



ABERGELDIE
COMPLEX INFRASTRUCTURE

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BILLABONG CREEK ENVIRONMENTAL WATER REGULATORS

CONTRACT No. SR00696
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SOIL AND WATER MANAGEMENT PLAN

10 April 2026

REVISION No: 02



WATER



BRIDGES



TRANSPORT



UNDERGROUND



ENERGY



REMEDIATION

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1. DOCUMENT CONTROL

1.1 SOIL AND WATER MANAGEMENT PLAN SIGN OFF

Approval of the Soil and Water Management Plan (SWMP) by the Planning Secretary is a hold point for the commencement of Construction. The SWMP is only valid if reviewed, approved and signed off in accordance with the process documented in Section 10.2. A record of the approval (and re-approval of any revisions) will be maintained Table 1-1. This refers to internal Abergeldie review and approval processes. Planning Secretary approval is required separately in accordance with the Conditions of Approval.

Table 1-1 SWMP Review and Abergeldie Approval Register

FUNCTION	POSITION	NAME	SIGNATURE	DATE
Prepared by	Consultant	Kristen Skewes		10/04/2026
Reviewed by	Abergeldie Environmental Site Representative	Glen Isbester		10/04/2026
Approved by	Abergeldie Project Manager	Balwanth Kondakindi		10/04/2026

1.2 DOCUMENT REVISION STATUS

Each page of this document bears a document name and revision date. The document is uncontrolled when printed. Any changes within this document that modify either the scope or intent of the original document are highlighted in the right margin by a vertical bar (|). When revisions to the document are issued, Table 1-2 will be updated to show the most recent revision level. The revised document will be forwarded to the holders of controlled copies as shown in Table 1-3. Recipients are responsible for destroying or marking “superseded” on the previous revision.

Table 1-2 SWMP Revision Register

DOC ID #	REVISION DATE	AMENDMENT DESCRIPTION
00	27/01/2026	Initial Draft
01	16/03/2026	Client feedback included
02	10/04/2026	ER Comments Addressed

Significant amendments to the SWMP shall be reviewed and re-approved in accordance with SWMP Section 10.2. Some appendices to this plan are revised independently of this SWMP and would not trigger a revision. Controlled versions of these documents will be kept on the Project SharePoint page with all previous revisions marked as “superseded”.

1.3 DISTRIBUTION (CONTROLLED COPIES)

Table 1-3 SWMP Distribution Register

ISSUED TO	COMPANY/POSITION	DATE
Jonas Ball	Client Environmental Manager	10/04/2026

2. INTRODUCTION

2.1 PURPOSE OF SWMP

This Soil and Water Management Plan (SWMP) is a sub-plan of the Construction Environmental Management Plan (CEMP) for the construction of the Billabong Creek Environmental Water Regulators project (the Project) to be delivered for the Department of Climate Change, Energy, the Environment and Water (DCCEEW).

The purpose of this plan is to describe how potential construction impacts on soil and water will be minimised and managed during the construction of the Project.

The CEMP that this SWMP is a part of details environmental management measures, controls, resources and responsibilities required during the Project to comply with all the requirements of relevant legislation, conditions of applicable licences, approvals and permits.

This sub-plan must be implemented for the duration of construction.

The SWMP has been developed in accordance with Abergeldie's Integrated Management System (IMS) processes to address the environmental risks associated with the Project.

2.2 OBJECTIVES OF THE SWMP

The objectives of the SWMP are to:

- Describe, schedule, and assign responsibility for all EIA and approval conditions relevant to soil and water management.
- Minimise leaks and spills from construction activities.
- Maintain existing water quality of surrounding surface watercourses.
- Prevent pollution of surface water as much as possible through appropriate erosion and sediment controls.
- Source construction water from non-potable sources, where feasible and reasonable.
- Reduce the potential for drawdown of surrounding groundwater resources.
- Prevent the pollution of groundwater through appropriate controls.
- Reduce the potential impacts on groundwater dependent ecosystems.
- Address the requirements of DCCEEW Management Guidelines.
- Outline mechanisms for review and improvement of environmental performance of the soil and water management measures for the project.

2.3 SCOPE OF THIS SWMP

The SWMP has been prepared to address the requirements of:

- Environmental planning approval conditions and the Environmental Impact Assessments (EIA).
- Contract Agreements and associated Technical Specifications and Schedules.
- Applicable environmental legislation, regulations (NSW and Commonwealth) and guidelines.
- Abergeldie Integrated Management System (IMS), to meet the requirements of AS/NZS ISO14001.

This SWMP is intended as a working reference, providing line management and employees with a documented resource necessary for them to achieve the objectives of Abergeldie and those of our Client.

The SWMP applies to all works and activities undertaken by the Abergeldie Project team including sub-contractors. It is a requirement that all Project personnel comply with the SWMP and its requirements.

Abergeldie acknowledge that they shall be bound by the Terms and Conditions contained within the Contract.

2.4 TARGETS OF THIS SWMP

The following targets have been established for the management of soil and water impacts during the Project:

- Full compliance with the relevant legislative requirements, EIA, Conditions of Approval and DCCEEW Specifications.
- Meet best practice water quality discharge parameters for all planned discharges from excavations and water quality structures including coffer dams and sumps.
- Manage downstream water quality impacts attributable to the Project (i.e. maintain waterway health by avoiding the introduction of nutrients, sediment and chemicals outside of those permitted by the ANZG (2018) Guidelines).
- Provide training on best practice soil and water management to all construction personnel through site inductions.

2.5 CONDITIONS OF APPROVAL

Conditions of approval (COA) for the Project relevant for the SWMP and listed in Table 2-1.

Table 2-1 CoA for the Project from the Minister for Planning and Public Spaces and where they are addressed within this SWMP.

REF	COA	SWMP DOCUMENT REFERENCE
C13	The CEMP sub-plan for Soil and Water Management must be prepared to incorporate mitigation measures identified in the documents listed in Condition A1 and the following: (a) energy dissipation and stabilisation measures in areas of disturbance and increased flow velocity and/or shear stress (b) geomorphic monitoring of channel form and erosion, and suitable response measures.	Section 8 Environmental Safeguards. Section 9.3 Monitoring and Inspection requirements Dewatering procedure (Appendix A -S4.2) ESCP (Appendix C). WQMP (Appendix E).
C14	The CEMP Sub-plans must state how: (a) the environmental performance outcomes identified in the documents listed in Condition A1 will be achieved; (b) the mitigation measures identified in the documents listed in Condition A1 will be implemented; (c) the relevant terms of this approval will be complied with; and (d) issues requiring management during construction (including any trigger levels and cumulative impacts), as identified through ongoing environmental risk analysis, will be managed through SMART principles. Construction must not commence until the relevant CEMP(s) and CEMP Sub-plans have been approved by the Planning Secretary.	Section 2.2 Objectives of the SWMP Section 5.2 Project EIA & Environmental Planning Approval Section 5.4 Environmental Mitigation Measures Section 8 Environmental Safeguards. Section 9 Implementation & Operation Section 10.2 Continuous improvement. WQMP (Appendix E).
E1	Measures must be implemented to minimise and manage the emission of dust, odour and other air pollutants during Work and Operation.	Section 8 Environmental Safeguards.
E36	Erosion and sediment controls must be installed and maintained, as a minimum, in accordance with the publication <i>Managing Urban Stormwater: Soils & Construction</i> (4 th edition, Landcom 2004) commonly referred to as the 'Blue Book'.	Section 8 Environmental Safeguards and ESCP (Appendix C).
E37	Ensure that all vehicles, motorised plant and equipment leaving the premises do not deposit mud, soil, sand, gravel and any other materials onto public roads.	Section 8 Environmental Safeguards.
E45	The SSI must be designed, constructed and operated so as to maintain the <i>NSW Water Quality Objectives</i> where they are being achieved as at the date of this approval, and contribute towards achievement of the <i>NSW Water Quality Objectives</i> over time where they are not being achieved as at the date of this approval in respect of the SSI contains different requirements in relation to the <i>NSW Water Quality Objectives</i>, in which case those requirements must be complied with. Note: <i>If it is proposed to discharge construction stormwater to waterways, a Water Pollution Impact Assessment will be required to inform licensing, consistent with section 45 of the POEO Act. Any such assessment must be prepared in consultation with the EPA and be consistent with the National Water Quality Guidelines, with the level of detail commensurate with the potential water pollution risk.</i>	Appendix E - WQMP
E46	Works on waterfront land and within watercourses must be carried out with regard to <i>Controlled activities – Guidelines for riparian corridors on waterfront land</i> (DCCEEW, 2025). Note: <i>This includes outlets and watercourse crossings.</i>	Section 8 Environmental Safeguards.

REF	COA	SWMP DOCUMENT REFERENCE
E47	Drainage feature crossings (permanent and temporary watercourse crossings and stream diversions) and drainage swales and depressions must be carried out in accordance with relevant guidelines and designed by a suitably qualified and experienced person.	Section 8 Environmental Safeguards.
E48	Sufficient entitlement must be obtained to account for water take, unless an exemption with reporting requirements applies	Water take recorded in the Water take record template (Appendix H)

3. PROJECT OVERVIEW

3.1 CLIENT

The Billabong Creek Environmental Water Regulators (SSI-50831979) (Part 2A and 2C) project is being undertaken by Abergeldie for DCCEEW.

3.2 PROJECT LOCATION

The Project is situated in rural south-west NSW within Edward River Local Government Area (LGA).

The Hartwood Weir is located about 10 kilometres east of Conargo village. Land in the vicinity of the Project is mostly used for dryland and irrigated cropping and grazing. The closest regional centre to the Project is Deniliquin (about 40 kilometres south-east of Wanganella and 30 kilometres south-west of Conargo). The existing Hartwood Weir is downstream of the Billabong Creek and Forest Creek junction.

WaterNSW manages the land on which Hartwood Weir is located (Lot 1 DP1144789, Lot 2 DP1144789 and Lot 3 DP181995). Downstream of this land includes both private and Crown land. Land on the right bank (eastern side) of the creek is privately-owned agricultural land. Billabong Creek around the weir is a Crown Waterway. The land on the left bank (western side) is Crown Land and includes a Crown License (R92577) and a Crown Enclosure Permit (R30139).

Wanganella Weir (Lot 7004 DP1024203, Lot 7005 DP1024202) is located on Billabong Creek. Wanganella village is located around one kilometre north of the site. The weir contains eleven drop board bays to regulate flows, however the drop boards are no longer in place as they were removed in the 1980s. It now operates as a fixed crest weir with a concrete apron and abutments. The weir was constructed for the Wanganella village water supply. The extent of the weir pool at full supply level upstream of the structure is around 13 kilometres.

The site is part of the Wanganella Recreation Reserve, known to local residents as Wanganella Common. The area is a Crown Reserve (R88408) for the preservation of fauna and for public recreation. It is understood to be managed by Edward River Council. Billabong Creek at this location is a Crown Waterway. Existing access to the site is from the Cobb Highway on the western side of the Creek. Zara Road is located on the eastern side of the creek but there is no formed access track on that side. Zara Road also intersects with another Crown Reserve (R58165). Surrounding land uses include cropping and grazing.

The Hartwood Weir and Wanganella Weir are zoned as RU1 Primary Production under the Conargo Local Environmental Plan (LEP) 2013.

The new Hartwood Regulator will be located immediately downstream of the existing Hartwood Weir. The new Wanganella Regulator will be located immediately downstream of the existing Wanganella Weir. The location of the new regulators and other components of the new infrastructure are shown in Figures 3.1, 3.2, 3.3 and 3.4.

3.3 PROJECT BACKGROUND

The Yanco Creek Modernisation Project (YCMP) is progressing the upgrade of infrastructure to enable smarter use of water in the Yanco Creek system, including Yanco, Billabong, Colombo and Forest Creeks. It encompasses a series of initiatives aiming to improve water management as part of commitments within

the Sustainable Diversion Limit Adjustment Mechanism (SDLAM) program.

The modernisation of the Yanco Creek system aims to:

- create a community and government partnership to maintain and improve flows
- keep the Yanco, Billabong, Forest and Colombo Creeks flowing
- be smart in the use of available water
- modernise ageing infrastructure
- ensure Project benefits for irrigators, town water supplies, native fish, water birds, culture and heritage, and recreational use.

The modernisation focuses on delivering equivalent and/ or improved environment outcomes through infrastructure and smarter use of water. Some of the expected benefits in the Yanco, Billabong, Forest, Colombo creeks and Murrumbidgee River system include:

- more efficient delivery of environmental water
- improved fish passage (e.g. new fishways)
- improved knowledge and understanding of First Nations cultural heritage
- improved connection to Country
- an economic, training and employment boost for local communities
- improved levels of service for water users (e.g. more flexible irrigation scheduling)
- a reduced risk of further non-strategic water market purchases from the southern-connected Basin to meet Basin Plan commitments.

The Yanco Creek modernisation is also progressing the construction of works that will restore fish passage along creeks and enable native fish to safely negotiate barriers to movement.

The Hartwood Regulator and Wanganella Regulator are sub-projects of the YCMP program.

3.4 PROJECT DESCRIPTION

The Project involves replacing two existing weirs, Hartwood Weir and Wanganella Weir, along Billabong Creek with new regulators including fishways.

The core structures of the Hartwood and Wanganella regulators would include:

- concrete piers with maintenance bulkhead slots
- automated layflat gates across the crest of the structure to assist with flow management and downstream fish passage

- a low turbulence ‘keyhole’ type vertical slot fishway with allowances for variable headwater to provide upstream fish passage
- automated sidewinder gates within the vertical slot fishway to allow for variable headwater conditions
- fixed concrete crests on the opposite side of the gates to the vertical slot fishway
- concrete apron downstream of the structure
- concrete wingwalls upstream and downstream of the structure
- access from a trafficable deck for maintenance
- walkway grating over gates to facilitate operations and maintenance
- crushed rock maintenance pads, access and turnaround areas adjacent to the structure
- rock beaching upstream and downstream of structure for erosion protection
- control house
- sheet pile cut-off walls beneath the structure
- fencing of the structures to prevent public access
- Supervisory Control and Data Acquisition (SCADA) control system.

The Project will also involve the following elements:

- Power supply to the regulators will be provided by a mix of underground and overhead electricity cables connecting the structures to the grid.
- Access to the regulators will require permanent tracks for maintenance and some additional tracks to support construction. Track upgrades include a new drainage culvert at Hartwood.
- The existing Forest Creek block bank is in a degraded condition. This will be replaced with a similar earthen structure in the same location.

The Wanganella flood bypass channel will be constructed to reduce potential upstream flooding impacts from the Wanganella Regulator. The channel will enable flood waters to drain between the billabongs in the Wanganella Reserve during flood events.

An existing privately owned borrow pit on Lot 56 DP756322 near Hartwood Weir will be extended to provide material for the construction of Hartwood Regulator and Forest Creek block bank.

The local context and key features of the Hartwood regulator are shown in Figures 3.2 and 3.3 below (reproduced from EIS DCCEEW / 3Rivers, 2024). The key features of the Wanganella regulator are shown in Figure 3.4 below (reproduced from EIS DCCEEW / 3Rivers, 2024).

