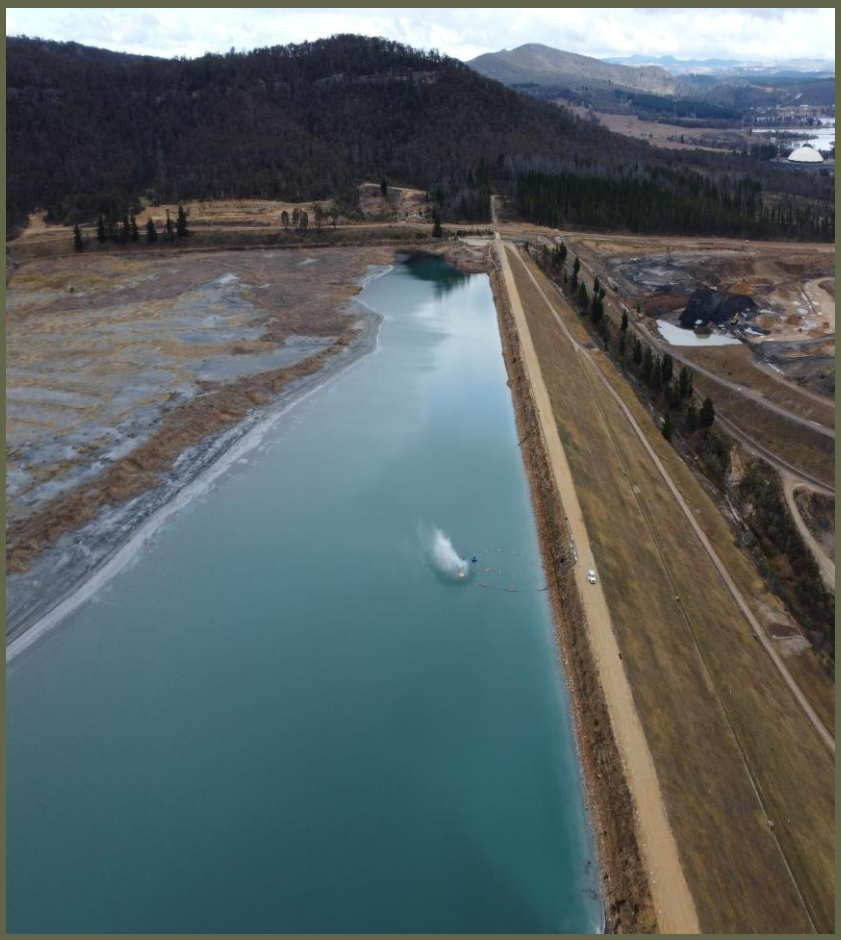
GPM Generator Propert

ABN: 73 615 047 295

Operational Surface Water Management Plan

Lidsdale Ash Repository 2026



GPM

Document control

Title	Operational Surface Water Management Plan - Lidsdale Ash Repository 2025
Approved by GPM Environment Manager	John Pola
Signed	
Dated	31st March 2026

Version control

Revision	Date	Description	Author	Reviewer	Approval
Rev 01	26/11/2024	Draft	Laurence Smith	Philip Towler	John Pola
Rev 02	19/12/2024	Final	Verity Blair	Phillip Towler	John Pola
Rev 03	24/03/2025	Updates following WaterNSW comments	Lachlan Hammersley, Nadia Eisenlohr	Daniel Keegan	John Pola
Rev 04	08/09/2025	Updates following DPHI comments	Nadia Eisenlohr	Lachlan Hammersley	John Pola
Rev 05	04/02/2026	Update to address EPA comments DOC25/354786-1	Tasman Coupe	Henry Noakes	John Pola
Rev 06	31/03/2026	Final	Tasman Coupe	Lachlan Hammersley	John Pola

List of emergency and key contacts

Position	Name	Phone
EPA pollution hotline	General Number	131 555
Fire and Rescue NSW	General Number	000 (for pollution incidents that present an immediate threat to human health or property) 1300 729 579 (for pollution incidents that do not present an immediate threat to human health or property)
Lithgow Hospital	General Number	02 6350 2300
SafeWork NSW	General Number	131 050
24-hour community information line	General Number	1800 817 711
GPM Environmental Manager	John Pola	0429 205 290
Financial Controller & Company Secretary	Diane Dibben	0412 773 255
Managing Director	David Wood	0484 623 220
Western Region Manager	Marlon Frost	0423 127 030
Engineering Project Officer	Timothy Edwards	0413 446 686
Engineering Project Officer	Julian MacPhee	0427 094 014
Environmental Representative	David Bone	0407 461 092
Lithgow City Council	General Number	02 6354 9999
Wallerawang Police	General Number	02 6355 1303
Lithgow Police	Chris Sammut	02 6352 8399

Contents

Figures and Tables

Glossary/Abbreviations

Abbreviation	Expanded text
Approval	Approval Modification MP07_005-Mod 2
ASS	Acid Sulfate Soils
CEMP	Construction Environmental Management Plan
CEMS	Contractors Environmental Management System
CIP	Caustic Injection Plant
Compliance audit	Verification of how implementation is proceeding with respect to a Construction Environmental Management Plan (CEMP) (which incorporates the relevant approval conditions).
CoAs	Conditions of Approval
Minister, the	Minister of the NSW Department of Planning and Environment (or delegate)
DP&E	Department of Planning and Environment (now DPHI)
DPHI	NSW Department of Planning, Housing and Infrastructure
EIS	Environmental Impact Statement
EEC	Endangered Ecological Community
Ecologically sustainable development	Using, conserving and enhancing the community's resources so that the ecological processes on which life depends are maintained and the total quality of life now and in the future, can be increased (Council of Australian Governments, 1992)
EPA	NSW Environment Protection Authority
EPBC-CoA	Federal Conditions of Approval under the EPBC Act
EMS	Environmental Management System
EMMs	Environmental Management Measures as outlined in the project EIS documentation.
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 organisation's environmental aspects.
Environmental incident	A set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits or performance measures/criteria in the planning approval
Environmental objective	Defined by AS/NZS ISO 14001:2015 as an overall environmental goal, consistent with the environmental policy, that an organisation sets itself to achieve.
Environmental policy	Statement by an organisation of its intention and principles for environmental performance.

Environmental target	Defined by AS/NZS ISO 14001:2015 as a detailed performance requirement, applicable to the organisation or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives.
Environmental Representative	A suitably qualified and experienced person independent of project design and construction personnel employed for the duration of construction. The principal point of advice in relation to all questions and complaints concerning environmental performance.
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EPL	Environment Protection Licence
ESCP	Erosion and Sediment Control Plan
GPM	Generator Property Management Pty Ltd
Hold point	Is a verification point that prevents work from commencing prior to approval from Roads and Maritime Services
KPI	Key Performance Indicator
KVAD	Kerosene Vale Ash Dam
KVAR	Kerosene Vale Ash Repository (dry stacked as on top of KVAD)
LADR	Lidsdale Ash Dam Repository
LDP	Licenced discharge point
Non-compliance	An occurrence, set of circumstances or development that is a breach of the approval but is not an incident.
OEH	Office of Environment and Heritage
OEMP	Operational environmental management plan
OSWMP	Operational Surface Water Management Plan
PESCP	Progressive Erosion and Sediment Control Plan
PIRMP	Pollution Incident Response Management Plan
Principal, the	GPM
POEO Act	*Protection of the Environment Operations Act 1997* (NSW)
REMM	Revised Environmental Management Measure
Roads and Maritime	Roads and Maritime Services (now TfNSW)
ROL	Road occupancy licence
SAP	Sensitive Area Plan
Secretary	Secretary of the Department of Planning or their Nominee
SSCAD	Sawyers Swamp Creek Ash Dam
SEAR's	Secretary's Environmental Assessment Requirements
SMP	Specific Management Plans
SPIR	Submission and Preferred Infrastructure Report

SWMS	Safety & Environmental work method statement
TfNSW	Transport for New South Wales
WPS	Wallerawang Power Station

1 Introduction

The Lidsdale Ash Dam Repository (LADR), formerly known as the Wallerawang Ash Repository, is located at Skelly Road, Lidsdale NSW (the Site) and is approximately 15 kilometres (km) northwest of Lithgow and 2.5 km north-east of Wallerawang Power Station (WPS). The Site comprises an area of approximately 528 hectares (ha) and is situated primarily on Lot 5 of Deposited Plan (DP) 829137.

The Site includes several distinct components, including:

- The Kerosene Vale Dry Ash Repository (KVAR) and underlying former Kerosene Vale Ash Dam (KVAD).
- Sawyers Swamp Creek Ash Dam (SSCAD).
- Lidsdale Cut and adjacent asbestos landfills.
- WPS Asbestos demolition landfill south of the SSCAD.

The Site location and general layout are shown in Figure 1.1.

The Site has been used since the 1950s to store ash and other wastes generated by the Wallerawang Power Station (WPS). Site operations started prior to the commencement of the E*nvironmental Planning and Assessment Act 1979* (EP&A Act), when the WPS and associated facilities were owned by the NSW Government.

Ownership and responsibility for the Site was transferred from Energy Australia NSW Pty Ltd to Generator Property Management Pty Limited (GPM) in September 2020. GPM's objectives at the Site include closure of the operational facilities and the rehabilitation and management of the Site in general including the Kerosene Ash Repository (KVAR) and the Sawyers Swamp Creek Ash Dam (SSCAD).

This Operational Surface Water Management Plan (OSWMP) has been developed to ensure the care and maintenance of the Site are carried out responsibly and in accordance with the relevant Conditions of Approval (CoAs) and any other requirements.

GPM and its contractors are also undertaking construction activities that will be managed under the Site's Construction Environmental Management Plan (CEMP).

1.1 Background to the Lidsdale Ash Repository

The Lidsdale Site was originally farmland that was gradually turned into mining premises during the late 1800s into the early 20th century. The Kerosene Vale mines were originally a series of open cut operations that changed to underground mines using portals driven under the northern escarpment.

The original ash placement operations were at the KVAD. The mining void was filled with ash transported from the WPS as a slurry (i.e. wet ash placement). When the KVAD was full, it was capped with a clay capping and then ash placement operations began at the SSCAD, which saw wet ash placement take place from 1980 to 2003. The SSCAD is still used to manage site water requirements with water levels managed by irrigation for dust suppression and other onsite water uses to prevent discharge to Sawyers Swamp Creek. When required, water is transferred for treatment via a Caustic Injection Plant (CIP), clarified and discharged through a licenced discharge point (LDP3). The SSCAD is a declared dam under the NSW Dams Safety Act 2015 No 26 (DS Act) and is subject to regular surveillance and monitoring by certified engineers in accordance with the DS Act.

The need to further develop the KVAR area to maintain power-generation operations at WPS was identified in 2001. The existing wet ash storage area (i.e. the SSCAD) was approaching its design capacity and the placement of dry ash at the KVAR was identified as a viable alternative. Conversion from wet to dry ash placement aimed to minimise environmental and social impacts potentially resulting from heavy metal accumulation. The extent of both stages is outlined in Figure 1.1.

It is noted that the Site has recently been formally Declared under the *Contaminated Land Management Act* (CLM Act) by the EPA and is subject to a Voluntary Management Plan requiring detailed and extensive investigations that will guide long term works on the SSCAD and may require additional works on the Site that would be subject to further approval.

1.2 Relevant project approval

In 2002, Project Approval was granted by the then Minister of Planning to change from wet to dry ash-producing activities and to use the KVAR area for dry ash storage.

The placement of ash on the Repository was developed in two stages:

- Stage 1: Comprises about one third of the area associated with the repository site and located on the south-western section of the Site, this area was designed to operate for a period of 5 years and reached its design capacity and has been capped.

- Stage 2: Comprises the remainder the repository site, covering an area from the open face of the Stage 1 area to the edge of the original storage area. This stage was designed to operate about 10 years, depending on actual ash production rates.

On 26 November 2008, Project Approval (07_0005) was granted by the then Minister of Planning for the extension of the existing KVAR area to permit the continued disposal of ash generated by the WPS under Part 3A (now repealed) of the *Environmental Planning and Assessment Act 1979*. The KVAR Stage 1 placement works were completed and capped in February 2009. The KVAR Stage 2 placement works commenced soon after in April 2009.

In January 2014, WPS's Unit 7 was removed from service and deregistered from the market; whilst in March 2014, Unit 8 was placed in long term storage. However, in November 2014, EnergyAustralia NSW announced that Unit 8 was to be removed from service and the WPS deregistered from the market.

WPS ceased energy production in April 2014 and is currently being decommissioned and dismantled. The bulk transport and disposal of ash to the KVAR ceased following the closure of the WPS. The Lidsdale Ash Repository is currently being managed in a care and maintenance arrangement. Environmental studies and investigations are currently underway to support GPM's safe decommissioning, demolition, rehabilitation and management of ongoing regulatory and contractual obligations associated with the Lidsdale Ash Repository area.

Modification 1 to 07_005 was approved on 9 August 2018 under section 75W of the EP&A Act. This was to allow for the importation of clean fill (virgin excavated natural material (VENM) and excavated natural material (ENM)) for use of capping of KVAR and SSCAD over two years. This modification included a revised project area that extended the originally approved project to include the area covered by SSCAD.

Modification 2 to 07_005 was approved on 13 October 2023 under section 96(1A) of the EP&A Act. This was to allow for the importation of fill over an additional 10 years (i.e. until 13 October 2033).

The most complete description of the onsite activities was provided in the original *Kerosene Vale Stage 2 Ash Repository Area Environmental Assessment* prepared by Parsons Brinckerhoff in April 2008. This focused on the ongoing ash management without providing any details of site rehabilitation requirements when the power station closed. However, it did include the realignment of a section of Sawyers Swamp Creek to allow the structural earthworks required to achieve an acceptable factor of safety against failure of the ash stockpiles during earthquakes. The subsequent modification applications focussed on the potential impacts of the importation of fill material, rather than on activities within the Site where the material would be utilised.

