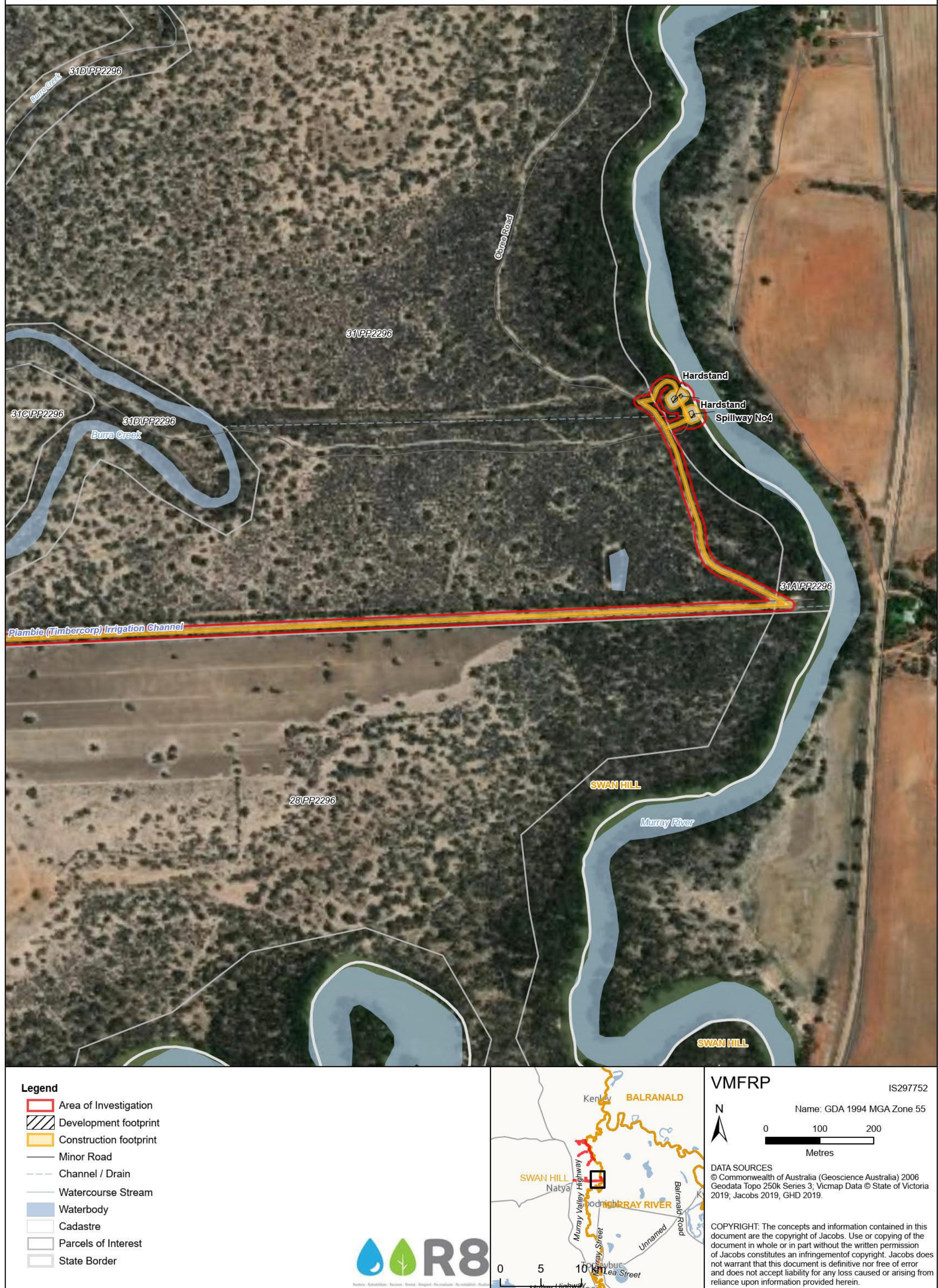
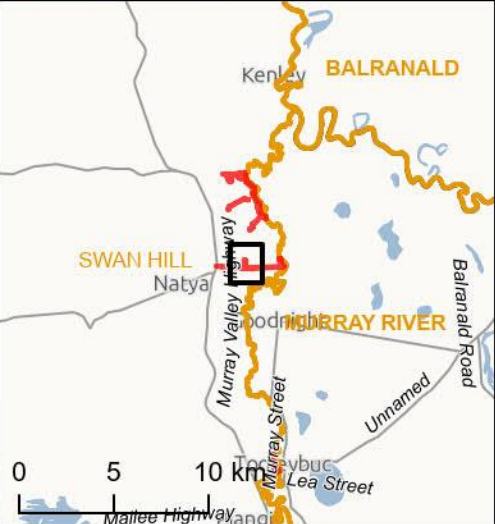


Figure 1.2 Burra Creek Floodplain Restoration Project – Project Infrastructure Overview, 6 of 8



- Legend**
- Area of Investigation
 - Development footprint
 - Construction footprint
 - Minor Road
 - Channel / Drain
 - Watercourse Stream
 - Waterbody
 - Cadastre
 - Parcels of Interest
 - State Border



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Name: GDA 1994 MGA Zone 55

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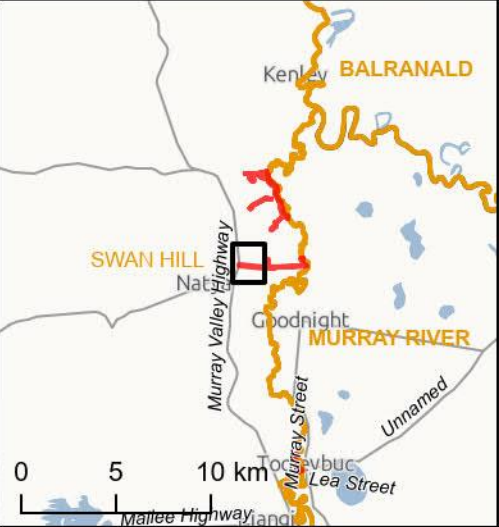
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Figure 1.2 Burra Creek Floodplain Restoration Project – Project Infrastructure Overview, 7 of 8



- Legend**
- Area of Investigation
 - Construction footprint
 - Major Road
 - Minor Road
 - Channel / Drain
 - Watercourse Stream
 - Waterbody
 - Cadastre
 - Parcels of Interest
 - State Border



VMFRP IS297752

Name: GDA 1994 MGA Zone 55

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Metres

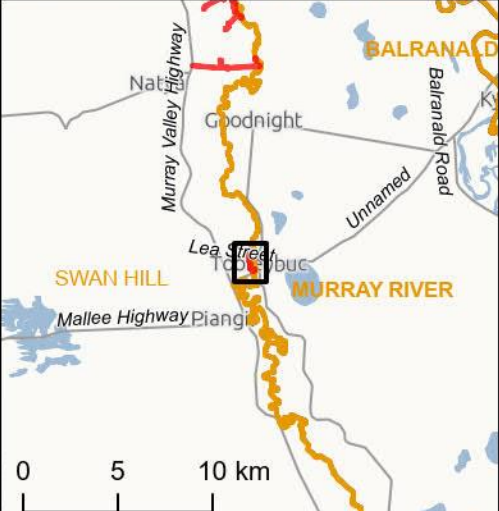
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Figure 1.2 Burra Creek Floodplain Restoration Project – Project Infrastructure Overview, 8 of 8



- Legend**
- Area of Investigation
 - Development footprint
 - Construction footprint
 - Major Road
 - Minor Road
 - Channel / Drain
 - Watercourse Stream
 - Waterbody
 - Cadastre
 - Parcels of Interest
 - State Border



VMFRP IS297752

Name: GDA 1994 MGA Zone 55

0 100 200 Metres

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2. Key legislation

2.1 Commonwealth legislation

Table 2.1 provides an overview of key Commonwealth legislation relevant to this land use planning assessment, including identifying likely approvals for the project.

Table 2.1: Summary of relevant Commonwealth legislation

Description	Relevance to this project
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	
<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 Agriculture, Water and the Environment (DAWE) for a decision on whether the project is a 'controlled action' requiring assessment and approval under the EPBC Act.</p>	<p>Based on available information, the proposed works have been assessed as potentially having an impact on the following MNES:</p> <ul style="list-style-type: none"> Listed threatened species Listed migratory species. <p>Based on the Flora and Fauna Assessment – Burra Creek Floodplain Restoration Project (R8, 2020), the project is not considered likely to have a significant impact on these MNES.</p> <p>Nevertheless, it is understood that a conservative approach to referrals is being taken for the VMFRP and a referral under the EPBC Act is being prepared for the Burra Creek Floodplain Restoration Project.</p>
<i>Native Title Act 1993</i>	
<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 <i>Traditional Owner Settlement Act 2010</i> 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 Crown land in both Victoria and NSW.</p> <p>According to the National Native Title Tribunal (NNTT, 2020):</p> <ul style="list-style-type: none"> No previous native title claims have been determined and there are no current applications under the <i>Native Title Act 1993</i> in relation to land within or adjacent to the area of investigation. One Indigenous Land Use Agreement (ILUA VI2004/010) applies to parts of the area of investigation and proposed inundation area (Figure 3.2). This ILUA does not apply to the development footprint of any proposed project infrastructure except for Construction Laydown Area (Regulator B2 SE). The ILUA is registered with the traditional owners of the Wamba, Barapa and Wadi Peoples in relation to exploration. <p>The project will require further assessment to determine requirements to comply with the <i>Native Title Act 1993</i>.</p>

Description	Relevance to this project
Aboriginal and Torres Strait Islander Heritage Protection Act 1984	
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.
Water Act 2007	
<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 relevant to this land use planning assessment, including identifying likely approvals for the project.

Table 2.2: Summary of relevant Victorian legislation

Description	Relevance to this project
Environment Effects Act 1978	
<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 environmental effects under the <i>Environment Effects Act 1978</i>' (DSE, 2006) (Ministerial Guidelines).</p>	<p>The project is being referred under the <i>Environment Effects Act 1978</i>. Based on the information available, it is considered that the project may trigger the following referral criteria in the Ministerial Guidelines:</p> <ul style="list-style-type: none"> ▪ Potential clearing of 10 ha or more of native vegetation ▪ Potential extensive or major effects on the health of biodiversity of aquatic, estuarine or marine ecosystems over the long term

Description	Relevance to this project
<p>The Minister will make one of three decisions in relation to a referral under the Act:</p> <ul style="list-style-type: none"> ▪ EES is required ▪ EES is not required ▪ EES is not required subject to conditions. <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>	<ul style="list-style-type: none"> ▪ Potential extensive or major effects on landscape values of regional importance, especially where recognised by a planning scheme overlay or within or adjoining land reserved under the <i>National Parks Act 1975</i> ▪ Potential extensive or major effects on Aboriginal cultural heritage.
Planning and Environment Act 1987	
<p>The <i>Planning and Environment Act 1987</i> (P&E Act) regulates the use and development of land in Victoria. The P&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>Within Victorian, the area of investigation is on land that is subject to the provisions of the Swan Hill Planning Scheme, which is prepared and administered under the <i>Planning and Environment Act 1987</i>.</p> <p>Use and development of land for the project will require approval under the Swan Hill Planning Scheme and the <i>Planning and Environment Act 1987</i>.</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"> ▪ Amendment of the planning scheme under Part 3 ▪ Application for a planning permit under Part 4. <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>
Crown Land (Reserves) Act 1978	
<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>The majority of the area of investigation and proposed inundation area are located on land within natural features reserves that are reserved under the CLRA and managed by Parks Victoria. Consent will be required from Parks Victoria under section 17 of the CLRA to authorise the use and development of land for the project within the natural features reserve.</p> <p>Parts of the natural features reserve that contain the area of investigation and proposed inundation area, are subject to water frontage licences and other licences issued under the CLRA, which permit the licence-holder (typically an adjoining landholder) to</p>

Description	Relevance to this project
	undertake specific activities within the reserve without granting the licence-holder exclusive use rights. VMFRP will need to consult with potentially affected licence-holders to ensure their existing rights are not adversely affected by the project.
Parks Victoria Act 2018	
<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>The majority of the area of investigation and the proposed inundation area are located on Crown land comprising natural features reserve that is reserved and managed by Parks Victoria under the CLRA.</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 natural features reserves containing the project, including parts of the River Murray Reserve and proposed Murray River Park, which are managed under the River Red Gum Parks Management Plan (Parks Victoria, 2018).</p>
Aboriginal Heritage Act 2006	
<p>The <i>Aboriginal Heritage Act 2006</i> is the primary legislation dictating Aboriginal cultural heritage management in Victoria. The <i>Aboriginal Heritage 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"> Specify the circumstances in which a cultural heritage management plan (CHMP) is required for an activity or class of activity Prescribe standards for the preparation of a CHMP including the carrying out of assessments. <p>Regulation 6 of the Regulations prescribes that a CHMP is required for an activity if:</p> <ul style="list-style-type: none"> All or part of the activity area is defined as an area of cultural heritage sensitivity; and All or part of the activity is a high impact activity. <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 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 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>
Traditional Owner Settlement Act 2010	
<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</p>	<p>No Traditional Owner Settlement Agreements apply to the area of investigation.</p>

Description	Relevance to this project
to the <i>Native Title Act 1993</i> (Cth) and not to make any future native title claims.	
<p>Water Act 1989</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>Burra Creek is a designated waterway. 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 Burra Creek. A licence may also be required under section 51 of the Water Act to authorise the take and use of water for the project.</p>
<p>Flora and Fauna Guarantee Act 1988</p> <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>
<p>Road Management Act 2004</p> <p>The <i>Road Management Act 2004</i> (RM Act) establishes the statutory framework for management of the Victorian road network by Department of Transport, Regional Roads Victoria and councils to facilitate the coordination of the various uses of road reserves 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, Department of Transport 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 will be required from the relevant responsible road authority under the RM Act for any development and use of land within a road reserve, including occupation and / or construction works in, on or under a road. This would apply to any access track maintenance works within a road reserve and potentially the managed inundation of land within road reserve.</p> <p>Regional Roads Victoria is the responsible road authority for the Murray Valley Highway. Parks Victoria is the responsible road authority for public roads within the River Murray Reserve. Rural City of Swan Hill is the responsible authority for all remaining roads directly affected by the project.</p>
<p>Heritage Act 2017</p> <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</p>	<p>No heritage places currently listed on the VHR or VHI are located within the area of investigation or proposed inundation area (R8, 2020b) and as such,</p>

Description	Relevance to this project
<p>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"> ▪ Victorian Heritage Register (VHR) ▪ Victorian Heritage Inventory (VHI). <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, 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 old¹; 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>no requirements for a permit or consent under the Heritage Act have been determined at this stage.</p> <p>However, consent may be required under the Heritage Act if any unregistered archaeological sites are found within proposed work areas during the detailed historical heritage investigations or during construction, operation and decommissioning of the project.</p>
<p>Environment Protection Act 1970</p> <p>The <i>Environment Protection Act 1970</i> (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>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"> ▪ State Environment Protection Policy (Waters) ▪ State Environment Protection Policy (Prevention and Management of Contamination of Land) ▪ Noise from industry in regional Victoria: Recommended maximum noise levels from commerce, industry and trade premises in regional Victoria (NIRV; EPA publication 1411) ▪ State Environment Protection Policy (Ambient Air Quality) ▪ State Environment Protection Policy (Air Quality Management). <p>The <i>Environment Protection Act 2017</i> will fully come into effect on 1 July 2020 and will establish 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</i></p>

¹ 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 to this project
	<p><i>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 2017 Act.</p>
Catchment and Land Protection Act 1994	
<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>
Wildlife Act 1975	
<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>
Fisheries Act 1995	
<p>The <i>Fisheries Act 1995</i> (Fisheries Act) provides a legislative framework for the regulation, management and conservation of Victorian fisheries.</p> <p>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 Victorian planning and environmental 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 drop structure downstream of Regulator B1 and two temporary pump stations. The pumps would be located above the top of bank of the Murray River and so would be located in Victoria and the suction lines would be in the Murray River in NSW.