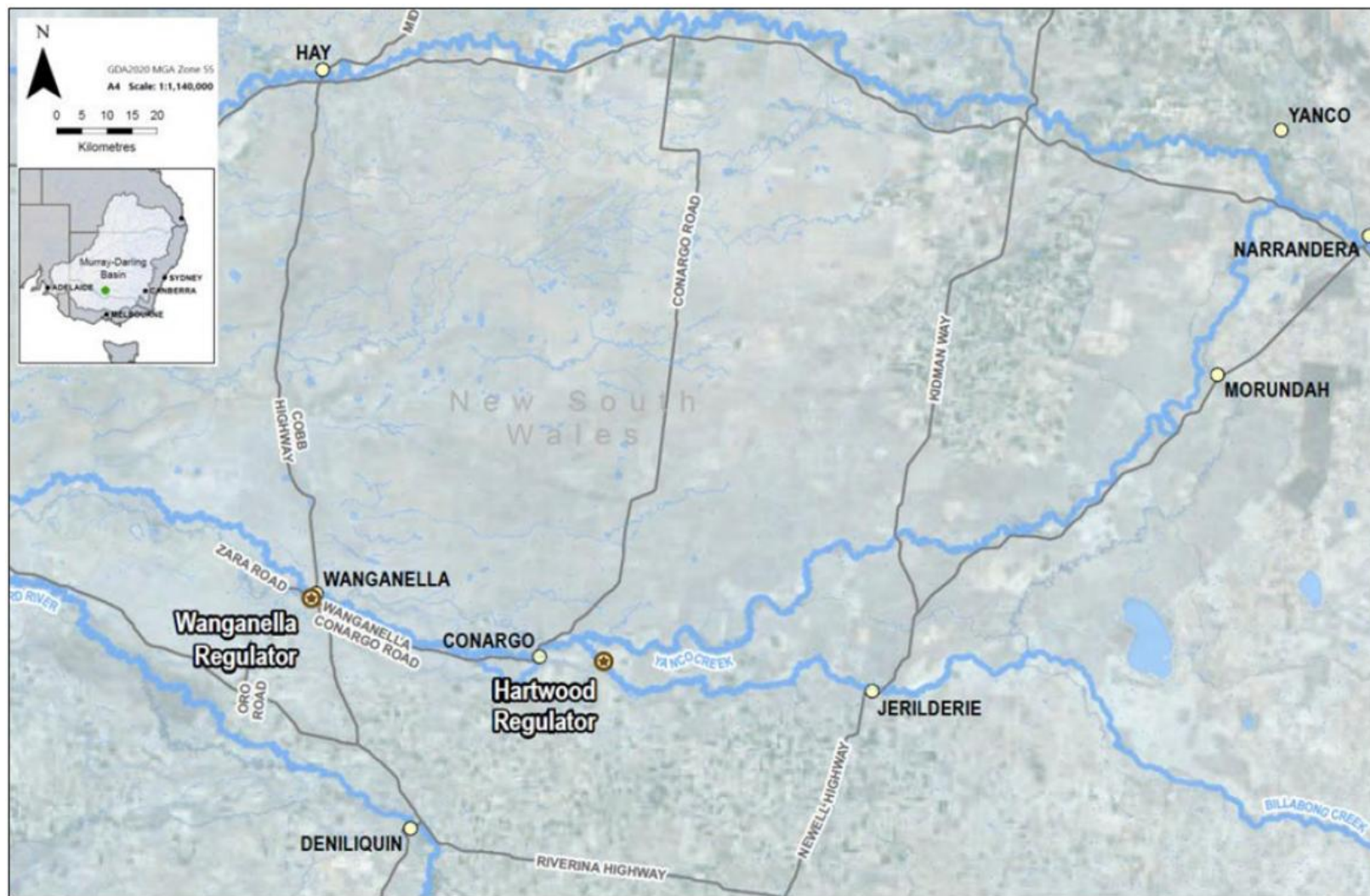


Figure 3.1 Regional context map (Source: EIS (DCCEEW / 3 Rivers 2024))

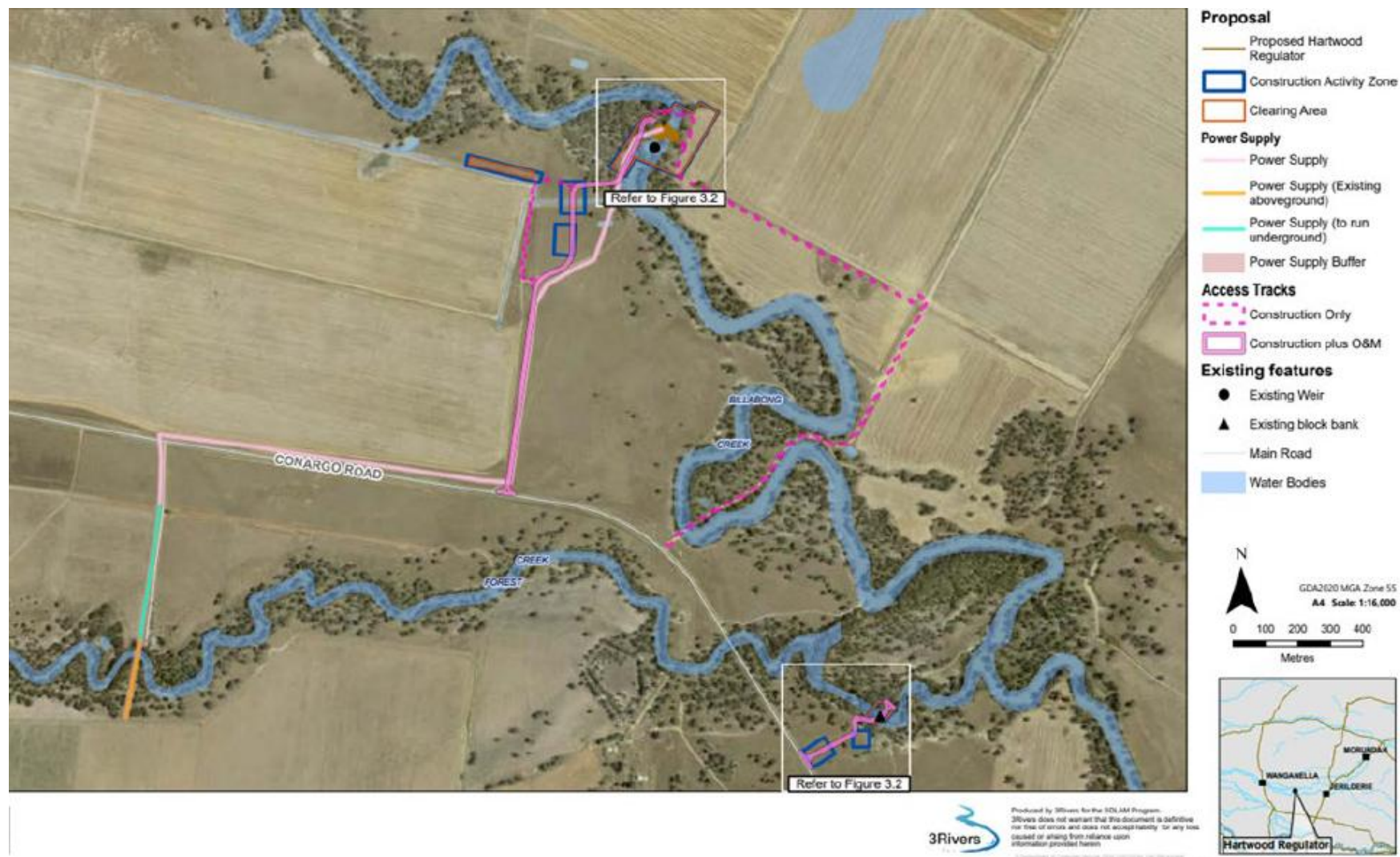


Figure 3.2 Local context map – Hartwood Regulator (Source: EIS (DCCEW / 3 Rivers, 2024))

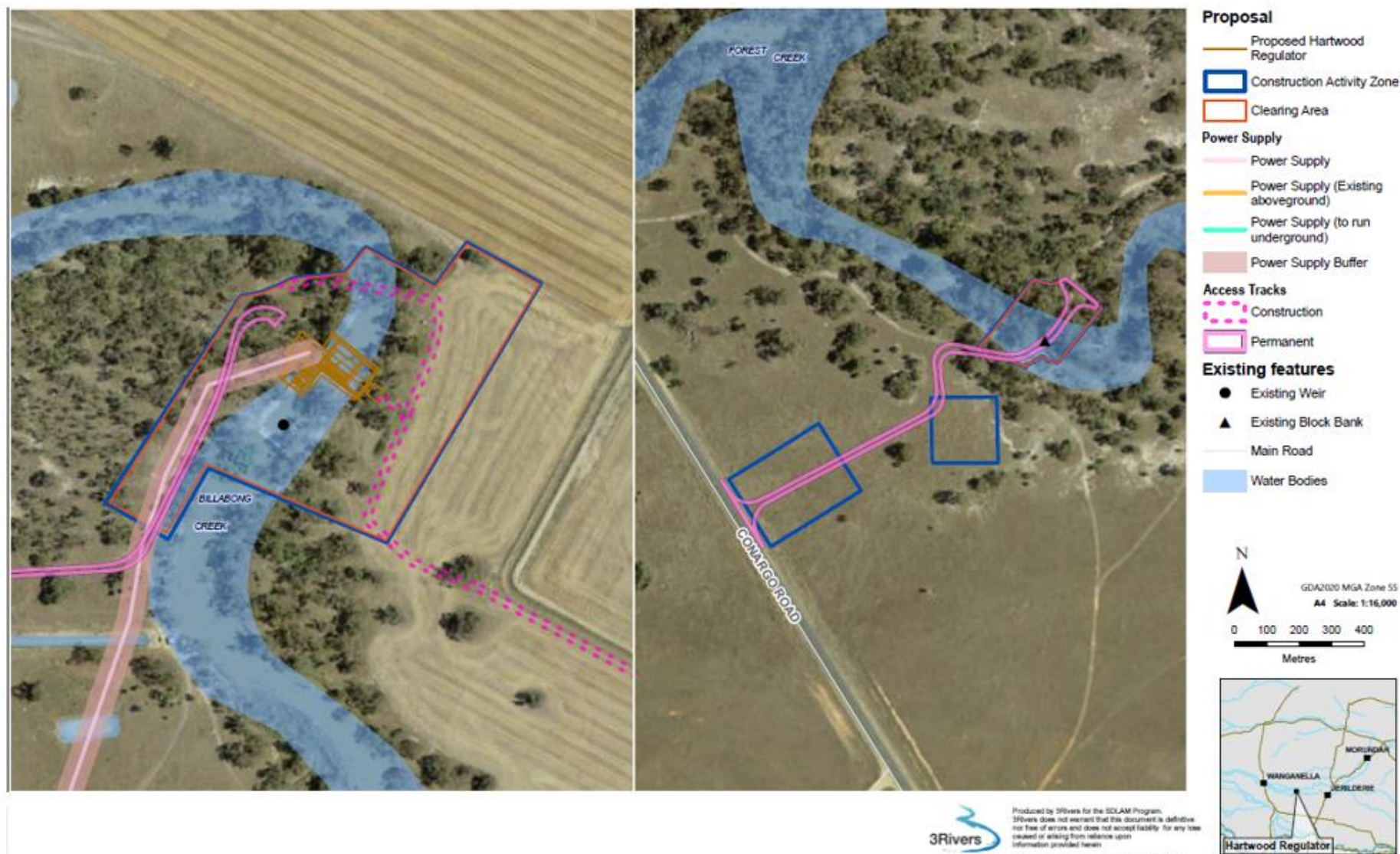


Figure 3.3 Location of Hartwood regulator and key features (Source: EIS (DCCEEW / 3 Rivers 2024))

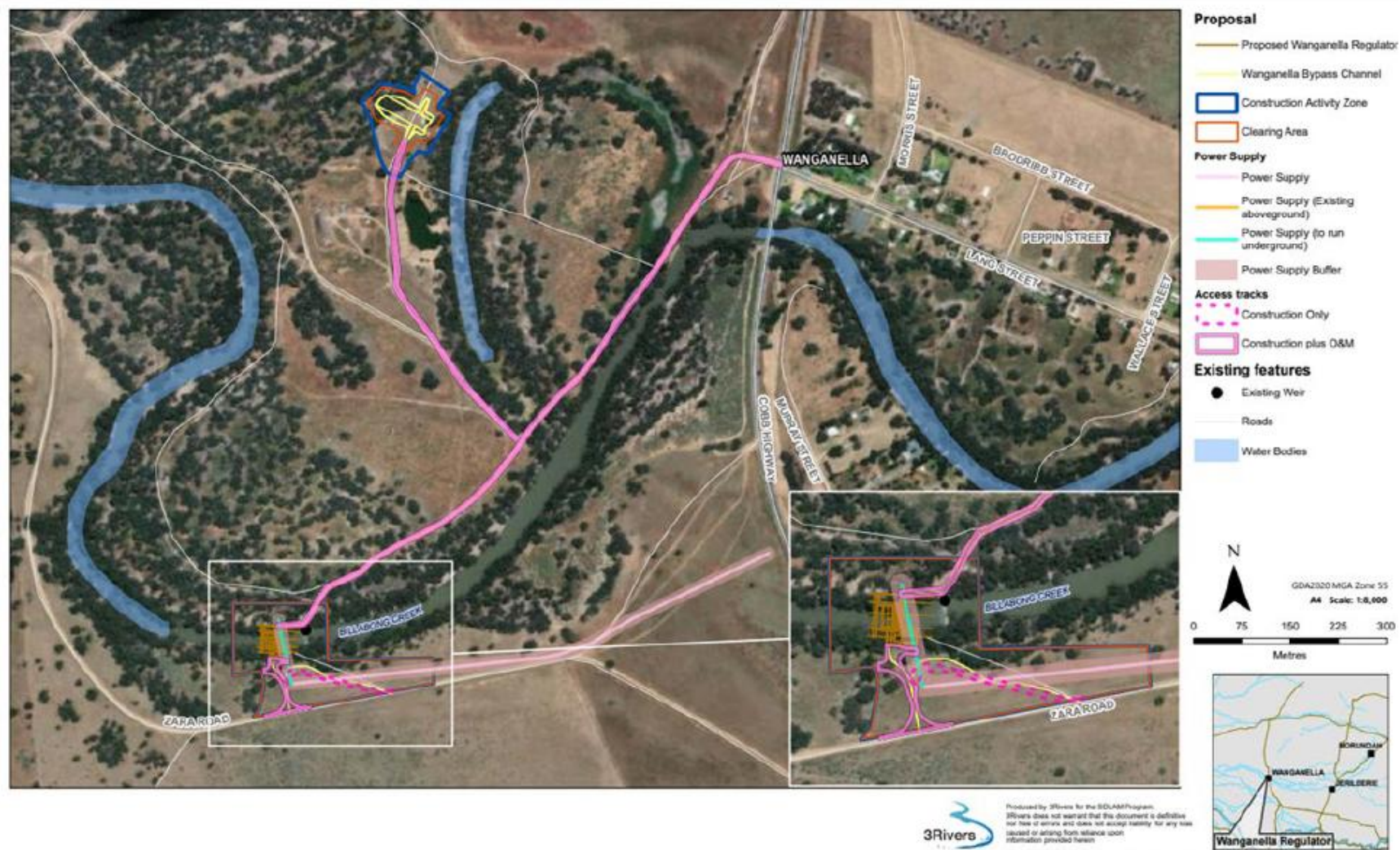


Figure 3.4 Location of Wanganella Regulator and Key Features (Source: EIS (DCEW / 3 Rivers, 2024))

4. ENVIRONMENTAL MANAGEMENT PLANNING

4.1 INTEGRATED MANAGEMENT SYSTEM

Abergeldie Complex Infrastructure operates an Integrated Management System (IMS), comprising of policies, procedures, forms, management plans and proformas that define the minimum requirements by which Abergeldie functions. Abergeldie Procedure *BMS000 Management System Overview*, provides a detailed description of the Abergeldie IMS.

The IMS is Third Party certified against Australia and New Zealand ISO 14001:2015 – Environmental Management Systems, ISO 45001:2018 Occupational Health and Safety Management Systems and ISO 9001: 2015 Quality Management Systems.

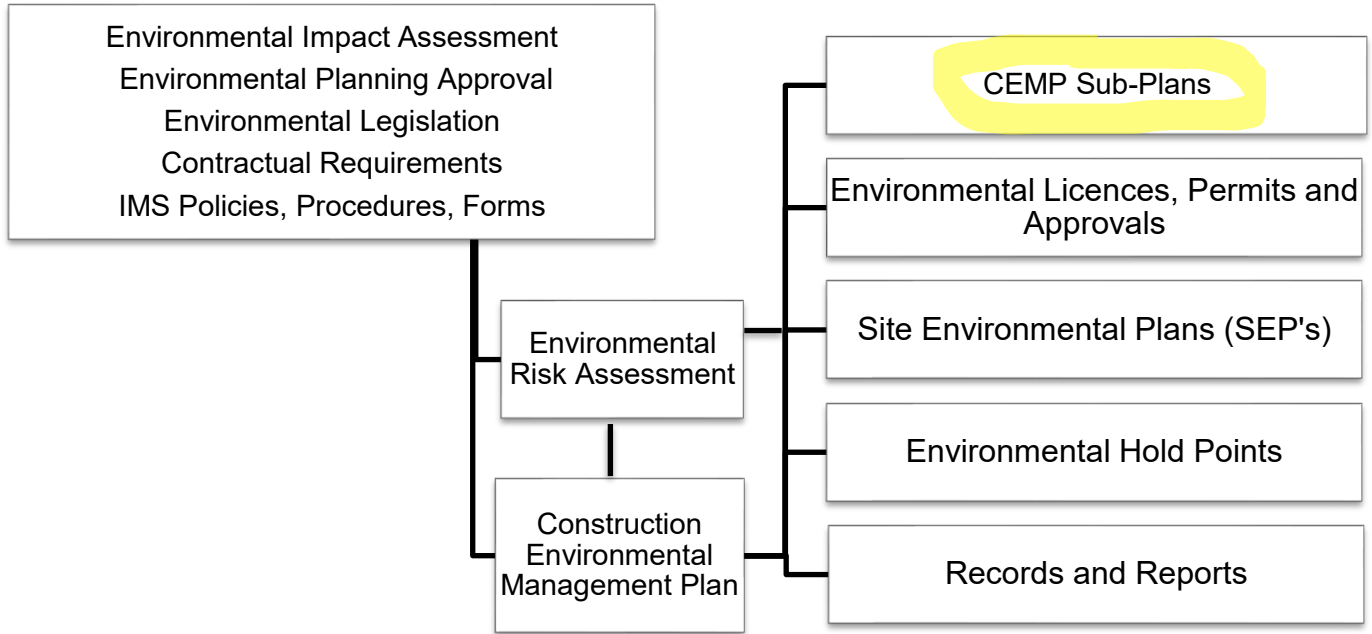
Abergeldie maintains a company intranet that serves as the repository for the management system documents. All documentation is controlled through this environment and ensures Project personnel always have access to the most current documents for the purposes of meeting company and legal requirements.

4.2 ENVIRONMENTAL MANAGEMENT DOCUMENTATION

As per BMS000, Abergeldie's environmental management system includes:

- Environmental and Sustainability Policies.
- Planning for works by assessing environmental risks and potential impacts on the environment.
- Obtaining all approvals, permits and licences required to undertake works.
- Undertaking activities, only after the appropriate environmental protection measures are in place.
- Undertaking environmental due diligence to assess effectiveness of risk mitigation measures via inspections, monitoring, audits and communication and addressing non-conformances.
- Providing appropriate resources, training and management review processes.