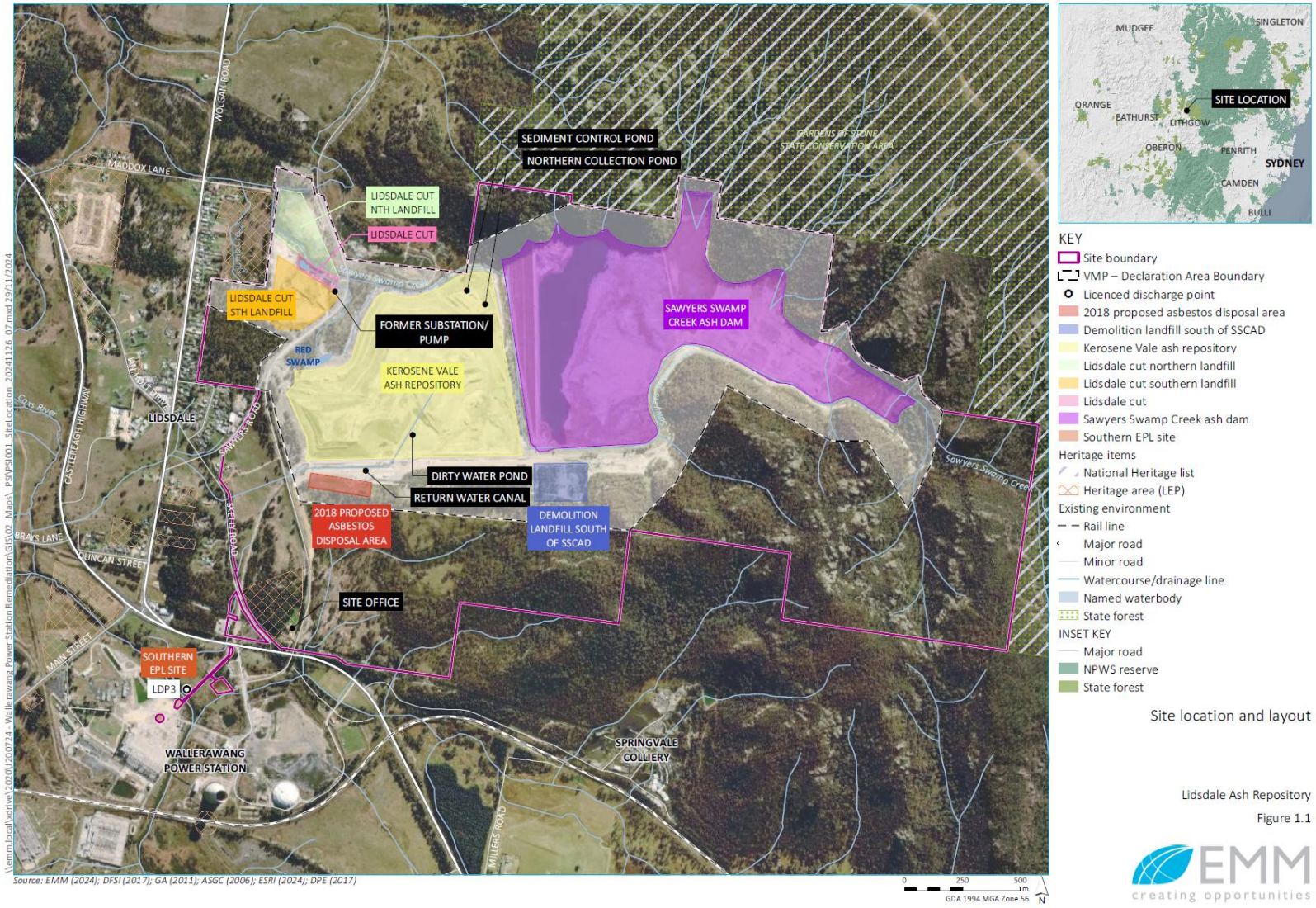


Figure 1.1 Site location and layout.

1.3 Operational Environmental Management Plan and Sub-plans

CoA 6.5 requires the applicant to develop an OEMP that outlines the environmental management practices and procedures to be followed and requires the preparation and implementation of the following management plans:

- **Operational Surface Water Management Plan** (OSWMP) - identifies the management measures to minimise surface water impacts
- **Operational Noise Management Plan** (ONMP) - identifies the management measures to minimise operational noise impacts
- **Operational Groundwater Management Plan** (OGMP) - identifies the management measures to minimise operational groundwater impacts
- **Operational Air Quality Management Plan** (OAQMP) - identifies the management measures to minimise operational air quality impacts
- **Operational Landscape/Revegetation Plan** (OLP) - identifies the management measures to minimise operational biodiversity impacts
- **Operational Transport Management Plan** (OTMP) - identifies the management measures to minimise traffic and transport impacts during construction

Given the requirement to develop these additional management plans in conjunction with the OEMP, these plans are identified as sub-plans to the OEMP.

Table 1.1 provides a high-level overview of the proposed activities that are covered by the CEMP and those covered by the OEMP. Further information on the scope of this OEMP is provided in Section 1.4.

Table 1.1 Activities covered by the CEMP and OEMP

Environmental Management Plan	Activities covered
OEMP – care and maintenance operations	• Ash management • Management of on-site water systems • Capping material haulage, placement and management • Landscaping and revegetation/rehabilitation of the Site • Upgrading and maintaining internal access roads in the project area

Environmental Management Plan	Activities covered
CEMP – construction activities	• Sawyers Swamp Creek realignment • Construction of stability berms around the perimeter of the KVAR • Excavation of the former pine plantation area • Sediment controls and surface water dams associated with construction of the KVAR stability berm and realignment of the Sawyers Swamp Creek • Establishment of freshwater collection ponds on the northern edge of SSCAD • Rearrangement of water flows around the KVAR • Establishment of access roads onto the surface of the SSCAD and associated roads across the dam surface • Reinstatement of environmental controls for historic landfill areas including capping of slumped areas, reprofiling for water management and control of sediment runoff during these activities • Concurrent construction activities.

1.4 Environmental management system overview

GPM's Environmental Management System (EMS) is based on AS/NZS ISO 14001. The ISO 14001 standard provides best practice specifications for the implementation of an EMS. An EMS provides a framework for managing the company's environmental responsibilities so that they are integrated into overall operations. The standard approach integrates environmental management and supports the company's compliance with legislated and voluntary environmental requirements, as well as continuously improving their overall environmental performance.

The relevant environmental standard ensure a consistent approach is undertaken to integrate environmental management at all levels of the organisation by:

- Identifying and maintaining awareness of relevant environmental legislation.
- Assignment of roles and responsibilities.
- Establishment of procedures for internal and external communications.
- Establishment of procedures for monitoring and measuring environmental performance.
- Setting and reviewing objectives and targets for improving environmental performance.
- Monitoring and measuring environmental compliance and community inquiries.
- Setting and reviewing management system programs for achieving objectives and targets.
- Provision of environmental training aligned to skill requirements.
- Review of EMS performance for continual improvement.

This OSWMP has been developed to be consistent with the relevant provisions of GPM's EMS, including approvals and license as noted above.

A summary of the EMS and its interaction with the CEMP and OEMP is provided in Figure 1.2.

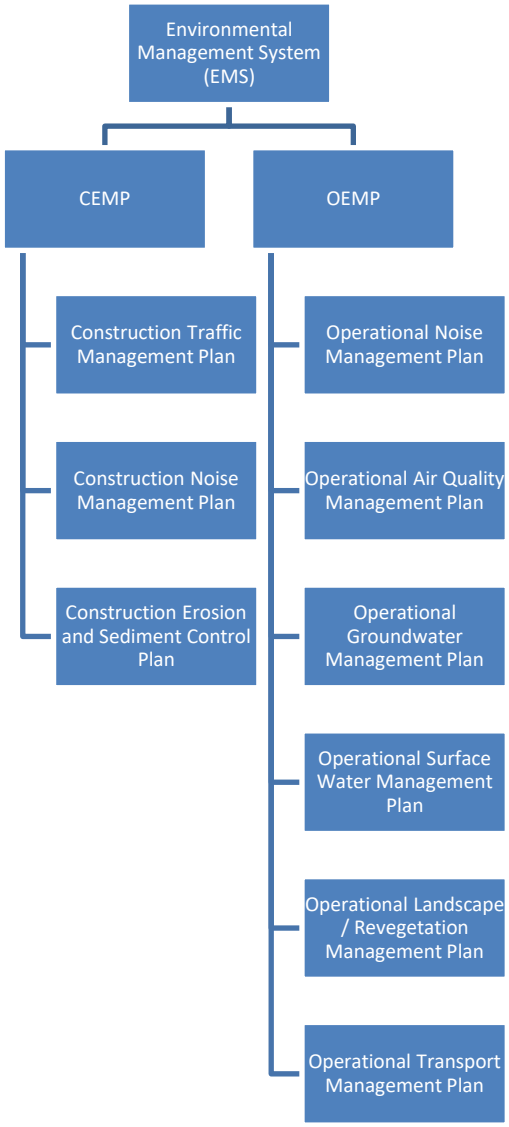


Figure 1.2 Environmental Management System flowchart

1.5 Interactions with other management plans and strategies

This OSWMP is a sub-plan to the OEMP and interrelates with the other (sub) management plans set out in Section 1.3 and 1.4 above.

1.6 Reference documents

This OSWMP incorporates the obligations and criteria outlined in the following documents:

- Project Approval 07_0005 (NSW Department of Planning)
- Submission Report – Statement of Commitments (Parsons Brinckerhoff 2008)
- Modification application 07_0005 Mod 1
- Modification application 07_0005 Mod 2
- Wallerawang Power Station to Submissions Report (EA 2018)
- Environment Protection Licence 21185 (NSW Environment Protection Authority)
- Works Approval (Water Mgt Act 2000).

1.7 Endorsement and approval

1.7.1 Internal approval of OEMP and Sub-plans

The OEMP and associated sub-plans, strategies and monitoring programs undergo ongoing review by the GPM team. Following the ongoing review and revision process, internal signoff will be provided.

Once internal approval is received, the documents will be provided to DPHI and the ER for review prior to undertaking external consultation, review and approval processes described below.

1.7.2 External endorsement and approval of OEMP and sub-plans

Table 1.2 below provides a summary of the relevant authority(s), council(s) and agencies that require consultation during preparation of the OEMP sub-plans and monitoring programs in accordance with the conditions of approval.

External distribution for consultation and approval of the OEMP, sub-plans and monitoring programs will be undertaken and updated in consultation with the relevant external parties (refer Table 1.2) and will then be endorsed by the ER in accordance with CoA 6.5. After this external consultation and endorsement process is complete the required documents will be submitted to the Secretary for approval.

A copy of the latest ER Endorsement of the OEMP is included in Appendix E of this Plan. Consultation evidence with relevant external parties is provided in Appendix F.

Table 1.2 Consultation requirements for OEMP and subplans

Report	Relevant CoA	Condition of Approval	Consultation required
Operational Environmental Management Plan	6.4	The plan shall be submitted for the approval of the Secretary no later than four weeks prior to the commencement of operation of the project, unless otherwise agreed by the Secretary.	Secretary (DPHI)
Operational Noise Management plan	6.5a	The plan shall be prepared in consultation with, and to the satisfaction of, the EPA.	EPA
Groundwater Management Plan	6.5b	The plan shall be prepared in consultation with, and to the satisfaction of, WaterNSW.	WaterNSW
Surface Water Management Plan	**6.5c**	**The plan shall be based on best environmental practice and shall be prepared in consultation with, and to the satisfaction of, WaterNSW and Fisheries NSW.**	**WaterNSW** **Fisheries NSW**
Air Quality Management Plan	6.5d	The plan shall be prepared in consultation with, and to the satisfaction of, the EPA.	EPA
Operational Transport Management Plan	6.5f	The plan must be prepared in consultation with TfNSW and Council.	TfNSW Lithgow Council

Table 1.3 Consultation outcomes for OSWMP

Agency	Date provided	Comments	Where addressed
WaterNSW	4th February 2025	The OSWMP should include a detailed water balance for the site to demonstrate that storage volumes can effectively manage contaminated water on site	Added as Appendix D
		Little information is provided in the OSWMP regarding the Caustic Injection Plant (CIP). WaterNSW considers the potential impacts of this activity are relevant and should also be included in the OSWMP including specific details of the current water quality within the SSCAD (including heavy metals and metalloids) and details of the treatment process and the expected quality of treated water discharges for all parameters. The OSWMP should also include when use of the CIP is triggered (i.e., anticipated rainfall thresholds, water quality exceedances), and monitoring is required prior to treatment, and prior to discharge to ensure compliance with the EPL	Section 4.2 added to provide more detail about the water treatment system.
		WaterNSW considers detailed baseline monitoring data for each sample site be provided as an appendix similar to that provided in the OGWMP	Added baseline monitoring as Appendix C
		WaterNSW considers baseline values for all parameters proposed for monitoring should be included in Table A.2 – particularly given the site has a history for exceedances of Boron, Fluoride, Filterable Iron and Filterable Manganese which present a risk to the local aquatic ecology of the receiving waters that would not have been exposed to these contaminants on a regular basis. We also note that treatment through the CIP would not address these contaminants	Table A.2 has been updated to include additional analytes. Additional information about the CIP treatment processes has been added to Section 4.2.
		WaterNSW also considers that the 80th percentile values be provided for each monitoring site, for each parameter to identify potential spatial trends	80th percentile values are continuously updated with each monitoring event. Any included within this plan would not be accurate. Surface water quality data, including the trends for monitoring sites, will be incorporated into the Annual Environmental Management Report (AEMR).
		In Table B3 - Stage 2 notification, WaterNSW should also be included as a relevant agency to be notified,	WaterNSW added as a relevant agency to notify at Stage 2.
		In the Trigger Action Response Plans (Table B3 in the OSWMP and Table B4 in the OGWMP), recommend notifying the relevant agencies if a Stage 1 (Low Hazard) trigger continues for greater than 6 weeks, even if Stage 2 is not triggered.	Table B.3 has been updated to clarify when relevant agencies shall be notified if Low Hazard (Stage 1) trigger continues, and where Stage 2 is not triggered.

Agency	Date provided	Comments	Where addressed
Fisheries NSW	7th February 2025	DPIRD Fisheries believe that the Trigger Action Response Plan (TARP) is not very detailed in providing corrective mitigating actions to address non-compliant adverse surface water quality exceedances and surface water level exceedances in the dam, other than reporting/consulting with regulatory agencies and reviewing the OSWMP. A clear Response and Contingency Plan outlining triggers and actions to be undertaken in such events might be beneficial.	Corrective mitigating actions are determined based on the type and scale of the exceedance. These actions will be determined based on the outcomes of the investigation. Reference to the Pollution Incident Response Management Plan (PIRMP) has been added within the TARP. The PIRMP provides more details around the action and notification protocol as well as site specific hazards and environmental risks.
Revision 3 of this plan was provided to WaterNSW and Fisheries NSW on the 21st of July 2025 for comment close-out.			
WaterNSW	7th August 2025	Thank you very much for sending through the updated plans. Water NSW has now reviewed the and have no further comments.	N/A
Fisheries NSW	1st September 2025	Thank you for your correspondence. I have reviewed the updated OSWMP and am satisfied that my previous comments have been addressed and endorse the revised plan.	N/A
Revision 4 of this plan was provided to WaterNSW and Fisheries NSW on the 8th of September 2025 for comment close-out			
NSW EPA	22nd October 2025	**Relocation of surface water monitoring location** The EPA supports the request to relocate LDP 20 [read:EPL20] (S5) surface water sampling point approximately 200 m downstream due to increasing inaccessibility and workplace safety matters.	Figure 5.3 in the OEMP and Figure B.1 of this document have been updated to present the updated monitoring location for S5 (EPL20).

2 Purpose and Objectives

2.1 Purpose

This OSWMP for the Lidsdale Ash Repository outlines strategies and actions to mitigate environmental impacts during operations. It is designed to set clear protocols and responsibilities, and to thereby ensure that risks are managed and sustainable practices are upheld. This sub-plan supports the OEMP and should be read in conjunction with the OEMP.

2.2 Objectives

Key Issues

The key surface water management issues at the Site are:

- clean water and stormwater separation from the contaminated water system
- incidental ingress of contaminated water into the clean water and stormwater systems
- treatment and discharge of contaminated water via EPL discharge points
- discharge of un-contaminated stormwater
- sediment laden runoff from unsealed roads, and areas where capping earthworks are being undertaken.

Constraints

GPM commenced ownership and responsibility for the Site in September 2020, taking over from EnergyAustralia. GPM's initial focus has been to manage the ongoing regulatory and contractual obligations for the Site. The longer-term objective is to plan for and then undertake the safe closure of the ash dams and repositories and then appropriately remediate the balance of the Site for permanent closure. On 22 August 2022, the EPA issued GPM with a Contaminated Land Declaration Notice which declares the Site as significantly contaminated land under division 2 the *Contaminated Land Management Act 1997*. GPM is required to provide the EPA with a Voluntary Management Proposal to investigate and address the contamination by 18 October 2022.

Currently the Site is operated on a care and maintenance arrangement. GPM are progressively improving the water management system to treat and discharge contaminated water and reduce the volume of contaminated water that requires management and the incidental ingress of contaminated water into the clean water, stormwater and local surface and groundwater systems. These works are expected to result in improvements overtime. However, it is expected that some water management issues can only be resolved via complete rehabilitation of the Site. Accordingly, some residual impacts are expected during the current care and maintenance period.