Table 2.3: Summary of relevant NSW legislation

Description	Relevance to this project
<i>Environmental Planning and Assessment Act 1979</i>	
<p>Development in NSW is assessed in accordance with the <i>Environmental Planning and Assessment Act 1979</i> (EP&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"> 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). Part 5 provides for control of 'activities' that do not require approval or development consent under Part 4. Part 5 Division 5.2 provides for control of State significant infrastructure. <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&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 Murray River 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 Wakool Local Environmental Plan.</p>
<i>Crown Lands Management Act 2016</i>	
<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, licence or other permit to allow the use of Crown land. NSW DPIE Crown Lands has advised that:</p> <ul style="list-style-type: none"> A short term licence will be required to construct the drop structure. A Crown Lands Licence will be required for the pump stations.
<i>Water Management Act 2000</i>	

Description	Relevance to this project
<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, 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><i>National Parks and Wildlife Act 1974</i></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 <i>Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW</i> 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><i>Aboriginal Land Rights Act 1983</i></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"> ▪ To provide land rights for Aboriginal persons in New South Wales ▪ To provide for representative Aboriginal Land Councils in New South Wales ▪ To vest land in those Councils ▪ 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 ▪ To provide for the provision of community benefit schemes by or on behalf of those Councils. 	<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
<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>	
Fisheries Management Act 1994	
<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>
Biodiversity Conservation Act 2016	
<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"> ▪ The listing of threatened species under Schedule 1 ▪ The listing of threatened ecological communities listed under Schedule 2 ▪ The preparation and implementation of Recovery Plans and Threat Abatement Plans ▪ Requirements or otherwise for the preparation of a Species Impact Statement. <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 (less than about 200 square metres) within NSW, 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>
Local Land Services Act 2013	
<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&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&A Act, clearing of native vegetation does not require authorisation under the <i>Local Land Services Act 2013</i>.</p>
Heritage Act 1977	
<p>The <i>Heritage Act 1977</i> 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</p>	<p>The proposed works within NSW are not located on land containing any known heritage items.</p>

Description	Relevance to this project
<p>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>Potential impacts on heritage items would be considered during the environmental assessment required under the EP&A Act.</p>
<i>Protection of the Environment Operations Act 1997</i>	
<p>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.</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

Floodplain areas, including proposed inundation areas, at Burra North are largely unmodified and comprise wetlands, forest and woodland known as Burra Forest. These areas are popular for bird watching and water related activities such as camping, fishing, barbequing and picnics (Sunraysia Environmental, 2017). Floodplain areas at Burra South are mainly developed for grazing, irrigated agriculture and dryland agriculture.

The majority of the proposed inundation area and area of investigation at Burra North, including the development footprint of all proposed infrastructure, is located within the River Murray Reserve. The River Murray Reserve is a natural features reserve managed by Parks Victoria under the *Crown Land (Reserves) Act 1978*. Burra North has been managed by Parks Victoria under the River Murray Reserve since the Land Conservation Council's Final Recommendations in 1989. Prior to this and since about 1929, it has been managed as State Forest (Sunraysia Environmental, 2017).

The majority of the proposed inundation area and area of investigation at Burra South, including the development footprint of all proposed infrastructure, is also contained within natural features reserve (partly River Murray Reserve) managed by Parks Victoria under the *Crown Land (Reserves) Act 1978*. Some sections of Burra Creek, including small areas of proposed inundation area, meander outside the natural features reserve onto adjacent private land. Private land adjoining Burra Creek at Burra South is primarily used for agriculture.

The River Murray Reserve at Burra North and the natural features reserve at Burra South are part of the proposed Murray River Park recommended by the Victorian Environmental Assessment Council (2008) to consolidate various areas of existing public land into a single park of more than 35,000 ha extending along the Murray River from Wodonga to Mildura. Land within the proposed Murray River Park is managed by Parks Victoria in accordance with the River Red Gum Parks Management Plan, July 2018 (Parks Victoria, 2018).

The River Red Gum Parks Management Plan (Parks Victoria, 2018) identifies almost all of the area of investigation at Burra North, except for some access tracks and Construction Laydown Area (Regulator B2 SE), as being located in the Burra-Piambie Visitor Experience Area (VEA). The Burra-Piambie VEA is a 30 km stretch of the Murray River east of Piambie that encompasses the River Murray Reserve, and part of the proposed Murray River Park, including Major Mitchell Lagoon Historic Area. The VEA is easily accessible from the Murray Valley Highway, although 2WD drive access is limited to dry weather only. The VEA is rich with Aboriginal and European history, hosting the Wakool Junction and Major Mitchell Lagoons, offers secluded camping along the banks of the Murray River and associated nature-based activities, such as fishing, swimming, canoeing, kayaking, bushwalking, bird watching and hunting.

The proposed drop structure is located in the Gundagai Bend Camping Area (Kenley), which stretches north from the proposed drop structure along the Murray River frontage. Most of the containment banks and proposed works at the existing private pump site (Spillway 4) are located in the Burra Camping Area, which stretches along the Murray River frontage from the existing private pump site north to about Spillway 2. Both camping areas permit dispersed camping and are described as providing only very basic levels of service (Parks Victoria, 2018). The access track to proposed Regulator B4 passes via the Tooleybuc Bridge Day visitor Area (Parks Victoria, 2018).

No grazing licences currently affect reserved land within the area of investigation or proposed inundation area at Burra North or Burra South (DELWP, 2020). Sections of the River Murray Reserve at Burra North and almost all of the Burra Creek natural features reserve through Burra South are subject to water frontage licences that enable adjoining landowners to access Burra Creek. Sections of Burra Creek at Burra North and Burra South are used for the storage of irrigation water, with blockages such as Bank 5 impounding creek flows to create a pump pool for extracting irrigation water supply.

In total, 35 blockages have been identified along the length of Burra Creek for purposes including capturing flood water; retaining water pumped for emergency red gum watering; providing vehicle and stock crossings; delivering irrigation supply water; containing irrigation drainage water; and providing crossings for water supply channels or pipes (Ecological Associates, 2007). These blockages and associated isolation of sections of the creek were determined to cause the main hydrological impact at Burra Creek (Ecological Associates, 2007).

The Piambie (former Timbercorp) Channel extends from the Murray River in the east, along the southern edge of Burra North to the Murray Valley Highway, which it passes under before continuing further west to supply an extensive area of irrigated farmland. The Piambie Channel runs parallel to and immediately south of the area of investigation associated with the access to the Bank 5, Regulator B2 and existing private pump station work sites. The Piambie Channel crosses Burra Creek and the proposed inundation area at three locations, including a siphon crossing adjacent to proposed Regulator B2 and two non-siphoned crossings further west between Regulator B2 and the Murray Valley Highway. A smaller private irrigation channel is located about 350 m north of Piambie Channel and extends from the Murray River at the private pump station site near proposed Spillway 4 west to Burra Creek.

Four apiary sites (or buffers) are identified within the Burra North inundation area and one apiary site (or buffer) is identified within the Burra South inundation area (refer to Figure 3.1). One apiary site is located within the area of investigation at Burra North (also within the construction footprint of a containment bank) while four apiary buffers overlap the area of investigation at Burra North.

3.1.2 Surrounding areas

Surrounding land uses in both Victoria and NSW, are primarily associated with farming, including grazing, irrigated agriculture and dryland agriculture. Although land in the vicinity of the area of investigation and proposed inundation area are used for irrigated agriculture, these areas are not located in a declared irrigation district. The nearest declared irrigation area is the Nyah-Torrumbarry Irrigation Area (TIA), which is located more than 10 km south of the Burra South inundation area. The TIA is part of the largest irrigation system in Victoria – the Goulburn-Murray Irrigation District (GMID). The GMID accounts for more than 70% of water storages and some 90% of water used in irrigation across the state. Approximately 2,000 landowners rely on this system for farming within the area.

Conservation and nature-based recreational land uses are also common in the surrounding area including along the Murray River and associated reserves. In addition, a series of smaller bushland reserves are located further to the west (Bower Tank, Natya, Coonimur, Possum Flat, Piangil Yungera, Piambie Bushland Reserves), mostly on the western side of the Murray Valley Highway.

Approximately two dwellings are located on farming land between Burra Creek and the Murray Valley Highway at Burra North. A small number of dwellings are also located on farming land between the Murray River and the Murray Valley Highway at Burra South. A small number of farm dwellings are also present along the NSW side of the Murray River adjacent to Burra North and Burra South, with denser settlement associated with the township of Tooleybuc on the NSW side of the river near proposed Regulator B4.

3.2 Land tenure

A summary of land parcels intersected by the area of investigation is provided in Table 3.1. A summary of land parcels intersected by the proposed inundation area is provided in Table 3.2.

The location of land parcels intersected by the project is shown in Figure 3.2.

Table 3.1: Land parcels intersected by the area of investigation

SPI	Tenure	Description	Owner/land manager	Project component ²
Victoria				
55\PP3390	Crown land, Natural Features Reserve (River Murray Reserve)	Kenley Road, Kenley VIC 3597 (Crown Allotment 55, Parish of Piambie) <u>Encumbrances:</u> Reservation (Temporary) for Reserved Forest MI179676E	Parks Victoria	Regulator B1 Construction Laydown Area (Regulator B1) Containment Bank Drop Structure (not development footprint) Block Bank 1 Access tracks
56\PP3390	Crown land, Natural Features Reserve (River Murray Reserve)	Hector Lane, Kenley VIC 3597 (Crown Allotment 56, Parish of Piambie) <u>Encumbrances:</u> Reservation (Permanent) for Public Purposes MI179682K	Parks Victoria	Regulator B1 Containment Bank Drop Structure Block Bank 1 Access tracks
31\PP2296	Crown land, Natural Features Reserve (River Murray Reserve)	Angle Road, Natya VIC 3597 (Crown Allotment 31, Parish of Burra) <u>Encumbrances:</u> Reservation (Temporary) for Reserved Forest MI061516L	Parks Victoria	Containment Bank Spillways 1, 2 and 3 Access tracks
31A\PP2296	Crown land, Natural Features Reserve (River Murray Reserve)	Obree Road, Natya VIC 3597 (Crown Allotment 31A, Parish of Burra) <u>Encumbrances:</u> Reservation (Permanent) for Public Purposes MI061513S	Parks Victoria	Regulator B1 (not development footprint) Containment Bank Spillways 1, 2 (not development footprint), 3 and 4

² Where a project component is included in this column, it can be taken that the land parcel is intersected by the area of investigation, construction footprint and development footprint. Exceptions are noted where a project component is only intersected by the area of investigation (not construction footprint) or only the area of investigation and construction footprint (not development footprint).

SPI	Tenure	Description	Owner/land manager	Project component ²
		Water Frontage Licence MI310944D		Block Banks 1, 2, 3 and 4 Temporary pump hardstand and rock-lined pump pool Access tracks
31C\PP2296	Crown land, Natural Features Reserve (River Murray Reserve)	Obree Road, Natya VIC 3597 (Crown Allotment 31C, Parish of Burra) <u>Encumbrances:</u> Reservation (Temporary) for Reserved Forest MI061504T	Parks Victoria	Regulator B2 Construction Laydown Area (Regulator B2 NW) Construction Laydown Area (Block Bank 5) Access tracks
31D\PP2296	Crown land, Natural Features Reserve (River Murray Reserve)	Obree Road, Natya VIC 3597 (Crown Allotment 31D, Parish of Burra) <u>Encumbrances:</u> Reservation (Permanent) for Public Purposes MI061510Y	Parks Victoria	Regulator B2 Block Bank 5 Access tracks
20A\PP2296	Freehold	Angle Road, Natya VIC 3597 (Crown Allotment 20A, Parish of Burra) <u>Encumbrances:</u> Depth Limitation: 15.24m <u>Benefits:</u> Waterway Notation Abuts Crown land subject to Crown licence to use. Benefitted by Water Frontage Licence MI310944D.	Private	Access tracks
20B\PP2296	Freehold	270 Angle Road, Natya VIC 3597 (Crown Allotment 20B, Parish of Burra) <u>Encumbrances:</u> Depth Limitation: 15.24m	Private	Access tracks

SPI	Tenure	Description	Owner/land manager	Project component ²
		<p>Crown grant subject to condition requiring protection of indigenous trees on not less than 3% of total land area.</p> <p><u>Benefits:</u></p> <p>Waterway Notation Abuts Crown land subject to Crown licence to use.</p>		
21\PP2296	Freehold	<p>118A Angle Road, Natya VIC 3597 (Crown Allotment 21, Parish of Burra)</p> <p><u>Encumbrances:</u></p> <p>Depth Limitation: 15.24m</p> <p>Crown grant subject to condition requiring protection of indigenous trees on not less than 3% of total land area.</p> <p><u>Benefits:</u></p> <p>Waterway Notation Abuts Crown land subject to Crown licence to use.</p>	Private	Access tracks
21A\PP2296	Freehold	<p>118A Angle Road, Natya VIC 3597 (Crown Allotment 21A, Parish of Burra)</p> <p><u>Encumbrances:</u></p> <p>Depth Limitation: Nil</p> <p>Easements E-1 and E-2 (purpose not specified on Plan).</p> <p><u>Benefits:</u></p> <p>Waterway Notation Abuts Crown land subject to Crown licence to use.</p>	Private	<p>Construction Laydown Area (Block Bank 5) (not Construction Footprint)</p> <p>Access tracks</p>
28\PP2296	Freehold	<p>5474 Murray Valley Highway, Natya VIC 3597 (Crown Allotment 28, Parish of Burra)</p> <p><u>Encumbrances:</u></p> <p>Depth Limitation: 15.24m</p>	Private	Construction Laydown Area (Regulator B2 SE)

SPI	Tenure	Description	Owner/land manager	Project component ²
		<u>Benefits:</u> Waterway Notation Abuts Crown land subject to Crown licence to use. Benefitted by Water Frontage Licence MI310943F.		
27\PP2296	Freehold	5474 Murray Valley Highway, Natya VIC 3597 (Crown Allotment 27, Parish of Burra) <u>Encumbrances:</u> Depth Limitation: 15.24m <u>Benefits:</u> Waterway Notation Abuts Crown land subject to Crown licence to use. Benefitted by Water Frontage Licence MI310943F	Private	Access track (not Construction Footprint)
27B\PP2296	Crown land, Natural Features Reserve	Murray Valley Highway, Natya VIC 3597 (Crown Allotment 27B, Parish of Burra) <u>Encumbrances:</u> Reservation (Permanent) for Public Purposes MI061524M Water Frontage Licence MI310943F	Parks Victoria	Regulator B2 (not Construction Footprint) Access track (not Construction Footprint)
2019\PP3391	Crown land, Natural Features Reserve (River Murray Reserve)	3564 Murray Valley Highway, Wood Wood VIC 3596 (Crown Allotment 2019, Parish of Piangil) <u>Encumbrances:</u> Reservation (Permanent) for Public Purposes MI179755J Water Frontage Licence MI303609J, MI303610A, MI30361X, MI303613T, MI303614R, MI303615P, MI303616M, MI303617K, MI303619F, MI303620W, MI303622S, MI303623Q, MI303624N, MI303625L	Parks Victoria	Regulator B4 and temporary pump hardstand Access track
165A\PP3391	Crown land, Natural Features Reserve	4686 Murray Valley Highway, Piangil VIC 3597 (Crown Allotment 165A, Parish of Piangil)	Parks Victoria	Regulator B4 and temporary pump hardstand