The following chart shows the environmental management documentation applicable to the Project. The SWMP is a subplan of the CEMP as highlighted in yellow.



5. ENVIRONMENTAL REQUIREMENTS

5.1 RELEVANT LEGISLATION AND GUIDELINES

5.1.1 Legislation

Legislation relevant to this plan include:

- *Environmental Planning and Assessment Act 1979*
- *Contaminated Land Management Act 1997*
- *Protection of the Environment Operations Act 1997*
- *Water Management Act 2000*
- Protection of the Environment Operations (Waste) Regulation 2014
- Protection of the Environment Operations General Regulation 2009

The POEO Act defines waters as the whole or any part of:

- Any river, stream, lake, lagoon, swamp, wetlands, unconfined surface water, natural or artificial watercourse, dam or tidal waters (including the sea), or
- Any water stored in artificial works, any water in water mains, water pipes or water channels, or any underground or artesian water.

Section 120 of the *Protection of the Environment Operations Act 1997* states that it is illegal to pollute waters. Under this Act, 'water pollution' includes, but is not limited to, introducing litter, sediment, oil, grease, wash water, debris, and flammable liquids such as paint etc. into waters or placing such material where it is likely to be washed or blown into waters or the stormwater system or percolate into groundwater. All practicable steps are to be taken to minimise the risk of pollution of waters.

All environmental and planning legislation relevant to this Project is included in the CEMP and is therefore not repeated here.

5.1.2 DCCEEW Specifications

Project specific DCCEEW specifications:

- DCCEEW Water Discharge and Reuse Guideline (EMF WG GUI 04/002).
- DCCEEW Soil and Water management Guideline (EMF-WG-GUI-04/003).
- DCCEEW Can water be discharged to water flowchart? (EMF-WG-TOO-04/030).
- DCCEEW Biosecurity Management Guideline (EMF-WG-GUI-04/004).
- DCCEEW Biodiversity Management Guideline (EMF-WG-GUI-04/005).

- DCCEEW Environmental incident management procedure (EMF-WG-PRO-10/001).

5.1.3 Guidelines and Standards

The main guidelines, specifications and policy documents relevant to this plan include:

- Managing Urban Stormwater: Soils and Construction, Volume 1 and Volume 2 (DECC, 2008) (the “Blue Book”)
- NSW EPA Waste Classification Guidelines 2014
- Contaminated Land Guidelines: Consultants Reporting on Contaminated Land (NSW EPA, 2020)
- IECA (2008). Best Practice Erosion and Sediment Control. International Erosion Control Association (Australasia). Picton, NSW
- National Environment Protection (Ambient Air Quality) Measure (NEPM, 2021)
- NSW EPA Contaminated Land Guidelines, Sampling Design Guidelines Parts 1 and 2, 2022 (NSW EPA, 2022)
- NSW EPA Guidelines on the Duty to Report Contamination Under the CLM Act 1997, 2015;
- Department of Primary Industries ‘Policy and Guidelines for Fish Habitat Conservation and Management’ (DPI, 2013)
- Policy and Guidelines for Fish Friendly Waterway Crossings (November 2003)
- Hygiene protocol for the control of disease in frogs (DECCW, 2008)
- Revised Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC and ARMCANZ, 2018)
- Department of Environment and Conservation (DEC): Bunding & Spill Management. Insert to the Environment Protection Manual for Authorised Officers - Technical section "Bu" November 1997
- Fairfull, S. and Witheridge, G. (2003) Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings. NSW Fisheries, Cronulla.
- NSW Fisheries, November 2003. Fishnote – Policy and Guidelines for Fish Friendly Waterway Crossings (Ref: NSWF – 1181)
- Approved Methods for the Sampling and Analysis of Water Pollutants in NSW – March 2004
- Book 4 Dryland Salinity: Productive Use of Saline Land and Water, (NSW DECC, 2008)
- Controlled activities – Guidelines for riparian corridors on waterfront land (DCCEEW, 2025)

5.2 PROJECT EIA & ENVIRONMENTAL PLANNING APPROVAL

The Project was assessed and approved under Part 5, Division 5.2 of the NSW *Environmental Planning and Assessment Act 1979* in an Environmental Impact Statement prepared by 3Rivers (2024) and

determined by NSW Department of Planning, Housing and Infrastructure on 19 February 2026.

The environmental planning approval documents for the Project are:

- Environmental Impact Statement for Billabong Creek Regulators, DCCEEW / 3Rivers, October 2024.
- Response to Submissions for Billabong Creek Regulators, DCCEEW, May 2025.
- Billabong Creek Regulators Request for Additional Information, DCCEEW, September 2025.
- SSI-50831979 Approval and included Conditions of Approval, 19 February 2026

The conditions of approval and environmental mitigation measures from the Environmental Impact Assessment (EIA) documents have been incorporated into this SWMP. The SWMP is to be read in conjunction with the approved EIA documents.

The Environmental Impact Statement for Billabong Creek Regulators identifies that environmental performance will be monitored via the implementation of mitigation measures, site inspections and internal and external audits/inspections.

5.3 ENVIRONMENTAL LICENCES, PERMITS AND APPROVALS

As noted in the CEMP, environmental licences, permits and approvals may be required in accordance with environmental legislation. Where required, these will be obtained prior to commencement of the affected construction scope, by the Client or Abergeldie, in accordance with allocations outlined in the contract.

Where obtained, environmental licence, permit and approval requirements and conditions of consent have been incorporated into this SWMP. The SWMP is to be read in conjunction with the approved EIA documents. The Abergeldie Project Manager will ensure current copies of environmental licences, permits and approvals are available at the site.

Environmental licences, permits and other approvals relevant for this SWMP and are required for construction of the Project are listed in Table 5-1.

Table 5-1 Environmental License, Permit and Approval Register

INSTRUMENT	REQUIREMENT	AUTHORITY	RESPONSIBILITY	TIMING	STATUS
<i>Fisheries Management Act 1994</i>	Notification: Written notice of dredging and reclamation work. Notification: Written notice of proposal to construct, alter or modify a weir on a waterway	DPI – Fisheries	Abergeldie / DCCEEW	Prior to dredging and reclamation on water land or construction, alteration or modification of a weir.	Consultation is ongoing. Fisheries have been consulted regarding the draft CoAs, the proposed diversion channels and the temporary creek crossing.

5.4 ENVIRONMENTAL MITIGATION MEASURES

Environmental mitigation measures (EMMs) are the risk controls assessed as necessary to minimise or avoid potential environmental impacts during construction of the Project. The mandatory environmental mitigation measures for the Project are tabulated in full in Appendix C of the CEMP. EMMs relevant to this SWMP, and the relevant section within this SWMP where they are addressed, are listed in Table 5-2. Note that only construction-related EMMs are included in Table 5-2. Those EMMs related to permanent design or operation are excluded.

Table 5-2 Environmental mitigation measures from the EIA and where they are addressed within this SWMP.

ENVIRONMENTAL MITIGATION MEASURES					
#	MITIGATION MEASURE	TIMING/ FREQUENCY	RESPONSIBILITY	VERIFICATION	SWMP DOCUMENT REFERENCE
Groundwater					
GW01	The need for construction dewatering will be reviewed if the construction methodology changes substantially from that assessed in the Groundwater Assessment Report and deeper excavations are proposed.	Pre- construction Construction	DCCEEW Environmental Site Representative Project Engineer	SWMP Dewatering Procedure	Appendix A - Dewatering Procedure.
Geomorphology					
GE02	A Construction Environment Management Plan (CEMP) will be prepared to include site specific control measures to manage potential erosion or sedimentation impacts from instream works as set out below.	Pre- construction	Environmental Site Representative Certified CPESC	This Plan SWMP ESCP	Appendix C - ESCP.
GE03	A construction Erosion and Sediment Control Plan (ESCP) will be prepared as part of the construction soil and water management plan (CSWMP) and will detail the specific erosion and sediment control measures to be implemented within the proposal area, in accordance with the principles and requirements of Managing Urban Stormwater – Soils and Construction, Volumes 1 (Landcom 2004) and 2C (DECC, 2008) (known as the Blue Book). Controls should include but not be limited to: • Instream control measures: ○ Floating silt fences for instream works. ○ Undertaking work when flows are low/dry and minimise the duration of works within the watercourse as far as practicable. ○ Weir removal and new regulator construction to be undertaken in two phases; half of the creek needs to remain unobstructed to maintain continuous flow of water while construction is undertaken on the other side. Cofferdams, sumps and pumps would be used to separate and dewater the half of the creek undergoing construction. ○ Minimise clearance of vegetation and retain existing vegetation as much as possible.	Pre- construction Construction	Environmental Site Representative CPESC (Certified Professional in Erosion and Sediment Control) Site Supervisor	SWMP ESCP	Appendix C - ESCP. Appendix D – Stockpile Management Protocol.

ENVIRONMENTAL MITIGATION MEASURES					
#	MITIGATION MEASURE	TIMING/ FREQUENCY	RESPONSIBILITY	VERIFICATION	SWMP DOCUMENT REFERENCE
	- Contingencies are in place for moderate to high flows, particularly during instream construction works. - Wherever possible, prefabricate instream structural elements prior to instream installation. - Terrestrial control measures: - Install sediment controls around stockpiles and borrow areas to contain coarse soil and sediment, as applicable to prevent sedimentation of watercourses. - Placement of stockpiles away from the watercourse (at least 20 metres of creek channels) and be covered when not in use to prevent sediment runoff, and consider whether covering of stockpiles containing coarse soil and sediment is also required. - Stabilise exposed soil where applicable with the appropriate structural materials and media for the construction activities (e.g. stabilisation matting, rock armour or vegetation). - Regular, at least daily, visual water quality monitoring of waterways adjacent to the project area during construction, to assess the effectiveness of silt fences, so they can be fixed if necessary. - Erosion and sediment controls established prior to commencement of vegetation clearing or earthworks where practical.				
GE04	Disturbed areas will be revegetated as soon as practical, progressively. Rehabilitation at construction sites to include replacing topsoil.	Construction Post-construction	Environmental Site Representative CPESC Project Ecologist	SWMP ESCP Rehabilitation Plan	Section 8 Environmental Safeguards.
GE05	Erosion and sediment controls, will be maintained post construction until disturbed areas are stabilised. Undertake two post-construction visual assessments of the regulator over two years to identify and assess any erosion, so it can be addressed if required.	Post-construction Operation	Environmental Site Representative CPESC WaterNSW	ESCPs Environmental Inspection Reports Ersed Inspection Reports	Section 8 Environmental Safeguards.

ENVIRONMENTAL MITIGATION MEASURES					
#	MITIGATION MEASURE	TIMING/ FREQUENCY	RESPONSIBILITY	VERIFICATION	SWMP DOCUMENT REFERENCE
Surface Water Quality and Aquatic Ecology					
SWQ01	Preparation of a CEMP to outline the measures to manage water quality impacts associated the construction works is recommended. If risks are to be minimised, it is recommended the CEMP include, but not be limited to, the following: - Measures to minimise/manage erosion and sediment transport within the disturbance area and off site with consideration of contingencies for moderate to high rainfall events. - Measures to manage stockpiles, including locations and sediment controls and stabilisation. - Detail procedures to capture, contain and dispose of concrete waste. - Measures to manage saline soils. - Measures to manage water (including dewatering) and groundwater ingress from construction, including water collection protocols, and water quality standards to be achieved for release to downstream environment. This should be included in a dewatering management plan that would be prepared as a subplan to the CEMP. - Staging of works to consider and respond to forecast high flows and heavy rainfall events. - Management of the spread of weeds and pests. - Management of spills and leaks.	Pre- construction	Environmental Site Representative CPESC	CEMP SWMP Dewatering Procedure ESCPs Weed and Pathogen Control Plan	Appendix A – Dewatering Procedure. Appendix C - ESCP. Appendix D - Stockpile Management Protocol.
SWQ02	Measures to ensure all waterway crossings will be constructed in accordance with the Guidelines for Controlled Activities on Waterfront Land – riparian corridors (NRAR, 2018), Guidelines for watercourse crossings on waterfront land (DPI, 2012), Guidelines for riparian corridors on waterfront land (DPI, 2012) and Why Do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (DPI, 2003).	Pre- construction Construction	Environmental Site Representative CPESC Project Ecologist	SWMP ESCPs Biodiversity Management Plan	Section 8 Environmental Safeguards.
SWQ03	A construction Erosion and Sediment Control Plan (ESCP) will be prepared as part of the construction soil and water management plan (CSWMP) and will detail the specific erosion and sediment control measures to be implemented within the proposal area, in accordance with the principles and requirements of Managing Urban Stormwater – Soils and Construction, Volumes 1 (Landcom 2004) and 2C	Pre- construction Construction	Environmental Site Representative CPESC	ESCPs	Appendix C - ESCP

ENVIRONMENTAL MITIGATION MEASURES					
#	MITIGATION MEASURE	TIMING/ FREQUENCY	RESPONSIBILITY	VERIFICATION	SWMP DOCUMENT REFERENCE
	(DECC, 2008) (known as the Blue Book). Controls should include but not be limited to: • Instream control measures ○ Floating silt fences for instream works. ○ Undertaking work when flows are low/dry and minimise the duration of works within the watercourse as far as practicable ○ Weir removal and new regulator construction to be undertaken in two phases; half of the creek needs to remain unobstructed to maintain continuous flow of water while construction is undertaken on the other side. Cofferdams, sumps and pumps would be used to separate and dewater the half of the creek undergoing construction. ○ Minimise clearance of vegetation and retain existing vegetation as much as possible. ○ Contingencies are in place for moderate to high flows, particularly during instream construction works. ○ Wherever possible, prefabricate instream structural elements prior to instream installation.				
SWQ04	Site specific controls to be developed to manage the risk of accidental spills or leaks of fuels, oils and chemicals (such as hydraulic oils), or concrete, during construction. These controls are to be documented in the CEMP and would include: • emergency spill response procedure in accordance with NSW DCCEEW incident management protocols • site specific controls to reduce the risk of the release of potentially harmful chemicals from spills or leaks entering waterways • storage of hazardous materials such as oils, chemical and refuelling activities in bunded areas within contractor's temporary work areas • bunded receptacles for concrete waste including concrete slurries and washout water provided at the work sites to capture, contain and appropriately dispose of any concrete waste at a suitably licenced waste facility. These will be located as far from waterways as feasible.	Pre-construction	Environmental Site Representative CPESC	CEMP SWMP	Appendix G – Spill Management Procedure.

ENVIRONMENTAL MITIGATION MEASURES					
#	MITIGATION MEASURE	TIMING/ FREQUENCY	RESPONSIBILITY	VERIFICATION	SWMP DOCUMENT REFERENCE
SWQ05	To avoid ingress of concrete waste material into downstream watercourse, the CEMP would outline procedures to capture, contain and appropriately dispose of any concrete waste. Concrete structures would be pre-fabricated prior to installation instream, where practicable.	Pre-construction	Environmental Site Representative CPESC	CEMP SWMP	Section 8 Environmental Safeguards.
SWQ06	To detect and manage the degradation of water quality due to construction activities, a water quality monitoring program will be designed and implemented and appended to the CSWMP. As a minimum water quality monitoring would include: - Water quality monitoring upstream and downstream of the proposal site prior to and during construction. In particular, monitoring of dissolved oxygen to ensure suitable saturation levels and turbidity to determine effectiveness of erosion and sediment controls. - Any groundwater that enters excavations within the works sites will be tested and, if suitable, pumped into nearby waterways or otherwise transferred into a treatment pond and treated before being discharged into nearby waterways. The CEMP will include water quality criteria for any water to be discharged into nearby waterways.	Pre-construction Construction	Environmental Site Representative CPESC	SWMP Water Quality Monitoring Program	Appendix E – Water Quality Monitoring Program.
SWQ07	Minimise the duration of fish passage restrictions (e.g. cofferdams).	Construction	Environmental Site Representative CPESC Project Ecologist	SWMP Biodiversity Management Plan	Section 8 Environmental Safeguards.
Terrestrial Flora and Fauna					
B16	A construction Erosion and Sediment Control Plan (ESCP) will be implemented as part of the construction soil and water management plan (CSWMP) and will detail the specific erosion and sediment control measures to be implemented within the proposal area, in accordance with the principles and requirements of Managing Urban Stormwater – Soils and Construction, Volumes 1 (Landcom 2004) and 2C (DECC, 2008) (known as the Blue Book).	Construction	Environmental Site Representative CPESC Site Supervisor	SWMP ESCP	Appendix C – Erosion and Sediment Control Plans

ENVIRONMENTAL MITIGATION MEASURES					
#	MITIGATION MEASURE	TIMING/ FREQUENCY	RESPONSIBILITY	VERIFICATION	SWMP DOCUMENT REFERENCE
B17	Erosion and sediment controls throughout the proposal site will be inspected and maintained to ensure they are operating effectively. Management measures that have been integrated in the proposal design, including partial coffer damming of Billabong Creek are specified in the Surface Water Quality and Aquatic Ecology Assessment Report, Appendix K to the EIS (Jacobs 2024).	Construction	Environmental Site Representative CPESC Site Supervisor	SWMP ESCP Environmental Site Inspection Reports Ersed Inspection Reports	Section 9.3 Monitoring and Inspections
B21	Post approval Management/Monitoring plans will be prepared and implemented in accordance with relevant NSW EPA Guidance including, but not limited to: - Consultants reporting on contaminated land, Contaminated Land Guidelines, NSW EPA 2020. - Environmental Guidelines, Solid Waste Landfills (2nd Edition), NSW EPA 2016. - The NSW Waste Classification Guidelines and relevant NSW reuse/waste orders and exemptions (E.g. the Excavated Natural Material Order / Exemption) - NSW DCCEEW incident management protocols. Measures will include: - Site specific controls to reduce the risk of the release of potentially harmful chemicals from spills or leaks entering waterways - Spill kits will be kept on site and in construction vehicles where required - Storage of hazardous materials such as oils, chemical and refuelling activities in bunded areas within the construction activity zones - Bunded receptacles for concrete waste including concrete slurries and washout water provided at the work sites to capture, contain and appropriately dispose of any concrete waste at a suitably licenced waste facility. These will be located as far from waterways as feasible.	Pre- construction Construction	Environmental Site Representative Site Supervisor	CEMP SWMP Water Quality Monitoring Program	Section 8 Environmental Safeguards.
Public Health and Safety					
HR2	The soil and water management plan will include a spill response procedure. The procedure will detail measures to manage hazardous substances and dangerous	Pre- construction	Environmental Site Representative CPESC	SWMP	Appendix G – Spill