Strategy

The surface water management subplan establishes procedures for categorising and managing water. The procedures will be implemented across all parts of the water management system that require active management. Examples include an erosion and sediment control plan that would be prepared by a contractor or a plan to manage the diversion of clean water from SSCAD to Sawyers Swamp Creek. The following sections describe water management methods, responsibilities, monitoring requirements and thresholds for discharging to the clean water system. Where required for training and quality purposes, procedures will be developed outside of this OSWMP and will be progressively updated as required.

2.3 Targets

This sub-plan establishes targets and indicators as follows.

Targets:

- As much as practical, separate clean water from the contaminated water system to minimise the volume of contaminated water that requires management.
- Where practical, minimise the incidental discharge of contaminated water into Sawyers Swamp Creek.
- Treat water in SSCAD pond to EPL discharge criteria
- Reuse stormwater across the site for irrigation or construction uses as a priority
- Treat residual stormwater to relevant guidelines and EPL criteria (where appropriate) prior to discharge to the environment
- Reduce exposed areas through erosion and sediment control and rehabilitation to reduce stormwater management requirements over time
- Zero environmental incidents that relate to pollution of waters.

Indicators:

- No significant degradation of the water quality of Sawyers Swamp Creek downstream of the Site.
- The volume of treated water from SSCAD Pond that is discharged via LDP3, as per EPL requirements.

Supporting documentation includes water categorisation procedure (Appendix A), surface water monitoring analytes and methods (Appendix B), baseline monitoring (Appendix C) and a preliminary site water balance (Appendix D).

3 Environmental requirements

3.1 Water management overview

Surface water within the Site is described using the following nomenclature:

- The Site's water management system includes:
  - **Sawyers Swamp Creek Ash Dam (SSCAD)** is an ash dam that was formed in the Sawyers Swamp Creek valley. It is divided into four sections (A, B, C and D) and has a total area of 82 ha. Each section is separated by earthen embankments. Sections A comprises an open water body that is referred to as the SSCAD Pond and currently has areas of exposed ash. Sections B, C and D are referred to as the Upper Dam. A perched groundwater system also exists within the placed ash (the perched SSCAD groundwater system).

    The SSCAD Pond is a large water body and is a central feature of the Site's overall water management system. It receives potentially contaminated water from the KVAR/KVAD water management area and the SSCAD embankment drainage system. This assists in minimising incidental surface and groundwater discharges from the Site. The SSCAD Pond also receives runoff from direct rainfall, clean water catchment CW1 and overflows from the SSCAD Upper Dam (Section B, C and D).

    Water accumulation in the SSCAD Pond is managed via irrigation to exposed ash areas and at times via controlled discharges to the Coxs River at a licensed discharge point referred to as LDP3. Controlled discharges are treated prior to discharge and are regulated by EPL 21185.
  - **KVAR/KVAD water management area** is located to the west (downgradient) of SSCAD. KVAD is the Power Station's original ash dams which used to be an open cut mine void (KVAD) and KVAR is the dry ash compacted stockpile situated on top of the capped KVAD. The combined area now has an associated water management system. A perched groundwater system exists within the KVAR (the perched KVAR groundwater system). Surface water runoff and seepage from this area drains to several water storage areas. Captured water that is known to be contaminated is pumped to the Lidsdale Cut.
  - **Sawyers Swamp Creek Diversion** is a clean water system that manages streamflow from the Sawyers Swamp Creek catchment areas to the east and south of SSCAD. The system diverts clean water around SSCAD and the KVAR/KVAD water management area. The diversion eventually joins the Sawyers Swamp Creek channel to the north-west of the Site which eventually flows to the Cox's River.
- The following ancillary areas are located within the Site or are relevant to the Site's water management system:
  - Investigation Area is a 24 ha area located west of the Site, downgradient from the KVAR/KVAD water management area. Parts of this area have been disturbed by mining that is understood to have occurred prior to the 1950s. There are known deposits of coal ash, chitter and a potential landfill in this area. Vegetation has re-established within most of the investigation area. GPM are undertaking an investigation into the potential for surface and groundwater contamination to occur from this area as part of the contaminated land investigations that are a separate process to this OSWMP.

- Upgradient clean water catchments refer to clean water catchment areas that are upgradient of either the SSCAD or the Sawyers Swamp Creek Diversion. Runoff from these catchments has potential to interact with the Site's water management system via either direct inflows or system overflows during certain high flow events. Incidental discharge from the Site's water management system (discussed above) may also enter the Sawyers Swamp Creek Diversion at several locations.
- Downgradient clean water areas refer to parts of the Site that are not known to have been previously disturbed by mining operations or ash placement and drain away from the Site's water management system.
- Dump Creek is a first order watercourse that is located to the west of the Site. Parts of the Investigation Area are within the Dump Creek Catchment. There is also potential for some groundwater from the Site to flow to the north-west towards Dump Creek.

- Surface water within the Site is described using the following categories based on water quality: clean water, stormwater and contaminated water. A water categorisation procedure is provided in Appendix A.
- A site water balance for the site is currently under development and subject the completion of a number of environmental studies currently occurring on the site. A preliminary version of the water balance is attached in Appendix D.

Figure 3.1 shows the abovementioned water management areas and systems.

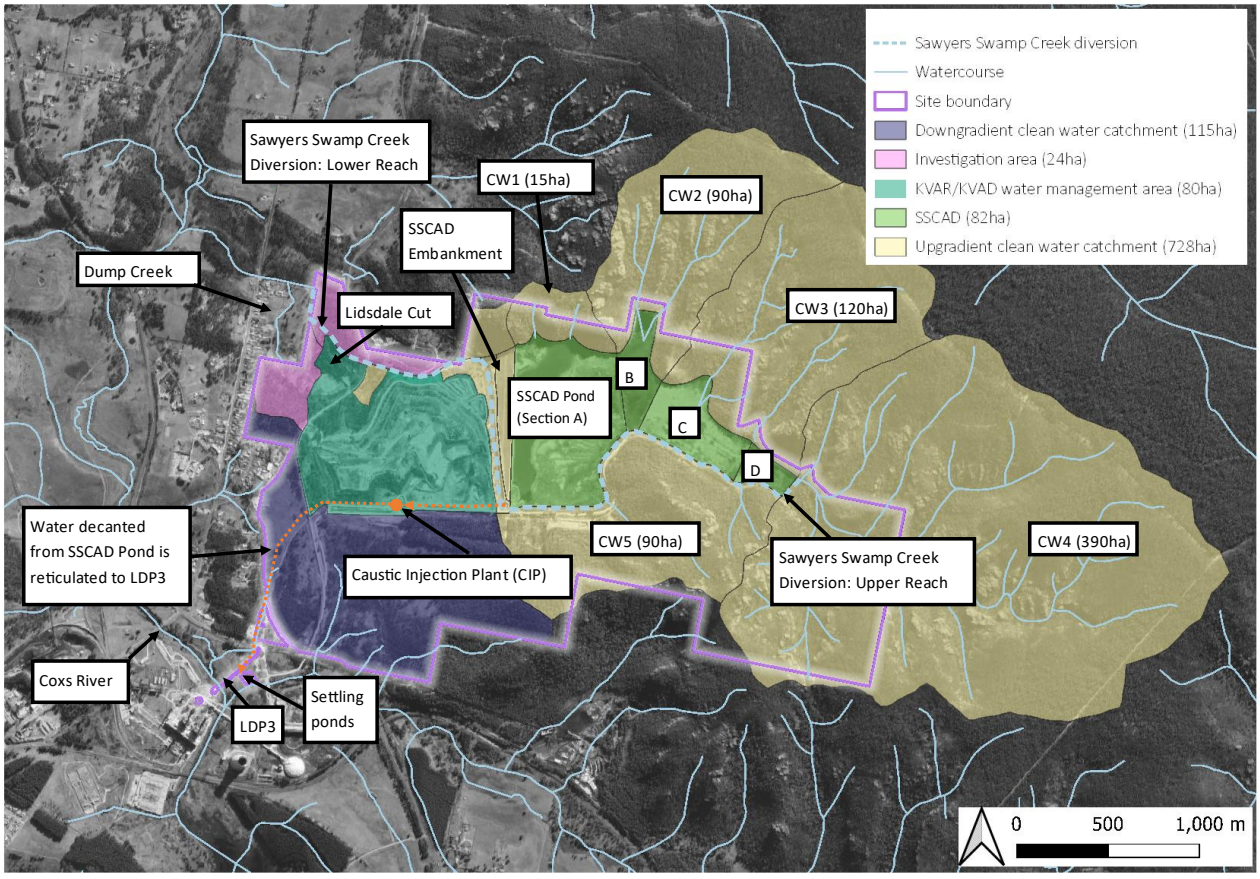


Figure 3.1 Water management areas

Specific procedures related to the decommissioning of water management structures will be included in future revisions of this document as part of closure planning.

3.2 Relevant Conditions of Approval

The relevant CoAs, and where they are addressed in this Sub-plan are provided in Table 3.1.

Table 3.1 Relevant Conditions of Approval and where they are addressed

Relevant CoA	Condition of Approval	Where addressed in this plan
2.30	The Applicant shall take all reasonable and feasible measures to prevent discharge of sediments and pollutants from the construction and operation of the project entering waterways.	Table 4.1 Environmental mitigation measures)
2.31	Earthworks not associated with the realignment of Sawyers Swamp Creek shall not be undertaken within 50 m of the creek where reasonable and feasible.	Table 4.1 Environmental mitigation measures)
2.32	All equipment, machinery and vehicles associated with the construction and operation of the project shall be operated and maintained in a manner that minimises the potential for oil and grease spills/leaks.	Table 4.1 Environmental mitigation measures)
3.5	The Applicant is to implement a surface water quality monitoring program to monitor the impacts of the ash placement activities on, and the realignment of, Sawyers Swamp Creek. The Program shall be developed in consultation with and to the satisfaction of Fisheries NSW and WaterNSW, and shall describe the location, frequency, rationale and the procedures and protocols for collecting water samples as well as the parameters analysed and methods of analysis. The program shall include, but not necessarily be limited to: a) monitoring at the four existing water quality monitoring sites as described in the document referred to under condition 1.1 of this approval; b) monitoring downstream of the realigned section of Sawyers Swamp Creek; c) monitoring at groundwater discharge points into Sawyers Swamp Creek; d) wet weather monitoring with a minimum of two events recorded within the first 12 months of both the operation of the project and post realignment of Sawyers Swamp Creek; and e) a schedule for periodic monitoring of surface quality at all sites throughout the life of the project, at an initial frequency of no less than once every month for the first 12 months and must include, but not be limited to, dissolved oxygen, turbidity, total phosphorus and total nitrogen. The monitoring program shall form part of the Surface Water Management Plan referred to in condition 6.5c) of this approval.	Appendix B (Surface Water Monitoring Plan)
6.5c	A Surface Water Management Plan to outline measures that will be employed to manage water on the site, to minimise soil erosion and the discharge of sediments and other pollutants to lands and/or waters throughout the life of the project. The Plan shall be based on best environmental practice and shall be prepared in consultation with, and to the satisfaction of, WaterNSW and Fisheries NSW. The Plan shall include, but not necessarily be limited to: i. baseline data on the water quality and flow in Sawyers Swamp Creek up to the date of this approval; *ii. Left blank due to typo in the Planning Approval*	Appendix C (Baseline Monitoring)

Relevant CoA	Condition of Approval	Where addressed in this plan
	iii. water quality objectives and impact assessment criteria for Sawyers Swamp Creek;	Appendix A (Water quality categorisation procedure)
	iv. a program to monitor surface water quality in Sawyers Swamp Creek as referred to in condition 3.5 of this approval;	Appendix B (Surface Water Monitoring)
	v. a protocol for the investigation of identified exceedances in the impact assessment criteria;	Appendix B (Surface Water Monitoring)
	vi. a response plan to address potential adverse surface water quality exceedances;	Appendix B (Surface Water Monitoring)
	vii. a site water management strategy identifying clean and dirty water areas for Stages A, B and C of the project and the associated water management measures including erosion and sediment controls and provisions for recycling/reuse of water and the procedures for decommissioning water management structures on the site; and	Section 3.1, Table 4.1 Environmental mitigation measures, Appendix D (Site water balance). It is noted that these stages of the approved development were completed by others prior to GPM ownership of the site.
	viii. provisions for periodic reporting of results to the Fisheries NSW and WaterNSW.	Section 5.2

3.3 Compliance tracking

CoA 4.2 mandates a compliance tracking program to track compliance with the requirements before commencing operations. A compliance tracking program has been prepared for internal use by GPM to ensure effective and efficient tracking of compliance (refer Section 3.6 of the OEMP for further details on compliance tracking).

Detail on compliance management, including roles and responsibilities, is provided throughout Section 3 of the OEMP.

4 Environmental management

4.1 Management measures

Management actions to minimise operational impacts are summarised in Table 4.1. This describes the water management approach for each water quality category (i.e. clean water, stormwater and contaminated water) and monitoring and reporting requirements.

Table 4.1 Environmental mitigation measures

Relevant aspect	Management and mitigation measures	Source of requirement	Frequency	Relevant records	Responsibility
Clean water management	Clean water will be identified using the water quality categorisation procedure (see Appendix A of the OSWMP).	This OSWMP and CoA 2.30	Ongoing	Appendix A ESDAT database	GPM
	Where practical, clean water will be separated from stormwater and contaminated water systems and will be diverted into a designated clean water drainage system, such as the Sawyers Swamp Creek Diversion.	This OSWMP and CoA 2.30	Ongoing	Appendix A ESDAT database	GPM
	Any clean water diversion system that manages water that is potentially exposed to ash will require ongoing monitoring and review. A procedure will be prepared for each system. Each procedure will describe: • how clean water is to be diverted; • ongoing monitoring requirements; and • thresholds for ceasing the diversion.	This OSWMP, CoA 2.30 and CoA 6.4c)	Ongoing	Appendix A ESDAT database	GPM
Site management	Earthworks not associated with the realignment of Sawyers Swamp Creek shall not be undertaken within 50 m of the creek where reasonable and feasible.	CoA 2.31	Ongoing	Site inspection reports	GPM
	All equipment, machinery and vehicles associated with the construction and operation of the project shall be operated and maintained in a manner that minimises the potential for oil and grease spills/leaks.	CoA 2.32	Ongoing	Site inspection reports	GPM
Stormwater management	Stormwater will be identified using the water quality categorisation procedure (see Appendix A).	This OSWMP and CoA 2.30	Ongoing	Appendix A	GPM
	Water that is identified as stormwater is to be managed in accordance with the methods described in *Managing Urban Stormwater Soils and Construction: Volume 1* (Landcom 2004) and *Volume 2E Mines and Quarries* (DECC 2008).	This OSWMP, CoA 2.30 and CoA 6.4c)	Ongoing	Site inspection reports ESCPs	GPM

Relevant aspect	Management and mitigation measures	Source of requirement	Frequency	Relevant records	Responsibility
	A plan will be prepared for the Site that shows: all stormwater catchment areas, stormwater drainage lines, sedimentation basins, overflow locations and irrigation areas (if relevant). The plan will be progressively updated as required.	This OSWMP, CoA 2.30 and CoA 6.4c)	Ongoing	This OSWMP	GPM
	Any stormwater system that manages runoff or interflow that is potentially exposed to ash and/or potentially receives some contaminated water ingress will require ongoing monitoring and review. Monitoring and review requirements have been established.	This OSWMP, CoA 2.30 and CoA 6.4c)	Ongoing	Appendix A, Surface water TARP, ESDAT database	GPM
Contaminated water management	Contaminated water will be identified using the water quality categorisation procedure (see Appendix A).	This OSWMP and CoA 2.30	Ongoing	Appendix A, Surface water TARP, ESDAT database	GPM
	Where practical, contaminated water will be separated from clean and stormwater systems.	This OSWMP and CoA 2.30	Ongoing	Nil	GPM
	All known sources of contaminated water, the contaminated water management system, operating procedures (including response and contingency procedures) and monitoring and reporting requirements will be established. These will be progressively updated as required.	This OSWMP, CoA 2.30 and CoA 6.4c)	Ongoing	Appendix A, Appendix B, ESDAT database	GPM
	The accumulation of contaminated water will be managed by irrigation to exposed ash, natural evaporation and controlled discharges to the Coxs River at LDP3. Controlled discharges will be undertaken in accordance with the requirements of EPL 21185.	This OSWMP and CoA 2.30	Ongoing	Appendix A, Appendix B, ESDAT database	GPM
Routine surface water quality monitoring	Routine monitoring will be undertaken at the following locations: • Coxs River – WX12 – upstream of Sawyers Swamp Creek confluence – S1 – downstream of Sawyers Swamp Creek confluence • Sawyers Swamp Creek – SS5 - upstream of SSCAD	This OSWMP, CoA 2.30 and CoA 6.5c)	Quarterly sampling preferably conducted during dry conditions.	All water quality results will be reported in the AEMR, EPL annual return, EPL data reporting	GPM

Relevant aspect	Management and mitigation measures	Source of requirement	Frequency	Relevant records	Responsibility
	– S6 – downstream of SSCAD, upstream of SSCAD embankment and KVAR/KVAD water management area – S5 – downstream of SSCAD, SSCAD embankment and the eastern part of KVAR/KVAD water management area – WX5 – upstream of Lidsdale Cut, downstream of SSCAD, SSCAD embankment and the KVAR/KVAD water management area – WX7 – downstream of the Site and Dump Creek • Dump Creek – WX11 – located immediately upstream of the confluence with Sawyers Swamp Creek • Water management dams – SSCAD Pond and BLKH – water bodies located behind the SSCAD embankment on SSCAD – Lidsdale Cut – a former open cut that contaminated water from the KVAR/KVAD Water Management Area is reticulated to. It is noted that additional monitoring within the water management system may be undertaken as required. This monitoring is referred to as Operational Monitoring and will be used to inform the operation of the water management system and therefore does not need to be reported in the AEMR. Appendix B provides monitoring analytes, analysis methods and more detailed information on each surface water monitoring location.				