SPI	Tenure	Description	Owner/land manager	Project component ²
		<u>Encumbrances:</u> Reservation (Permanent) for Public Purposes MI179802C Water Frontage Licence MI303612V, MI303613T, MI303618H, MI303619F, MI303621U, MI303625L		Access track
126\PP3391	Freehold	Murray Valley Highway, Piangil VIC 3597 (Crown Allotment 126, Parish of Piangil) <u>Encumbrances:</u> Depth Limitation: 15.24m Easements A-1 and A-2 for water supply and drainage purposes. Easement E-1 (purpose not specified on Plan). <u>Benefits:</u> Waterway Notation Abuts Crown land subject to Crown licence to use.	Private	Access track
126A\PP3391	Freehold	447 Murray Valley Highway, Piangil VIC 3597 (Crown Allotment 126A, Parish of Piangil) <u>Encumbrances:</u> Depth Limitation: 15.24m Easement for water supply and drainage purposes. <u>Benefits:</u> Waterway Notation Abuts Crown land subject to Crown licence to use.	Private	Access track
135A\PP3391	Freehold	117 Tooleybuc Road, Piangil VIC 3597 (Crown Allotment 135A, Parish of Piangil) <u>Encumbrances:</u> Depth Limitation: 15.24m <u>Benefits:</u>	Roads Corporation	Access track

SPI	Tenure	Description	Owner/land manager	Project component ²
		Waterway Notation Abuts Crown land subject to Crown licence to use.		
NSW				
NA	Crown land – waterway	Unallocated/unreserved Crown land	NSW DPIE	Drop Structure Temporary pump hardstand and rock-lined pump pool

Table 3.2: Land parcels intersected by proposed inundation area

SPI	Tenure	Description	Owner/land manager	Project component
21A\PP2296	Freehold	118A Angle Road, Natya VIC 3597 (Crown Allotment 21A, Parish of Burra) <u>Encumbrances:</u> Depth Limitation: Nil Easements E-1 and E-2 (purpose not specified on Plan). <u>Benefits:</u> Waterway Notation Abuts Crown land subject to Crown licence to use.	Private	Managed inundation area (Burra North) – part downstream of Regulator B2 and part upstream of Regulator B2
21\PP2296	Freehold	118A Angle Road, Natya VIC 3597 (Crown Allotment 21, Parish of Burra) <u>Encumbrances:</u> Depth Limitation: 15.24m Crown grant subject to condition requiring protection of indigenous trees on not less than 3% of total land area. <u>Benefits:</u>	Private	Managed inundation area (Burra North)

SPI	Tenure	Description	Owner/land manager	Project component
		Waterway Notation Abuts Crown land subject to Crown licence to use.		
55\PP3390	Crown land, Natural Features Reserve (River Murray Reserve)	Kenley Road, Kenley VIC 3597 (Crown Allotment 55, Parish of Piambie) <u>Encumbrances:</u> Reservation (Temporary) for Reserved Forest MI179676E	Parks Victoria	Managed inundation area (Burra North)
56\PP3390	Crown land, Natural Features Reserve (River Murray Reserve)	Hector Lane, Kenley VIC 3597 (Crown Allotment 56, Parish of Piambie) <u>Encumbrances:</u> Reservation (Permanent) for Public Purposes MI179682K	Parks Victoria	Managed inundation area (Burra North)
20A\PP2296	Freehold	Angle Road, Natya VIC 3597 (Crown Allotment 20A, Parish of Burra) <u>Encumbrances:</u> Depth Limitation: 15.24m <u>Benefits:</u> Waterway Notation Abuts Crown land subject to Crown licence to use. Benefitted by Water Frontage Licence MI310944D.	Private	Managed inundation area (Burra North)
20B\PP2296	Freehold	270 Angle Road, Natya VIC 3597 (Crown Allotment 20B, Parish of Burra) <u>Encumbrances:</u> Depth Limitation: 15.24m Crown grant subject to condition requiring protection of indigenous trees on not less than 3% of total land area. <u>Benefits:</u>	Private	Managed inundation area (Burra North)

SPI	Tenure	Description	Owner/land manager	Project component
		Waterway Notation Abuts Crown land subject to Crown licence to use.		
31B\PP2296	Crown land, Natural Features Reserve (River Murray Reserve)	Obree Road, Natya VIC 3597 (Crown Allotment 31B, Parish of Burra) <u>Encumbrances:</u> Reservation (Temporary) for Reserved Forest MI061507M	Parks Victoria	Managed inundation area (Burra North)
31\PP2296	Crown land, Natural Features Reserve (River Murray Reserve)	Angle Road, Natya VIC 3597 (Crown Allotment 31, Parish of Burra) <u>Encumbrances:</u> Reservation (Temporary) for Reserved Forest MI061516L	Parks Victoria	Managed inundation area (Burra North)
31A\PP2296	Crown land, Natural Features Reserve (River Murray Reserve)	Obree Road, Natya VIC 3597 (Crown Allotment 31A, Parish of Burra) <u>Encumbrances:</u> Reservation (Permanent) for Public Purposes MI061513S Water Frontage Licence MI310944D	Parks Victoria	Managed inundation area (Burra North)
31D\PP2296	Crown land, Natural Features Reserve (River Murray Reserve)	Obree Road, Natya VIC 3597 (Crown Allotment 31D, Parish of Burra) <u>Encumbrances:</u> Reservation (Permanent) for Public Purposes MI061510Y	Parks Victoria	Managed inundation area (Burra North)
27A\PP2296	Freehold	5474 Murray Valley Highway, Natya VIC 3597 (Crown Allotment 27A, Parish of Burra) <u>Encumbrances:</u> Depth Limitation: 15.24m <u>Benefits:</u>	Private	Managed inundation area (Burra South)

SPI	Tenure	Description	Owner/land manager	Project component
		Waterway Notation Abuts Crown land subject to Crown licence to use. Benefitted by Water Frontage Licence MI310943F.		
27B\PP2296	Crown land, Natural Features Reserve	Murray Valley Highway, Natya VIC 3597 (Crown Allotment 27B, Parish of Burra) <u>Encumbrances:</u> Reservation (Permanent) for Public Purposes MI061524M Water Frontage Licence MI310943F	Parks Victoria	Managed inundation area (Burra South)
28\PP2296	Freehold	5474 Murray Valley Highway, Natya VIC 3597 (Crown Allotment 28, Parish of Burra) <u>Encumbrances:</u> Depth Limitation: 15.24m <u>Benefits:</u> Waterway Notation Abuts Crown land subject to Crown licence to use. Benefitted by Water Frontage Licence MI310943F.	Private	Managed inundation area (Burra South)
28A\PP2296	Freehold	5474 Murray Valley Highway, Natya VIC 3597 (Crown Allotment 28A, Parish of Burra) <u>Encumbrances:</u> Depth Limitation: 15.24m <u>Benefits:</u> Waterway Notation Abuts Crown land subject to Crown licence to use. Benefitted by Water Frontage Licence MI310943F.	Private	Managed inundation area (Burra South)
22A\PP2437	Freehold	5235 Murray Valley Highway, Natya VIC 3597 (Crown Allotment 22A, Parish of Coonimur) <u>Encumbrances</u>	Private	Managed inundation area (Burra South)

SPI	Tenure	Description	Owner/land manager	Project component
		<p>Depth Limitation: 15.24m</p> <p>Easement E-1 for the purpose of a water channel.</p> <p><u>Benefits:</u></p> <p>Waterway Notation Abuts Crown land subject to Crown licence to use. Water Frontage Licence MI306178T</p>		
22B\PP2437	Crown land, Natural Features Reserve	<p>Murray Valley Highway, Natya VIC 3597 (Crown Allotment 22B, Parish of Coonimur)</p> <p><u>Encumbrances:</u></p> <p>Reservation (Permanent) for Public Purposes MI075455B</p> <p>Water Frontage Licence MI306178T</p>	Parks Victoria	Managed inundation area (Burra South)
23A\PP2437	Freehold	<p>4924 Murray Valley Highway, Natya VIC 3597 (Crown Allotment 23A, Parish of Coonimur)</p> <p><u>Encumbrances:</u></p> <p>Depth Limitation: 15.24m</p> <p><u>Benefits:</u></p> <p>Waterway Notation Abuts Crown land subject to Crown licence to use. Water Frontage Licence MI306177V.</p>	Private	Managed inundation area (Burra South)
23E\PP2437	Crown land, Natural Features Reserve	<p>Murray Valley Highway, Natya VIC 3597 (Crown Allotment 23E, Parish of Coonimur)</p> <p><u>Encumbrances:</u></p> <p>Reservation (Permanent) for Public Purposes MI075447A</p> <p>Water Frontage Licence MI306177V</p>	Parks Victoria	Managed inundation area (Burra South)

SPI	Tenure	Description	Owner/land manager	Project component
114\PP3391	Freehold	4750B Murray Valley Highway, Piangil VIC 3597 (Crown Allotment 114, Parish of Piangil) <u>Encumbrances:</u> Depth Limitation: 15.24m <u>Benefits:</u> Waterway Notation Abuts Crown land subject to Crown licence to use.	Private	Managed inundation area (Burra South)
114D\PP3391	Crown land, Natural Features Reserve	Murray Valley Highway, Piangil VIC 3597 (Crown Allotment 114D, Parish of Piangil) <u>Encumbrances:</u> Reservation (Permanent) for Public Purposes MI179715W	Parks Victoria	Managed inundation area (Burra South)
114E\PP3391	Crown land, Natural Features Reserve	Murray Valley Highway, Piangil VIC 3597 (Crown Allotment 114E, Parish of Piangil) <u>Encumbrances:</u> Reservation (Permanent) for Public Purposes MI179706X	Parks Victoria	Managed inundation area (Burra South)
114F\PP3391	Crown land, Natural Features Reserve	Murray Valley Highway, Piangil VIC 3597 (Crown Allotment 114F, Parish of Piangil) <u>Encumbrances:</u> Reservation (Permanent) for Public Purposes MI179712D	Parks Victoria	Managed inundation area (Burra South)
2\LP116601	Freehold	4750B Murray Valley Highway, Piangil VIC 3597 <u>Encumbrances:</u> Depth Limitation: 15.24m <u>Benefits:</u>	Private	Managed inundation area (Burra South)

SPI	Tenure	Description	Owner/land manager	Project component
		Waterway Notation Abuts Crown land subject to Crown licence to use. Water Licence MI303619F		
1\TP217555	Freehold	<p>4686 Murray Valley Highway, Piangil VIC 3597</p> <p><u>Encumbrances:</u></p> <p>Depth Limitation: 15.24m</p> <p>Easement E-1 (purpose not specified on Plan).</p> <p><u>Benefits:</u></p> <p>Waterway Notation Abuts Crown land subject to Crown licence to use.</p>	Private	Managed inundation area (Burra South)
1\TP218784	Freehold	<p>4686 Murray Valley Highway, Piangil VIC 3597</p> <p><u>Encumbrances:</u></p> <p>Depth Limitation: 15.24m</p> <p><u>Benefits:</u></p> <p>Waterway Notation Abuts Crown land subject to Crown licence to use. Benefitted by Water Frontage Licence MI303618H</p>	Private	Managed inundation area (Burra South)
124A\PP3391	Freehold	<p>4548 Murray Valley Highway, Piangil VIC 3597 (Crown Allotment 124A, Parish of Piangil)</p> <p><u>Encumbrances:</u></p> <p>Depth Limitation: 15.24m</p> <p>Easements A-1, A-2 and A-3 for water supply and drainage purposes.</p> <p>Easement E-1 (purpose not specified on Plan).</p> <p><u>Benefits:</u></p>	Private	Managed inundation area (Burra South)

SPI	Tenure	Description	Owner/land manager	Project component
		Waterway Notation Abuts Crown land subject to Crown licence to use.		
125\PP3391	Freehold	<p>Murray Valley Highway, Piangil VIC 3597 (Crown Allotment 125, Parish of Piangil)</p> <p><u>Encumbrances:</u></p> <p>Depth Limitation: 15.24m</p> <p>Easements for water supply and other purposes (purpose not specified on Plan).</p> <p><u>Benefits:</u></p> <p>Waterway Notation Abuts Crown land subject to Crown licence to use. Benefitted by Water Frontage Licence MI303625L</p>	Private	Managed inundation area (Burra South)
CP154682	Freehold	<p>4686 Murray Valley Highway, Piangil VIC 3597 (Plan CP154682, Parish of Piangil)</p> <p><u>Encumbrances:</u></p> <p>Depth Limitation: 15.24m</p> <p>Easement E-1 for irrigation purposes.</p> <p><u>Benefits:</u></p> <p>Waterway Notation Abuts Crown land subject to Crown licence to use. Benefitted by Water Frontage Licence MI303612V, MI303618H.</p>	Private	Managed inundation area (Burra South)
165A\PP3391	Crown land, Natural Features Reserve	<p>4686 Murray Valley Highway, Piangil VIC 3597 (Crown Allotment 165A, Parish of Piangil)</p> <p><u>Encumbrances:</u></p> <p>Reservation (Permanent) for Public Purposes MI179802C</p>	Parks Victoria	Managed inundation area (Burra South)

SPI	Tenure	Description	Owner/land manager	Project component
		Water Frontage Licence MI303612V, MI303613T, MI303618H, MI303619F, MI303621U, MI303625L		
Government Road	Crown land	Un-named road (opposite Natya Road)	Rural City of Swan Hill	Managed inundation area (Burra North)
Government Road	Crown land	Murray Valley Highway Un-named road (opposite Coonimur Road), Mossop Lane	Regional Roads Victoria Rural City of Swan Hill	Managed inundation area (Burra South)