ENVIRONMENTAL MITIGATION MEASURES					
#	MITIGATION MEASURE	TIMING/ FREQUENCY	RESPONSIBILITY	VERIFICATION	SWMP DOCUMENT REFERENCE
	goods, including storage, handling, and spill response, in accordance with legislative requirements.				Management Procedure.
Soils and Contamination					
CS2	• Odour and dust/fibre control procedures and monitoring to minimise the release of dust/fibres to the surrounding environment. • Erosion and sediment control procedures and management measures. • Procedures to minimise the potential for construction spills and contamination releases. • Protocols to minimise the potential for offsite migration of impact in surface water and groundwater. • Emergency response procedures in the event of a release of contamination, whether it be via surface water, groundwater, or air. • A soil management plan detailing the high-risk areas of the site, exposure risk management protocols, materials storage procedures (including stockpile management and reuse protocols), waste transport procedures, waste tracking and disposal plans to ensure all material is appropriately managed. • An unexpected finds protocol, particularly with regard to asbestos, which is linked to additional site investigations and the development of a remedial action plan, where required, to effectively manage contamination. • Management/Monitoring plans should be prepared in accordance with relevant NSW EPA Guidance including, but not limited to: ○ Consultants reporting on contaminated land, Contaminated Land Guidelines, NSW EPA 2020. ○ Environmental Guidelines, Solid Waste Landfills (2nd Edition), NSW EPA 2016. ○ The NSW Waste Classification Guidelines and relevant NSW reuse/waste orders and exemptions (E.g. the Excavated Natural Material Order / Exemption).	Pre- construction Construction	Environmental Site Representative Contaminated Land Consultant	CEMP Management/Mo nitoring Plans	Appendix C – Erosion and Sediment Control Plans. Appendix G – Spill Management Procedure.

ENVIRONMENTAL MITIGATION MEASURES					
#	MITIGATION MEASURE	TIMING/ FREQUENCY	RESPONSIBILITY	VERIFICATION	SWMP DOCUMENT REFERENCE
CS3	- Surface water, groundwater and dust monitoring should be implemented to monitor for and respond to the emergence of contamination impacts during construction of the proposal. - Monitoring plans should be prepared in accordance with relevant NSW EPA Guidance including, but not limited to: - consultants reporting on contaminated land, Contaminated Land Guidelines, NSW EPA 2020.	Construction	Environmental Site Representative Contaminated Land Consultant	Management/Monitoring Plans	Appendix E – Water Quality Monitoring Program.
Air Quality					
AQ1	Dust during construction will be considered and addressed within the CEMP and will include methods to manage work during strong winds or other adverse weather conditions as required. As a minimum, the following measures will be included: - covering all loaded trucks and vessels - machinery to be turned off rather than left to idle when not in use - maintenance of all vehicles, including trucks and vessels entering and leaving the site in accordance with the manufacturers specifications to comply with all relevant legislation - maintenance of all plant and equipment to ensure good operating conditions and exhaust emissions comply with the <i>Protection of the Environment Operations Act 1997</i> - stockpiled materials will be covered, stabilised, or stored in areas not subject to high wind - maintaining the work site in a condition that minimises fugitive emissions of dust.	Construction	Environmental Site Representative Site Supervisor	CEMP SWMP	Section 8 Environmental Safeguards.

5.5 ENVIRONMENTAL HOLD POINTS

A hold point is a mandatory verification point that prevents work from commencing prior to completion/ release of the hold point. Hold points relevant to the SWMP are detailed in Table 5-3 below. For a complete list of Project environmental hold points see Table 4-5 in the CEMP.

Table 5-3 Environmental Hold Points

HOLD POINT	RELEASE REQUIREMENT	NOMINATED APPROVER	REFERENCE DOCUMENT
Hold Points			
Prior to ground disturbing activities and dewatering	Installation of erosion and sediment controls as per plan. Check biosecurity controls in place	Environmental Site Representative	CEMP
Prior to the installation of environmental controls e.g. sediment and erosion controls, tree protection etc	Assessment of the delineation of approved area by DCCEEW	DCCEEW Representative	CEMP
Prior to removal of erosion and sediment controls	Stabilisation of ground completed/effective	Environmental Site Representative	CEMP/Restoration Plan
Pumping water / dewatering	Approved and signed Dewatering Permit	Environmental Site Representative	ENV003-F04 - Dewatering Permit

5.6 SITE ENVIRONMENTAL MANAGEMENT DOCUMENTS

5.6.1 SEPs

Site Environmental Plans (SEPs) provide a practical representation of the existing environment, key environmental risks and environmental mitigation measures for the Project. SEPs are specific to a site or activity and provide a detailed visual depiction of the site, environmentally sensitive receivers and detailed control measures from relevant environmental approvals and risk assessments. The Site Layout template may be used, refer to IMS template, WHS020-F05.

SEPs will be prepared and updated progressively by the Project team and endorsed by the Project Environmental Site Representative (ESR) or delegate. SEPs will be regularly communicated to relevant workers throughout the construction of the Project and be signposted on Project notice boards. The adequacy of SEPs and their implementation will be reviewed during site inspections and audits. Observations made during site inspections will prompt SEP updates by the Project team, on an as needed basis.

SEPs will include the following information, where applicable:

- Approved Project construction site boundary, site access paths and compound/laydown areas.
- Environmentally sensitive areas on and adjacent to the site (for example, threatened species or habitat, heritage items or areas, known contamination etc.).
- Exclusion zones or No-Go areas.

- Waterways including natural waterbodies and drainage pathways.
- Erosion and sediment control measures.
- Work areas, machinery and vehicle parking, spoil stockpiling, waste storage, concrete washout, fuel/chemical storage areas, spill kits.
- Approved vegetation clearing and vegetation protection zones.
- Project specific environmental controls (e.g. heritage protection barriers, noise blankets).
- Monitoring locations (e.g. noise, dust, water etc).
- Sensitive receivers (e.g. residents, school, etc).

An initial SEP for the Project is presented in the CEMP. It will be continuously reviewed as works progress and updated accordingly.

6. EXISTING ENVIRONMENT

6.1 CLIMATE

Bureau of Meteorology (BoM) rainfall statistics for Deniliquin Airport AWS (Station 074258), approximately 40 km from the Project, are contained in Table 6-1. Rainfall occurs throughout the year although is highest in October and November. Stronger wind conditions are more prevalent from September to March.

Table 6-1 Climate statistics for Deniliquin Airport AWS (Station 074258) from the Bureau of Meteorology (sourced January 2026).

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
Mean max temp (°C)	33.3	32.2	28.8	23.5	18.6	15.0	14.4	16.3	20.0	23.8	27.9	30.7	23.7
Mean min temp (°C)	16.7	16.1	13.6	9.6	6.1	4.1	3.4	4.1	6.0	8.5	12.0	14.3	9.5
Mean Rainfall	24.7	25.1	26.0	27.1	27.6	31.2	28.0	32.1	32.2	39.4	48.1	29.5	371.8
Mean number of days of rain ≥1mm	3.4	2.5	2.6	3.5	4.0	5.0	5.8	5.9	5.0	4.6	4.7	3.7	50.7
Mean 9am wind speed (km/h)	19.5	19.3	17.9	16.4	13.8	14.0	13.7	15.9	17.9	19.6	19.2	19.6	17.2
Mean 3pm wind speed (km/h)	20.5	19.2	18.4	17.4	17.7	17.9	18.6	20.3	21.3	21.3	20.3	21.1	19.5

According to Appendix B of Landcom (2004), the Project lies to the west of the 1000 R-Factor isolines. A conservative R-Factor of 1000 has been adopted in the calculations of erosion hazard.

The risk of rainfall at any time of year is a consideration for construction-phase soil and water management on this project.

6.2 TOPOGRAPHY

As noted in the EIS (DCCEEW / 3Rivers, 2024), the landform at the current Hartwood Weir in the northern portion of the Project area is relatively flat and uniform at 90m AHD. In this northern part of the project area surface flows are directed to Billabong Creek. The flow of the creek is north westerly. In the southern portion of the Project area at Hartwood Weir the landform is similarly flat and surface flows are directed to Forest Creek. Forest Creek flows in a westerly direction.

The landform at Wanganella Weir is similarly flat and uniform at approximately 100 AHD. Surface flows are directed to Billabong Creek which flows in a westerly direction.

6.3 SOILS – GENERAL

The soil landscape within the study area is described in Table 6-2.

Table 6-2 Soil landscape description within the Project area

SOIL LANDSCAPE NAME	DESCRIPTION
Yancobong	Epipedal and crusty Black, Brown, and Grey Vertosols (cracking clays) are found in the low-lying depressions adjacent to the active channels. The more frequently inundated flood-runners and channels typically support Redoxic Hydrosols (NSG). Small dunes also occur within this landscape, dominated by Arenic Rudosols (siliceous sands). Limitation include poor drainage with soils that deform easily when wet.

6.4 GROUNDWATER

The lower Murray and lower Murrumbidgee shallow alluvium resource unit underlays the Project area. The shallow deposits in the Murrumbidgee Alluvium are approximately 40 metres deep and limited to the uppermost units of the Shepparton Formation, which are predominantly clay and silt with minor sand.

As noted in the EIS (DCCEEW / 3Rivers, 2024) there are no significant impacts for groundwater predicted at Hartwood Regulator, based on the groundwater elevation at the site and the regulator design as of February 2024.

The EIS (DCCEEW / 3Rivers, 2024) noted that during construction of the Wanganella Regulator there is anticipated to be limited drawdown. The drawdown around the construction area would be limited to a maximum of 0.5m in depth with predicted dewatering less than 0.2 L/s. Drawdown extent would be limited to a maximum of 250 meters although it is likely that the limit of effect would be only 50 metres from the in-creek excavations. It is anticipated that, once the regulator construction is at groundwater level, dewatering will no longer be required.

Groundwater testing undertaken at the proposed Wanganella Regulator as part of the EIS Appendix I (DCCEEW / 3Rivers, 2024) occurred at two boreholes (BH3 and BH4). Sodium concentrations at BH4 exceeded the ANZECC 2000 Stock Watering guideline. Exceedances of the ANZG (2018) freshwater 95% toxicant default guideline values (DGVs) were also recorded, with BH4 exceeding DGVs for copper, lead, nickel and zinc and BH3 exceeding DGVs for copper and zinc.

6.5 ACID SULFATE SOILS

The EIS (DCCEEW / 3Rivers, 2024) noted that the Project area has a low to extremely low risk of Acid Sulfate Soils naturally occurring, this was further verified by sampling undertaken as part of the geotechnical investigations.

6.6 FLOODING

Flood risk at Hartwood weir and Wanganella weir and the surrounding Project areas during construction was assessed in the EIS (DCCEEW / 3 Rivers, 2024) as low for construction activity zones outside of the channel. Inundation modelling shows that the five-year average recurrence interval (ARI) event remains contained within the creek channels.

Within the Billabong Creek system, faster and deeper floodwaters are typically confined to the creeks, defined flow paths, and adjacent floodplain corridors, while other areas only experience minor ponding or fringe flooding. Billabong Creek has a large catchment and slow-rising high-flow events, so inundation of

nearby floodplains and agricultural land occurs gradually and can persist for extended periods. Construction zones located outside the channel would be unlikely to be impacted by floodwaters under these conditions.

For works within the creek it was assumed within the EIS (DCCEEW / 3Rivers, 2024) that the coffer dams would be constructed to convey the 1 in 5-year event and there would be the provision of adequate diversions during construction to maintain normal flows.

6.7 SALINITY

Salinity is the accumulation of salts in soil and water to levels that impact on human and natural assets. Salinity occurs where salt in the landscape is mobilised and redistributed closer to the soil surface and / or into waterways by rising groundwater.

The EIS (DCCEEW / 3Rivers, 2024) noted that Billabong Creek had low salt load hazard and low instream electrical conductivity. However, salinity is categorised as high on surrounding lands and the overall salinity hazard for the Project areas is categorised as moderate. A search of the NSW Department of Planning, Industry and Environment's database indicates there is a moderate salinity potential for the Project area.

6.8 LAND CONTAMINATION

A contamination assessment undertaken as part of the preparation of the EIS (DCCEEW / 3Rivers, 2024) suggests that there is a low risk of contamination within the Hartwood Regulator and Wanganella Regulator Project areas. At the Wanganella Flood Bypass Channel Project area the contamination risk has been assessed as moderate, due to Wanganella Landfill being located directly south-west of the Project area. The Targeted Contamination Land Assessment (GHD, May 2025) appended to the Submissions Report concluded that the construction of the flood bypass channel will be very unlikely to pose any risks to workers or the general public from contamination.

Any contamination encountered will be managed in accordance with the Unexpected Finds Procedure - Contamination.

6.9 SURFACE WATER

6.9.1 Catchments

The Project is located on Billabong Creek, which forms part of the Yanco Creek System within the Murray Darling Basin. The Yanco Creek system is a complex braided system of interconnecting creeks and anabranches with the main branches including the Yanco, Colombo, Billabong and Forrest Creeks (DCCEEW / 3Rivers, 2024).

6.9.2 Water Quality

According to the EIS (DCCEEW / 3Rivers, 2024), water quality within the vicinity of the Project areas is characterised by elevated turbidity, nutrients and, sometimes, electrical conductivity compared to the nominated water quality objectives (95% percentile) protection of freshwater ecosystems) in the Australian and New Zealand Guidelines (ANZG, 2018). Elevated turbidity was recorded within the catchment following high rainfall events. Sampling undertaken at Hartwood and Wanganella weir as part of the EIS found elevated concentrations of heavy metals (chromium, copper, lead and zinc) exceeding the

nominated water quality objectives.

6.9.3 Sensitive Receivers

The Project lies wholly within the bounds of the ‘aquatic ecological community in the natural drainage system of the lower Murray River catchment’, also known as the ‘Lower Murray River aquatic ecological community’. This effectively means that the whole fish community and its habitat is listed as Endangered under the Fisheries Management Act. Surveys have shown that Murray Cod (Listed as Vulnerable under the EPBC Act) and Silver Perch (Listed as Critically Endangered under the EPBC Act) are widespread in the middle and lower reaches of Billabong Creek where the Project areas are located. There is also the possibility that the Freshwater Catfish (Listed as Endangered under the Fisheries Management Act) and Murray Crayfish (Listed as Vulnerable under the Fisheries Management Act) may be present within the Project area.

6.10 EROSION RISK

Erosion hazard is calculated using the predicted annual average soil loss using the Revised Universal Soil Loss Equation (RUSLE):

$$A = R \times K \times LS \times P \times C.$$

provides typical values for the erosion hazard at the Project site.

Table 6-3 Typical RUSLE values for the Project

FACTOR	DEFINITION	VALUE ADOPTED
R	Rainfall erosivity factor	1000
K	Soil erodibility factor	0.06 (conservative assumption for fill of mixed origin)
LS	Slope length and gradient factor	Varies. Conservative adopted value: 0.19 (80m, 1%)
P	Conservation practice factor	1.3 (default maximum)
C	Ground cover factor	1.0 (default maximum)
A	Total calculated soil loss (t/ha/yr)	14.8 t/ha/yr (very low)

Under Blue Book standards sediment basins are required in any disturbed catchment with a potential soil

loss of more than 150 m³/yr (roughly equivalent to 200 t/yr). The Wanganella regulator works, including the bypass channel has a total construction footprint of 5.64 ha, with the potential soil loss being approximately 83.5 t/yr. The Hartwood regulator works including the Forest Creek block bank has a construction activity zone of 7.42, the soil loss of these catchments being approximately 109.8 t/yr. Therefore, sediment basins are not required as the potential soil loss is less than 200 t/yr for all catchments. Refer to Appendix C for the construction ESCPs.

7. ENVIRONMENTAL ASPECTS AND IMPACTS

The potential for impacts on soil and water during construction are dependent upon several factors. Primarily impacts will be dependent on the nature, extent and magnitude of construction activities and their interaction with the natural environment. A summary of the proposed construction activities and the potential impacts is in Table 7-1.