Relevant aspect	Management and mitigation measures	Source of requirement	Frequency	Relevant records	Responsibility
Water quality monitoring results analysis	Surface water quality results will be compared to: • Guideline Values (GVs) for a slightly-to-moderately disturbed upland river system. GVs are provided in Appendix A; and • Water quality trends at each sampling location (where available) since July 2019. Earlier data is not considered to be relevant due to the water quality in Sawyers Swamp Creek being strongly influenced by discharges from Springvale Colliery that occurred between 2013 and July 2019. The results will be interpreted by a suitably qualified professional who will describe any deviations from GVs and changes to water quality trends. To comply with CoA 6.5c), the results will also be separately compared to the baseline data that is referenced in CoA 6.5c). This baseline data relates to data collected between July 2004 and January 2006 at the four surface water monitoring locations as per CoA 3.5. Immediately prior to this period wet ash placement in SSCAD had ceased. Dry ash was being placed in Stage 1 of KVAR over the period. Hence, this data is not representative of pre-disturbance conditions and has little relevance to current site conditions.	This OSWMP	Monthly as part of the AEMR	All water quality results will be reported in the AEMR and in accordance with the EPL	GPM
Reporting	An Annual Surface Water Quality Review (ASWQR) will be prepared as part of the AEMR. The ASWQR will include: • a description of weather and streamflow conditions over the AEMR period (the period); • a description of the water management system that was operated over the period; and • all water quality data and analysis. The AEMR will: • include a summary of the ASWQR; and describe any reported surface water incidents over the period.	This OSMP and CoA 7.3	Annually	AEMR	GPM

4.2 Water treatment system

Following consultation with the EPA in early 2022 GPM committed to installing a new LDP3 Treatment System. Initial modifications to the historic system and the discharge regime were made in March 2022. The new system was constructed and installed over the balance of 2022 and was completed in January 2023. Commissioning and operation of the new system commenced in February 2023.
The system includes the following features:

- Treatment processes
  - The Caustic Injection Plant (CIP) was modified to enable an initial pH adjustment to the 8.5 to 9.5 range, allowing for the optimum pH for metal removal to be established
  - Metal and polymer coagulants and limestone have been added to the treatment process to enhance co-precipitation and flocculation of metals in the Return Canal, which is used as an extended settling basin
  - Passive mixing tanks were installed between the CIP and the Return Canal. The tanks enhance reaction times and the overall effectiveness of the treatment system
  - The system utilises the original Return Canal as a partitioned extended settling basin. This modification facilitates increased residence time which enhances removal of metals and improves sludge management
  - Treated water from the Return Canal is pumped into the existing gravity main that reticulates water to the settling ponds (see Figure 4.1). pH adjustment to within the EPL range 6.5 - 8.5 is made at this point in the treatment process if required. This mechanism can also be used as a second stage pH adjustment to target removal of any residual metals that are less soluble at near-neutral pH (ie aluminium)
  - The existing settling ponds have been maintained to allow for the settling of any residual sludge. The ponds continue to overflow at the LDP3 discharge location, as per the historic arrangement.
- Discharge restrictions – EPL condition L2.5 applies the following restrictions on discharges at LDP3:
  - Minimum streamflow – discharge can only occur when streamflow in the Coxs River is above the wet weather threshold defined in EPL. Wet weather was initially defined as a streamflow of >=20 ML/day but was reduced to >= 10 ML/day when the EPL was varied on 19 December 2023.
  - Minimum streamflow to discharge ratio - when streamflow in the Coxs River is higher than the wet weather threshold, discharges can occur at rates that maintain a minimum streamflow to discharge ratio of 10:1. For example, a 2 ML/day discharge can occur when the streamflow is 20 ML/day, a 4 ML/day discharge can occur when the streamflow is 40 ML/day.

The recorded streamflow at the NSW Water operated stream gauge (number 212054) located immediately upstream of the LDP3 discharge location is used to calculate daily discharge rates.
A conceptual process flow diagram is provided in Figure 4.1. Photograph 4.1 shows inflows into the Return Canal and Photograph 4.2 is an aerial image of the eastern portion of the treatment system that shows the CIP, mixing tanks, eastern portion of the Return Canal and the acid dosing system.

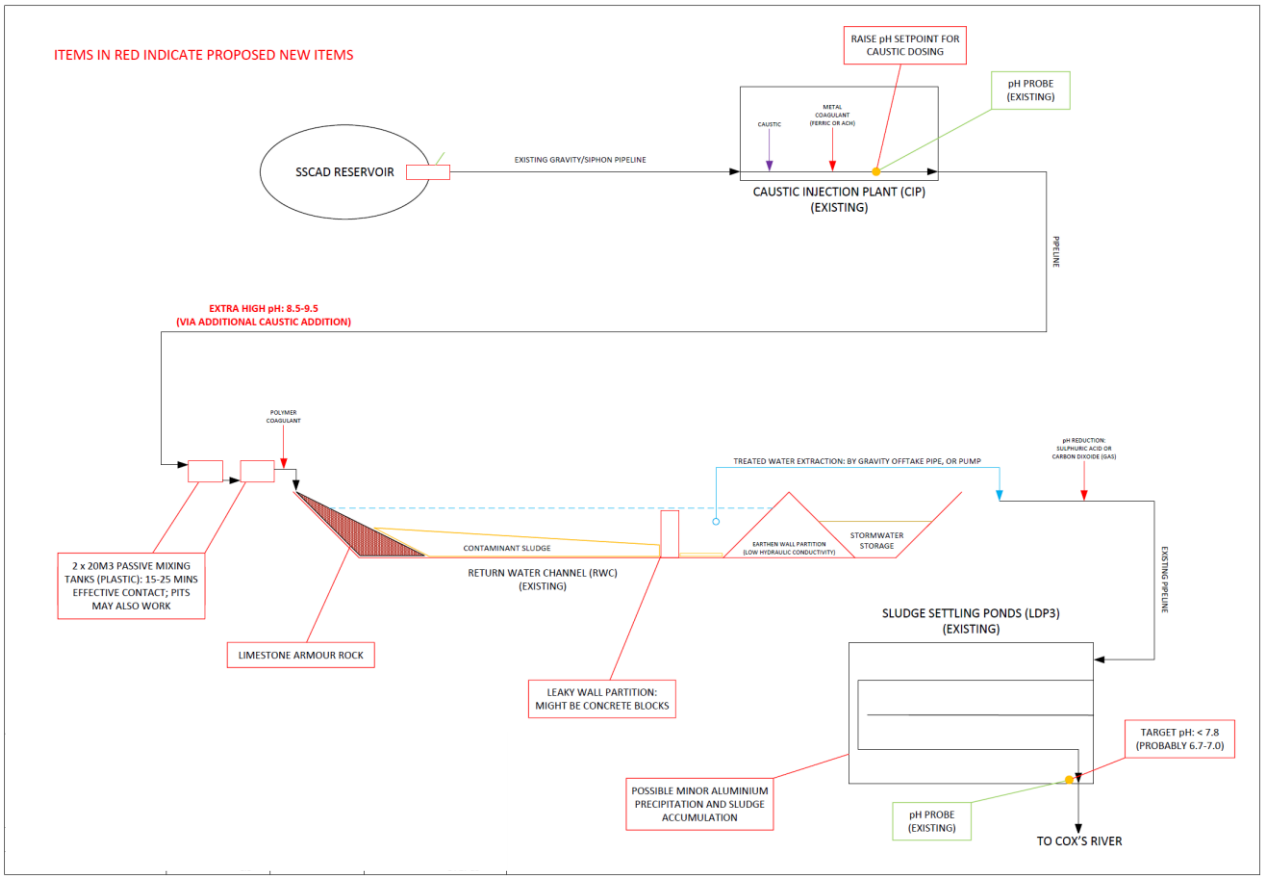
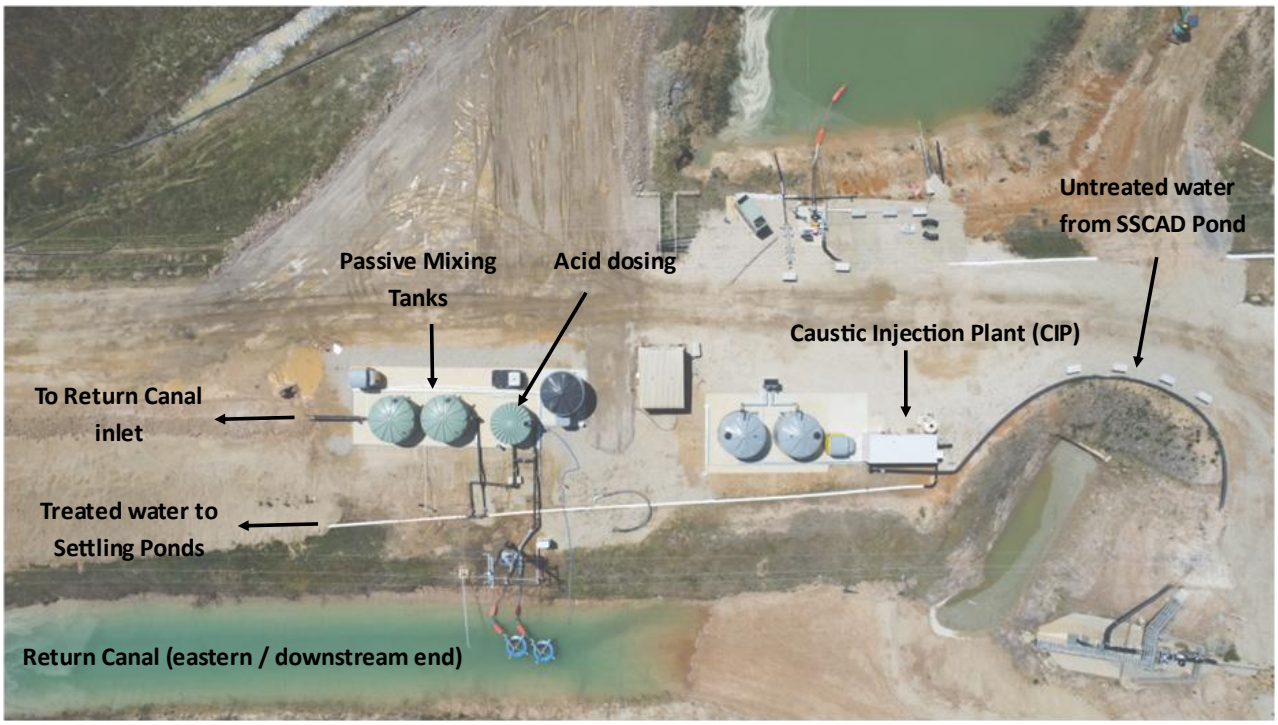


Figure 4.1 New LDP3 Treatment System

Photograph 4.1 Inflows into the Return Canal



Photograph 4.2 LDP3 Treatment System – eastern end

5 Administrative requirements

5.1 Incidents and non-compliances

5.1.1 Incidents

All incidents will be reported and investigated, and corrective actions assigned to prevent future occurrences in accordance with the OEMP Section 3.8.

The approval defines an incident as:

A set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits or performance measures/criteria in this approval.

Material harm (which includes actual or potential harm) to the health or safety of human beings or to ecosystems that is not trivial or that results in actual or potential loss or property damage exceeding a threshold dollar value as identified by the POEO Act.

The Secretary must be notified in writing via the Major Projects website immediately after the Project team becomes aware of an incident in accordance with CoA 7.1. The notification must identify the development (including the application number and the name of the development if it has one) and set out the location and nature of the incident.

Section 3.8 of the OEMP details environmental incidents and the response to environmental emergencies for the Project. This includes the reporting, notification and investigation of environmental incidents. Emergency contact details are also provided. In the event of an environmental incident or emergency related to the implementation of this OSWMP, the responses detailed in the OEMP are to be implemented.

5.1.2 Non-compliance

The approval defines non-compliance as:

An occurrence, set of circumstances or development that is a breach of the approval but is not an incident.

The Secretary must be notified in writing via the Major Projects website within seven days after the Project team becomes aware of any non-compliance in accordance with CoA 7.2. A non-compliance notification must identify the development and the application number for it, set out the condition of approval that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.

Section 3.8.1 of the OEMP details the Project team's response following the identification of a non-compliance with the CoA, the OEMP and associated sub-plans. This includes the reporting, investigation and notification of non-compliances. Non-compliance with this OSWMP will be addressed as required by the OEMP.

5.2 Reporting

Environmental monitoring for the Lidsdale Ash Repository area is designed to comply with the requirements of statutory approvals and provide an analysis of the condition of the environment surrounding the works.

An overview of the environmental monitoring activities for the project area specified under Section 5 of the OEMP.

Surface water quality monitoring frequency and locations are specified in the Surface Water Monitoring Program in Appendix B.

Surface water quality data, including the trends for monitoring sites, will be incorporated into the Annual Environmental Management Report (AEMR) which will be submitted to the Secretary each year. In accordance with CoA 6.5(c)viii, the surface water component of the AEMR will also be provided to WaterNSW and Fisheries NSW.

5.3 Review

A review of the OEMP, sub-plans (including this OSWMP) and monitoring programs will be undertaken during operations as required. These reviews will be completed to determine the efficiency of the plans and monitoring programs and whether any changes are required to ensure compliance.
Circumstances which may trigger a review include:

- changes to design, construction, work methods, legislation, or policy
- incidents, complaints or non-compliance
- changes identified by continuous improvement
- changes to key management plans that are relevant
- where additional monitoring measures are identified in annual reviews or audits.