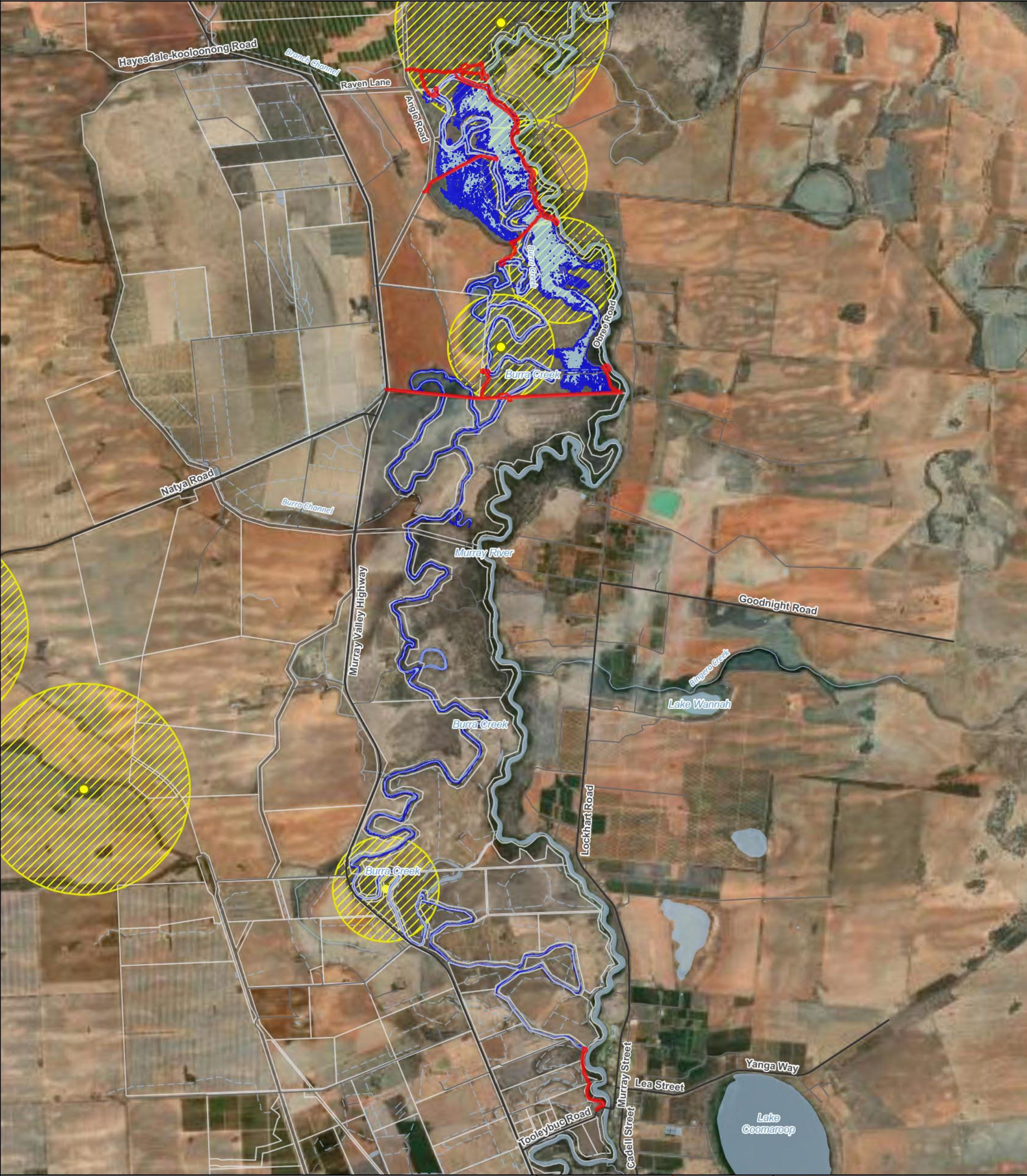
3.3 Native title interests

A search of the National Native Title Tribunal (NNTT) 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* (Cth) in relation to land within or adjacent to the area of investigation.
- One Indigenous Land Use Agreement (ILUA VI2004/010) applies to parts of the area of investigation and inundation area (Figure 3.3). This ILUA does not apply to the development footprint of any proposed project infrastructure except for Construction Laydown Area (Regulator B2 SE)

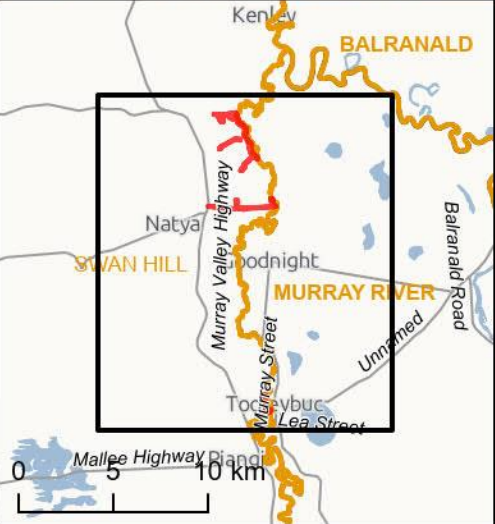
The ILUA is registered with the traditional owners of the Wamba Wamba, Barapa Barapa and Wadi Wadi Peoples in relation to exploration. This ILUA covers a wide area west of the Murray River extending from north of Nyah to around Narrung.

A search of the Victorian Department of Justice and Community Safety website indicates that no current applications or registered agreements under the *Traditional Owner Settlement Act 2010* (Vic) apply over land within or adjacent to the area of investigation (DoJCS, 2020).



- Legend**

 - Area of Investigation
 - Inundation Area
 - Bee Farm (Buffer)
 - Bee Farm
 - Major Road
 - Minor Road
 - Channel / Drain
 - Watercourse Stream
 - Waterbody
 - Wetland Swamp
 - Cadastre



IS297752

Name: GDA 1994 MGA Zone 55

0 1,000 2,000

Metres

DATA SOURCES

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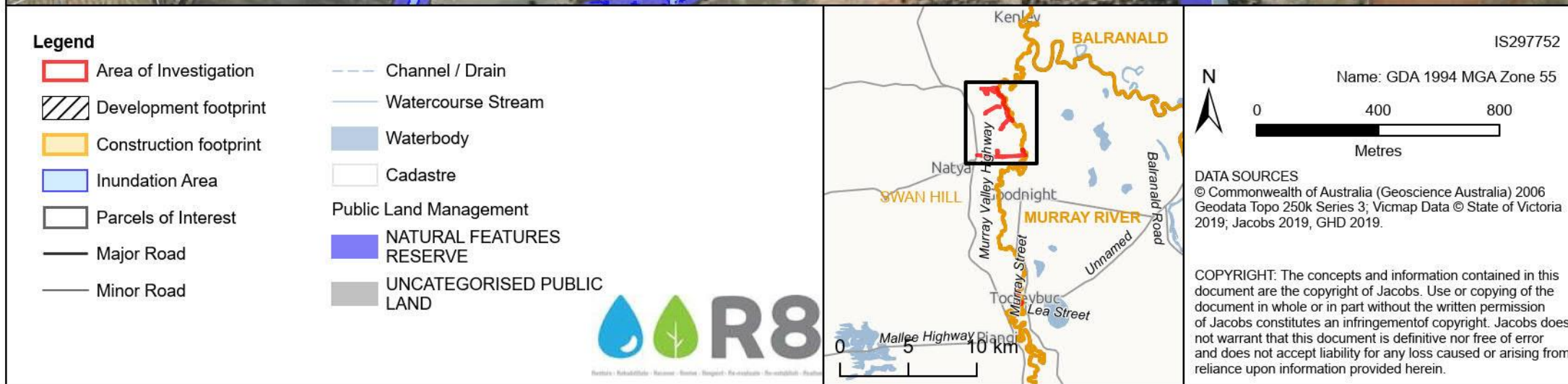
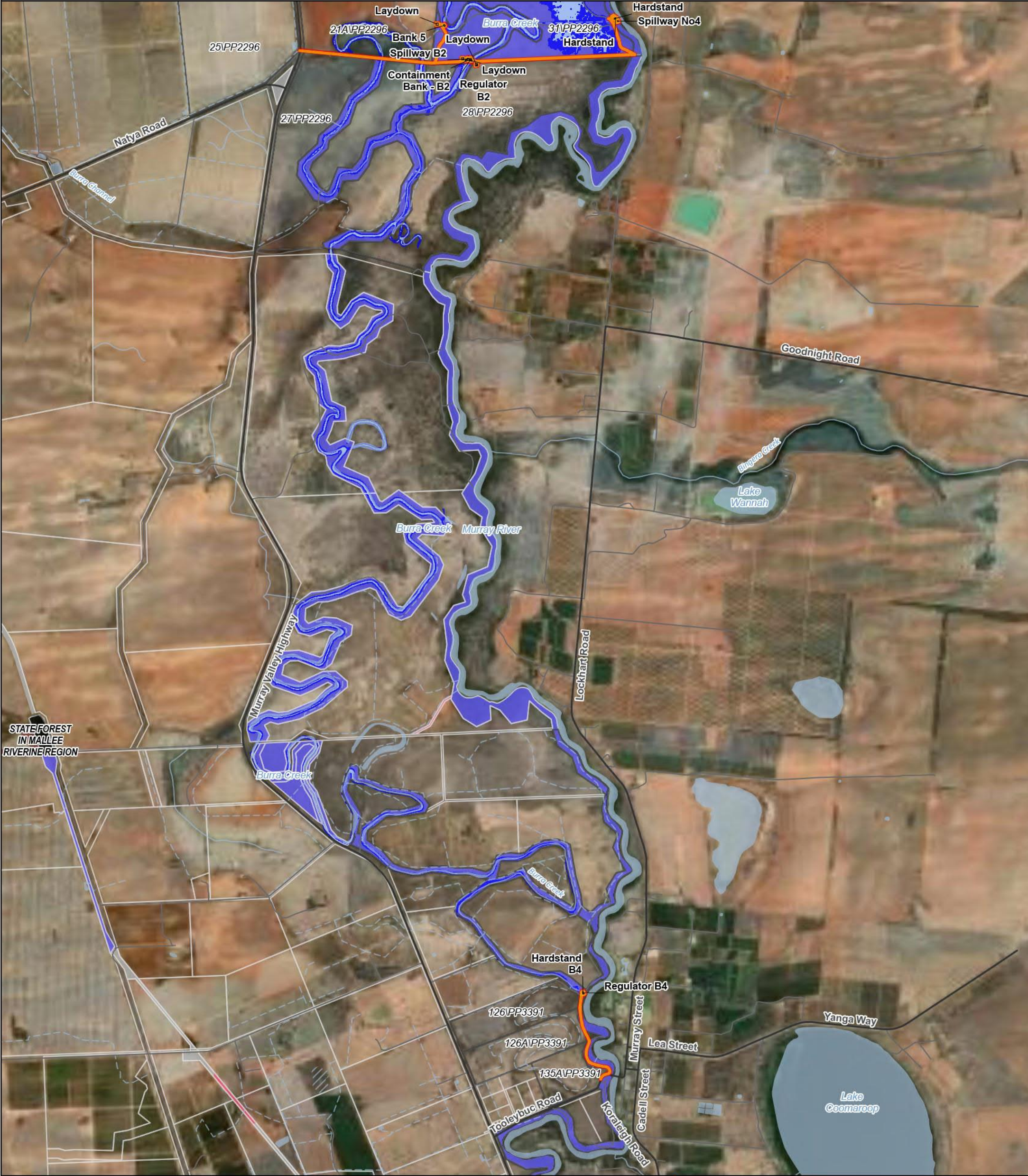
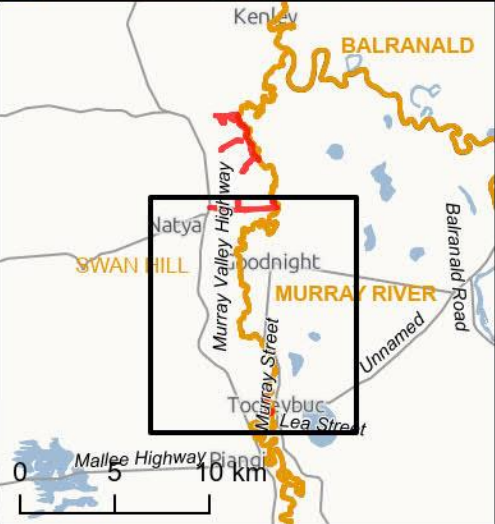


Figure 3.2 Burra Creek Floodplain Restoration Project – Land Tenure, South



- Legend**

 - Area of Investigation
 - Development footprint
 - Construction footprint
 - Inundation Area
 - Parcels of Interest
 - Major Road
 - Minor Road
 - Channel / Drain
 - Watercourse Stream
- Waterbody
 - Wetland Swamp
 - Cadastral
 - Public Land Management
 - STATE FOREST
 - NATURAL FEATURES RESERVE
 - SERVICES AND UTILITIES
 - Unknown
 - UNCATEGORISED PUBLIC LAND



IS297752

Name: GDA 1994 MGA Zone 55

0 400 800

Metres

DATA SOURCES

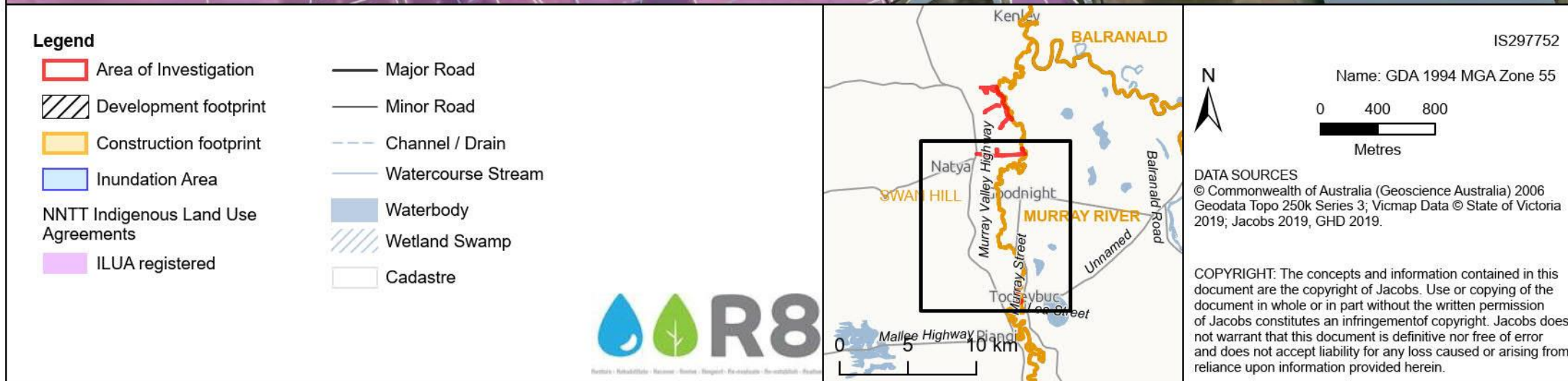
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4. Victorian planning framework

The majority of the area of investigation is located in Victoria within the Rural City of Swan Hill and is therefore subject to the provisions of the Swan Hill Planning Scheme (the planning scheme). This section provides a brief assessment of the project against state and local policy and provisions of the planning scheme.

4.1 Planning policy framework

Table 4.1 lists the clauses of the Planning Policy Framework, including state and regional policies, relevant to the project.