Table 7-1 Summary of the Overall Aspects and Potential Impacts

ACTIVITIES	POTENTIAL IMPACTS
Storage and use of potential contaminants or hazardous substances	▪ Potential for soil contamination from spills or leaks ▪ Potential for pollutants to wash into the receiving environment
Clearing of vegetation and topsoil stripping during site establishment	▪ Potential for sediment-laden runoff to wash offsite into the receiving environment ▪ Damage to protected vegetation ▪ Disturbance of areas outside the Project footprint ▪ Potential for dust to be blown offsite, impacting neighbours ▪ Potential to encounter or expose contaminated soils or groundwater.
Earthworks	▪ Potential for sediment-laden runoff to wash offsite into the receiving environment ▪ Disturbance of areas outside the Project footprint ▪ Potential for dust to be blown offsite, impacting neighbours ▪ Potential to encounter or expose contaminated soils, groundwater, or saline soils.
Discharge of water detained onsite following rainfall	▪ Potential for polluted water to be discharged offsite.
Stockpiling of spoil and other materials	▪ Potential for sediment-laden runoff to wash offsite into the receiving environment ▪ Potential for dust to be blown offsite, impacting neighbours ▪ Potential to encounter or expose contaminated soils, groundwater, or saline soils.
Use of plant, equipment and ancillary facilities	▪ Potential for spills or leaks of fuels, oils, and fluids onto soils or waterways ▪ Potential for tracking of sediment onto public roads, leading to traffic safety issues and pollution of receiving waters.
Loading and transport of materials	▪ Potential for dust impacts during loading and transport. ▪ Potential for tracking of sediment onto public roads, leading to traffic safety issues and pollution of receiving waters.
Construction within waterways	▪ Potential for accidental discharge of sediment-laden runoff into waterways. ▪ Potential for pollution of waterways as a result of in-stream works. ▪ Potential for blockages to waterways and drainage lines which may result in localised flooding upstream and change the ultimate discharge location of overland flows into receiving watercourses. ▪ Potential to change fluvial processes resulting in downstream bed and bank erosion or instability.
Concreting	▪ Potential for water quality impacts on surface water from concreting ▪ Potential for spills of excess or waste concrete ▪ Potential for waste concrete to be discharged into receiving waterways

8. ENVIRONMENTAL SAFEGUARDS

Soil and water environmental safeguards and commitments required to meet the objectives of this SWMP and to address potential impacts to the natural environment are outlined in Table 8-1.

Table 8-1 Additional Environmental Safeguard Measures.

ID	MEASURE/REQUIREMENT	WHEN TO IMPLEMENT	RESPONSIBILITY
General			
SW1	Environmental incidents will be managed and reported in accordance with the CEMP and the Site-specific Spill Management Procedure (Appendix G).	Construction	Environment Manager Site Supervisor
SW2	Site specific Erosion and Sediment Control Plan/s (ESCPs) will be prepared and implemented as part of the Soil and Water Management Plan. The ESCPs will include arrangements for managing wet weather events, including monitoring of potential high-risk events (such as storms) and specific controls and follow-up measures to be applied in the event of wet weather. The site specific ESCPs will be developed in accordance with the principles and requirements in Managing Urban Stormwater – Soils and Construction, Volume 1 (Landcom, 2004) and Volume 2C (DECCW, 2008), commonly referred to as the 'Blue Book'. Energy-dissipation and sediment-control structures, such as sediment traps, silt curtains, and check dams, will be incorporated as required. A range of ground-stabilisation methods will also be employed, including the use of geofabric or jute matting, as detailed within the ESCP.	Pre-Construction Construction	Environment Manager CPESC
SW3	Progressively update the ESCPs to reflect site conditions and progression.	Construction	Environment Manager CPESC Site Supervisor
SW4	Training will be provided to relevant Project personnel, including relevant sub-contractors on sound erosion and sediment control practices and the requirements from this Plan through inductions, toolboxes and targeted training	Pre-Construction Construction	Environment Manager CPESC
SW5	Key personnel who control construction work at each worksite must also have completed a training course in erosion and sedimentation control	Pre-Construction	Environment Manager CPESC
Erosion and Sediment Control			
SW6	All erosion and sediment controls will be installed in accordance with best practice guidelines such as the Blue Book.	Construction	Environment Manager Site Supervisor
SW7	Engage and retain until completion a suitably qualified and experienced Soil Conservationist.	Pre-Construction	Environment Manager

ID	MEASURE/REQUIREMENT	WHEN TO IMPLEMENT	RESPONSIBILITY
SW8	CEMP and relevant sub-plans including SWMP and ESCPs must be submitted to DCCEEW for approval before commencing work.	Construction	Environment Manager CPESC
SW9	The following measures will be included to limit sediment and other contaminations entering receiving waterways: - chemicals will be stored within a sealed or bunded area to contain at least 110 per cent of the volume of the largest stored container. - appropriate controls will be in place where plant is stored - run-off from ancillary facilities will be controlled and treated before discharging into downstream waterways - vehicle movements will be restricted to designated pathways where feasible. Areas that will be exposed for extended periods, such as car parks will be stabilised where feasible.	Construction	Environment Manager Site Supervisor
SW10	The extent of ground disturbance and exposed soil will be minimised to the greatest extent practicable to minimise the potential for erosion. No-disturbance zones will be clearly marked to delineate the limits of the work areas.	Construction	Site Supervisor
SW11	Disturbed ground and exposed soils will be permanently stabilised and proposed landscaped areas will be suitably profiled and vegetated as soon as possible following completion to minimise the potential erosion.	Construction	Environment Manager Site Supervisor
SW12	Erosion and sediment control structures shall remain installed, inspected and maintained until sufficient stabilisation is achieved	Construction	Site Supervisor
SW13	Measures will be implemented to minimise dust, soil or mud from being deposited by vehicles on public roads. This will be achieved by implementing mitigation measures such as rumble grids, large aggregate at entry/exit points, or wheel wash facilities	Pre-Construction Construction	Site Supervisor
SW14	Hardstand areas and surrounding sealed public roads will be cleaned as required, using methods including brooms, bobcat attachments or street sweepers.	Construction	Site Supervisor
SW15	Dust rise will be minimised through the use of water to dampen surfaces.	Construction	Site Supervisor
SW16	Chemical dust control agents can be used as required, providing they are safe and non-polluting.	Construction	Site Supervisor
SW17	As much as possible, water for dust suppression will be sourced from the non-potable sources.	Construction	Site Supervisor
SW18	Traffic movements and speeds will be moderated as required to limit the potential for dust rise.	Construction	Site Supervisor
SW19	Sediment fencing must be woven polypropylene and cotton / geotextile thread with a flow rate > 110 litres / m2/ sec to AS3706.9	Construction	Site Supervisor

ID	MEASURE/REQUIREMENT	WHEN TO IMPLEMENT	RESPONSIBILITY
SW20	Upslope clean water will be diverted around disturbed areas (as much as practicable).	Construction	Site Supervisor
SW21	Sediment control devices will be placed downslope of all disturbed lands immediately before commencement of land disturbance activities.	Construction	Environment Manager Site Supervisor
Topsoil and Soil Stockpiles			
SW22	Spoil stockpiles will be managed to reduce potential impacts associated with dust generation, erosion and sedimentation.	Construction	Site Supervisor
SW23	Stockpiles of soil material will be sited in low-hazard areas outside of riparian corridors, away from the dripline of any retained trees, away from any drainage areas, and away from locations likely to receive run-off wherever possible. Sediment fencing is to be installed around the lower edge of stockpiles as per <i>Managing Urban Stormwater: Soils & Construction</i> (4 th edition, Landcom 2004) Standard Drawing SD 6-8, unless the stockpile is immediately adjacent to a suitable alternative sediment control.	Construction	Site Supervisor
SW24	Weeds on stockpiles will be managed as required.	Construction	Environment Manager Site Supervisor
SW25	Stockpiles left exposed and undisturbed for longer than 10 days will be stabilised by: • Spraying with suitable tackifier • Covering with anchored fabrics • Seeding with sterile grass (topsoil only).	Construction	Site Supervisor
SW26	Temporary stockpile height will be generally no greater than 2 meters with slopes no steeper than 2:1	Construction	Site Supervisor
SW27	Upslope water will be diverted away from stockpiles to minimise the risk of erosion.	Construction	Site Supervisor
SW28	Weed-free topsoils will be used for rehabilitation purposes wherever possible.	Construction	Site Supervisor
SW29	Stockpiles of mulch which could result in tannin runoff will be established at least 20m from the edge of waterways and will be earth-bunded (300 mm high).	Construction	Site Supervisor
Chemicals, Fuels, Hazardous Materials and Concrete Use			
SW30	Storage of dangerous goods and hazardous materials will occur in accordance with suppliers' instructions and relevant Australian Standards and legislation including the: • <i>Work Health and Safety Act 2011</i> (NSW) • Storage and Handling of Dangerous Goods Code of Practice (WorkCover NSW 2005)	Construction	Site Supervisor

ID	MEASURE/REQUIREMENT	WHEN TO IMPLEMENT	RESPONSIBILITY
	- Environment Protection Manual for Authorised Officers: Bunding and Spill Management, technical bulletin (EPA 1997). - Incompatible chemicals will be stored separately in accordance with manufactures specifications and compatibility chart.		
SW31	Secure, bunded areas at least 40m from waterways will be provided around storage areas for oils, fuels and other hazardous liquids. Impervious bunds will be of sufficient capacity to contain at least 110 per cent of the volume of the largest stored container.	Construction	Site Supervisor
SW32	Hazardous substances will be stored onsite in lockable containers or on a bund within a secure area, in their original receptacles.	Construction	Site Supervisor
SW33	All hazardous substances will be clearly labelled and will have Safety Data Sheets affixed or available nearby.	Construction	Site Supervisor
SW34	An up-to-date register of hazardous substances will be kept onsite at all times.	Construction	Environment Manager Site Supervisor
SW35	Any concrete waste areas for washout water or slurries will be bunded, adequately sized, regularly maintained, and located in designated areas at least 40m from a waterway. Any concrete waste will be managed in accordance with the Resource and Waste Management Plan.	Construction	Site Supervisor
SW36	Hazardous substances will only be used onsite as required, in accordance with the manufacturer/supplier instructions.	Construction	Site Supervisor
Spill Prevention and Incidents			
SW37	The use of any hazardous substance that could result in a spill will be undertaken away from drainage lines and, wherever possible, within defined bunds.	Construction	Site Supervisor
SW38	Any refuelling undertaken on site shall be undertaken in designated areas only, at least 40m away from waterways.	Construction	Site Supervisor
SW39	Spills or leakages will be immediately contained and absorbed. Spills will be cleaned up and reported using the DCCEEW Environmental Incident Management Flowchart and managed in accordance with the Spill Management Procedure.	Construction	Environment Manager Site Supervisor
SW40	Spill containment kits will be placed at locations with a high concentration of plant or machinery.	Construction	Environment Manager
Sediment Retention Structures, Traps, Bunds etc			

ID	MEASURE/REQUIREMENT	WHEN TO IMPLEMENT	RESPONSIBILITY
SW41	Design and install the sediment retention structures including construction of outlet controls prior to execution of earthworks and the structures coming on line. These sediment retention structures must include completion of outlet controls including the requirements of level spreaders and flow control measures during the construction period.	Construction	Environment Manager Site Engineer Site Supervisor
SW42	Flow diversion bunds and sediment retention traps/sumps are to be used as required to manage potential egress of site runoff.	Construction	Site Engineer Site Supervisor
SW43	All water discharges from the Project site will be in accordance with the Project Dewatering Procedure (Appendix A)	Construction	Environment Manager Site Supervisor
In Stream Works			
SW44	Install floating silt curtains around all potential sediment generating instream works.	Construction	Site Engineer Site Supervisor
SW45	Schedule all in-stream works for a period of little to no rainfall and low flow. Complete works as quickly as possible. Closely monitor weather forecasts and follow weather action plans as detailed in the construction ESCP	Construction	Site Engineer Site Supervisor
SW46	Utilise coffer dams/aqua barriers/bulka bags (filled with clean sand or rock) or similar to direct upslope clean water around in-stream work areas during demolition of weirs.	Construction	Site Engineer Site Supervisor
SW47	Temporary blockage or diversion of natural waterways is to be considerate of the potential to alter flood and flow behaviour up- and down-stream.	Detailed Design Pre-Construction	Design Manager Environment Manager
Contamination			
SW48	If any contaminated land or groundwater is exposed during demolition or construction, it will be managed in accordance with the Unexpected Finds – Contamination Procedure in the CEMP.	Construction	Site Engineer Site Supervisor
Flooding			
SW49	Weather forecasts and upstream river levels are to be monitored for weather conditions that might cause flooding of the construction site (in accordance with the Project Emergency Response Management Plan). The site is to be prepared for forecast heavy rain and/or flood conditions, and materials secured to reduce the impact of flooding on construction activities.	Construction	Site Engineer Site Supervisor

ID	MEASURE/REQUIREMENT	WHEN TO IMPLEMENT	RESPONSIBILITY
Saline Soils			
SW50	Disturbance of saline soils during construction will be managed by the implementation of site ESCPs to reduce the risk of saline soil migrating offsite.	Construction	Environment Manager Site Supervisor

9. IMPLEMENTATION & OPERATION

9.1 PROJECT ROLES & RESPONSIBILITIES

The Abergeldie Project Team's organisational structure and overall roles and responsibilities are outlined in the CEMP. Specific responsibilities for the implementation of environmental safeguards are detailed in Section 8 of this Plan.

9.2 TRAINING & ENVIRONMENTAL AWARENESS

All employees, contractors and utility staff working on site will undergo site induction training relating to soil and water management issues. The induction training will address elements related to soil and water management including:

- Existence and requirements of this sub-plan
- Relevant legislation
- Installation and maintenance of erosion and sediment control measures
- Use and interpretation of erosion and sediment control plans
- Dewatering responsibilities
- Refuelling controls and requirements
- Spills and incident response requirements

Further details regarding staff induction and training are outlined in the CEMP.

9.3 MONITORING AND INSPECTIONS

On-site soil and water monitoring will be undertaken within the Project boundaries in accordance with the Water Quality Monitoring Program (Appendix E).

The following soil and water monitoring will be undertaken for the duration of construction:

- Regular, at least daily, monitoring of visual water quality immediately outside the instream construction areas.
- Regular inspections of channel form and bank erosion upstream and downstream of the active work area to monitor potential projects impacts and evaluate the effectiveness of soil and water management measures.
- Regular inspections at active, exposed work sites to evaluate the effectiveness of soil and water management measures.
- Rainfall inspections will be conducted after the start of all rainfall events exceeding 10mm and during periods of prolonged rainfall at active exposed work sites to evaluate the effectiveness of erosion and sediment controls measures.

- Rainfall inspections will be conducted utilising Abergeldie's Pre and Post Rainfall Inspection checklist (ENV001-F06) when events are significant (greater than 20mm in a 24 hours period).
- Inspections will be undertaken of erosion and sediment controls prior to any shut down of greater than 48 hours.
- Pre-work inspection will be conducted prior to ground disturbing activities to confirm that appropriate controls are installed or are planned to be installed in accordance with the ESCP.
- Construction discharge water will be tested, treated, reused or discharged, recorded and reported to meet the requirements of this SWMP.

The range of parameters to be tested for construction discharge water is detailed in the Water Quality Monitoring Program (Appendix E).

Dewatering will be undertaken in accordance with the Dewatering Procedure (Appendix A) and recorded in the Dewatering Permit (Appendix B).

9.4 WEATHER AND RIVER LEVEL MONITORING

Weather (rainfall, temperature, wind speed/direction) will be monitored during the construction phase via a Bureau of Meteorology weather station located at Deniliquin Airport AWS (Station 074258). Where adverse weather warnings are provided, the Environmental Site Representative (ESR) will alert relevant Project staff, enabling them to prepare the site for inclement weather.

Rainfall at the premises will be measured and recorded in millimetres per 24-hour period at the same time each workday from the time that the site office associated with the activities is established.

River levels are to be monitored via the WaterNSW Real Time Data webpage for:

- Hartwood Weir (site number 410168)
- Wanganella Weir (site number 41010810).

In accordance with the Project Emergency Management Plan and Project ESCPs at periods of high flow enact controls as detailed within those plans.

9.5 REPORTING

Reporting requirements and responsibilities are documented in the CEMP. There are specific reporting requirements associated with additional survey work and monitoring for the SWMP including:

- Results of any off-site water discharge.
- Monthly reports outlining the works that have been undertaken and the achievements that have been met, as well as identifying those areas where improvements were made and detailing environmental performance, including all non-conformities and any other environmental reporting requirements.

9.6 COMMUNICATION

Internal and external communication requirements, including communication because of environmental incidents for the Project are detailed in the CEMP.

10. REVIEW AND IMPROVEMENT

10.1 CONTINUOUS IMPROVEMENT

Continuous improvement of this plan will be achieved by the ongoing evaluation and monitoring of environmental performance outcomes against environmental policies, objectives and targets. They will be evaluated for their effectiveness and for the purpose of identifying opportunities for improvement and whether additional measures are required

The continuous improvement process will be designed to:

- Identify areas of opportunity for improvement of environmental management and performance
- Determine the cause or causes of non-conformances and deficiencies
- Develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies
- Verify the effectiveness of the corrective and preventative actions
- Document any changes in procedures resulting from process improvement
- Make comparisons with objectives and targets.

10.2 SWMP UPDATE AND AMENDMENT

The review processes required under the CEMP may result in the need to update or revise this Plan. This will occur as needed.

Only the Environment Manager, or delegate, has the authority to change any of the environmental management documentation.

A copy of the updated plan and changes will be distributed to all relevant stakeholders in accordance with Section 1.3 of this SWMP.