In addition and in accordance with CoA 6.6, GPM will review and, if necessary, revise the studies, strategies and plans required under the conditions of approval to the satisfaction of the Secretary within three months of:

- the submission of an incident report under CoA 7.1
- the submission of an Annual Review under CoA 7.3
- the submission of an Independent Environmental Audit under CoA 4.2
- the modification of the conditions of this approval (unless the CoAs require otherwise).

Where this review leads to revisions in any such document, then within 4 weeks of the review, GPM will submit the revised document to the Secretary for approval, unless otherwise agreed with the Secretary.
In accordance with CoA 6.5A, this OSWMP has been updated prior to the importation of capping material to the site from sources outside of the Lithgow local government area.

Appendix A: Water quality categorisation procedure

Procedure

Surface water within the Site is described using the following water quality categories:

- clean water
- stormwater
- contaminated water.

Table A.1provides a water quality categorisation procedure. The procedure can be applied to any waterbody within the Site's water management system.

Table A.1 Water quality categorisation procedure

Item	Categorisation criteria	Water quality monitoring requirements
1	**Clean water** – water can be categorised as clean water if it meets any of the following criteria:	
1.1	Water that flows onto the Site from upgradient areas and is separated from the stormwater and contaminated water systems in a dedicated clean water drainage system.	• Nil Note: the water quality in Sawyers Swamp Creek will be monitored as part of the routine surface water monitoring program (see Surface Water Subplan).
1.2	Surface water runoff from undisturbed areas of the Site that are outside of the KVAR/KVAD water management area. An undisturbed area is any area that has not been previously disturbed and is vegetated or has been previously disturbed but has been rehabilitated.	• Nil Note: the water quality in Sawyers Swamp Creek will be monitored as part of the routine surface water monitoring program (see Appendix B).
1.3	Any water that has water quality consistent with: • Guideline values (GVs); or • The water quality in Sawyers Swamp Creek upstream of the SSCAD (monitoring location SS5), based on 80th percentile values or the water quality at SS5 at the time of sampling. GVs and 80th percentile values at SS5 are provided in Table A.2.. Consistency with water quality criteria can be assessed on an analyte-by-analyte basis (i.e. the criteria would be met if some analytes meet GVs and others meet upstream water quality values).	**Initial period** – applies to waterbodies that have not been previously categorised as being clean water or if material changes in the water management system or operating procedures occur. During the initial period, weekly water quality monitoring is required when discharge from the waterbody to the clean water system occurs. The initial period is to continue until: • the water quality criteria are met in five consecutive representative samples; or • if results from ten or more representative samples are available and 80th percentile values meet the water quality criteria. **After initial period –** monthly water quality monitoring is required when discharge from a waterbody to the clean water system occurs. The monthly monitoring frequency can continue if: • the water quality criteria are met; or • if results from ten or more representative samples are available and 80th percentile values meet the water quality criteria.

Item	Categorisation criteria	Water quality monitoring requirements
2	**Stormwater** – water can be categorised as stormwater if it meets any of the following criteria:	
2.1	Catchment areas outside of the KVAR/KVAD water management area (see Figure 3.1): • Any surface water runoff from unsealed roads, unvegetated areas (ie exposed batters) or areas where earthworks are being undertaken.	• Nil Note: the water quality in Sawyers Swamp Creek will be monitored as part of the routine surface water monitoring program.
2.2	Stormwater storages that receive runoff from KVAR/KVAD water management area (see Figure 3.1). These storages may receive some contaminated water ingress. • Water that has water quality consistent with clean water (as described in item 1.3) but has elevated turbidity and potentially electrical conductivity.	As per monitoring requirements for item 1.3.
3	**Contaminated water** – is any water that is:	
3.1	• Known to be contaminated. This includes water in SSCAD Pond, seepage from the SSCAD embankment and seepage and subsurface drainage discharges from the KVAR/KVAD water management area.	• Nil Note: monitoring is not required to categorise contaminated water as the focus of water categorisation monitoring is to demonstrate that clean water and stormwater is not contaminated.
3.2	• Not clean water or stormwater.	

Guideline Values and upstream water quality

Table A.2 provides guideline values (GVs) and information on upstream water quality that can be applied to categorising water quality. It is noted that:

- The GV are the default values for a slightly-to-moderately disturbed upland river system (95% species protection) that are provided in ANZG 2018 and other references.
- The 80th percentile values at Sawyers Swamp Creek upstream of SSCAD (monitoring site SS5) have been calculated using:
  - data from samples collected between 2013 to 21 July 2022 that were available for pH (73 samples), EC (69 samples), turbidity (70 samples), fluoride (71 samples), total nitrogen (73 samples) barium (22 samples), boron (25 samples), copper (26 samples), iron (71 samples), manganese (67 samples), vanadium (50 samples) and zinc (50 samples)
  - data from samples collected between January 2022 and January 2025 that were available for total suspended solids (120 samples), total phosphorus (122 samples), filterable reactive phosphate (90 samples), oxides of nitrogen (122 samples) and ammonia (122 samples).

Table A.2 GVs and upstream water quality

Parameters	Units	Guideline values (GVs) GV	Source	Sawyers Swamp Creek upstream of SSCAD (SS5) 80th percentile value[1]	At time of sampling
Physico-chemical parameters					
pH	-	6.5 - 8.0	Default Guideline Value (DGV) for upland river in south-east Australia (Table 3.3.2; ANZECC 2000)	5.5 – 6.8	To be established via monitoring
EC	µS/cm	350	DGV for NSW upland rivers (Table 3.3.3; ANZECC 2000)	114	
Turbidity	NTU	2 - 25	DGV for upland river in south-east Australia (Table 3.3.2; ANZECC 2000)	26	
Total suspended solids	mg/L	25	DGV for NSW upland river (Table 8.2.12; ANZECC 2000)	9	
Ions					
Fluoride	mg/L	1.7	Moderate-reliability DGVs for fluoride (ANZ 2024)	0.2	To be established via monitoring
Nutrients					
Total phosphorus	mg/L	0.02	DGV for upland river in south-east Australia (Table 3.3.2; ANZECC 2000)	0.05	To be established via monitoring
Filterable reactive phosphate as P	mg/L	0.015	DGV for upland river in south-east Australia (Table 3.3.2; ANZECC 2000)	0.005	
oxides of nitrogen as N (NOx)	mg/L	0.015	DGV for upland river in south-east Australia (Table 3.3.2; ANZECC 2000)	0.010	
Total nitrogen as N	mg/L	0.25	DGV for upland river in south-east Australia (Table 3.3.2; ANZECC 2000)	0.9	
Ammonia as N	mg/L	0.9	Very high reliability DGV (at pH 8) (ANZG 2018)	0.012	
Metals				Refers to results from 45 µm filtered samples only	
Aluminium	mg/L	0.055	Low reliability DGV (pH > 6.5) (ANZG 2018)	0.160	To be established via monitoring
Antimony	mg/L	0.009	Unknown reliability DGV (ANZG 2018)	<0.001	
Arsenic	mg/L	0.013	Moderate reliability DGV for As(V) (ANZG 2018)	<0.001	
Barium	mg/L	2	Australian Drinking Water Guidelines Version 3.9 (NHMRC 2024) Health-Based Guideline Value	0.055	
Boron	mg/L	0.94	Very high reliability DGV (ANZG 2018)	<0.05	

Parameters	Units	Guideline values (GVs) GV	Source	Sawyers Swamp Creek upstream of SSCAD (SS5) 80th percentile value[1]	At time of sampling
Cadmium	mg/L	0.0002	Very high reliability DGV (ANZG 2018)	<0.0001	
Chromium	mg/L	0.001	Very high reliability DGV for Cr(VI) (ANZG 2018)	<0.001	
Cobalt	mg/L	0.0014	Unknown reliability DGV (ANZG 2018)	0.005	
Copper	mg/L	0.0014	Very high reliability DGV (ANZG 2018)	<0.001	
Iron	mg/L	0.3	Canadian guideline level (CCREM 1987) Interim working level (ANZECC 2000)	0.61	
Lead	mg/L	0.0034	Moderate reliability DGV (ANZG 2018)	<0.001	
Manganese	mg/L	1.9	Moderate reliability DGV (ANZG 2018)	0.265	
Mercury	mg/L	0.00006	Moderate reliability DGV for 99% species protection level recommended for slightly to moderately disturbed systems due to the potential for bioaccumulation (ANZG 2018)	<0.00004	
Molybdenum	mg/L	0.034	Unknown reliability DGV (ANZG 2018)	<0.001	
Nickel	mg/L	0.011	Low reliability DGV (ANZG 2018)	0.002	
Selenium	mg/L	0.005	Moderate reliability DGV for 99% species protection level recommended for slightly to moderately disturbed systems due to the potential for bioaccumulation (ANZG 2018)	<0.01	
Silver	mg/L	0.00005	Low reliability DGV (ANZG 2018)	<0.001	
Vanadium	mg/L	0.006	Unknown reliability DGV (ANZG 2018)	<0.01	
Zinc	mg/L	0.008	Very high reliability DGV (ANZG 2018)	0.034	

Notes: 1. ID refers to insufficient data. 80th percentile values can be updated once additional data becomes available (for analytes that have results from ten or more representative samples).

It is noted that analyte suite provided in Table B.1includes the following analytes that are not included in Table A.2. These analytes (listed below) are to be monitored to provide information on water chemistry but do not need to be considered when categorising water quality against potential physical and chemical stressors or toxicants (as GVs have not been established):

- dissolved oxygen (DO), redox, hardness, alkalinity, and total dissolved solids
- anions and cations including chloride, sulfate, sodium, potassium, calcium, and magnesium
- nutrients including total kjeldahl nitrogen
- metals including beryllium and strontium (it is noted that barium and iron have no defined GV within ANZ 2018, however there are applicable recommendations associated with these parameters)

The development of GVs for various stressors and toxicants are ongoing. Where new information on GVs is available, this table will be updated as part of future periodical management plan reviews.

Appendix B: Surface Water monitoring

Monitoring analytes and analysis methods

Table B.1 provides the surface water monitoring analytes and analysis methods.

Table B.1 Monitoring analytes and methods

Category	Analytes	Sampling and analysis methods
Streamflow conditions	Continuous flow monitoring (at select locations SS5 and S6) and observations at time of sampling	Note and photograph of streamflow (i.e. dry, stagnant or flowing) or water storage conditions at the time of sampling
Physio-chemical parameters	pH, turbidity, electrical conductivity, dissolved oxygen, redox	Analysis is to be undertaken using a calibrated water quality meter OR by a NATA-certified laboratory.
	Total suspended solids Total dissolved solids Total hardness (as CaCO3) Total alkalinity (as CaCO3) Ammonia as N, oxides of nitrogen as N (NOx), total kjeldahl nitrogen (TKN) as N and total nitrogen as N Total phosphorus as P Filterable reactive phosphate as P	Analysis is to be undertaken by a NATA-certified laboratory.
Anions	Chloride, fluoride, sulfate	Analysis is to be undertaken by a NATA-certified laboratory.
Cations	Sodium, potassium, calcium, magnesium	Analysis is to be undertaken by a NATA-certified laboratory.
Metals and Metalloids (dissolved)	aluminium (Al), antimony (Sb), arsenic (As), barium (Ba), beryllium (Be), boron (B), cadmium (Cd), chromium (Cr), cobalt (Co), copper (Cu), iron (Fe), lead (Pb), manganese (Mn), mercury (Hg), molybdenum (Mo), nickel (Ni), selenium (Se), silver (Ag), strontium (Sr), vanadium (V) and zinc (Zn)	Samples for dissolved metals analysis are to be filtered using a 0.45 µm filter. Analysis is to be undertaken by a NATA-certified laboratory.

Surface water monitoring locations and frequency

Table B.2 describes the surface water monitoring locations and monitoring objectives, while Figure B.1 shows the monitoring locations. Monitoring at all locations should be undertaken within a single day and samples from the Coxs River and Sawyers Swamp Creek should be collected from upstream to downstream to minimise the potential for changing streamflow conditions during the sampling period to impact the results.

Table B.2 Surface water monitoring locations and frequency

ID	Description	Monitoring objective	Frequency
WMS3	Lidsdale Cut	Lidsdale Cut is one of the storages in the KVAR water management system (see Chapter 2). It receives runoff and collected seepage from the western portion of the KVAR water management area. Lidsdale Cut is dewatered to SSCAD Pond on an as needed basis.	Monthly monitoring

ID	Description	Monitoring objective	Frequency
WX11	Dump Creek	Dump Creek is a 1st order watercourse located to the west (down gradient) of the KVAR water management area (see Figure B.1**Error! Reference source not found.**). It flows to the north and joins Sawyers Swamp Creek upstream of WX7 (see Figure B.1).	Monthly monitoring
WMS1	Sawyers Swamp Creek Ash Dam	This monitoring location is in the SSCAD Pond (see Figure B.1). To characterise water quality in SSCAD Pond and comply with CoA 3.5a	Monthly monitoring
WX7	Sawyers Swamp Creek	WX7 is located on Sawyers Swamp Creek approximately 500 m downstream of the Site.	Monthly monitoring
WX12	Upstream of Sawyers Swamp Creek confluence	To characterise the quality of the water in the Coxs River upstream and downstream of the Sawyers Swamp Creek confluence and to enable an assessment of water quality impacts to the Coxs River.	Monthly monitoring
S1	Downstream of Sawyers Swamp Creek confluence		Monthly monitoring
SS5	Upstream of SSCAD	SS5 is located upstream of SSCAD and is therefore not potentially impacted by the Site's water management system. Water quality data from SS5 can be used to: • identify changes in Swayer Swamp Creek water quality within the Site (i.e. by comparison with downstream samples); and • categorise water quality within the Site's water management system. It is noted that historically S7 has been used as an upstream monitoring location. SS5 replaces S7 as it was recently discovered that S7 is on a tributary to Sawyers Swamp Creek.	Monthly monitoring
S6	Downstream of SSCAD, upstream of SSCAD embankment and KVAR / KVAD water management area	To identify changes in water quality in the upper reach of the Sawyers Swamp Creek Diversion, which flows to the south of SSCAD.	Monthly monitoring
S5	Downstream of SSCAD, SSCAD embankment and the eastern part of KVAR / KVAD water management area	To identify changes in water quality in the Sawyers Swamp Creek Diversion reach, that flows between the SSCAD embankment and the eastern portion of the KVAR/KVAD water management area. This reach may receive seepage from SCCAD and the eastern portion of KVAD.	Monthly monitoring
WX5	Downstream of SSCAD, SSCAD embankment and KVAR / KVAD water management area, adjacent to Lidsdale Cut	To identify changes in water quality in the lower reach of the Sawyers Swamp Creek Diversion, which flows past the northern portion of the KVAR/KVAD water management area. This reach of the creek may receive seepage from western and northern portions of KVAD.	Monthly monitoring

ID	Description	Monitoring objective	Frequency
BLKH	Located in the Blackhole which is a waterbody that has formed adjacent to placed ash in SSCAD.	To characterise water quality in the Blackhole which receives a combination of ash drainage and catchment runoff from the north of the site (this includes construction of collection ponds).	Monthly monitoring
WX9	Downstream of Sawyers Swamp Creek confluence, upstream of LDP3.	LDP3 discharge monitoring	Weekly when discharge at LDP3 is occurring
LDP3	Controlled discharge location from the LDP3 Water Treatment System, which treats water from SSCAD Pond.		Weekly when discharge at LDP3 is occurring
WX10A	Downstream of Sawyers Swamp Creek confluence, downstream of LDP3.		Weekly when discharge at LDP3 is occurring

In accordance with CoA 3.5 (d), wet weather monitoring will be undertaken at least twice at all locations listed in Table B.2 within the first 12 months of both the operation of the project (commenced in 2008) and post realignment of Sawyers Swamp Creek (yet to occur).