Table 4.1: Relevant state and regional policies in the Planning Policy Framework

Relevant clause		Objectives
Clause 12 – Environmental and Landscape Values	Clause 12.01 Biodiversity	<p>Clause 12.01-1S – Protection of Biodiversity To assist the protection and conservation of Victoria's biodiversity.</p> <p>Clause 12.01-2S Native Vegetation Management To ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation.</p>
	Clause 12.03 Water Bodies and Wetlands	Clause 12.03-1S River Corridors, Waterways, Lakes and Wetland To protect and enhance river corridors, waterways, lakes and wetlands.
	Clause 12.05 Significant Environments and Landscapes	Clause 12.05-2S Landscapes To protect and enhance significant landscapes and open spaces that contribute to character, identity and sustainable environments.
Clause 13 Environmental Risks and Amenity	Clause 13.01 Climate Change Impacts	Clause 13.01-1S Natural Hazards and Climate Change To minimise the impacts of natural hazards and adapt to the impacts of climate change through risk-based planning.
	Clause 13.02 Bushfire	Clause 13.02-1S Bushfire Planning To strengthen the resilience of settlements and communities to bushfire through risk-based planning that prioritises the protection of human life.
	Clause 13.03 Floodplains	<p>Clause 13.03-1S Floodplain Management To assist the protection of:</p> <ul style="list-style-type: none"> Life, property and community infrastructure from flood hazard. The natural flood carrying capacity of rivers, streams and floodways. The flood storage function of floodplains and waterways. Floodplain areas of environmental significance or of importance to river health.
	Clause 13.04 Soil Degradation	<p>Clause 13.04-3S Salinity To minimise the impact of salinity and rising water tables on land uses, buildings and infrastructure in rural and urban areas and areas of environmental significance and reduce salt load in rivers.</p>

Relevant clause		Objectives
	Clause 13.07 Amenity and Safety	<p>Clause 13.07-1S Land Use Compatibility To safeguard community amenity while facilitating appropriate commercial, industrial or other uses with potential off-site effects.</p>
Clause 14 Natural Resource Management	Clause 14.01 Agriculture	<p>Clause 14.01-1S Protection of agricultural land To protect the state's agricultural base by preserving productive farmland.</p> <p>Clause 14.01-2R Agricultural productivity – Loddon Mallee North Support emerging agribusinesses and location clusters, including intensive animal industries. Protect and maintain productive irrigation assets necessary to help grow the region as an important food bowl for domestic and international exports.</p> <p>Clause 14.01-3S Forestry and Timber Production To facilitate the establishment, management and harvesting of plantations and the harvesting of timber from native forests.</p>
		<p>Clause 14.02-1S Catchment Planning and Management To assist the protection and restoration of catchments, water bodies, groundwater, and the marine environment.</p> <p>Clause 14.02-2S Water Quality To protect water quality.</p>
	Clause 14.02 Water	
Clause 15 Built Environment and Heritage	Clause 15.01 Built Environment	<p>Clause 15.01-6S Design for Rural Areas To ensure development respects valued areas of rural character.</p>
	Clause 15.03 Heritage	<p>Clause 15.03-1S Heritage Conservation To ensure the conservation of places of heritage significance.</p> <p>Clause 15.03-2S Aboriginal Cultural Heritage To ensure the protection and conservation of places of Aboriginal cultural heritage significance.</p>
Clause 17 Economic Development	Clause 17.04 Tourism	<p>Clause 17.04-1R Tourism - Loddon Mallee North 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 To establish, manage and improve a diverse and integrated network of public open space that meets the needs of the community.</p>

Table 4.2 lists the clauses of the Local Planning Policy Framework relevant to the project.

Table 4.2: Relevant local planning policies in the Local Planning Policy Framework

Clause		Relevant issues and objectives
Municipal Strategic Statement		
Clause 21.01 Municipal Profile		<p>The Murray River corridor accommodates the majority 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> <ul style="list-style-type: none"> ▪ The protection of the environmental values of the Murray River corridor. ▪ The river and its wetland provide significant habitat values for flora and fauna. ▪ Flooding is a significant environmental risk, particularly along the Murray River. <p><u>Natural resource management</u></p> <ul style="list-style-type: none"> ▪ The continued growth of the horticulture industry. ▪ The need to support dry land agriculture <p><u>Built environment and heritage</u></p> <ul style="list-style-type: none"> ▪ The protection of Aboriginal and European heritage is critical to the growth in tourism and sense of place. <p><u>Economic development</u></p> <ul style="list-style-type: none"> ▪ The significant potential for tourism along the Murray River Corridor. <p><u>Infrastructure and transport</u></p> <ul style="list-style-type: none"> ▪ The uptake of improved irrigation practices via projects such as the Northern Victorian Irrigation Renewal Project.
Clause 21.03 Vision and Strategic Framework		<p><u>Map 1: Land Use Framework Plan</u></p> <ul style="list-style-type: none"> ▪ Nyah to Robinvale – Continue to develop irrigated horticulture potential, farm processing and value adding in accordance with sustainable land and water management principles. ▪ River Corridor – Promote importance of River Corridor and associated wetlands as a key natural resource, recreation, tourism and heritage features. ▪ Irrigation Areas – Extension of irrigation areas – encourage where there is minimal environmental impact.

Clause 21.05 Environment	Clause 21.05-1 Murray River corridor	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	Objective 3 - To protect remnant native vegetation, including understorey and vegetation constituting significant habitat and facilitate natural revegetation. Objective 4 - To protect and maintain biodiversity, including native vegetation and habitats for flora and fauna.
Clause 21.07 Built Environment and Heritage	Clause 21.07-3 Heritage	Objective 4 - To protect and conserve all heritage buildings, places, trees and streetscapes. Objective 5 - To recognise the significance of local Aboriginal heritage.
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.
Local Planning Policies		
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"> ▪ To maintain the unobstructed passage of floodwaters. ▪ To recognise appropriate public and community based flood management organisations and their role in maintenance and development of existing flood protection levee banks. ▪ 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. ▪ To protect and encourage the rural and riverine character of the area. ▪ To recognise the agricultural value of land within levee protected areas and to support the continued use of these areas for agricultural production.

4.2 Land use definitions

Land use of proposed works are defined in Clause 73 of the planning scheme and summarised in Table 4.3. These definitions will be used in the assessment of the applications under the planning scheme.

Table 4.3: Planning scheme land use definitions

Project component	Clause 73 Land use / general term	Definition
Spillway Containment bank Inundation Temporary pump hardstands	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 d) to collect, treat, transmit, store or distribute water; or e) to collect, treat, or dispose of storm or <u>flood water</u>, sewage, or sullage It includes any associated flow measurement device or a structure to gauge waterway flow
Regulator Drop structure	Minor Utility Installation	Land used for a utility installation comprising any of the following: a) Sewerage or water mains b) Storm or <u>flood water</u> drains or retarding basins c) Flow measurement device or a structure to gauge waterway flow d) Siphons, water storage tanks, disinfection booster stations and channels 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 Blockage bank removal / modification Temporary pump hardstands Temporary construction laydown areas	Earthworks	Land forming, laser grading, levee banks, raised access road and tracks, building pads, storage embankments, channel banks and drain banks and associated structures.
Native Vegetation	Native Vegetation	Plants that are indigenous to Victoria, including trees, shrubs, herbs and grasses.

4.3 Relevant zones and overlays

A summary of zones and overlays applying to the proposed project components is provided in Table 4.4 and shown in Appendix A.

Table 4.4: Summary of zones and overlays relevant to project components

Zone ID	Zone Name	Project component
PCRZ	Public Conservation and Resource Zone	Regulator B1 Regulator B2 Regulator B4 and Temporary Pump Hardstand Containment Bank Spillways 1, 2, 3 and 4 Drop Structure Block Banks 1, 2, 3, 4 and 5 Construction Laydown Areas (Regulator B1, Regulator B2 NW, Block Bank 5) Temporary Pump Hardstand and Rock-lined Pump Pool (at existing private pump site) Access tracks Managed Inundation Area (Burra North and Burra South)
FZ	Farming Zone	Construction Laydown Area (Regulator B2 SE) Construction Laydown Area (Block Bank 5) – area of investigation only, not construction footprint Access tracks Managed Inundation Area (Burra North and Burra South)
RDZ1	Road Zone, Category 1	Access track Managed Inundation Area (Burra South)
ESO1	Environmental Significance Overlay (Schedule 1 – Waterway, Wetlands and Lakes Environs)	Regulator B1 Regulator B2 Regulator B4 and Temporary Pump Hardstand Containment Bank Spillways 1, 2, 3 and 4 Drop Structure Block Banks 1, 2, 3, 4 and 5 Temporary Pump Hardstand and Rock-lined Pump Pool (at existing private pump site) Access tracks Managed Inundation Area (Burra North and Burra South) Note: No temporary construction laydown areas are located in ESO1.
VPO1	Vegetation Protection Overlay (Schedule 1 – Remnant Vegetation)	Construction Laydown Area (Regulator B2 SE) Access tracks Managed Inundation Area (Burra North and Burra South) Note: No proposed project infrastructure is located in VPO1.

Zone ID	Zone Name	Project component
LSIO	Land Subject to Inundation Overlay	All project components
BMO	Bushfire Management Overlay	All project components

The purpose of the zones and overlays associated with the area of investigation is provided in Table 4.5.

Table 4.5 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"> To implement the Municipal Planning Strategy and the Planning Policy Framework. To protect and conserve the natural environment and natural processes for their historic, scientific, landscape, habitat or cultural values. To provide facilities which assist in public education and interpretation of the natural environment with minimal degradation of the natural environment or natural processes. To provide for appropriate resource-based uses. 	<p>The PCRZ covers the majority of the area of investigation and the proposed inundation area.</p> <p>The project aims to restore a more natural inundation regime to improve the ecological condition of high ecological value floodplain and anabranch habitats mostly located within natural features reserves that are managed primarily for conservation and recreational purposes by Parks Victoria. As such, the project is considered to be consistent with the purpose of the PCRZ “to protect and conserve the natural environment and natural processes”.</p>
Clause 35.07 Farming Zone (FZ)	<ul style="list-style-type: none"> To implement the Municipal Planning Strategy and the Planning Policy Framework. To provide for the use of land for agriculture. To encourage the retention of productive agricultural land. To ensure that non-agricultural uses, including dwellings, do not adversely affect the use of land for agriculture. To encourage the retention of employment and population to support rural communities. To encourage use and development of land based on comprehensive and sustainable land management practices and infrastructure provision. To provide for the use and development of land for the specific purposes identified in a schedule to this zone. 	<p>The area of investigation associated with some sections of access tracks, Construction Laydown Area (Regulator B2 SE) and Construction Laydown Area (Bank 5), along with a portion of the proposed inundation area, are located in the FZ.</p> <p>Proposed works within the FZ will be limited to maintenance works on existing access tracks and the potential establishment of a temporary construction laydown area to support works at Regulator B2. No works associated with Construction Laydown Area (Bank 5) are likely to be required on land in the FZ as the current design indicates that the construction footprint for this activity will be wholly contained within the PCRZ. The maintenance of existing access tracks and establishment of temporary construction laydown areas is consistent with the purpose of the FZ in that these activities will not adversely affect the current or future use of the land for agriculture.</p> <p>It is understood that the project can be operated to avoid managed inundation of privately owned land within the FZ through</p>

Relevant zone/overlay	Purpose	Project response
		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 not considered to be inconsistent with the purpose of the FZ in that managing inundation in accordance with landowner agreements should ensure that agricultural use of the land will not be adversely affected by the project.
Clause 36.04 Road Zone, Category 1 (RDZ1)	<ul style="list-style-type: none"> ▪ To implement the Municipal Planning Strategy and the Planning Policy Framework. ▪ To identify significant existing roads. ▪ To identify land which has been acquired for a significant proposed road. 	<p>A small part of the area of investigation associated with an access track connecting with the Murray Valley Highway and a small part of the proposed inundation area associated with the creek channel in Burra South, is located in RDZ1.</p> <p>It is not anticipated that any works will be required on land in RDZ1 associated with the Murray Valley Highway. However, if any works are required within RDZ1 or any works involve creating or altering access to the Murray Valley Highway in RDZ1, consent will be required from the Roads Corporation (Regional Roads Victoria) to ensure consistency with the purpose of this zone.</p> <p>The proposed inundation area within RDZ1 is located at Burra South where it is understood that managed inundation will be restricted to within the bank full level of the creek channel. The proposed inundation area within RDZ1 is located within the Land Subject to Inundation Overlay (LSIO). On this basis, the project is not likely to be inconsistent with the purpose of RDZ1, however consultation with Regional Roads Victoria will be required to ensure that operation of the project does not adversely impact on the functioning of the Murray Valley Highway.</p>
Clause 42.01 Environmental Significance Overlay (Schedule 1 - Waterway, Wetlands and Lakes Environs) (ESO1)	<ul style="list-style-type: none"> ▪ To implement the Municipal Planning Strategy and the Planning Policy Framework. ▪ To identify areas where the development of land may be affected by environmental constraints. ▪ To ensure that development is compatible with identified environmental values. <p><u>Schedule 1 Environmental objectives</u></p>	<p>The ESO1 covers the length of Burra Creek and land immediately adjoining the Murray River. Proposed works associated with each of the proposed regulators, the drop structure, the majority of containment banks, temporary pump hardstands, blockage bank removals / modifications, and some access tracks will occur within the ESO1. Due to the nature of their role in diverting, retaining and releasing floodwaters, construction of these proposed</p>

Relevant zone/overlay	Purpose	Project response
	<ul style="list-style-type: none"> To protect and enhance the natural environment and cultural heritage qualities of the Murray River and its anabranches as a major waterway of local, regional, state, national and international significance. To maintain the quality and availability of water within waterways and water bodies. To ensure that any use, development or works in the environs of waterways, wetlands and lakes are of a scale, character and form that is compatible with the high environment quality of these systems. To promote tourist and recreational activities in the vicinity of watercourses, wetlands and lakes subject to the design, siting and landscaping of development to protect the values of these environments. To protect and enhance the biodiversity, ecological, and cultural values of waterway, wetland and lake environments. To protect the visual and environmental qualities of waterways, wetlands and lakes, restricting the use and development of land in these areas to maintain these qualities. To maintain the ability of waterways to carry natural flows. To prevent the erosion and siltation of waterways and adjoining land. To provide for the use and development of land adjacent to Lake Boga for tourist and recreational purposes, while protecting the natural beauty and amenity of the area. 	<p>infrastructure components within the ESO1 is unavoidable. The location of temporary construction activities however is more flexible and therefore all temporary construction laydown areas have been located outside the ESO1.</p> <p>Parts of the proposed inundation area associated with the Burra Creek channel are located within the ESO1, while only a relatively small part of the Burra North floodplain inundation area is located within the ESO1.</p> <p>The project aims to restore a more natural inundation regime to improve the ecological condition of high ecological value floodplain and anabranch habitats, mostly located with natural features reserves that are 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"> protect and enhance the natural environment and cultural heritage qualities of the Murray River and its anabranches protect and enhance the biodiversity, ecological, and cultural values of waterway, wetland and lake environments maintain the ability of waterways to carry natural flows protect and enhance the biodiversity, ecological, and cultural values of waterway, wetland and lake environments.
Clause 42.02 Vegetation Protection Overlay (Schedule 1 – Remnant Vegetation)	<ul style="list-style-type: none"> To implement the Municipal Planning Strategy and the Planning Policy Framework. To protect areas of significant vegetation. To ensure that development minimises loss of vegetation. To preserve existing trees and other vegetation. 	<p>No proposed project infrastructure is located in VPO1. Project components in the VPO1 include Construction Laydown Area (Regulator B2 SE), some access tracks and part of the proposed inundation area.</p> <p>Proposed works within the VPO1 will be limited to maintenance works on existing access tracks and the potential establishment of a temporary construction laydown area to</p>

Relevant zone/overlay	Purpose	Project response
	<ul style="list-style-type: none"> To recognise vegetation protection areas as locations of special significance, natural beauty, interest and importance. To maintain and enhance habitat and habitat corridors for indigenous fauna. To encourage the regeneration of native vegetation. <p><u>Schedule 1 Vegetation protection objectives</u></p> <ul style="list-style-type: none"> To protect remnant native vegetation and habitat, including understorey, and facilitate revegetation of native vegetation. To protect and enhance native habitat, particularly areas providing habitat or potential habitat for rare or threatened flora and fauna species. To encourage and maintain biodiversity and linkages between existing remnant vegetation. To recognise the catchment-wide land and water management benefits of native vegetation retention. To provide a 'net gain' principle for native vegetation in Swan Hill Rural City. To retain native vegetation in any land use or development proposal when there is an alternative to native vegetation removal. To protect and enhance native vegetation used by Regent Parrot for habitat. To implement the principles and environmental objectives of the Victorian Native Vegetation Management: A Framework for Action and Victoria's Biodiversity Strategy. 	<p>support works at Regulator B2. Provided track maintenance works are limited to within the area of disturbance associated with the existing access tracks, and avoid or minimise impacts to native vegetation, the proposed works are likely to be consistent with the purpose and objectives of VPO1.</p> <p>The establishment of temporary Construction Laydown Area (Regulator B2 SE) is not likely to be consistent with the purpose and objectives of VPO1 unless it is demonstrated that no remnant or otherwise significant native vegetation will be impacted by this project component.</p> <p>The project aims to restore a more natural inundation regime to Burra Creek and associated floodplain areas with the objectives of maintaining native plant cover and diversity, maintaining threatened native flora presence, and maintaining the health of native trees, amongst other objectives. As such, operation of the project including managed inundation of land within the VPO1, is considered to be consistent with the purpose and objectives of the VPO1.</p>
Clause 44.04 Land Subject to Inundation Overlay (LSIO)	<ul style="list-style-type: none"> To implement the Municipal Planning Strategy and the Planning Policy Framework 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. 	<p>The area of investigation and proposed inundation area are almost entirely located on land affected by the LSIO. A small part of the proposed inundation area associated with the Burra Creek channel at Burra North is not located in the LSIO. The section of Burra Creek inundation area not included in the LSIO is intersected both upstream and downstream by the Piambie Channel via non-siphoned crossings.</p>

Relevant zone/overlay	Purpose	Project response
	<ul style="list-style-type: none"> 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. 	<p>The project aims to restore a more natural inundation regime to Burra Creek and associated floodplain areas, including the removal of some existing blockages and installation of regulators 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>
Clause 44.06 Bushfire Management Overlay (BMO)	<ul style="list-style-type: none"> To implement the Municipal Planning Strategy and the Planning Policy Framework. To ensure that the development of land prioritises the protection of human life and strengthens community resilience to bushfire. To identify areas where the bushfire hazard warrants bushfire protection measures to be implemented. To ensure development is only permitted where the risk to life and property from bushfire can be reduced to an acceptable level. 	<p>The area of investigation and proposed inundation area are almost entirely located on land affected by the BMO.</p> <p>The project does not involve a use of land that will increase the number of people living or working in a bushfire prone area, or a use that requires approval under the BMO. The project is consistent with the purpose of the BMO.</p>

4.4 Particular and general exemptions

Table 4.6 provides a summary of exemptions under particular and general provisions of the planning scheme that apply or may apply to the proposed project works.