11. ABBREVIATIONS AND DEFINITIONS

ABBREVIATION	DESCRIPTION
ACM	Asbestos Containing Material
Ancillary Facility	A temporary facility for construction of the SSI including an office and amenities compound, construction compound, skip bin, fuel and equipment containers, a fixed material stockpile area, access roads, borrow pit, temporary coffer dams and car parking facilities. <i>Note: Where an approved CEMP contains a stockpile management protocol, a material stockpile area located within the construction boundary is not considered to be an ancillary facility.</i>
AHIP	Aboriginal Heritage Impact Permit, issued under the <i>National Parks and Wildlife Act 1974</i>
ARA	Appropriate Regulatory Authority
ASS	Acid Sulphate Soils
ASSMAC	Acid Sulphate Soils Management Advisory Committee
BC Act	<i>Biodiversity Conservation Act 2016 (NSW)</i>
BOM	Bureau of Meteorology
CEMP	Construction Environmental Management Plan
Client	DCCEEW
CLM Act	<i>Contaminated Land Management Act 1997 (NSW)</i>
COA	Conditions of Approval
DCCEEW	Department of Climate Change, Energy, Environment and Water
DCCEEW (Commonwealth)	Department of Climate Change, Energy, Environment and Water (Commonwealth)
DPI	NSW Department of Primary Industries - Fisheries
EEC	Endangered Ecological Community
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement, the environmental impact assessment, when approved by the determining authority in accordance with the EP&A Act, forms the Project Environmental Planning Approval.
ENM	Excavated Natural Material
Environmental Aspect	Defined by AS/NZS ISO 14001:2015 as an element of an organisation's activities, products or services that can interact with the environment.
Environmental Impact	Defined by AS/NZS ISO 14001:2015 as any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisations' environmental aspects.
Environmental Incident	An environmental incident is an occurrence or set of circumstances, where pollution or an adverse impact to the environment has occurred or is likely to occur (near miss), as a consequence. This may include: - Pollution to water, air or land - Adverse environmental impacts such as contamination, harm to flora and fauna, damage to heritage. - Adverse community impacts such as odour, excessive noise emissions. An environmental incident is a notifiable environmental incident if it meets the threshold for notification to the appropriate regulatory authority within the appropriate legislation.
Environmental Site Representative	Includes Abergeldie Environment & Sustainability Team members such as Environmental Manager, Environmental Advisor, Environmental Coordinator, etc.
EPA	Environment Protection Authority (NSW)

EP&A Act	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)</i>
EPL	Environment Protection Licence
ERA	Environmental Risk Assessment (ENV001-F02)
ERSED	Erosion and Sediment
ESCP	Erosion and Sediment Control Plan
EWMS	Environmental Work Method Statement
FM Act	<i>Fisheries Management Act 1994 (NSW)</i>
HAZMAT	Hazardous Materials
Hold Point	A verification point that prevents work from commencing prior to completion / approval / release of the hold point by the nominated approver
HSEQ	Health, Safety, Environment and Quality
IFS	Abergeldie's Incident Management System
IMS	Integrated Management System
ISO14001	International Standard ISO 14001:2015, Environmental Management Systems
LGA	Local Government Authority
Material Harm	Under section 147 of the POEO Act, <i>harm to the environment is material if:</i> - <i>it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or</i> - <i>it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations), and</i> - <i>loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.</i> - <i>It does not matter that harm to the environment is caused only in the premises where the pollution incident occurs.</i> A pollution incident is required to be notified to the relevant authorities listed in section 148 of the POEO Act if there is a risk of material harm to the environment. This is a notifiable environmental incident.
MNES	Matter of National Environmental Significance, as defined under the <i>EPBC Act 1999</i> .
Non-conformance	Failure to conform to the requirements of the IMS, Project system documentation including the CEMP or supporting documentation, Project environmental planning approval or any applicable licence, permit or legal requirements.
Notifiable environmental incident	Environmental incidents that trigger a regulatory obligation to formally notify a relevant authority. Notifiable environmental incidents require immediate formal notification to the relevant authorities and must be managed and reported as per the relevant legislative requirements.
NSW	New South Wales
OOHW	Out Of Hours Work, being work outside of the standard construction hours or other hours approved in the Project environmental planning approval/EIA
pH	Potential of hydrogen which is the measure of the acidity or alkalinity of a solution
POEO Act	<i>Protection of the Environment Operations Act 1997 (NSW)</i>
Pollution Incident	A pollution incident means an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on a premises, but it does not include an incident or set of circumstances involving only the emissions of any noise.
PPE	Personal Protective Equipment

SEP	Site Environmental Plan, a visual representation of the site environmental sensitivities and key environmental management controls to be applied.
SEPP	State Environmental Planning Policy
SDS	Safety Data Sheet
SRZ	Structural Root Zone, the area of a tree where the roots provide critical structural stability
SWMP	Soil and Water Management Plan
TISEPP 2021	State Environmental Planning Policy (Transport and Infrastructure) 2021
TPZ	Tree Protection Zone, the area of a tree set aside for the protection of tree roots and crown to maintain the trees long-term viability
VENM	Virgin Excavated Natural Material, natural soil/rock that comes from undisturbed areas that are not contaminated
VMP	Vegetation Management Plan
WM Act	<i>Water Management Act 2000</i> (NSW)
YCMP	Yanco Creek Modernisation Program

12. REFERENCES

ANZECC/ARMCANZ (2000). *National Water Quality Management Strategy Australian and New Zealand Guidelines for Fresh and Marine Water Quality*. Australian and New Zealand Environment and Conservation Council, Agriculture and Resource Management Council of Australia and New Zealand.

ANZECC 2000 Stock Watering guideline

ANZG (2018). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*. Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia.

Australian Government Bureau of Meteorology (2024). Climate Data Online (Weather Station 074258). Available at: <http://www.bom.gov.au/climate/data>

DECC (2008). *Managing Urban Stormwater: Soils and Construction. Volume 2D: Main Road Construction*. Department of Environment and Climate Change, Sydney.

DCCEEW / 3Rivers (2024). Billabong Creek Regulators Environmental Impact Statement.

GHD (2025) Billabong Creek Regulators Landfill Gas Investigation. Report prepared for the NSW Department of Climate Change, Energy, the Environment and Water, Appendix E to the EIS Response to Submissions.

IECA (2008). *Best Practice Erosion and Sediment Control*. International Erosion Control Association (Australasia). Picton, NSW.

Jacobs (2024). Billabong Creek Regulators Surface Water Quality and Aquatic Ecology Assessment. Report prepared for NSW Department of Climate Change, Energy, the Environment and Water, Appendix K to the EIS.

Landcom (2004). *Managing Urban Stormwater: Soils and Construction (4th Edition)* March 2004 (reprinted 2006) (the “Blue Book”). Volume 1.

APPENDIX A – DEWATERING PROCEDURE

DEWATERING PROCEDURE

BILLABONG CREEK ENVIRONMENTAL WATER REGULATORS

1. INTRODUCTION

This Dewatering Procedure forms part of the Soil and Water Management Plan (SWMP) for the Billabong Creek Environmental Water Regulators project (the Project). The purpose of the Dewatering Procedure (the Procedure) is to outline how Abergeldie proposes to manage dewatering activities during the construction of the Project.

This Procedure outlines the processes for the management of detained water that requires dewatering, including surface water captured in trenches, excavations, coffer dams, boreholes and sumps.

2. TRAINING

All personnel involved in dewatering activities will undergo specific training relating to this Procedure and have completed training on the dewatering Environmental Work Method Statement (EWMS).

3. SCOPE

This Procedure covers the following activities:

- Dewatering activities conducted by site personnel (including subcontractors) for surface water captured in coffer dams, trenches, excavations, boreholes and sumps.
- Dewatering of wheel washes, vehicle washdown location and bunded areas.

4. DEWATERING PROCESS

Water may be detained on the Project in coffer dams or other areas, particularly after a rain event or due to groundwater ingress such as trenches, excavations, boreholes and sumps.

A Dewatering Permit (Appendix B of the SWMP) is required for all dewatering for the project and needs approval by a member of the Environmental Team prior to commencement. There are two options for dewatering (in order of preference):

1. Reuse on site
2. Discharge

4.1 REUSE ON SITE

During construction, the Project may reuse or take water on-site from a range of sources such as coffer dams, trenches, sumps and open excavations. Generally, water will be taken via a pump or standpipe arrangement into a water cart and transported to the intended usage site. Water will be reused for various construction activities such as, but not limited to, dust suppression throughout the Project footprint, onto and adjacent to access tracks, unsealed roads, and unsealed areas in construction compounds, soil compaction, wheel wash, vehicle washdown areas and irrigation/watering of vegetation for site restoration/rehabilitation.

Water reuse requires a visual screening for oil and grease and a pH range of 6.5-8.5. Turbidity does not need to be monitored if water will be reused onsite.

The following will be considered when reusing water for construction activities:

- The reuse area is clear of sensitive receiving environments such as waterways, farm dams, threatened flora and threatened ecological communities or areas of contamination.
- No erosion is caused by the reuse.

In the event that water is required to be used within or in close proximity to sensitive areas (e.g. close to a waterway), the Environment and Manager (or delegate) is to undertake an assessment prior to water reuse to determine if there is potential impact to the sensitive areas.

4.2 DISCHARGE

Discharge typically involves pumping or active release of water detained within a coffer dam or collected in other construction areas to reinstate capacity. The action usually results in a 'point source' discharge of detained water to a location on- or off-site, however discharge may also occur through spray application. Discharge occurs when the water is not able to be reused on site.

Discharge needs to meet the water quality requirements outlined in Table 5-1.

Discharge locations will consider the following (where practicable):

- discharge to occur to areas of existing vegetation or stabilised discharge points to assist with the management of runoff.
- no discharge to areas which may directly or indirectly impact sensitive receiving environments (heritage features, threatened flora, threatened ecological communities) or areas of contamination.
- If discharge is to be directed into a natural watercourse it must be into a large pool of water not a shallow area of the Creek.
- The discharge rate must not exceed 9 L/sec.

If erosion or scouring is observed during discharge, the following will occur:

- pump to be shut off
- the erosion or scouring repaired/rectified
- additional measures taken to avoid further erosion/scouring such as reduction in flow rate, dissipation of flows, or additional ground stabilisation measures, such as rock armouring.
- if needed, the discharge point will be moved to an approved alternative location before recommencement of dewatering operations.

Relevant details will be recorded on the Dewatering Permit.

5. COFFER DAMS

5.1 COFFER DAM MANAGEMENT

5.1.1 Cofferdam Dewatering

Note. Cofferdam dewatering is to be undertaken in accordance with this Procedure and the Cofferdam Dewatering Procedure in the Biodiversity Management Plan.

A Dewatering Permit is required for dewatering of a coffer dam and needs approval by a member of the Environmental Team prior to commencement. There are two options for dewatering a coffer dam. These include:

1. Reuse on-site outlined in Section 4.1
2. Controlled discharge outlined in Section 4.2.

An uncontrolled discharge of a coffer dam, typically due to heavy rain or regional flood events when the design capacity of the coffer dam is exceeded, will not conform to the process outlined in this procedure and may not meet water quality criteria. As such, design of the coffer dam will include a stable overflow point to direct the water to an appropriate discharge location to minimise impacts of any uncontrolled discharge. Where observed, uncontrolled discharges will be recorded in the post rainfall inspections.

5.2 WATER QUALITY

Prior to discharge detained water within the coffer dam must meet the water quality criteria within Table 5-1.

Where treatment is required to achieve the water quality criteria:

- Cease treatment if additional rainfall is predicted that is likely to generate runoff that would adversely affect the treatment process or downstream environment; and
- Recommence treatment only after any predicted rain is no longer forecast within the rainfall period.

Where captured water is reused, the water quality criteria for turbidity does not apply. Reuse of water will occur in accordance with Section 4.1 of this procedure.

Table 5-1 Water Quality Criteria for Discharge

PARAMETER	WATER QUALITY CRITERIA	UNITS
pH	pH units	6.5 - 8.5
Turbidity	NTU	≤50
Oil and Grease	Visible	Nil
Odour (for Wangella Flood Bypass Channel ONLY)*	Discernible	Nil

* due to the low risk of landfill leachate infiltration at this location.

5.3 TREATMENT

There may be times that the water quality in the coffer dam does not meet the criteria outlined within Table 5-1 for discharge, when this occurs treatment is required.

Where the level of suspended solids or turbidity within the coffer dam does not meet the criteria treatment will typically occur with flocculants.

Where the pH of the basin does not meet the criteria, the pH may need to be adjusted by either raising the pH or lowering the pH:

- To raise the pH of a basin, hydrated lime is typically applied. Application of the lime will consider the total volume of water which requires treating.
- To lower pH, pool acid is typically applied. Application of the acid will consider the total volume of water which requires treating.

The safety requirements should be followed as outlined in the relevant safety data sheet.

5.4 INSPECTIONS

Coffer dams will be inspected as part of the post-rainfall inspections to determine if any maintenance is required. The inspections will occur within the next working day, if safe to do.

Prior to dewatering of coffer dams for discharge, the water quality will be assessed as stipulated in Section 5.2. The Supervisor (or delegate) undertaking the dewatering activity will conduct a visual inspection prior to and during dewatering to confirm that the pump or siphon inlet is elevated above any settled sediments to reduce the risk that they are not discharged during dewatering.

6. WHEEL WASHDOWNS AND CHEMICAL BUNDS

Water from wheel wash downs and chemical bunds may contain weeds, pathogens, biocides, antifungals, disinfectants and other chemicals, in addition to suspended solids, oil and grease and variations in pH. Therefore, the management of the water from wheel wash bays and chemical bunds will be managed on a case-by-case basis. Where there is a risk of any chemical or biological contamination, wastewater will be managed in accordance with the Waste and Resource Management Plan, including testing and offsite disposal to a licensed facility where required.

7. REPORTING AND RECORD KEEPING

Dewatering activities will be recorded on the Dewatering Permit. The Dewatering Permit will include, but is not limited to the following information:

- Date and location of proposed discharge
- Water quality results including sampling date
- Volume of water (in accordance with DCCEE Water take record template Appendix H)
- Treatment details (as required), including the quantities, time and date added.

Any non-compliances and follow up actions will be reported to DCCEEW as described in the CEMP.

APPENDIX B – DEWATERING PERMIT

Part A – Activity Details

Project Name:		Project No:	
Date:		Time:	
Completed by:			
Location / Chainage:			
Date since last rain:		Amount (mm) of last rain:	

Part B – Discharge Location & Volume

Intended Use and Volume of Collected Water			
On-Site Reuse (Dust Suppression):	☐	Discharge to land (off-site) or waters:	☐
On-Site Reuse (Vegetation Rehabilitation):	☐	Off-site disposal to licenced facility (liquid waste):	☐
On-Site Reuse (Earthworks Compaction):	☐	Other (specify):	☐
On-Site Discharge to land:	☐	Estimated Water Volume (L):	☐

Part C – Test and Treat Records

STEP 1: Water Quality Recorded				
All discharge water must be tested, and if required, treated to ensure that it meets water quality requirements. Refer to PART G for water quality requirements. If the criteria are met, dewatering may be authorised by the Permit Approver.				
Test Date:		Time:		Tested by (Name):
Test 1	Limit	Result	Pass - Dewatering permit may be authorised by the Permit Authoriser (Part D)	Fail - Proceed to treatment (Step 2) and re-test (Step 3)
pH	6.5-8.5		☐	☐
Turbidity (NTUs) or Total Suspended Solids (TSS)	50 NTU / 50mg/L		☐	☐
Oil and Grease present?	Nil		☐	☐
Signs of contamination/ odours/ discolouration?	Nil		☐	☐
STEP 2: Water Treatment Record				
Treatment Date:		Time:		Treated by (Name):
Type	Dose	Quantity	Comments	
STEP 3: Water Quality Recorded				
Test Date:		Time:		Tested by (Name):
Test 2	Limit	Result	Pass - Dewatering permit may be authorised by the Permit Authoriser (Part D)	Fail - Repeat process with a new dewatering inspection permit form
pH	6.5-8.5		☐	☐
Turbidity (NTUs) or Total Suspended Solids (TSS)	50 NTU / 50mg/L		☐	☐
Oil and Grease present?	Nil		☐	☐
Signs of contamination/ odours/ discolouration?	Nil		☐	☐

Part D – Permit Approval

Approval to discharge – MUST BE APPROVED BY PROJECT MANAGER, SITE SUPERINTENDENT OR ENVIRONMENTAL SITE REPRESENTATIVE			
Name		Sign	Date

Part E – Pre-Pumping Checks

Pre-pumping Control Measure Checks by Site Superintendent/Supervisor					
Checked by:			Date/Time:		
Control	Yes	No	Comments	Yes	No
Dewatering Permit completed and signed off?	☐	☐	Pump outlet pipe is located to ensure water is contained within site boundary?	☐	☐
Dewatering personnel are trained in dewatering permit requirements?	☐	☐	Pump outlet is located within sediment controls, including filtration bags?	☐	☐
Erosion and sediment controls are in place and in good condition?	☐	☐	Pumping equipment is checked and operational?	☐	☐
Pump inlet is located/elevated to minimise uptake of sediment?	☐	☐	Spill kit is in place?	☐	☐
Pump outlet pipe is located to avoid erosion or environmental damage at the discharge point? Scour protection is installed if required?	☐	☐	Contingency plan in place, which may include: stop work provision, additional control installation, storage containers, tankers?	☐	☐
Comments:					