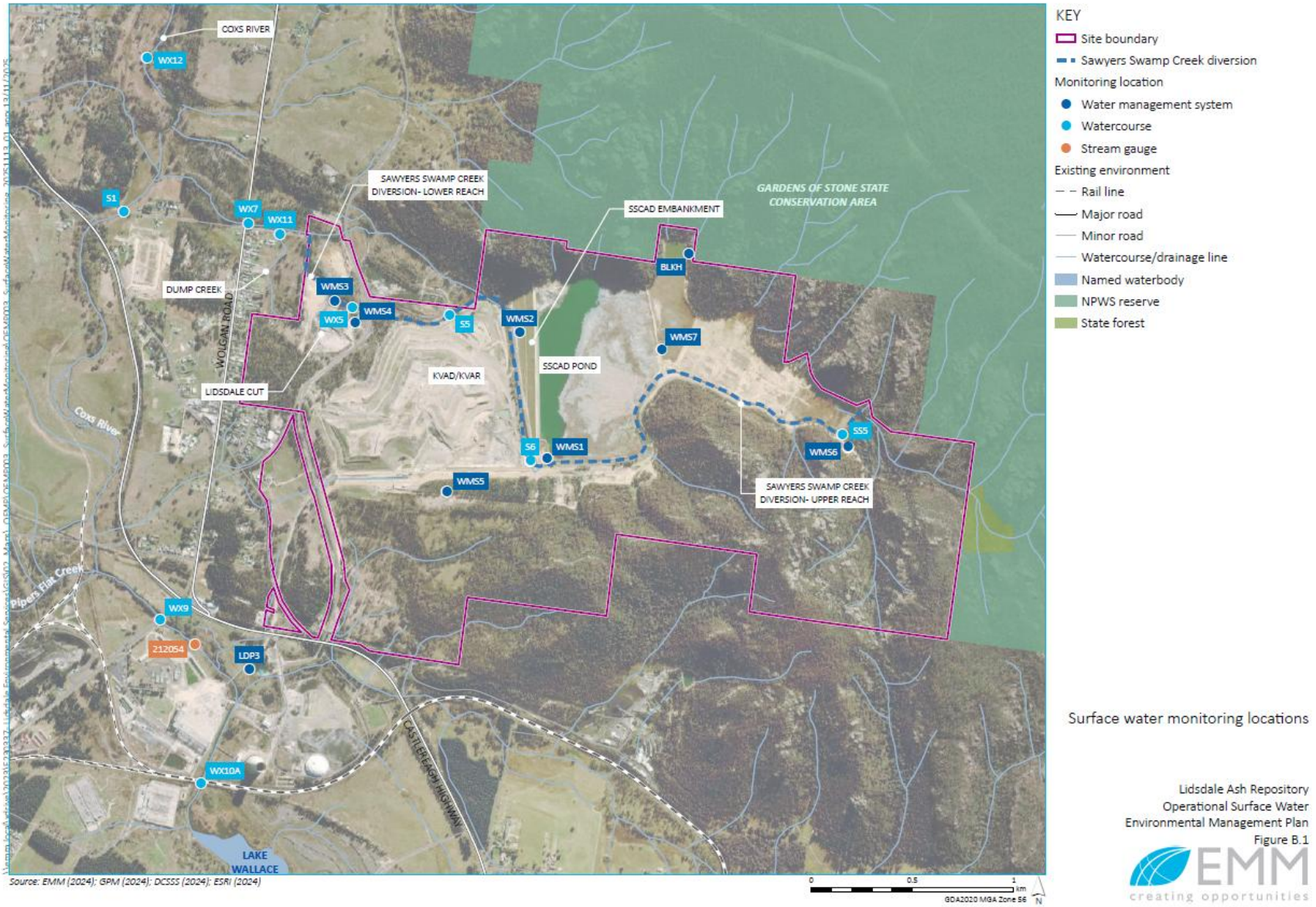


Figure B.1 Surface water monitoring locations

Surface water monitoring will be undertaken from the Site monitoring locations in accordance with this monitoring program, a protocol for identifying and investigating any exceedances of the surface water impact assessment criteria and for notifying DPHI and other relevant stakeholders is provided in the TARP (refer Table B.3). The TARP establishes methods to identify the source of surface water quality exceedances and if necessary, establish actions to further investigate the exceedance.

The surface water TARP and trigger values may be refined in future years as more site-specific surface water data are obtained.

Table B.3 Trigger Action Response Plan

Aspect	Normal Conditions	Stage 1 – Low Hazard	Stage 2 – Non-compliance	Notifications
Surface water level (NOTE: this does not include SSCAD, management as per Dam Safety requirements)	Surface water levels in water containment dams, leachate dams and stormwater dams are at or below the long-term median water levels	**Trigger:** Dam water levels are within 500mm of spillway discharge. No water leaving site. **Action:** Continue to monitor weather and assess water level data, establish trends and correlate with site activities and climatic data. Determine whether any decrease in water level may be required due to forecast rainfall. Calculate and predicted rainfall and assess dewatering requirements. If a Stage 1 trigger continues for greater than 6 weeks[1], relevant agencies, DPHI, WaterNSW and the EPA, will be notified.	**Trigger:** Water levels have risen to exceed the spillway height and water is discharging from site. Contaminated water is discharging from containment ponds. **Action:** **Enact Pollution Incident Response Management Plan (PIRMP)** Pump water to alternative storages where capacity is available. Commence monitoring of any discharges not already captured by existing telemetry. Engage hydrologist specialist to assess and confirm containment capacity. Work with regulators to determine necessary remediation actions. Review the SWMP and related procedures to prevent reoccurrence.	**Stage 1:** Notify environmental coordinator and site manager as soon as practicable. **Stage 2:** Notify relevant agencies (EPA, DPHI, WaterNSW). Notification to DPHI via the NSW Planning Portal immediately after the incident is identified (CoA 7.1), subsequent notification within 7 days of identified non-compliance (CoA 7.1, CoA Appendix 3). Written incident notification within seven days and a full report in 30 days to DPHI. EPA reporting of material harm (EPL 21185 R2) required immediately after the incident is identified and within 7 days (R2.2). Further reports may be requested by DPHI and/or EPA. Review of the OSWMP is required within 3 months of notification of an incident or non-compliance under CoA 6.6a.

Aspect	Normal Conditions	Stage 1 – Low Hazard	Stage 2 – Non-compliance	Notifications
Surface water quality	Surface water quality is within or below the values specified in Appendix A	**Trigger:** Water quality is outside or above the values in Appendix A. **Action:** Undertake investigation to determine if the change in water quality is related to site operations. If a Stage 1 trigger continues for greater than 6 weeks[1], relevant agencies, DPHI, WaterNSW and the EPA, will be notified.	**Trigger:** Investigation into Stage 1 trigger identifies that trigger exceedance is due to a site activity. **Action:** **Enact Pollution Incident Response Management Plan (PIRMP)** Implement corrective/preventative actions in consultation with relevant agencies based on the outcomes of the investigation. Review the SWMP and related procedures to prevent reoccurrence.	**Stage 1:** Notify environmental coordinator and site manager as soon as practicable. **Stage 2:** Notify relevant agencies (EPA, DPHI, WaterNSW). Notification to DPHI via the NSW Planning Portal immediately after the incident is identified (CoA 7.1), subsequent notification within 7 days of identified non-compliance (CoA 7.1, CoA Appendix 3). Written incident notification within seven days and a full report in 30 days to DPHI. EPA reporting of material harm (EPL 21185 R2) required immediately after the incident is identified and within 7 days (R2.2). Further reports may be requested by DPHI and/or EPA. Review of the OSWMP is required within 3 months of notification of an incident or non-compliance under CoA 6.6a.

1. The 6 week timeframe for notification was recommended by WaterNSW during consultation on Revision 1 of the Operation Groundwater Management Plan. If the Stage 1 trigger is recorded for less than 6 weeks and then returns to within the values specified in Appendix A, notification is not required.

Appendix C: Baseline Monitoring

Data from July 2004 to January 2006

This baseline data relates to data collected between July 2004 and January 2006 at the four surface water monitoring locations as per CoA 3.5. Immediately prior to this period wet ash placement in SSCAD had ceased. Dry ash was being placed in Stage 1 of KVAR over the period. Hence, this data is not representative of pre-disturbance conditions and has little relevance to current site conditions.

Table C. 1 Surface Water Quality Baseline Data from 2004 to 2006 - Source: Energy Australia, 2018

Table B – Surface Water Quality Baseline Data

38 Sawyers S Ck Ash Dam
39 Dump Ck Wallerawang Environmental Waters; Surface Water
40 Sawyers Ck WX Yearly Report
41 Sawyers Ck WX WW Env Surface Waters

	Date			Water Level	pH	Conductivity Lab.	MO Alk as CaCO3	Chloride	Fluoride	Sulphate Result	TDS Result	Sodium Na	Potassium K	Calcium Ca	Magnesium Mg	Arsenic As	Silver Ag	Barium Ba	Boron B	Cadmium Cd	Chrome Cr	Chrome 6+ Cr 6+	Copper Cu	Iron Fe f	Mercury Hg	Manganese Mn f	Lead Pb	Selenium Se	Zinc Zn
				metres		uS/m	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ANZECC 2000 Guideline (Fresh Water Aquatic Ecosytem) 95% PL								0.003								0.013	5E-05		0.37	0.0002		0.001	0.001		0.0006	1.9	0.0034	0.011	0.008
31-Jul-04	2004-07-39-1	7-Jul-04	39	Dump Ck		4.40	62,000	0	22	0.600	300	360	58	15	19	20	0.025	0.005	0.02	1.1	0.001	0.005		0.005	0.06	0.00005	2	0.005	0.003	0.33
31-Jul-04	2004-07-40-1	7-Jul-04	40	Sawyers Ck WX5		6.40	75,600	40	28	1.500	280	460	60	35	39	18	0.025	0.005	0.06	1.4	0.001	0.005		0.005	0.03	0.00005	1.5	0.005	0.003	0.05
31-Jul-04	2004-07-41-1	7-Jul-04	41	Sawyers Ck WX7		6.10	142,600	20	35	1.000	710	1060	150	30	82	48	0.025	0.005	0.03	3.4	0.001	0.005		0.005	0.04	0.00005	0.45	0.005	0.003	0.08
31-Oct-04	2004-10-38-1	20-Oct-04	38	Sawyers S Ck Ash Dam		5.60	244,900	5	23	10.000	1200	1940	330	84	140	17	0.025	0.005	0.08	7	0.006	0.005		0.005	0.03	0.00005	1.1	0.005	0.11	0.22
31-Oct-04	2004-10-39-1	20-Oct-04	39	Dump Ck		4.00	61,900	0	21	0.500	230	420	55	14	18	20	0.025	0.005	0.02	1	0.001	0.005		0.005	0.83	0.00005	1.8	0.005	0.003	0.34
31-Oct-04	2004-10-40-1	20-Oct-04	40	Sawyers Ck WX5		6.10	28,600	20	11	0.600	84	190	20	12	17	6	0.025	0.005	0.03	0.37	0.001	0.005		0.005	0.33	0.00005	0.53	0.005	0.003	0.08
31-Oct-04	2004-10-41-1	20-Oct-04	41	Sawyers Ck WX7		6.10	130,900	30	32	1.100	590	930	140	27	76	44	0.025	0.005	0.03	2.8	0.001	0.005		0.005	0.05	0.00005	0.41	0.005	0.003	0.07
31-Jan-05	2005-01-38-1	18-Jan-05	38	Sawyers S Ck Ash Dam		5.00	237,700	5	24	6.700	1300	1950	370	93	140	16	0.025	0.005	0.08	7.2	0.007	0.005		0.005	0.04	0.00005	1.2	0.005	0.1	0.27
31-Jan-05	2005-01-39-1	18-Jan-05	39	Dump Ck		4.40	57,600	0	21	0.400	220	430	55	16	16	17	0.025	0.005	0.02	1.1	0.001	0.005		0.005	0.68	0.00005	1.8	0.005	0.003	0.23
31-Jan-05	2005-01-40-1	18-Jan-05	40	Sawyers Ck WX5		6.40	30,200	30	11	0.400	89	250	25	12	16	6.7	0.025	0.005	0.04	0.42	0.001	0.005		0.005	0.09	0.00005	0.67	0.005	0.003	0.07
31-Jan-05	2005-01-41-1	18-Jan-05	41	Sawyers Ck WX7		6.50	108,700	30	27	0.900	480	800	110	22	53	33	0.025	0.005	0.03	2.4	0.001	0.005		0.005	0.16	0.00005	0.82	0.005	0.003	0.08
30-Apr-05	2005-04-38-1	14-Apr-05	38	Sawyers S Ck Ash Dam		4.40	245,300	0	25	7.600	1600	1900	350	87	140	18	0.025	0.005	0.09	7.3	0.007	0.005		0.01	0.09	0.00005	1.4	0.005	0.089	0.33
30-Apr-05	2005-04-39-1	14-Apr-05	39	Dump Ck		4.60	57,800	10	20	0.700	270	420	58	16	17	19	0.025	0.005	0.02	1.2	0.001	0.005		0.005	0.64	0.00005	1.9	0.005	0.003	0.24
30-Apr-05	2005-04-40-1	14-Apr-05	40	Sawyers Ck WX5		6.40	73,700	50	16	1.100	270	480	59	35	38	19	0.025	0.005	0.08	1.5	0.001	0.005		0.005	0.07	0.00005	2.4	0.005	0.003	0.03
30-Apr-05	2005-04-41-1	14-Apr-05	41	Sawyers Ck WX7		6.20	99,200	10	25	0.800	440	740	100	24	46	33	0.025	0.005	0.03	2.2	0.001	0.005		0.005	0.15	0.00005	1	0.005	0.003	0.15
31-Jul-05	2005-07-38-1	19-Jul-05	38	Sawyers S Ck Ash Dam		4.00	218,200	0	24	7.400	1200	1760	340	84	140	18	0.025	0.005	0.09	5.9	0.007	0.01		0.02	0.69	0.00005	1.4	0.005	0.06	0.33
31-Jul-05	2005-07-39-1	19-Jul-05	39	Dump Ck		4.30	55,400	0	21	0.800	220	300	56	14	17	18	0.025	0.005	0.02	0.95	0.001	0.005		0.005	0.83	0.00005	1.7	0.005	0.003	0.33
31-Jul-05	2005-07-40-1	19-Jul-05	40	Sawyers Ck WX5		5.10	91,900	5	18	3.200	490	620	71	50	52	25	0.025	0.005	0.08	1.6	0.001	0.005		0.005	4	0.00005	3.4	0.005	0.003	0.13
31-Jul-05	2005-07-41-1	19-Jul-05	41	Sawyers Ck WX7		6.30	101,600	12	28	0.800	460	650	110	24	52	34	0.025	0.005	0.03	2	0.001	0.005		0.005	0.12	0.00005	0.87	0.005	0.003	0.17
31-Oct-05	2005-10-38-1	26-Oct-05	38	Sawyers S Ck Ash Dam		4.10	231,700	0	26	7.100	1800	1760	330	85	130	17	0.025	0.005	0.09	6.3	0.007	0.01		0.04	0.34	0.00005	1.4	0.005	0.068	0.4
31-Oct-05	2005-10-39-1	26-Oct-05	39	Dump Ck		4.90	53,400	5	20	0.600	250	320	52	14	16	18	0.025	0.005	0.02	0.99	0.001	0.005		0.005	0.32	0.00005	1.6	0.005	0.003	0.23
31-Oct-05	2005-10-40-1	26-Oct-05	40	Sawyers Ck WX5		6.30	32,600	140	7	0.500	130	250	23	17	22	8.5	0.025	0.005	0.05	0.49	0.001	0.005		0.005	0.23	0.00005	0.67	0.005	0.003	0.07
31-Oct-05	2005-10-41-1	26-Oct-05	41	Sawyers Ck WX7		6.30	84,800	20	25	0.800	370	580	89	22	42	29	0.025	0.005	0.03	1.8	0.001	0.005		0.005	0.03	0.00005	0.68	0.005	0.003	0.18
31-Jan-06	2006-01-38-1	18-Jan-06	38	Sawyers S Ck Ash Dam		4.80	196,600	5	29	5.500	1100	1640	290	71	110	15	0.025	0.005	0.08	4.8	0.001	0.005		0.03	0.03	0.00005	1.2	0.005	0.053	0.31
31-Jan-06	2006-01-39-1	18-Jan-06	39	Dump Ck		5.90	40,700	5	19	0.300	150	310	42	13	13	12	0.025	0.005	0.02	0.63	0.001	0.005		0.005	0.06	0.00005	1	0.005	0.003	0.14
31-Jan-06	2006-01-40-1	18-Jan-06	40	Sawyers Ck WX5		6.50	20,700	30	6	0.300	57	180	13	9	15	4.2	0.025	0.005	0.04	0.24	0.001	0.005		0.005	0.12	0.00005	0.36	0.005	0.003	0.05
31-Jan-06	2006-01-41-1	18-Jan-06	41	Sawyers Ck WX7		6.60	61,400	30	18	0.700	250	440	62	14	29	17	0.025	0.005	0.02	1.1	0.001	0.005		0.005	0.04	0.00005	0.3	0.005	0.003	0.04
				MEDIAN VALUES																									
						6.40	71,200.00	30.00	18.00	1.10	250.00	460.00	59.00	35.00	26.00	13.00	0.03	0.01	0.05	1.40	0.001	0.01	0.01	0.01	0.23	0.00	1.26	0.01	0.0030	0.09
						6.30	107,150.00	10.00	27.00	0.90	460.00	738.00	110.00	24.00	51.00	33.00	0.03	0.01	0.03	2.40	0.00	0.01	3.25	0.01	0.15	0.00	0.82	0.01	0.0030	0.12

Baseline flow data from prior to 2008 is not available. Appendix F of the Stage 2 Environmental Assessment (Technical Report 2 – Surface Water, Parsons Brinckerhoff 2008) provides hydrological modelling to assess potential changes in catchment flows as a result of the expected changes to the catchment surfaces. The output of the model is provided in Table C.1 below.