Table 4.6: Relevant planning approval exemptions under particular and general provisions

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 in the PCRZ.

Relevant land use/activity	Clause of the planning scheme	Exemption	Relevant condition
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 in 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 (see below).
Native vegetation	Clause 52.17-7 Table of exemptions	Remove, destroy or lop native vegetation	<p><u>Conservation work</u></p> <p>To the minimum extent necessary to enable the carrying out of conservation work:</p> <ul style="list-style-type: none"> Which provides and overall improvement for biodiversity; and With written agreement of the Secretary to the DELWP (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i>).
			<p><u>Crown land</u></p> <p>To the minimum extent necessary to manage Crown land:</p> <ul style="list-style-type: none"> 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 With written permission from the Secretary to the DELWP (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i>).
			<p><u>Dead native vegetation</u></p> <p>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</p>
			<p><u>Grasses</u></p> <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"> Located within a lawn, garden or other landscaped area; or Maintained at a height of at least 10 cm above ground level.
			<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</p>

Relevant land use/activity	Clause of the planning scheme	Exemption	Relevant condition
			<p>the foliage of each individual plant is lopped or pruned.</p> <p>This exemption does not apply to:</p> <ul style="list-style-type: none"> ▪ The pruning or lopping of the trunk of a native tree; or ▪ Native vegetation on a roadside or railway reservation. <p><u>New buildings and works in the Farming Zone and Rural Activity Zone</u></p> <p>Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary to enable the construction of a building or works used for Agricultural production, including a dam, utility service, bore and accessway, in the Farming Zone or the Rural Activity Zone. New buildings and works in the Farming Zone and Rural Activity Zone.</p> <p>The maximum extent of native vegetation that may be removed, destroyed or lopped under this exemption on contiguous land in the same ownership in a five year period must not exceed any of the following:</p> <ul style="list-style-type: none"> ▪ 1 hectare of native vegetation which does not include a tree. ▪ 15 native trees with a trunk diameter of less than 40 centimetres at a height of 1.3 metres above ground level. ▪ 5 native trees with a trunk diameter of 40 centimetres or more at a height of 1.3 metres above ground level. <p>This exemption does not apply to the construction or operation of a pivot irrigation system or horticultural trellising.</p> <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>

Relevant land use/activity	Clause of the planning scheme	Exemption	Relevant condition
			<ul style="list-style-type: none"> ▪ Less than 10 years old; or ▪ Bracken (<i>Pteridium esculentum</i>); or ▪ 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 ▪ 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"> ▪ Shown on that plan as being 'certified regrowth'; and ▪ On land that is to be used or maintained for cultivation or pasture during the term of that plan. <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></p> <p>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></p> <p>Native 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.</p>
			<p><u>Utility installations</u></p> <p>Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary:</p> <ul style="list-style-type: none"> ▪ To maintain the safe and efficient function of a Minor Utility Installation; or ▪ 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>).

Relevant land use/activity	Clause of the planning scheme	Exemption	Relevant condition
			<p><u>Vehicle access from public roads</u></p> <p>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.</p> <p>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.</p> <p>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.</p> <p>In this exemption, roadside and public road have the same meanings as in section 3 of the <i>Road Management Act 2004</i>.</p> <p><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></p> <p>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.</p> <p>The maximum extent of native vegetation that may be removed, destroyed or lopped under this exemption on contiguous land in the same ownership in a five year period must not exceed any of the following:</p> <ul style="list-style-type: none"> 1 hectare of native vegetation which does not include a tree. 15 native trees with a trunk diameter of less than 20 cm at a height of 1.3 m above the ground level.

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 and RDZ1.

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', 'Crown Land' and 'Utility Installations', however the application of these exemptions would require written agreement from the Secretary to DELWP.

4.5 Zone and overlay exemptions

Table 4.7 identifies relevant exemptions under applicable zones and overlays that apply or may apply to the proposed project works.

Table 4.7: Relevant planning approval exemptions under zones and overlays

Relevant Zone / Overlay	Exemption	Relevant condition
Clause 36.03 Public Conservation and Resource Zone (PCRZ) Clause 36.03-2 Permit requirement	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>
Clause 35.07 Farming Zone (FZ) Clause 35.07-1 Table of uses, Section 1 Permit not required	Use (minor utility installation)	Any use listed in Clause 62.01.
Clause 35.07 Farming Zone (FZ) Clause 35.07-4 Buildings and works	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)	<p>Permit required for the following earthworks on all land, excluding earthworks carried out in accordance with an approved whole farm plan:</p> <ul style="list-style-type: none"> Earthworks which change the rate of flow or the discharge point of water across a property boundary Earthworks which increase the discharge of saline groundwater.
Clause 36.04 Road Zone, Category 1 (RDZ1) Clause 36.04-1 Table of uses, Section 1 Permit not required	Use (minor utility installation)	Any use listed in Clause 62.01

Relevant Zone / Overlay	Exemption	Relevant condition
Clause 42.01 Environmental Significance Overlay Clause 42.01-2 Permit requirement	Buildings and works	If a schedule to this overlay specifically states that a permit is not required (see below).
Schedule 1 to the Environmental Significance Overlay Clause 3.0 Permit requirement	Buildings and works	Any buildings or works located more than 100 m from Murray River and 60 m from any other waterway, wetland or lake.
		Repairs and routine maintenance to existing buildings and works
		Works undertaken by Swan Hill Rural City, a government department or a public authority for municipal purposes, stream improvement, drainage, channel repairs, flooding regulation, erosion control, water supply, sewerage supply, telecommunications or minor utility installation.
		Buildings or works associated with a minor utility installation, low impact telecommunications facility or passive recreation.
Clause 42.01 Environmental Significance Overlay Clause 42.01-2 Permit requirement	Remove, destroy or lop any vegetation, including dead vegetation	If the table to Clause 42.01-3 specifically states that a permit is not required (see below).
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>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: <ul style="list-style-type: none"> ▪ 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 or municipal council to maintain the safe and efficient function of an existing public road in accordance with the written agreement of the Secretary to the

Relevant Zone / Overlay	Exemption	Relevant condition
		DELWP (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i>).
		<p><u>Surveying</u></p> <p>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.</p>
Clause 42.02 Vegetation Protection Overlay Clause 42.02-2 Permit requirement	Remove, destroy or lop any vegetation, including dead vegetation	If a schedule to this overlay specifies that a permit is required and does not specify that a permit is not required (see below).
Clause 42.02-3 Table of exemptions	Remove, destroy or lop any vegetation, including dead vegetation	Same as relevant exemptions listed for Clause 42.01-3 Table of exemptions above.
Schedule 1 to the Vegetation Protection Overlay Section 3.0 Permit requirement	Remove, destroy or lop any vegetation, including dead vegetation	A permit is required to remove, destroy or lop any native vegetation, including any dead trees that are standing.
	Remove, destroy or lop any native vegetation, including dead vegetation	A permit is not required for works undertaken by Swan Hill Rural City, a government department or a public authority for municipal purposes, stream improvement, drainage, channel repairs, flooding regulation, erosion control, water supply, sewerage supply, telecommunications or minor utility installation.
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.
Schedule to the Land Subject to Inundation Overlay 1.0 Permit requirement	Works (earthworks)	Earthworks that do not raise ground level topography by more than 300 mm.
		Earthworks greater than 300 mm in height created during the construction of a dam of less than 3000 cubic metres capacity

4.6 Planning permit triggers

Table 4.8 identifies the planning permit triggers for the project under the Swan Hill Planning Scheme. Relevant exemptions identified in sections 4.4 and 4.5 may apply as discussed following the table.

Table 4.8: Summary of potential planning permit triggers under the Swan Hill Planning Scheme

Swan Hill Planning Scheme		Planning permit 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
Clause 36.04 Road Zone, Category 1 (RDZ1)	Y	Y	NA
Overlays			
Clause 42.01 Environmental Significance Overlay (Schedule 1 - Waterway, Wetlands and Lakes Environs) (ESO1)	NA	Y	Y
Clause 42.02 Vegetation Protection Overlay (Schedule 1 - Remnant Vegetation) (VPO1)	NA	N	Y
Clause 44.04 Land Subject to Inundation Overlay (LSIO)	NA	Y	N
Clause 44.06 Bushfire Management Overlay (BMO)	NA	N	N
Particular provisions			
Clause 52.17 Native Vegetation	NA	NA	Y
Clause 52.29 (Land Adjacent to A Road Zone, Category 1, or A Public Acquisition Overlay for A Category 1 Road)	NA	Y	NA

In accordance with the controls identified in Table 4.8, the project will require planning approval in relation to:

- Use
- Buildings and works, including earthworks
- Removal, destruction or lopping of native vegetation
- Removal, destruction or lopping of any vegetation, including dead vegetation in ESO1.

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 the PCRZ triggered under Clause 36.03-1 as the proposed use does not meet the Section 1 (Permit not required) condition requiring the use to be conducted by or on behalf of a public land manager or Parks Victoria.
- 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).
- 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 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 36.04 (Road Zone)

Planning approval will be required for:

- Use of land for a utility installation in the RDZ1 as it is specified as a Section 2 (Permit required) use in Clause 36.04-1. Planning approval will not be required for the use of land for a minor utility installation in the RDZ1 in accordance with the general exemption in Clause 62.01 (Uses not requiring a permit).
- Building and works for a utility installation in the RDZ1 under Clause 36.04-2 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 RDZ1 in accordance with the general exemption in Clause 62.02-1.

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 buildings or works located more than 100 m from Murray River and 60 m from any other waterway, wetland or lake.
- Removal, destruction or lopping of any vegetation in the ESO1 under Clause 42.01-2 unless an exemption in Clause 42.01-3 applies.

Clause 42.02 (Vegetation Protection Overlay)

Planning approval will be required for:

- Removal, destruction or lopping of any native vegetation in the VPO1 under Clause 42.02-2 unless an exemption in Clause 42.02-3 applies or the 'works are undertaken by Swan Hill Rural City, a government department or a public authority for municipal purposes, stream improvement, drainage, channel repairs, flooding regulation, erosion control, water supply, sewerage supply, telecommunications or minor utility installation'.

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. Most relevantly under the schedule, no planning approval will be required for buildings and works in the LSIO for earthworks that do not raise ground level topography by more than 300 millimetres.

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.

Clause 52.29 (Land Adjacent to A Road Zone, Category 1, or A Public Acquisition Overlay for A Category 1 Road)

Planning approval will be required:

- To construct works that involve the creation and / or alteration of access to the Murray Valley Highway, which is in RDZ1 and managed by Regional Roads Victoria. This would likely be limited to maintenance of any access tracks intersecting with the Murray Valley Highway.

4.7 Referral and notice requirements

Table 4.9 lists the referral and notice requirements that apply to the project in accordance with the relevant provisions of the planning scheme.

Table 4.9: Referral and notice requirements

Planning scheme clause	Type of application	Referral authority name / type ³
Clause 66.02 (Use and development referrals)		
Clause 66.02-2 Native vegetation	<p>An application to:</p> <ul style="list-style-type: none"> 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). Remove, destroy or lop native vegetation if a property vegetation plan applies to the site. Remove, destroy or lop native vegetation on Crown land which is occupied or managed by the responsible authority. 	Secretary to the DELWP (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i>) as a recommending referral authority
Clause 66.03 (Referral of permit applications under other state standard provisions)		
Clause 44.04-7 (LSIO)	An application under the LSIO outside the waterway management district of Melbourne Water Corporation.	Relevant floodplain management authority (Mallee CMA) as a recommending referral authority.
Clause 52.29	An application to create or alter access to, or subdivide land adjacent to, a road under the <i>Road Management Act 2004</i> , land owned by the Roads Corporation for the purpose of a road, or land in a PAO if the Roads Corporation is the acquiring authority for the land, subject to exemptions specified in the clause	Roads Corporation (Regional Roads Victoria) as a determining referral authority.

³ 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.

Recommending referral authority: 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.

Planning scheme clause	Type of application	Referral authority name / type ³
Clause 66.04 (Referral of permit applications under local provisions)		
Clause 4.0 of Schedule 1 to Clause 42.01 (ESO)	Any application for development and/or works within: <ul style="list-style-type: none"> 30 m of a Goulburn Murray Water channel or drain, Goulburn Murray Water land or Infrastructure asset. 60 m of a lake or waterway 	Goulburn-Murray Water as a determining referral authority.
	<ul style="list-style-type: none"> 100 m of the Murray River 	Goulburn Murray Water as a determining referral authority. Secretary to DELWP as a determining referral authority.
	<ul style="list-style-type: none"> 50 m of any public land managed by the Department of Sustainability and Environment (now DELWP) 	Secretary to DELWP as a determining referral authority.
Clause 66.05 (Notice of permit applications under state standard provisions)		
Clause 67.02	An application for a permit which, except for the provisions of Clause 67, would be made to the Minister in accordance with section 96 of the Act ⁴ . This does not apply to an application for a sign or advertisement, or to remove, destroy or lop native vegetation under Clause 52.17 of this scheme.	The Secretary to the Department administering the <i>Flora and Fauna Guarantee Act 1988</i> .
Clause 67.03	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.	The Secretary to the Department administering the <i>Flora and Fauna Guarantee Act 1988</i> .
Clause 66.06 (Notice of permit applications under local provisions)		
Clause 4 of Schedule 1 to Clause 42.02 (VPO)	An application for removal of native vegetation: <ul style="list-style-type: none"> In an area of high or very high conservation value under the Victorian Native Vegetation Management: A Framework for Action, 2002. If the native vegetation is identified as threatened flora and habitat or providing habitat for threatened fauna under the <i>Flora and Fauna Guarantee Act 1988</i>. If the native vegetation is identified in a depleted, endangered or vulnerable ecological vegetation 	Secretary to DELWP.