Part F – Pumping Checks

Pumping and Discharge Monitoring											
During all on-site or off-site discharge, regular monitoring must occur to ensure compliance with the requirements of this permit. All dewatering, erosion and sediment controls to be inspected for their integrity and capacity weekly, prior to forecast rainfall, during rainfall and following rainfall. Records of all water discharges must be kept on site.											
Checked by:			Date/Time:								
Control Checks during pumping			Yes	No	Comments						
Pump is monitored every _____ minutes?			☐	☐							
Pump inlet is clear of silt and sediment?			☐	☐							
Erosion and sediment controls are in place and in good condition?			☐	☐							
Discharge is not causing any erosion or sediment laden runoff offsite?			☐	☐							
If No, STOP pumping and implement contingency plan (e.g. additional controls).											
Record of Pumping Checks											
Start Time	Controls Acceptable?		Start Time	Controls Acceptable?		Start Time	Controls Acceptable?		Start Time	Controls Acceptable?	
	Yes	No		Yes	No		Yes	No		Yes	No
	☐	☐		☐	☐		☐	☐		☐	☐
	☐	☐		☐	☐		☐	☐		☐	☐
	☐	☐		☐	☐		☐	☐		☐	☐
Total Volume Dewatered:											
Any Comments:											

Part G – Water Quality Requirements

Water Quality Requirements (based on intended use)	
Acceptable Criteria for On-Site Reuse	- pH 6.5 – 8.5 - No Visual Oil or Grease Other requirements: - No erosion is caused by the discharge. - Runoff generated by the reuse is controlled entirely within the site boundary and erosion and sediment controls are in place and effective.
Acceptable Criteria for On-Site Discharge to Land	- pH 6.5 – 8.5 - No Visual Oil or Grease Other requirements: - No erosion is caused by the discharge. - No surface runoff is generated and no potential for discharged water to reach any watercourse (on or off-site) - All discharge water can be contained within the site boundary. - Discharge location to consider impacts on groundwater recharge, erosion, flora and fauna and flooding.
Acceptable Criteria for Discharge to Land (off-site) or Discharge to Water	- Total Suspended Solids <50mg/L or 50 NTU (visibly clean) - pH 6.5 – 8.5 - No Visual Oil or Grease Other requirements: - Any criteria in a regulatory licence authorising discharge of water from a specific site/location. - Consider salinity and other site-specific contaminants - Correlation used between TSS and NTU may be calculated on a site-by-site basis. A conservative correlation of 1:1 may be applied.
Acceptable Criteria for Off-Site Disposal as liquid waste	Licence requirements of the liquid waste disposal facility

PART H – Sketch of activity – If applicable

Diagram of dewatering location, discharge location and environmental controls

APPENDIX C – EROSION AND SEDIMENT CONTROL PLANS

Refer to ESCP's stored on site and in the Abergeldie Sharepoint for the most recent plans. These will be updated regularly to suit construction staging.

Refer to document number MBYCM00-000ALL-ACI-NM-DRG-00001.



APPENDIX D – STOCKPILE MANAGEMENT PROTOCOL

STOCKPILE MANAGEMENT PROTOCOL

BILLABONG CREEK ENVIRONMENTAL WATER REGULATORS

1. INTRODUCTION

The Stockpile Management Protocol forms part of the Soil and Water Management Plan (SWMP) for the Billabong Creek Environmental Water Regulators project (the Project). The purpose of the Stockpile Management Protocol (the Protocol) is to outline how Abergeldie proposes to manage stockpiles during the construction of the Project.

This Protocol outlines the processes and standards for managing stockpiles throughout the Project, applying appropriate mitigation measures.

2. SCOPE

This Protocol outlines the locational criteria used to guide the placement of temporary stockpiles and provides both standard and site-specific mitigation measures to be implemented to minimise impacts on the environment. Stockpile sites may typically be required to store material including, but not limited to the temporary storage of:

- Excavated materials to be used in fill areas and for other design features
- Excavated material unsuitable for reuse on the Project
- Excess concrete, pavement, rock, soils and aggregate stored for potential reuse in the Project or prior to removal from site
- Imported sands, soils, aggregates, recycled concrete products, topsoils, rock and engineered fills for use on the Project
- Topsoil, mulch, timber for landscaping and revegetation works

Temporary stockpiles will be removed for re-use within the Project or disposed of off-site. Stockpiles may also be permanent in nature in accordance with the design of the Project. These stockpiles will be managed in accordance with the mitigation measures in this plan.

Potentially contaminated materials will be managed in accordance with the Unexpected Finds Procedure Contamination and the Waste and Resource Management Plan.

The process for monitoring and managing spoil including details of how excavated material will be managed on-site and during offsite transport is detailed within the Waste and Resource Management Plan.

Where material is taken off-site, appropriate approvals will be confirmed and/or obtained under the *EP&A Act 1979* and *POEO Act 1997*.

3. INDUCTION / TRAINING

All construction personnel involved in planning or managing stockpiles will be trained in the requirements of the Procedure. Training will also include inductions, toolbox talks, pre-starts and targeted training as required.

4. SCOPE

This Protocol is relevant to the planning, placement and management of all stockpiles on or related to the Billabong Creek Environmental Water Regulators Project.

5. STOCKPILE LOCATION CRITERIA

Stockpile sites on the Project shall be assessed against the following criteria:

- Located five metres away from areas of concentrated water flow
- Located at least 40 metres away from a named Watercourse
- Have easy access via vehicle by internal haul road or external road network
- Located on relatively level land
- Positioned so as to achieve the maximum of 2 metres in height as much as possible
- Not unreasonably affect the land use of adjacent properties
- Located so that the appropriate erosion and sediment control measures can be installed and will operate effectively
- Located on land above the 5 ARI flood level unless a contingency plan to manage flooding is prepared and implemented
- Not within a tree protection zone
- Provides sufficient area for the storage of raw materials, to minimise to the greatest extent practical, the number of deliveries required outside of construction hours
- Positioned in areas where minimal noise and vibration impacts are anticipated at the nearest sensitive receiver
- Located within the approved Project boundary.

6. PROTOCOL

Prior to the establishment of any stockpile on site as part of the Project, confirm that:

1. The location of the stockpile is considered against the site selection criteria outlined in Section 5 of this Protocol.
2. Site specific mitigation measures, where they are necessary to further reduce impacts, are identified and detailed.
3. Mitigation measures for each stockpile site include as a minimum:
 - a) Materials will not be stockpiled within the tree protection zone (in accordance with AS 4970) of trees or native vegetation to be retained and never pushed up around the base of trees. Trees are not to be flooded or soils caused to be waterlogged as a result of stockpile development.
 - b) An Erosion and Sediment Control Plan (ESCP) will be prepared and implemented in advance of stockpiling. ESCPs will be updated as required.
 - c) The ESCPs will detail soil and water management measures consistent with Managing Urban Stormwater – Soils and Construction Vols 1 and 2, 4th Edition (Landcom, 2004) to minimise soil erosion and the discharge of sediment and other pollutants to land and / or waters. This may include:

- i. Erosion and sedimentation controls will be erected between the site and any drainage lines or down-slope areas
 - ii. A diversion bund will be installed on the uphill side of the stockpile to divert water around the site, unless run on water is 'dirty' construction water. Where this occurs 'dirty' run on water shall be diverted to erosion and sediment controls
 - iii. Erosion and sediment control structures shall remain installed and maintained until sufficient stabilisation is achieved as per the Blue Book
 - iv. Separating 'clean' run on water from 'dirty' (turbid) construction area run-off
 - v. Controlling run-off during the construction of stockpiles (e.g. fill shaping and the construction of temporary dykes and batter drains).
- d) Controls for covering stockpiles will be installed around and applied to all stockpiles that are in place for more than 10 days in order to prevent wind and water erosion. These controls will be in accordance with the SWMP and may include stabilisation with cover crop or similar appropriate controls.
- e) When stockpiling contaminated soil, erosion and sediment controls, including run-on/run-off control devices, will be maintained and functional at all times to prevent erosion. Sediment control measures will be used to preserve stockpiled soils to minimise siltation of any land surface and water or blockage of any existing drainage channels.
- f) All staff involved in the excavation works shall immediately report any visual or olfactory (smells/odours) evidence of contamination to the Site Supervisor. The Site Supervisor will consult with the Environment Manager when evidence of contaminated material is reported.
- g) The Contractor will maintain daily records of where excavation of contaminated or suspected material has occurred, the type and volume of any contaminated material excavated and where that material has been stored or stockpiled.
- h) Stockpiles will be monitored for odours on a regular basis during inspections. If nuisance odours are generated and are impacting sensitive receivers, odour control measures will be implemented.
- i) Weed management measures will be undertaken progressively including weed spraying or covering the stockpile to prevent growth as appropriate. Topsoil that is not contaminated by weeds will be located separately to other stockpiles.
- j) Dust management measures (including for vehicle movements associated with stockpiling activities) will be implemented in accordance with the CEMP and this SWMP.
- k) Temporary and permanent stockpile heights will be generally no greater than 2 meters with slopes no steeper than 2:1.
- l) Mulch stockpiles must be monitored and turned over as required to reduce the risk of spontaneous combustion.
- m) Mulch stockpiles in high tannin generating vegetation should be:
 - i. Located 40 metres from waterways for mulch stockpiles that will be in place for duration of more than one month
 - ii. Located 20 metres from waterways for mulch stockpiles that will be in place for duration of less than one month

- iii. Located on elevated ground where possible
 - iv. Be fully bunded to reduce the risk of up-gradient water entering the stockpile site, and to capture tannin impacted water. Bunds are to be impervious and 300mm high at a minimum. All bunded stockpiles that are in place for a period longer than one month must include a lined discharge point for overflow in extreme rainfall events
- n) Topsoil stockpile must:
- i. Be free from subsoil, other excavated materials, contaminated materials, refuse, clay lumps and stones, timber or other rubbish
 - ii. Be trimmed to a regular shape to facilitate measuring and batter slopes not steeper than 2:1
 - iii. Have their batters track rolled or stabilised by other means
 - iv. Be seeded with a sterile cover crop
- o) Following completion of the Project works, carry out restoration of the stockpile sites.

7. COMPLIANCE

Compliance with this Protocol will be tracked through the weekly environmental inspection.

Identified non-compliances will be reported to the Environment Manager and the appropriate management measures will be put in place to maintain ongoing compliance.



APPENDIX E – WATER QUALITY MONITORING PROGRAM

WATER QUALITY MONITORING PROGRAM

BILLABONG CREEK ENVIRONMENTAL WATER REGULATORS

Glossary/ Abbreviations

ABBREVIATIONS	EXPANDED TEXT
ANZG	Australia and New Zealand Guidelines
BoM	Bureau of Meteorology
CEMP	Construction Environmental Management Plan
DCCEEW	NSW Department of Climate Change, Energy, the Environment and Water
DGVs	Default Guideline Values
DO	Dissolved Oxygen
EC	Electrical Conductivity
EIS	Environment Impact Statement
EMM	Environmental Management Measures
SSTVs	Site Specific Trigger Values
SWMP	Soil and Water Management Plan
TDS	Total Dissolved Solids
TSS	Total Suspended Solids

1. INTRODUCTION

1.1 CONTEXT

This Water Quality Monitoring Program (WQMP) (the Program) forms part of the Soil and Water Management Plan (SWMP) for the construction of the Billabong Creek Environmental Water Regulators (the Project). This Program forms **Appendix E** of the Soil and Water Management Plan (SWMP).

This WQMP has been prepared to satisfy the Environmental Impact Assessments (EIAs) for the Project and DCCEEW specifications, including DCCEEW Water Discharge and Reuse Guideline (EMF-WG-GUI-04/002).

1.2 SCOPE

The scope of this WQMP is to describe how Abergeldie proposes to monitor potential impacts to surface water during construction of the Project. Operational monitoring and operation measures do not fall within the scope of the construction phase and therefore are not included within this Program.

2. PURPOSE AND OBJECTIVES

2.1 PURPOSE

The purpose of this WQMP is to describe how Abergeldie will monitor surface water quality during construction of the Project.

The WQMP will be implemented to monitor the effectiveness of safeguard measures applied during the construction phase of the Project. Monitoring of surface water will be undertaken to identify potential impacts so that an appropriate management regime can be implemented to address those impacts (if any) and manage local surface water quality.

This WQMP provides details of the surface water monitoring locations, required frequency of monitoring, and monitoring parameters.

The SMART (Specific, Measurable, Achievable, Realistic and Timely) principles have been considered in the preparation of this Program.

2.2 OBJECTIVES

The key objective of this Program is to confirm that all EMMs and licence/permit requirements relating to surface water monitoring are described, scheduled, and assigned responsibility as outlined in:

- The EIA requirements and approval conditions for the Project
- DCCEEW specifications
- All relevant legislation and other requirements described in Section 5 of the SWMP.

3. EXISTING SURFACE WATER CONDITIONS

3.1 OVERVIEW

A surface water quality investigation was undertaken as part of the EIS - Surface Water Quality and Aquatic Ecology Assessment Report, Appendix K to the EIS (Jacobs, 2024). The investigation was based on historical water quality monitoring undertaken throughout the catchment and site-specific surface water samples taken upstream and downstream of the Project areas. Water samples were taken in March 2023 around the Project area. At the time of the sampling Billabong Creek was receiving environmental flows typical of an autumn fresh.

3.2 SURFACE WATER QUALITY

Analysis of existing catchment wide water quality data and the site-specific samples taken during March 2023 assessed key indicators of pH, electrical conductivity (EC), dissolved oxygen (DO), turbidity and nutrients. Water quality within the vicinity of the Project had elevated turbidity, nutrients and, at times, conductivity compared to the Water Quality Objectives adopted within the study. The elevated turbidity (sediments) was attributed to erosion as increases were recorded following high rainfall events. In addition to elevated nutrients and turbidity, monitoring at the weir sites (Hartwood and Wanganella weirs) also shows elevated concentrations of metals but no evidence of pesticides and herbicides.

4. SURFACE WATER CONSTRUCTION MONITORING

4.1 OVERVIEW

The mobilisation of sediments and pollutants during the above-ground surface construction works is identified as a potential impact on surface water within the catchments and waterways. A soil conservation specialist will be engaged to provide construction input.

Table 4-2 contains the parameters to be tested as part of this Program. Adopted trigger criteria is presented in Table 4-3 and will be used to assess potential impacts on sensitive receiving environments.

Variation in Site Specific Trigger Values (SSTVs) (Table 4-2) indicates a change in overall water quality that prompt actions that are described in Section 4.6.2.

The volume of water discharged from the Project site is expected to be minor in comparison to flows within the receiving water bodies. The Project lies within the catchment of the Murray River, The NSW Water Quality Objectives (WQO) (DECCW, 2006) for the Murray River are adopted as a reference point. The WQO for the Murray River aim to maintain or improve ecological conditions for aquatic ecosystems. This WQMP provides a framework for monitoring existing water quality within the receiving environment and assessing whether construction activities are causing any adverse impacts.

4.2 RAINFALL MONITORING

To provide data to assess water quality trends, daily rainfall will be monitored during the construction phase via rainfall data will be gained from a nearby station from the Bureau of Meteorology website.

4.3 MONITORING LOCATIONS

Surface water quality monitoring will be carried out during construction at four sites, listed in Table 4-1. The monitoring program will commence prior to any ground disturbance being undertaken.

Construction phase monitoring will commence following approval of this Program. The monitoring allows for the assessment trends in water quality, including natural variations, and will result in sufficient data to enable assessment of any potential impacts measured during construction.

Table 4-1 Construction phase surface water monitoring program

SAMPLE ID	SAMPLE LOCATION	RECEIVING ENVIRONMENT	WATER QUALITY ANALYSIS SUITE *	PHYSICAL MONITORING	SAMPLING FREQUENCY
1	East of Wanganella Regulator works (approximate location 35°13'03.5"S 144°48'30.5"E)	Billabong Creek	Physiochemical Parameters	Visual inspection and assessment of any bank erosion or instability	Monthly/wet weather **
2	West of Wanganella Regulator works (approximate location 35°13'03.8"S 144°48'18.5"E)	Billabong Creek	Physiochemical Parameters	Visual inspection and assessment of any bank erosion or instability	Monthly/wet weather **
3	East of Hartwood Regulator works (approximate location 35°18'34.0"S 145°17'16.1"E)	Billabong Creek	Physiochemical Parameters	Visual inspection and assessment of any bank erosion or instability	Monthly/wet weather **
4	West of Hartwood Regulator works (approximate location 35°18'41.2"S 145°17'11.4"E)	Billabong Creek	Physiochemical Parameters	Visual inspection and assessment of any bank erosion or instability	Monthly/wet weather **

* Specific analytes detailed in Table 4-2

** Monitoring frequency detailed in Section 4.4

4.4 SAMPLING FREQUENCY

During the construction phase water quality sampling will be undertaken monthly.

Wet weather monitoring will be carried out when a continuous rainfall event of >25 mm is received in the local catchment during a 24-hour period (as recorded at the nearby BoM weather station) and has generated runoff from the Project.

A wet weather monitoring event will be undertaken at a minimum of once per 3 months where rainfall exceeds 25 mm within a 3-month period.

For safety reasons sampling will not be undertaken during peak stormflows. Sampling will be completed when flows are reasonably constant and monitoring points can be safely accessed. Where possible, monitoring locations will be selected to enable safe monitoring during all weather conditions.

The monitoring program will continue for the duration of construction and until the construction areas are rehabilitated (i.e. stabilised using permanent ground covers) to an acceptable condition as certified by the Environment Manager.

4.5 SURFACE WATER QUALITY PARAMETERS

Table 4-2 details the analytes that will be monitored during construction phase surface water monitoring, at the locations listed in Table 4-1.