Table C. 2 Catchment flow model data from Appendix F of the Stage 2 Environmental Assessment (Parsons Brinckerhoff 2008). Note: Appendix F Report notes that no flow data was available to calibrate this model. Sub-catchment details are displayed in Figure C. 1 below.

Table A-3 Catchment flows

Sub-catchment	Existing landform 9hr 2Yr ARI (m^3/s)	Final landform 9hr 2Yr ARI (m^3/s)	Existing landform 9hr 5Yr ARI (m^3/s)	Final landform 9hr 5Yr ARI (m^3/s)	Existing landform 9hr 20Yr ARI (m^3/s)	Final landform 9hr 20Yr ARI (m^3/s)	Existing landform 2hr 100Yr ARI (m^3/s)	Final landform 2hr 100Yr ARI (m^3/s)
U/S catch	7.43	7.43	11.29	11.29	16.76	16.76	16.52	16.52
Dam catch	12.23	12.23	18.61	18.61	27.42	27.42	27.28	27.28
SSCAD	12.27	12.27	18.67	18.67	27.52	27.52	27.36	27.36
Catch1a	2.10	2.10	2.46	2.46	2.94	2.94	3.74	3.74
Catch1b	3.29	3.29	4.02	4.02	5.00	5.00	6.43	6.43
Catch1c	3.92	3.92	4.86	4.86	6.13	6.13	7.88	7.88
Catch2	0.32	0.32	0.41	0.41	0.52	0.52	1.73	1.73
Catch3	0.44	0.81	0.58	1.13	0.77	1.53	1.53	2.12
Catch4	0.14	0.14	0.18	0.18	0.25	0.25	0.40	0.40
Catch5	0.33	0.33	0.43	0.43	0.57	0.57	1.44	1.44
SSC2	5.14	4.80	6.54	6.04	8.37	7.69	10.91	10.20
SSC3	5.58	5.25	7.13	6.63	9.14	8.48	11.92	11.23
SSC4	5.83	5.94	7.46	7.60	9.58	9.79	12.50	12.69
SSC5	5.89	5.99	7.56	7.69	9.71	9.92	12.63	12.82
SSC6	6.41	6.91	8.26	9.00	10.65	11.68	14.07	15.06
KVAR1	0.37	0.47	0.53	0.67	0.74	0.95	0.91	1.12
KVAR2	-	0.42	-	0.61	-	0.85	-	1.02

Figure A-1 Existing site model layout

Figure C. 1 Model layout from Appendix F of the Stage 2 Environmental Assessment (Parsons Brinckerhoff 2008)

Appendix D: Site water balance

Purpose

The site water balance is currently under development and subject to the completion of a number of environmental studies currently occurring on the site. A broad review of the water cycle has been prepared as an interim measure for the OSWMP whilst a comprehensive model is being developed.

Model description

The site water balance estimates the volume of water within the system based on the following equation:

Change in volume over time = inflows – outflows

where:

- inflows consist of direct rainfall onto the water surface of storages, catchment runoff, intercepted groundwater and pumped transfers of water
- outflows consist of evaporation from the water surface area of storages, infiltration into groundwater systems draining off-site, and discharges to downstream watercourses.

A conceptual schematic of the site water cycle is presented in Figure D.1.

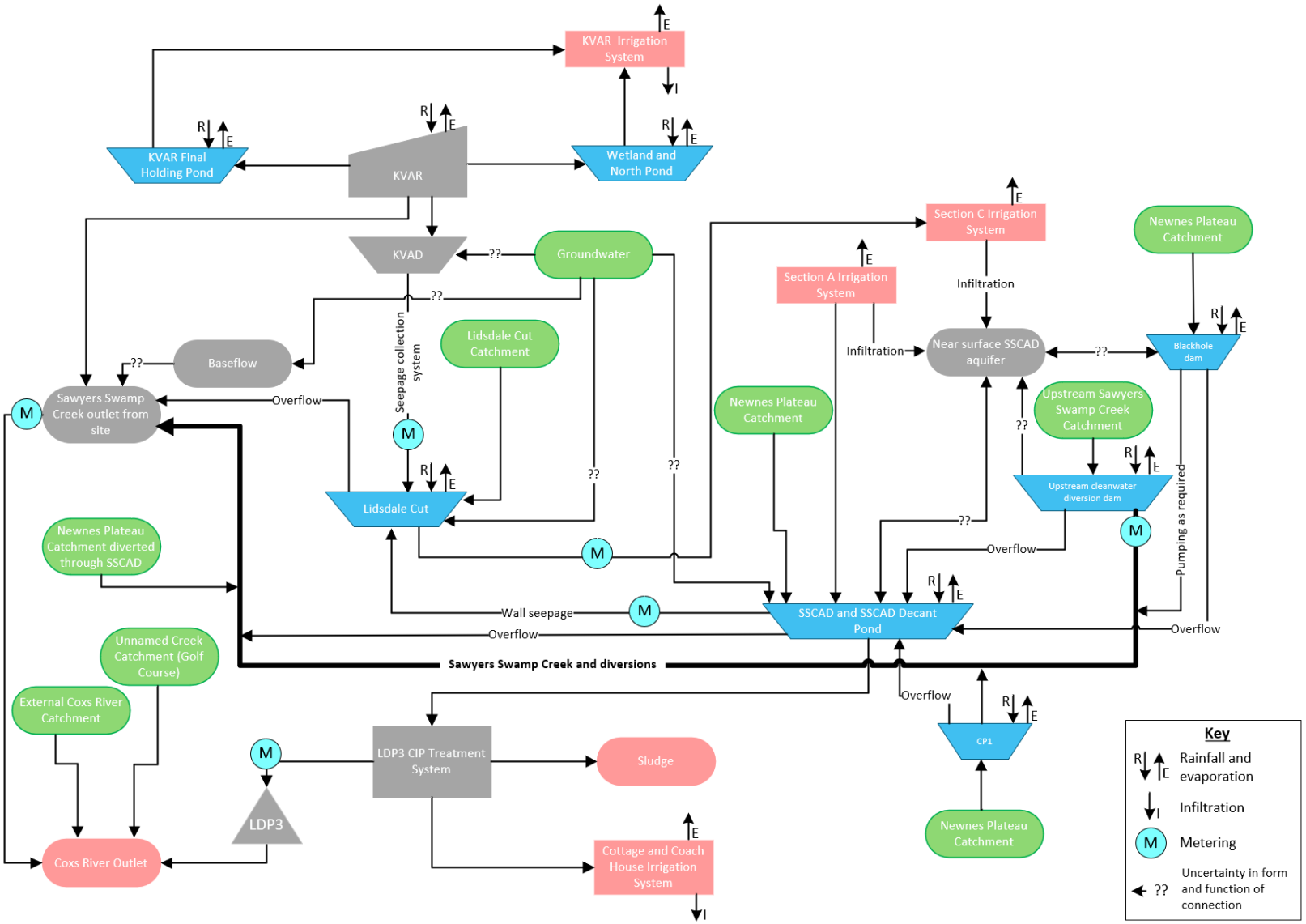


Figure D.1 Interim site water cycle schematic

Data

Climate data

Climate data for the water balance model used BoM station only data, extracted from grid reference -33.40, 150.10 via a SILO Data Drill. Data extracted from SILO was limited to historical data from 1959 as this was the period time when the local BoM weather stations (Lidsdale station number 63132) to the site were first developed. A total of 66 years were considered in the data set.

Daily rainfall was applied to the model to calculate direct rainfall onto the simulated water surface of storages. Morton's shallow lake evaporation data were used to estimate evaporation losses from the simulated water surface of storages. Morton's potential evapotranspiration data were used to estimate soil moisture losses and irrigation areas considered potential evapotranspiration losses using the FAO (Food and Agriculture Organisation of the United Nations) Penman-Monteith formula.

Annual statistics on rainfall is provided in Table D.1..

Table D.1 Annual climate statistics

Statistic	Rainfall total (mm)	Typical years representing statistic from data set
Minimum	385.6	1982
Maximum	1266	1978
10th	529	2006, 2019, 1979, 2002, 1980, 1997
50th (median)	799	1962, 2005, 1971, 1961, 1967, 2024, 2011, 2012
90th	1016	2020, 2010, 1984, 1963, 1973, 1990, 2022
Average	794	1962, 2005, 1971, 1961, 1967, 2024, 2011, 2012

Monthly distribution of average climate is presented in Figure D.2..

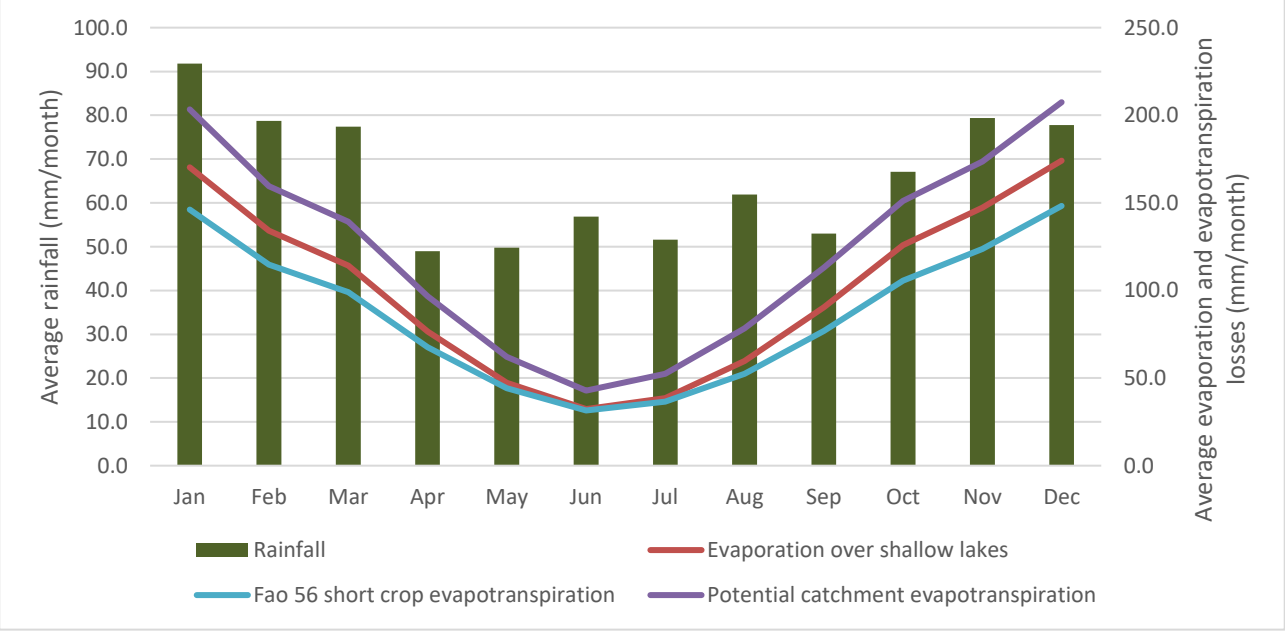


Figure D.2 Monthly average climate distribution

Metering data

The site has been progressively expanding a program of water metering around the site. Table D.2presents the metered sites relevant to the site water balance and data currently available. Data has been recorded as daily totals

Table D.2 Metering data available

Locations	Purpose	Data type and duration
Sawyers Swamp Creek (SSC) monitoring at three locations (diversion dam-SS5, dam spillway-S6 and creek outlet-between S5 and WX7)	SSC passes through the site and potentially interacts with groundwater systems to gain and/or lose water. Monitoring is occurring at three locations to understand how the site activities interact with the reaches of the diverted watercourse.	Diversion dam flow volumes– 1/6/2023 to current Dam spillway flow volumes – 17/7/2024 to current SSC downstream flow volumes – 17/7/2024 to current
Lidsdale Cut - WX5 (inflows and outflows)	Lidsdale Cut functions as a water storage, part of the water management system within the lower portion of the site. The storage is potentially connected to the groundwater system based on its water quality. Water transfers from the storage are important in ongoing groundwater investigations.	Lidsdale cut inflow volumes - 1/10/2023 to current Lidsdale cut outflow pumped volumes - 1/10/2023 to current
SSCAD Dam wall seepage	SSCAD Dam wall has a number of controlled seepage points to maintain adequate drainage of the wall. Given the water quality of water stored within SSCAD, this water needs to be further managed or treated within the site water management system. Monitoring of the wall seepage is important in the assessment of SSCAD's function.	Seepage pit outflow volumes – 1/10/2023 to current
SSCAD Pond water level	SSCAD Pond is actively managed to mitigate potential releases via the emergency spillway. Monitoring of the level assists in understanding the surface water runoff contribution to SSCAD from the surrounding catchment. Overtime this is expected to reduce as diversions are constructed Water from the Pond is beneficially reused on site or treated and discharged via the LDP3 Treatment System.	Pond level – 5/6/2023 to current
LDP3 Discharges	Water from SSCAD Pond is treated and discharged via LDP3 when the Pond levels and flow conditions within the Coxs River allow. Ongoing monitoring is a EPL requirement.	LDP3 discharge volumes – 1/1/2022 to current

Catchments and water storage data

Catchments for the site were characterised into the following two different land types, based upon site observations and aerial imagery:

- vegetated undisturbed / unvegetated uncompacted construction areas
- compacted / impervious areas – roads, water surfaces, laydown areas.

Table D.3 provides the key water storages and a breakdown of catchment types represented in the water balance model.