⁴ Section 96 of the *Planning and Environment Act 1987* applies where a responsible authority would be seeking to obtain a permit from itself, or any person would be seeking to obtain a permit from a responsible authority for use or development on land owned, occupied or managed by the same responsible authority. While Clause 67 exempts all types of use or development from the requirement to actually obtain a permit from the Minister in accordance with Section 96, the notice provisions of Clause 67.02 and Clause 67.03 still apply to permit applications in the circumstances described in Section 96 of the Act.

Planning scheme clause	Type of application	Referral authority name / type ³
	<p>class identified in the Department of Sustainability and Environment ecological vegetation communities mapping.</p> <ul style="list-style-type: none"> ▪ If the area of native vegetation to be removed is 4,000 square metres or greater. ▪ If the native vegetation is within 50 metres of any public land managed by the Department of Sustainability and Environment. ▪ If the native vegetation is within 100 metres of the Murray River. 	

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 strategies and policies

A review of relevant regional strategies that apply to the area of investigation is provided in Table 4.10.

Table 4.10: Relevant regional strategies

Regional strategy	Purpose	Key relevance
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"> ▪ To maintain and enhance long term land productivity, while also conserving the environment ▪ To ensure that the quality of the state's land and water resources and associated plant and animal life are maintained and enhanced ▪ To establish processes that can be used to assess the condition of the state's land 	<p>The Murray River and Burra Creek are 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"> ▪ Altered flow regimes; ▪ Salinity; ▪ Invasive plants and animals; ▪ Recreational activities; and ▪ Adjacent land use practices. <p>Major Mitchell Lagoon located about 1.3 km north east / downstream of Burra</p>

Regional strategy	Purpose	Key relevance
	<p>and water resources and the effectiveness of land protection measures</p> <ul style="list-style-type: none"> To establish processes to encourage and support participation of landholders, resource managers and other members of the community in catchment management and land protection. <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>Creek is also identified as a 'priority wetland asset' in the Mallee RCS.</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> <ul style="list-style-type: none"> Sets regional goals for waterway management that align with the Mallee RCSs broader objectives Identifies high value waterways and, from these, determines a subset which are a priority for management over the eight year planning period Details strategic work programs for priority waterways to guide investment over the eight year period Identifies the roles and responsibilities of regional stakeholders in the implementation of these work programs Establishes principles to guide the implementation of a seasonally adaptive approach to annual delivery processes. 	<p>The project is located in the Burra Waterway Management Unit (WMU) in the WMS.</p> <p>The WMS indicates stream condition at Burra Creek North and Burra Creek South is 'Poor'.</p> <p>The project contributes to a number of management outcomes and activities for the Burra WMU, including increasing the delivery of watering regimes which meet environmental objectives by:</p> <ul style="list-style-type: none"> Replacing bridges with regulators (maintaining vehicle access) along Burra Creek Installing regulators and raising vehicle tracks at north-end of Burra Creek Modifying impediments to flow due to Mannagarzo Channel at Burra Creek Delivering water to Macredie Island Establishing landholder management agreements for the delivery of water to private land.
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 FMW applies the policies, actions and accountabilities outlined in the Victorian Floodplain Management Strategy, including:</p>	<p>The project is included in the Burra 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</p>

Regional strategy	Purpose	Key relevance
	<ul style="list-style-type: none"> Applying a regional assessment of flood risks across the region Identifying potential actions to mitigate identified flood risks Documenting regional priorities for the next three years and associated responsibilities, timeframes and costs Establishing a monitoring and evaluation framework to determine the success of implementing the Strategy Providing the framework for collaboration with cross boundary stakeholders (regional and state) for the management of floodplains and flood events. 	<p>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	These guidelines provide a comprehensive guide for use in the process of assessing and approving irrigation development applications.	Although the project does not involve an irrigation development, the project has potential to impact on existing irrigation supply infrastructure. As such, consideration should be given to ensuring the proposed works do not impact on the capacity for affected irrigation development to comply with these guidelines.
Mallee Dryland Sustainable Agriculture Strategy 2017-23	The Mallee Dryland Sustainable Agriculture Strategy aims to strengthen the future of agriculture by optimising productivity through improving on-farm resilience and enhancing collaboration between stakeholders, while also addressing current threatening processes. This strategy focuses on private land only within the Mallee agricultural landscape.	<p>Parts of the proposed inundation area are located on land used for dryland agriculture.</p> <p>The project should consider potential risks to the sustainability of dryland agriculture in proposed inundation areas, particularly in relation to actions under the Strategy's Pests, Diseases and Weeds theme such as seeking to collaborate and strengthen partnerships to manage weeds and pest animals on public and private land.</p>
Mallee Natural Resource Management Plan for Climate Change 2016	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>The project is located in Catchment Asset 11: Murray River and Floodplain: Nyah to Robinvale.</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> <p>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</p>

Regional strategy	Purpose	Key relevance
		<p>aimed at maintaining ecological capacity into the future.</p> <p>Re-evaluation of regional catchment priorities based on climate projections has reinforced environmental watering as a high priority action for river and wetland assets.</p>

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 consent of the Murray River Council under clause 126A of the State Environmental Planning Policy (Infrastructure) 2007. 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 State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP (NSW)).

The proposed works at Burra Creek involve installing temporary pump stations at Regulator B4 and Spillway 4. The pads for the pump stations would be located in Victoria and the suction lines would extend into the Murray River in NSW. The proposal also involves constructing a drop structure downstream of Regulator B1 that would be within NSW and 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 suction lines for the temporary pump stations would be used to transport water and would be part of a water reticulation system (clause 125(5)(e)) they are permissible with development consent due to the application of clause 126A. The drop structure is an environmental management work (clause 125(5)(k)) so is also part of a water reticulation system and is permissible with consent under clause 126A.

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

A development application would need to be submitted to the Murray River 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 Murray River 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"> ▪ 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. ▪ If the development would affect boating safety consultation with the NSW Roads and Maritime Services is required.
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"> ▪ 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.

Clause in the MREP	Relevance to the project
	<ul style="list-style-type: none"> 13(8) – Desnagging operations (including snag maintenance). This relates to any work to move or remove trees or woody debris from the water of the River Murray. 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 levees, channels and mounds) and which are likely to affect the hydrology of the River Murray system. <p>This clause lists consultation requirements and clause 11 details how that consultation is to be undertaken.</p>

5.3 Wakool Local Environmental Plan 2013

The project at Burra Creek is located on land that is zoned W1 Natural Waterways under the Wakool Local Environmental Plan 2013 (Wakool LEP). Environmental protection works are the only activity that is permitted without development consent within the W1 zone.

Activities that are permitted with consent in the W1 zone are Aquaculture; Emergency services facilities; Environmental facilities; Information and education facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities.

Activities are prohibited in the W1 zone if they are not permissible with consent or without consent.

A water reticulation system is prohibited in the W1 zone because the Wakool LEP does not enable this activity to be undertaken either with consent or without consent in this zone. Despite this, a water reticulation system (including the drop structure and suction lines for the temporary pump station) is permissible with consent in the W1 zone due to the application of clause 126A of the Infrastructure SEPP (NSW) (refer to section 5.2.1). This is because the Infrastructure SEPP (NSW) prevails over the Wakool LEP.

The suction line for the temporary pump station would not be permanent infrastructure and would be installed only when the pumps are operating, which is understood to be for about a 2-3 month period. Under clause 2.8(2) of the Wakool LEP, despite any other provisions of the LEP, development consent may be granted for development on land in any zone for a temporary use for a maximum period of 28 days (whether or not consecutive days) in any period of 12 months. This clause does not apply to the project because the temporary pumps would operate for more than 28 days in any period of 12 months. If clause 2.8(2) did apply, it would have the effect of enabling Council to issue development consent. This would not affect the planning pathway because development consent is required under clause 126A of the Infrastructure SEPP (NSW).

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

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

Clause in the Wakool 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
6.2 – Flood Planning	The project would be undertaken on flood liable land. The clause lists matters that Council must consider before granting development consent on land that is flood liable.
6.3 – Terrestrial Biodiversity	This clause applies to land identified as 'Biodiversity' on the Terrestrial Biodiversity Map that is part of the LEP. The project is located on land that is mapped as

Clause in the Wakool LEP	Relevance to the project
	biodiversity on this map. This clause lists matters that Council must consider before granting consent to development on land mapped as biodiversity.
6.4 – Riparian land and watercourses	This clause applies to land identified as 'Watercourse' on the Watercourse Map that is part of the LEP, and is within 40 metres of the top of the bank of that watercourse. The project is located on land that is mapped as a watercourse on this map. This clause lists matters that Council must consider before granting consent to development on land mapped as a watercourse.
6.5 – Wetlands	This clause applies to land identified as 'Wetland' on the Wetland Map that is part of the LEP. The project is located on land that is mapped as a wetland on this map. This clause lists matters that Council must consider before granting consent to development on land mapped as a wetland.
6.7 – 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.

6. Potential impacts and mitigation

A summary of potential land use related impacts and proposed mitigation measures is provided in Table 6.1. Potential land use related impacts associated with the project are generally predicted to be associated with:

- Temporary disruptions to access to private land and infrastructure, recreational areas and commercial activities (apiary) during construction and managed environmental watering
- Damage or losses associated with inundation of private land and infrastructure during managed environmental watering events.

To evaluate the likelihood and consequence of these potential impacts, and determine the level of risk, further modelling of the extent, frequency and duration of inundation for the proposed operating scenarios based on the latest design is required along with further engagement with potentially affected land and asset owners.

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

Potential impacts	Proposed mitigation measures
Construction phase	
Removal of vegetation (within VPO1) and temporary loss of land for farming on a small area of private land for establishment of Construction Laydown Area (Regulator B2 SE).	<p>Avoid disturbance of land containing native vegetation within the VPO1 due to potential conflicts with the purpose and objectives of the VPO1.</p> <p>Engage with private landowners and ensure construction management plans include appropriate measures to minimise disruption to ongoing farming activities and avoid permanent degradation of farming land.</p> <p>Obtain agreements with private landowners prior to commencement of works.</p>
Possible disruptions to access to private infrastructure (e.g. irrigation pump sites and channels) during construction, including during maintenance of access tracks (Note: No access tracks proposed to be used during construction of the project appear to provide sole access to residential dwellings).	<p>Conduct further planning and modelling to predict access limitations during construction and identify opportunities to maintain or provide alternative access, where practicable.</p> <p>Engage with private land and infrastructure owners 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>
Possible disruptions to recreational access to the Murray River and other parts of the River Murray Reserve during construction.	<p>Conduct further planning and modelling 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>Engage with Parks Victoria to ensure construction management plans include appropriate measures to manage access disruptions within the River Murray Reserve.</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>

Potential impacts	Proposed mitigation measures
Possible disruption to access to water along some sections of Burra Creek during construction of in-stream works.	Engage with potentially affected water frontage licence and water licence holders to determine potential impacts and associated mitigations, and provide adequate notification prior to any potential disruptions to creek flow during construction.
Displacement of at least one apiary site 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 temporary amenity effects (increased noise, dust etc) on residents in close 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.
Operational phase	
Inundation of private land zoned for farming purposes during managed inundation events causing possible damage or loss of crops, or property improvements.	Conduct further modelling of proposed operating scenarios to confirm extent, frequency and duration of inundation potentially affecting private infrastructure based on the latest design. 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.
Possible damage to private pump infrastructure within or adjacent to Burra Creek and / or disruptions to access to private infrastructure during managed inundation events.	Conduct further modelling of proposed operating scenarios to confirm extent, frequency and duration of inundation potentially affecting private infrastructure based on the latest design. 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 River Murray Reserve 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 planning and modelling to predict access limitations during planned operating scenarios and in consultation with the public land manager (Parks Victoria), identify opportunities to maintain or provide alternative access, where practicable. Liaise with Parks Victoria as the public land manager to ensure operating plans include appropriate measures to avoid or minimise access disruptions during managed inundation events. 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 for an increase in the frequency and / or duration of flooding within sections of Burra Creek located in the Murray Valley Highway road reserve (Road Zone, Category 1)	Conduct further modelling of proposed operating scenarios to confirm extent, frequency and duration of inundation within the Murray Valley Road corridor based on the latest design.

Potential impacts	Proposed mitigation measures
compared to existing conditions during managed inundation events, which may affect functioning of the road.	Engage with Regional Roads Victoria to avoid or minimise potential impacts of managed inundation on the functioning of the Murray Valley Highway. Obtain any necessary permits or consents from Regional Roads Victoria.
Possible inundation or disruption to access to up to five apiary sites during managed inundation events.	Conduct further modelling of proposed operating scenarios to confirm extent, frequency and duration of inundation of apiary sites or associated access, based on the latest design. Engage with apiary licence holders in conjunction with Parks Victoria as the public land manager, to ensure operating plans include appropriate measures to avoid or minimise disruption to apiary activities during managed inundation events. 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.

In addition to these potential impacts, operation of the proposed works to restore a more natural inundation regime to Burra Creek and associated floodplain, has the potential to generate benefits to recreational users of the River Murray Reserve 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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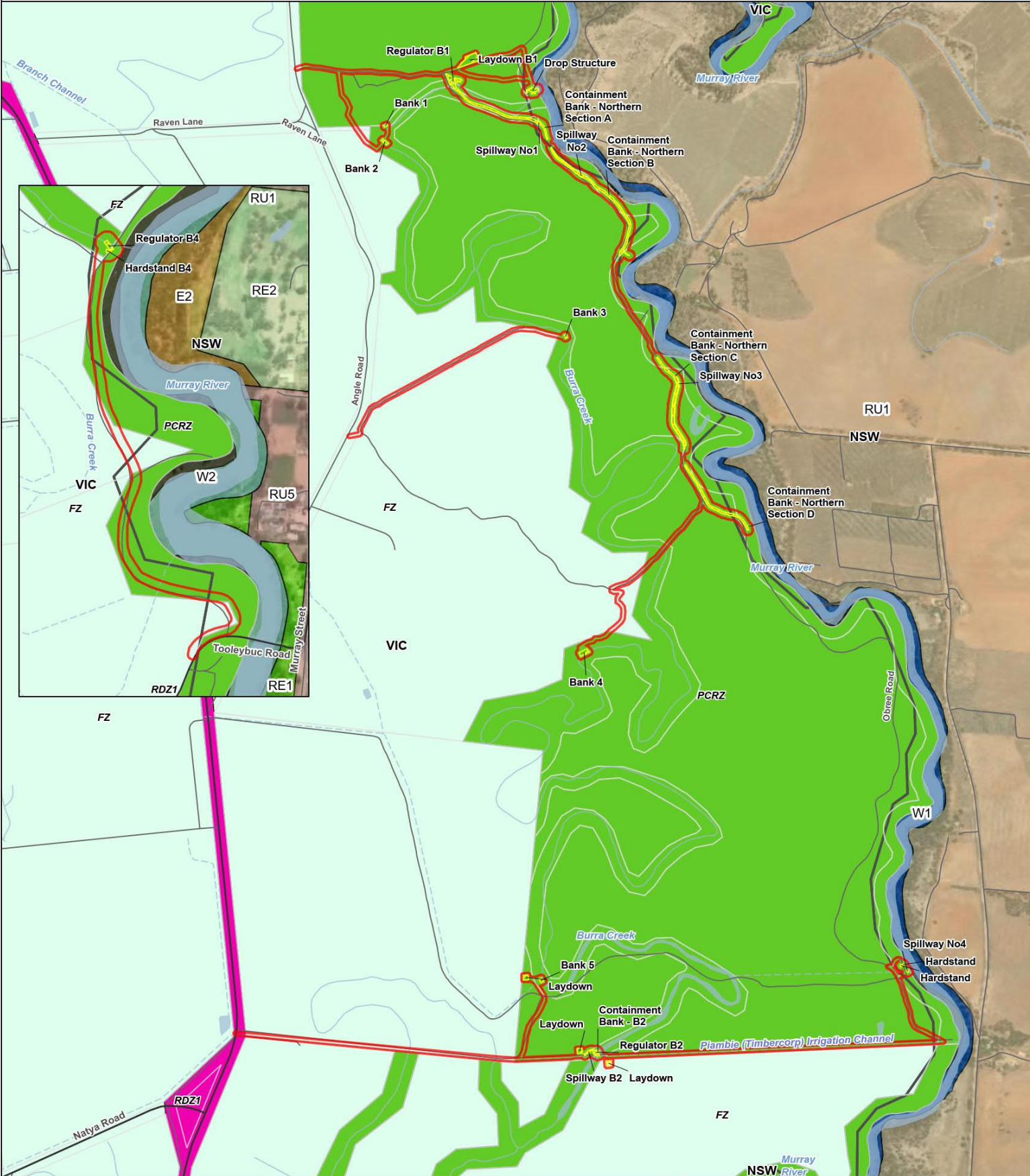
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Appendix A. Planning scheme zone and overlay maps