Table 4-2 Surface water quality monitoring parameters

CATEGORY	PARAMETERS	MEASUREMENT
Physio-chemical parameters	• Temperature (°C) • pH • Dissolved Oxygen (% saturation) • Electrical Conductivity (µS /cm) • Total dissolved solids (TDS) • Turbidity (NTU) • Visible oil and grease	Measured in the field using calibrated multi-probe water quality meter(s)

Surface water quality analysis results will be assessed and compared to baseline conditions, rainfall records, upstream monitoring results, and the performance criteria described in the sections that follow.

4.6 PERFORMANCE CRITERIA

4.6.1 Surface Water

Because only limited baseline, site specific sampling of surrounding surface waters has been completed, site-specific trigger values (SSTVs)) have not yet been developed for this WQMP. The available data is insufficient to account for seasonal variability.

SSTVs will be developed initially for each monitoring location based on actual catchment data, rather than the application of a uniform reference standard. Except for pH, SSTVs will be initially calculated using a rolling mean based on samples collected for this WQMP to-date. Thereafter, SSTVs will be updated after every round of sampling to confirm that the rolling mean incorporates all data collected.

After each round of sampling and testing, any monitoring result that exceeds the corresponding SSTV (i.e. exceeds the rolling mean) for any of the water quality parameters will trigger an investigation to identify the potential cause and, if required, propose appropriate mitigation or management measures, as detailed in Section 4.6.2. All surface water quality results will be evaluated against the corresponding SSTVs, as presented in Table 4-3 below.

Table 4-3 SSTV for the Project

PARAMETERS	SSTV	SSTV CALCULATION METHOD	TRIGGER FOR INVESTIGATION
pH	6.5 – 8.5		If pH results are greater than 1 pH value outside this range.
Electrical conductivity	To be calculated based on all previous samples collected as part of this WQMP.	Rolling mean	If result is >20% variation from SSTV or if most recent result is a >20% variation from results east to west of the same construction site.
Dissolved Oxygen	To be calculated based on all previous samples collected as part of this WQMP	Rolling mean	If result is >20% variation from SSTV or if most recent result is a >20% variation from results east to west of the same construction site.
Total Dissolved Solids	To be calculated based on all previous samples collected as part of this WQMP	Rolling mean	If result is >20% variation from SSTV or if most recent result is a >20% variation from results east to west of the same construction site.
Turbidity	To be calculated based on all previous samples collected as part of this WQMP	Rolling mean	If result is >20% variation from SSTV or if most recent result is a >20% variation from results east to west of the same construction site.

4.6.2 Stream Morphology

As instream construction activities have the potential to alter existing fluvial processes, downstream bank stability and erosion must be actively monitored and assessed in parallel with upstream conditions to determine whether works are adversely affecting downstream channel integrity.

If noticeable deterioration in bank stability or increased bank erosion is observed along downstream channel banks – and similar changes are not occurring upstream of the construction site at the same time - further investigation is required in accordance with Section 4.7.

4.7 TRIGGER ACTIONS

If the SSTV is exceeded, or bank erosion and instability in noticeably worsened downstream of an active construction site an investigation must be undertaken to identify the potential causes and determine whether these are related to Project activities. This investigation will confirm that erosion and sediment control (ESC) requirements and environmental management measures and safeguards are implemented and actively maintained in accordance with approved plans. The investigation must also assess any potential environmental impacts on the receiving environment. Based on the findings, appropriate recommendations should be made for corrective actions or improvements and these actions implemented. This may include further consultation with a suitably qualified and experienced person in erosion and sediment control and geomorphology.

5. MONITORING METHODOLOGY

5.1 SAMPLE COLLECTION

Grab samples will be collected manually from the sampling locations identified in Table 4-1. The volume of sample collected will be sufficient for the required physio-chemical (field) parameter analysis using a multi-probe water quality meter(s).

5.2 FIELD MEASURES

Field physio-chemical parameters including EC, pH, DO, TDS, temperature, and turbidity will be measured at each sampling location using a fully calibrated multi-probe water quality meter(s) or provided for laboratory analysis. Other observations including odour and colour may also be recorded, where relevant.

The multi-probe field water quality meter(s) will be calibrated against known standards, as supplied by the manufacturer, at the start and completion of each day of water quality sampling.

5.3 RECORDING OF FIELD RESULTS

Results for each monitoring location will be recorded on appropriate field sheets (hard copy or digital) using unique sampling identification nomenclature consisting of the sample date, location, and sampler details.

5.4 DECONTAMINATION

Sampling equipment will be cleaned (decontaminated) between each sample. Where a sample site shows evidence of contamination (e.g. algal bloom or strong odour) equipment will need to be cleaned thoroughly. In addition, equipment will need to be cleaned periodically to prevent a build-up of dirt.

The following decontamination method will be followed:

- Rinse the equipment in tap water
- Clean with De-Con 90 (a phosphate free detergent), or equivalent
- Rinse again with tap water
- Rinse three times with de-ionised water
- Allow to dry

De-ionised and tap water will be available for washing equipment in the field, if required.

5.5 QUALITY ASSURANCE AND DOCUMENTATION

Quality assurance and control protocols during sampling and recording of physio-chemical (field) parameters will be undertaken monthly (each sampling event) in accordance with ANZECC/ARMCANZ (2000b) to control the quality of the dataset.

Field results will be checked for accuracy before leaving the site and errors or discrepancies will be cross-checked, and further investigation initiated if required.

Monitoring and calibration records will be maintained in accordance with the appropriate standard.

6. COMPLIANCE MANAGEMENT

6.1 ROLES, RESPONSIBILITY AND TRAINING

The Abergeldie Team's organisational structure and overall roles and responsibilities are outlined in the CEMP. Specific responsibilities for the implementation of environmental controls are detailed in the SWMP.

All employees, contractors and utility staff working on site will undergo site induction and targeted training relating to surface water management issues, detailed in the SWMP.

Further details regarding staff induction and training are outlined in the CEMP.

All surface water quality monitoring required by this WQMP will be undertaken by the Project Environment Team.

6.2 MONITORING AND INSPECTION

This Program details the monitoring requirements for surface water. Additional soil and surface water inspection requirements (including weekly site inspections) are detailed in the SWMP.

Abergeldie's Environmental Site Representative (ESR) will be responsible for ensuring monitoring activities are undertaken.

Additional requirements and responsibilities in relation to inspections are documented in the CEMP.

6.3 DATA ANALYSIS AND MANAGEMENT RESPONSE

Monthly monitoring results for surface water quality will be compared against adopted trigger criteria in Table 4-3 and reported as per Section 6.5.

If a downstream parameter exceeds the adopted trigger criteria AND also exceeds the corresponding upstream parameter for any single monitoring event by more than 20%, a review will be undertaken. The review will assess available surface water data, baseline data for the relevant waterway, adopted ANZG (2018) guideline criteria, recent rainfall records, and recent activities or recorded erosion/sediment control incidents occurring in the catchment. If the exceedance is determined to be attributable to Project works, the event will be treated as an environmental incident and managed in accordance with the requirements of the CEMP. Corrective and preventative actions will be identified and implemented as part of that process.

6.4 AUDITING

Audits (both internal and external) will be undertaken to assess the effectiveness of environmental controls, compliance with this Program and other relevant approvals, licenses and guidelines.

Audit requirements are detailed in the CEMP.

6.5 REPORTING

During construction, surface water quality data will be collected, tabulated and assessed against baseline conditions and performance criteria.

Reporting requirements associated with the Program for the construction phase of the Project are presented in Table 6-1.

Table 6-1 Reporting requirements.

SCHEDULE (DURING CONSTRUCTION)	REQUIREMENTS	RECIPIENT (RELEVANT AUTHORITY)
Monthly Environmental Report (every month)	Monitoring program performance will be documented in the Monthly Project Safety and Environmental Report (DCCEEW DOC24/19204). Any incidents and key environmental issues will be documented.	DCCEEW

7. REVIEW AND IMPROVEMENT

7.1 CONTINUOUS IMPROVEMENT

Monitoring data will be reviewed throughout the construction period to inform the number of sampling locations and/or the analytical suites. The adopted SSTVs criteria will be reviewed for appropriateness following 3 months of construction monitoring.

Any alterations to the adopted SSTVs, monitoring locations, analytical suites, or frequencies would be proposed following a review of the data collected as part of this WQMP.

Continuous improvement of this Program will be achieved by the ongoing evaluation of environmental management performance against environmental policies and objectives (detailed in Section 2.2).

The continuous improvement process will be designed to:

- Identify areas of opportunity for improvement of environmental management and performance
- Determine the cause or causes of non-conformances and deficiencies
- Develop and implement a plan of corrective and preventative action to address any nonconformances and deficiencies
- Verify the effectiveness of the corrective and preventative actions
- Document any changes in procedures resulting from process improvement
- Make comparisons with WQO.

7.2 PROGRAM UPDATE AND AMENDMENT

The processes described in the Section 10 of the SWMP may result in the need to update or revise this WQMP. Revisions of this WQMP will be in accordance with the process outlined in the SWMP Section 10.

A copy of the updated plan and changes will be distributed to all relevant stakeholders in accordance with Section 1.3 of the SWMP.

8. REFERENCES

ANZECC/ARMCANZ (2000), National Water Quality Management Strategy Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Environment and Conservation Council, Agriculture and Resource Management Council of Australia and New Zealand.

ANZG (2018), Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia. Available at www.waterquality.gov.au/anz-guidelines.

DCCEEW (2024), Water Discharge and reuse guideline (EMF-WG-GUI-04/002).

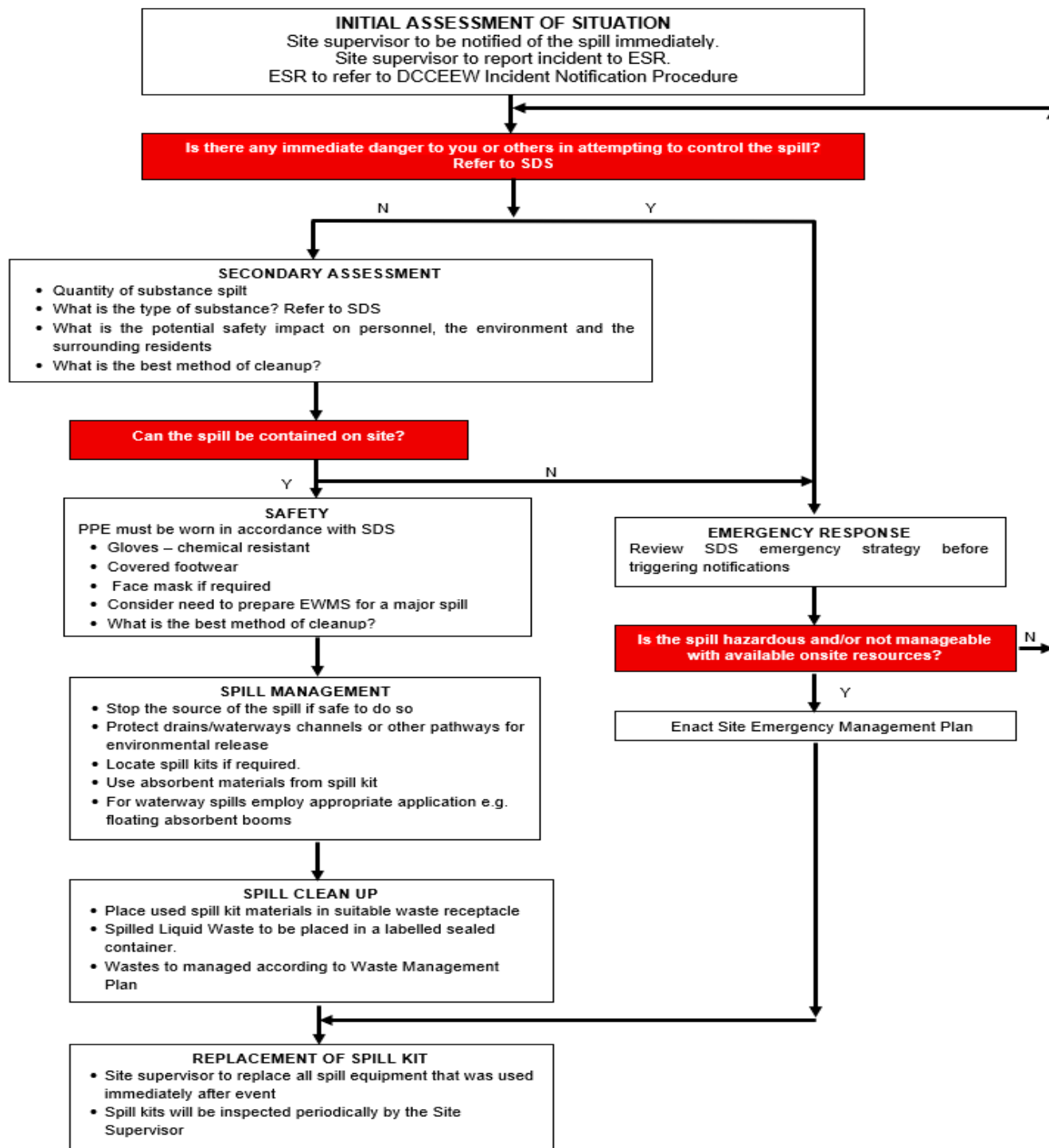
DECCW (2006), Australian and New Zealand Environment and Conservation Council (ANZECC) Guidelines and Water Quality Objectives in NSW.

Jacobs (2024). Billabong Creek Regulators Surface Water Quality and Aquatic Ecology Assessment. Report prepared for NSW Department of Climate Change, Energy, the Environment and Water, Appendix K to the EIS.

Landcom (2004), Managing Urban Stormwater: Soils and Construction. Landcom, (4th Edition) March 2004 (reprinted 2006) (the “Blue Book”). Volume 1 and Volume 2.

Murray Darling Basin Authority (MDBA) (2012), Basin Plan 2012. Murray Darling Basin Authority. Available at: <https://www.legislation.gov.au/Details/F2018C00451>.

APPENDIX G – SPILL MANAGEMENT PROCEDURE



APPENDIX H – DCCEEW WATER TAKE RECORD TEMPLATE

Department of Climate Change, Energy, the Environment and Water



2025 10 EMF-TOO – Water take record template (for water taken from coffer dams under a WAL exemption)

- This water take template must be used for the recording of water volumes taken from coffer dams during the construction of *essential infrastructure* as defined under Schedule 4 of the Water Management (General) Regulation 2025, by or on behalf of DCCEEW Water Group.
- The person responsible for operational management of the site must record the volume of water taken from coffer dams on this template; and provide the record to the Environment Lead at the end of each month.
- The DCCEEW Water Group Environment Lead is responsible for the annual reporting of water take to DCCEEW Water Group – Licensing and Approvals (2025 10 EMF-TOO – Annual water take record report template)

Purpose

This template is for recording the estimated volume of water taken from coffer dams on DCCEEW Water Group construction projects under a Water Access Licence (WAL) exemption (*NSW Water Management Regulation 2018*, Schedule 4 Exemptions (3) essential infrastructure).

To claim the WAL exemption, the water take record must meet the record-keeping and reporting requirements set out in the *NSW Water Management (General) Regulation 2025* and in this form.

2025 10 EMF-TOO – Water take record template (for water taken from coffer dams under a WAL exemption)



Procedure for recording water take volumes

Estimated volumes of water taken from coffer dams must:

- Be recorded using this template by the person responsible for operational management of the site.
- Be recorded separately for each coffer dam within each project Planning Approval (defined as REF decision statement), for each year (e.g. 1 July 2025 to 30 June 2026), until the project ends.
- Be recorded for each period of take within 24 hours of the end of take
- Complete a new record for each period of take of water from the coffer dam where the period of take is either:
 - the start and end dates for a period of continuous take; or
 - the date that water was taken for non-continuous take
- Where no water is taken, a record is not required.
- Be provided to the DCCEEW Water Group Environment Lead at the end of each month.
- Be retained for 5 years.

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Table 1: Water take record template (for water taken from coffer dams under a WAL exemption)

Item	Description						
Project name	<e.g. SDLAM Koondrook-Perricoota, Block banks and culverts>						
Project site	<e.g. Little Barbers Creek culvert construction>						
Is the water taken related to the construction of essential infrastructure on behalf of DCCEEW Water Group	<Yes>						
Planning Approval	<e.g. BN24/7654 Decision Statement (DCCEEW Water Group, 18 September 2024)>						
Water source	<e.g. New South Wales Murray Regulated River Water Source>						
Year	<e.g. 1 July 2025 to 30 June 2026>						
DCCEEW Water Group Project Manager							
DCCEEW Water Group Environment Lead							
Person responsible for operational management of the site	<table><thead><tr><th>Company</th><th>Role</th><th>Name</th></tr></thead><tbody><tr><td colspan="3"></td></tr></tbody></table>	Company	Role	Name			
Company	Role	Name					

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No.	Period of take- START	Period of take - END	Estimated volume	Units (ML)	Date record made	Method of volume estimation ¹
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

Methods that may be used to estimate the volume of water taken from the coffer dam include using (but are not limited to) v-notch weir, velocity times area, sump volumes, pump capacity, other (please specify)

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Document metadata

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Version control

Version number	Date issued	Change summary
V0.1	29 October 2025	Draft revised to reflect Licensing and Approvals record form requirements (TMP-MC-SD-V1.2). Reviewed by Director Environment, Engagement and Land prior to publishing.

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