Legend

Development footprint

Area of Investigation

Rail Station

Railway

Major Road

Minor Road

Channel / Drain

Watercourse Stream

Waterbody

Cadastre

VIC Planning Zones

FZ - Farming Zone

PCRZ - Public Conservation and Resource Zone

RDZ1 - Road Zone Category 1

NSW Land Zoning

RU1 - Primary Production

W1 - Natural Waterways



IS297705

Name: GDA 1994 MGA Zone 55

N

0400800

Metres

DATA SOURCES

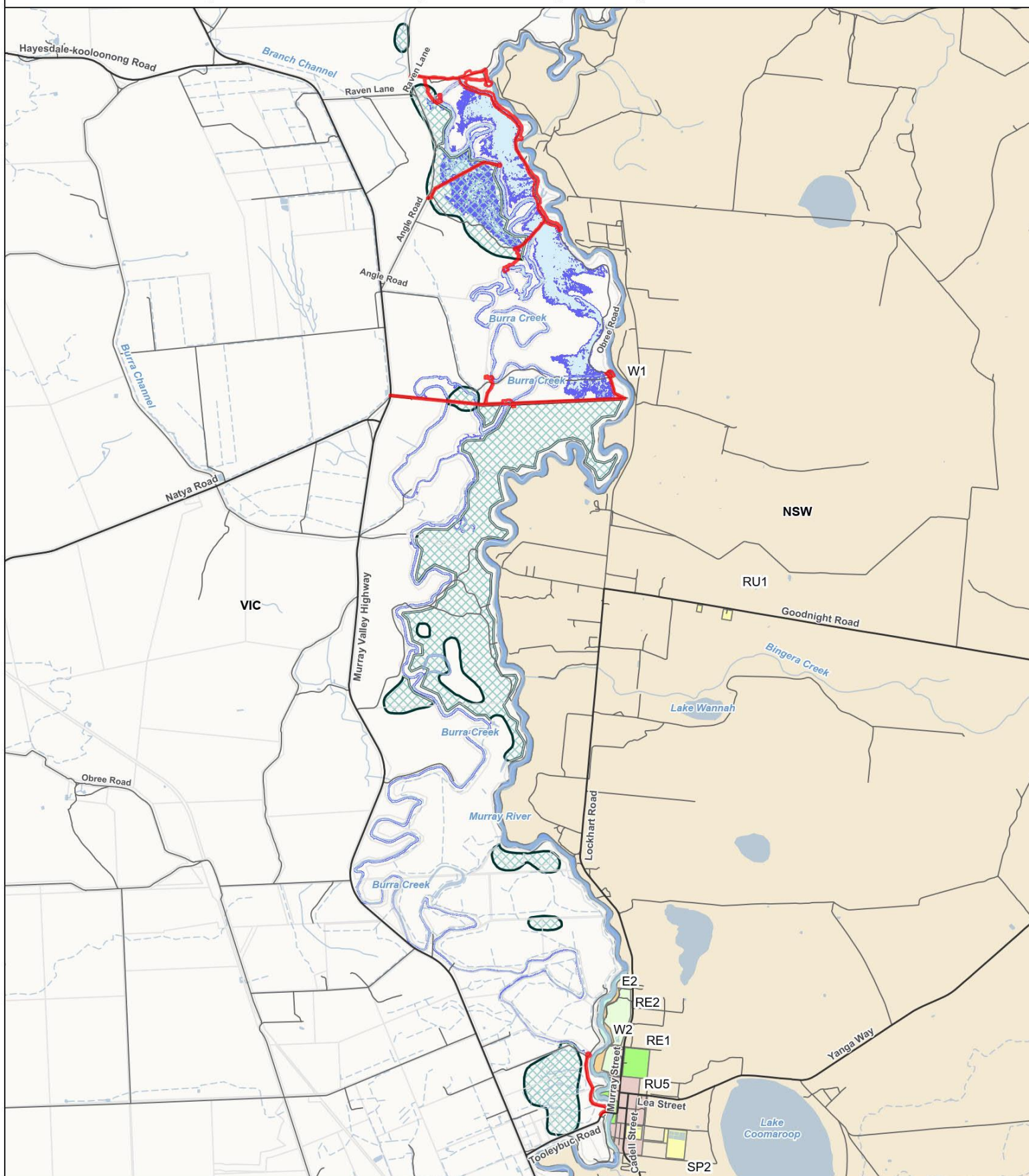
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Legend

Area of Investigation

Inundation Area

Major Road

Minor Road

Channel / Drain

Watercourse Stream

Waterbody

Wetland Swamp

Cadastre

VIC Planning Overlays

VPO - Vegetation Protection Overlay

NSW Land Zoning

E2

RE1

RE2

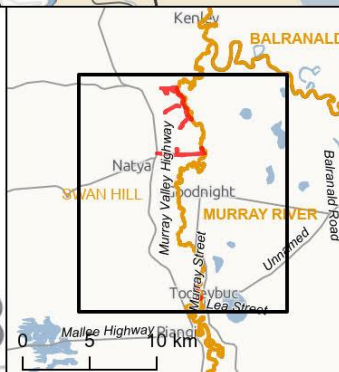
RU1 - Primary Production

RU5

SP2

W1 - Natural Waterways

W2



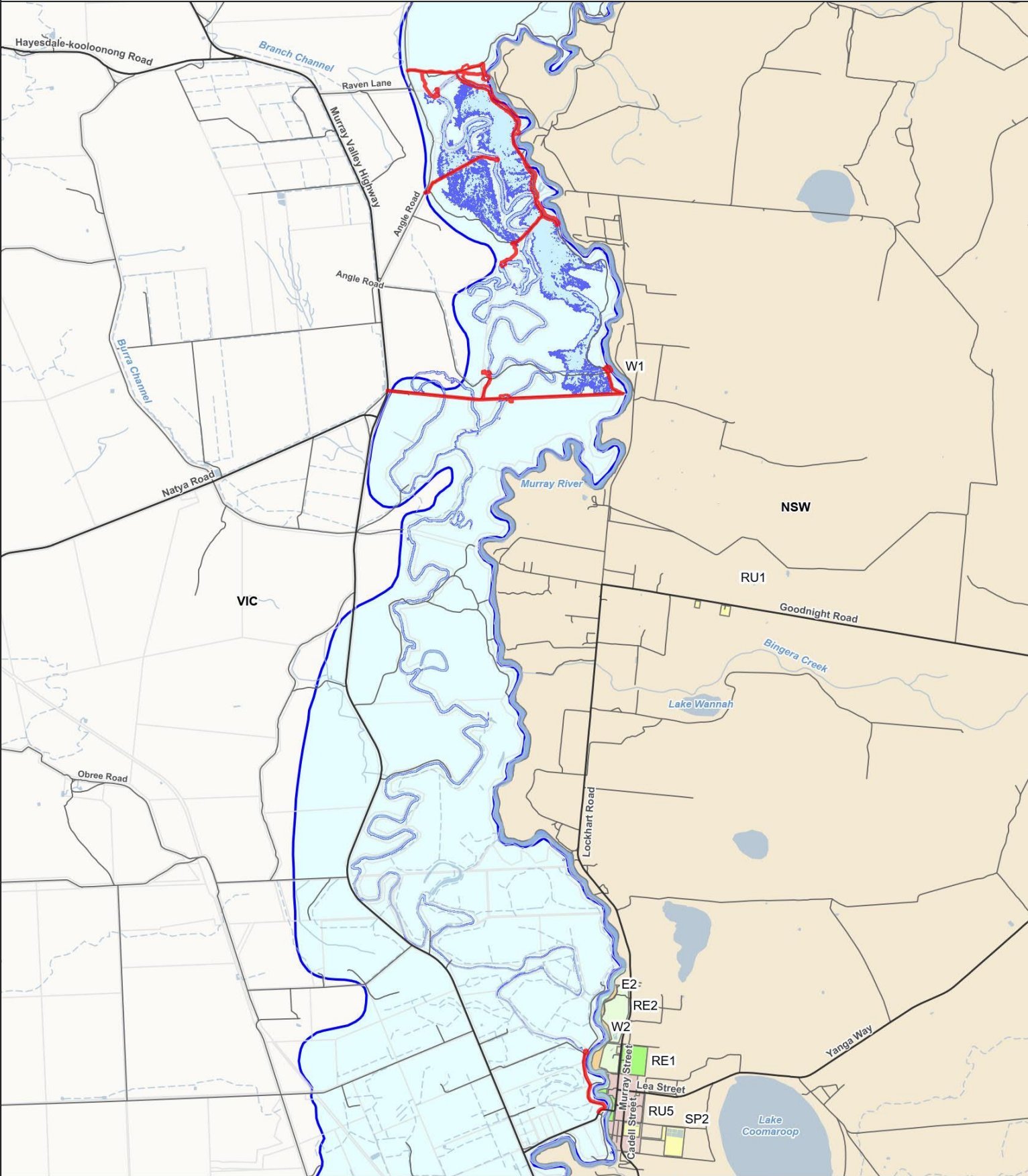
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- Legend**
- Area of Investigation
 - Inundation Area
 - Major Road
 - Minor Road
 - Channel / Drain
 - Watercourse Stream
 - Waterbody
 - Wetland Swamp
 - Cadastre
- VIC Planning Overlays**
- LSIO - Land Subject to Inundation Overlay
- NSW Land Zoning**
- E2
 - RE1
 - RE2
 - RU1 - Primary Production
 - RU5
 - SP2
 - W1 - Natural Waterways
 - W2



IS297752

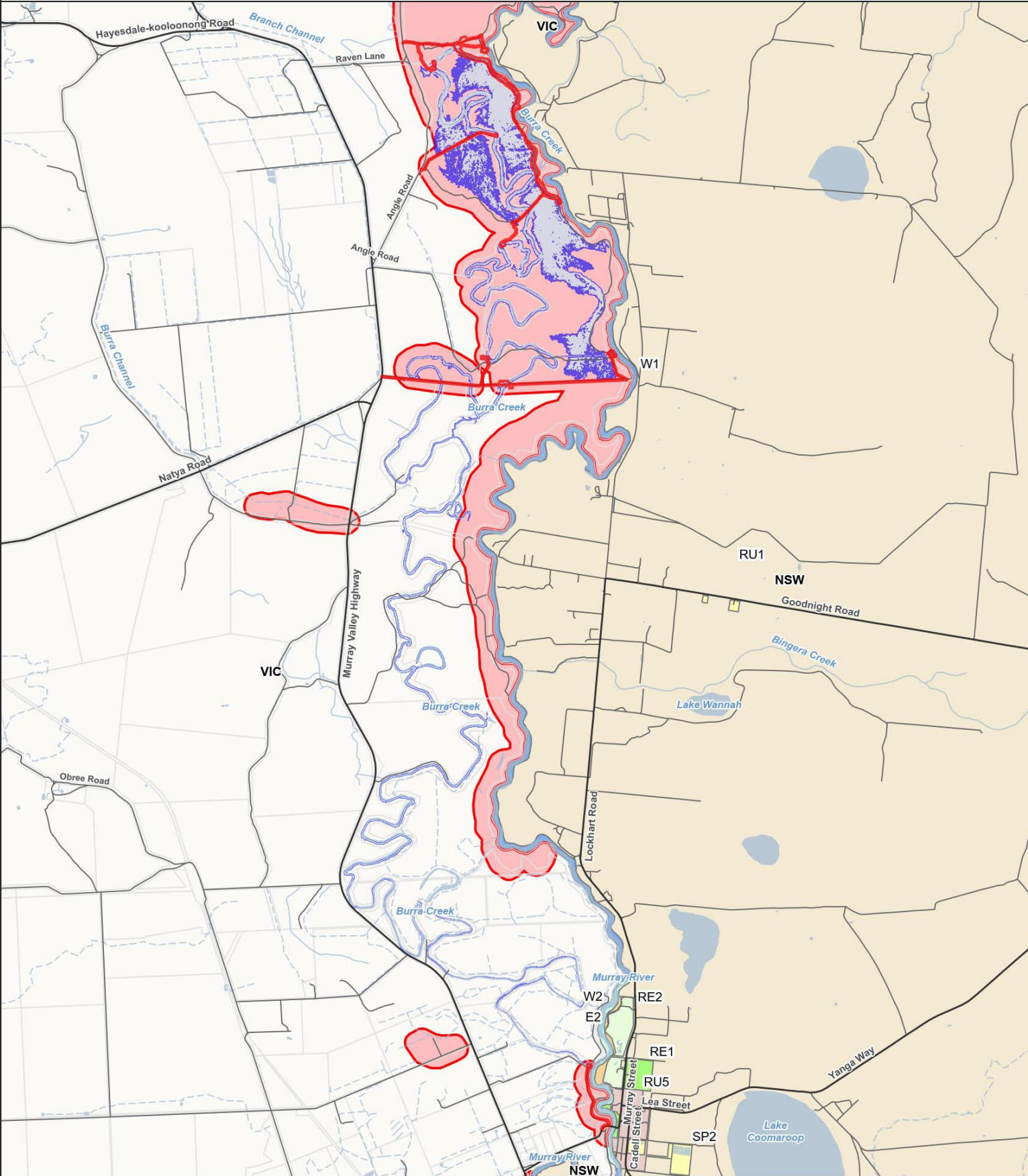
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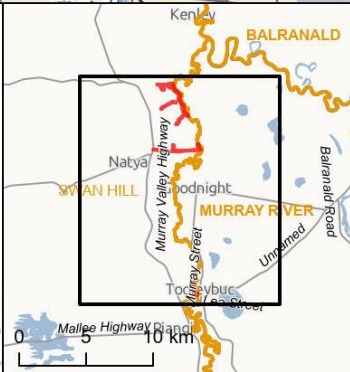
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 - Major Road
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 - Channel / Drain
 - Watercourse Stream
 - Waterbody
 - Wetland Swamp
 - Cadastre
- VIC Planning Overlays**
- BMO - Bushfire Management Overlay
- NSW Land Zoning**
- E2
 - RE1
 - RE2
 - RU1 - Primary Production
 - RU5
 - SP2
 - W1 - Natural Waterways
 - W2



IS297705

Name: GDA 1994 MGA Zone 55

0 1,000 2,000 Metres

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