Table D.3 Water storages and catchment data

Water storages	Storage capacity (ML)	Maximum surface area (m^2)	Pervious areas (vegetated undisturbed / unvegetated uncompacted) (ha)	Impervious areas (compacted / worked / capped) (ha)	Total catchment area (ha)
Wetland and north pond	20.5	19,394	6.9	10.3	17.1
Lidsdale Cut (Cells 1 and 2)	10.7	7,201.4	7.2	10.7	17.9
SSCAD Pond	472 (at spillway)	133,185	75.0	18.7	93.7
Diversion Dam	4.5 (at spillway)	11,687	389.2	0.0	389.2
KVAR Final Holding Pond	20	70,989	12.8	19.3	32.1

The currently total storage capacity of the water management system is estimated at 523.2 ML, and 51.2 ML not considering the SSCAD Pond.

Operational information

The site is managed on an as required basis with portable pumping infrastructure available to redirect water around site as required. As part of the water balance development further documentation of the typical activities and transfer rates associated with portable infrastructure will be included within the model. The preliminary water balance model has not included any operational data of this nature.

LDP3 discharges is a key water disposal mechanism for the site with discharge activities only to be undertaken when all the conditions of the EPL are met. Based on the historical operation of this discharge point, Figure D.3 presents the volume of site based discharges via LDP3 as a percentile over the period 2022 to 2025. Due to the conditions of the EPL, discharges greater than 0 ML/day occurred in 40% of days over the last three years, with discharges greater than 6 ML/day occurring in 10% of days. Average LDP3 discharges over the data set available totalled approximately 522 ML/year.

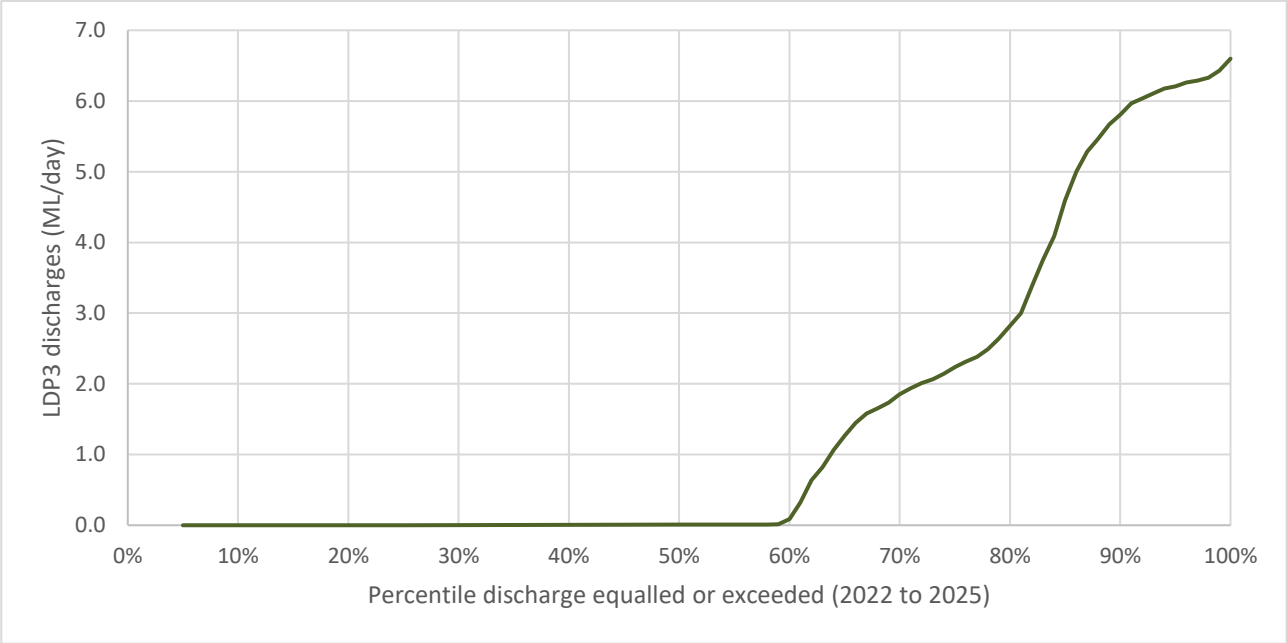


Figure D.3 Historical LDP3 discharges

To assist in water management at the site, irrigation activities are undertaken. These activities are currently undertaken across five main areas within the site. The irrigation disposal areas are estimated at 59.5 ha across site with irrigation activities including disposal of partially treated water from the LDP3 Treatment System and untreated stormwater from sediment basins.

Assumptions

The key assumptions for the water balance include:

- information prepared as part of this initial water balance assessment are preliminary and based on an annualised spreadsheet evaluation of inputs and outputs. Focus has been to present the information currently known and quantify the water management capacity for the site
- site investigations are ongoing specifically on groundwater interactions with various components of the site water management system
- data sets currently available are limited and are not representative of climate variability present at the site
- SSCAD sections B, C and D can individually serve as areas of water management storage however this is dependent on the presence of earthen bunds between each. As these bunds are currently subject to change as the site is being rehabilitated, for the purposes of this assessment, these areas have been assumed to all report to the SSCAD Pond which is likely to present a conservative outcome.
- Diversion Dam, Blackhole Dam and collection ponds provide capacity to manage the diversion of clean water. Stage storage information was not available for Blackhole Dam and the collection ponds.
- To appropriately simulate the potential for future LDP3 discharges, a catchment model for the Coxs River must be included within the site water balance to confirm, to simulate stream flows that meet EPL conditions. This has not been undertaken as part of this preliminary assessment however options to incorporate this will be included in future water balance versions.
- Soil assessment works are being scoped to optimise daily irrigation water volumes.

Assessment

The water balance has considered broad inputs and outputs for the site to provide a preliminary overview for the water cycle of the site. This has been undertaken using spreadsheet estimates for rainfall and runoff as well as evaporative losses. Metering data has been considered where appropriate to determine average transfer or inflow rates to the water management system.

A summary of the average annual inflows and outflows have been estimated based on the current data available for the site and is presented in Table D.4. Notes have been provided against various model estimates to indicate the current assumptions and where further work is required.

From the results, it generally supports a direction for the site to dispose of water from the site. The water inventory across the site has been historical high and is more than the demands require. The site water demands are relatively small, compared to the catchment and potential groundwater inflows, as the key operational tasks are construction related earthworks and site rehabilitation requirements.

Groundwater remains a key unknown for the site with further assessment of this component ongoing.

Table D.4 Summary of estimated annual inflows and outflows

Element	Annual volumes (ML/year)	Notes and comments
Inflows		
Direct rainfall and catchment runoff to water management system	396.0	
Direct rainfall and catchment runoff to Sawyers Swamp Creek Diversion	1,529.6	High level estimate with catchment runoff assumptions and requires further review of metering data
Groundwater into KVAR/KVAD	32.9	Based on metering of inflows Lidsdale Cut minus transferred volumes from SSCAD wall seepage
Groundwater into SSCAD	20.4	Partial volume only, based on seepage metering of the SSCAD wall
Total inflows	***1,958.5***	
Outflows		
Evaporation from dams	210.6	
Dust suppression and irrigation sediment laden water (from sediment basins)	81.1	Estimate based on soil moisture deficit calculation and nominated area by GPM
Irrigation partially treated water (from LDP3 Treatment System)	20.5	Estimate based on soil moisture deficit calculation and nominated area by GPM
Irrigation onto SSCAD (from Lidsdale Cut)	62.1	Based on metering data
Runoff loss through groundwater seepage	Unknown	There is a potential for surface to groundwater connectivity but remains unknown

Element	Annual volumes (ML/year)	Notes and comments
Sawyers Swamp Creek outflow from site	1,529.6	Model assumed inflows equalled outflows. This is likely a conservative estimate as current site watercourse metering suggests less than 10% of this volume however this is limited by data points and rainfall variability.
Loss to groundwater from Sawyers Swamp Creek	Unknown	Further metering data required to understand the differential between upstream to downstream monitoring sites
Discharge via LDP3	522.0	Average of annual data between 2022 and 2025 and subject to Coxs River streamflow and SSCAD Pond levels.
Total outflows	***2,425.9***	
Change in storage (Inflows – outflows)	***-467.4***	System theoretically has capacity to dewater excess water from site, subject to determining groundwater unknowns. Water inventory for the site is typically high (between 200 ML to 500 ML)
Balance	***0***	

Appendix E: ER Letter of Endorsement

Level 3 175 Scott Street
Newcastle NSW 2300
ABN: 28 141 736 558

02 4907 4800

www.emmconsulting.com.au

31 March 2026

John Pola
Environmental Manager
Generator Property Management - Lidsdale
110 Skelly Road
Lidsdale NSW 2790

Re: MP07_0005 - Wallerawang Ash Dam Areas - Environmental Representative Endorsement - Operational Surface water Quality Management Plan Rev 6

Dear John,

Following a review of the documents provided for the Operation Surface water Quality Management Plan (SWQMP) Rev 6, I can provide the following endorsement.

The SWQMP Rev 6 has been reviewed against the Mod 2 Consolidated Conditions of Approval, in particular Condition 6.5. Consultation with WaterNSW and DPIRD Fisheries has been completed and all comments have been addressed.

All conditions of approval and mitigation measures are contained in the SWQMP Rev 6.

The document is endorsed for submission for approval.

Yours sincerely

David Bone
Independent Environmental Representative
dbone@emmconsulting.com.au

Appendix F : Consultation

DPIRD Fisheries
Department of Primary Industries and Regional Development

Our Ref: C25/94 FE25/150

7 February 2025

John Pola
Generator Property Management Pty Ltd

Re: **Operational Surface Water Management Plan (OSWMP), Lidsdale Ash Repository (2024)**

Thank you for providing comment from DPIRD Fisheries, a division of NSW Department of Primary Industries and Regional Development (DPIRD) on the Operational Surface Water Management Plan (OSWMP) for this development.

DPIRD Fisheries is responsible for ensuring that fish stocks are conserved and that there is no net loss of key fish habitats upon which they depend. To achieve this, DPIRD Fisheries ensures that developments comply with the requirements of the *Fisheries Management Act 1994* (namely the aquatic habitat protection and threatened species conservation provisions in Parts 7 and 7A of the Act, respectively), and the associated *Policy and Guidelines for Fish Habitat Conservation and Management (2013)*.

DPIRD Fisheries have reviewed the OSWMP. The proposed surface water monitoring program satisfies the conditions of approval to consult with DPIRD Fisheries. The OSWMP appears reasonable in the selection of monitoring locations, frequency of monitoring, and rationale behind the monitoring program to determine the impacts of the ash placement activities and the realignment of Sawyers Swamp Creek. However, DPIRD Fisheries believe that the Trigger Action Response Plan (TARP) is not very detailed in providing corrective mitigating actions to address non-compliant adverse surface water quality exceedances and surface water level exceedances in the dam, other than reporting/consulting with regulatory agencies and reviewing the OSWMP. A clear Response and Contingency Plan outlining triggers and actions to be undertaken in such events might be beneficial.

If you require any further information, please do not hesitate to contact me on 0429 908 856.
Yours sincerely

D. Ward

David Ward
Fisheries Manager (Murray Darling)

4 February 2025

Generator Property Management Pty Ltd
PO Box 132
Budgewoi NSW 2262

Attention: Stephen Saladine

Dear Stephen

Subject: Wallerawang Power Station Ash Dam – WaterNSW's Advice on proposed Operational Groundwater (MP07_0005-PA-29) and Surface Water (MP07_0005-PA-30) Management Plan

WaterNSW appreciates the opportunity to provide advice on the proposed Operational Groundwater and Surface Water Management Plan (OGWMP and OSWMP) prepared by Generator Property Management Pty Ltd (GPM). The existing consent conditions for MP07_0005, conditions 6.5(b) and (c), requires an Operational Groundwater and Surface Water Management Plan (OGWMP and OSWMP) to be prepared in consultation with WaterNSW, and implemented as part of the Operation Environmental Management Plan for the project.

As the development is located within the Sydney Drinking Water Catchment (SDWC), Section 6.61(1) and 6.63 of the *State Environmental Planning Policy (Biodiversity and Conservation) 2021* (the SEPP) apply.

WaterNSW has reviewed the information in the proposed OGWMP and OSWMP (both dated 19 December 2024) prepared by GPM and requests that the reports include the following matters:

- For OGWMP:
  - Chrome 6+ (Cr6+), Mercury (Hg) and Silver (Ag) should be included in groundwater monitoring given historic data at the site
  - Table B2 should be updated to include sampling for Aluminium (Al), Chrome 6+ (Cr6+), Mercury (Hg) and Silver (Ag) given historic issues identified
  - There is no discussion as to what the 4 groundwater monitoring sites (A9, A17, GW10 & GW11) identified in Figure B1 as "extra water quality and water level sites – not part of OEMP" are for, and why they aren't included in the OEMP. WaterNSW considers that more detail regarding these monitoring sites should be included as part of the sites OGWMP, even if non-routine sites
  - Section 6.2 of the OGWMP notes that monitoring shall be conducted 6 monthly at 11 locations whereas, Appendix B of the OGWMP suggests 13 water quality monitoring locations. The OGWMP should be updated for consistency, and
  - Clarification should be included in Table B4 on when relevant agencies shall be notified if Low Hazard (Stage 1) trigger continues, and where Stage 2 is not triggered.
- For OSWMP:
  - The OSWMP should include a detailed water balance for the site to demonstrate that storage volumes can effectively manage contaminated water on site

WaterNSW ABN 21 147 934 787
169 Macquarie Street Parramatta NSW 2150
PO Box 398, Parramatta NSW 2124
t. 1300 662 077 **e.** Customer.Helpdesk@waternsw.com.au

- Little information is provided in the OSWMP regarding the Caustic Injection Plant (CIP). WaterNSW considers the potential impacts of this activity are relevant and should also be included in the OSWMP including specific details of the current water quality within the SSCAD (including heavy metals and metalloids) and details of the treatment process and the expected quality of treated water discharges for all parameters. The OSWMP should also include when use of the CIP is triggered (i.e., anticipated rainfall thresholds, water quality exceedances), and monitoring is required prior to treatment, and prior to discharge to ensure compliance with the EPL
- WaterNSW considers detailed baseline monitoring data for each sample site be provided as an appendix similar to that provided in the OGWMP
- WaterNSW considers baseline values for all parameters proposed for monitoring should be included in Table A.2 – particularly given the site has a history for exceedances of Boron, Fluoride, Filterable Iron and Filterable Manganese which present a risk to the local aquatic ecology of the receiving waters that would not have been exposed to these contaminants on a regular basis. We also note that treatment through the CIP would not address these contaminants
- WaterNSW also considers that the 80th percentile values be provided for each monitoring site, for each parameter to identify potential spatial trends
- In Table B3 - Stage 2 notification, WaterNSW should also be included as a relevant agency to be notified, and
- In the Trigger Action Response Plans (Table B3 in the OSWMP and Table B4 in the OGWMP), recommend notifying the relevant agencies if a Stage 1 (Low Hazard) trigger continues for greater than 6 weeks, even if Stage 2 is not triggered.

WaterNSW also requests to remain as a stakeholder in any further assessment and consultation on this project. If you have any questions, please contact Rizwana Rumman via email at environmental.assessments@waternsw.com.au.

Yours sincerely

JURI JUNG
Catchment Protection Manager

Nadia Eisenlohr

From: Nadia Eisenlohr
Sent: Monday, 8 September 2025 8:33 AM
To: Nadia Eisenlohr
Subject: RE: Ref: C25/94 - Re: Operational Surface Water Management Plan (OSWMP), Lidsdale Ash Repository (2024) - (MP07_0005-PA-30)

From: David Ward <david.ward@dpird.nsw.gov.au>
Sent: Monday, 1 September 2025 2:23 PM
To: Julian MacPhee <julian.macphee@gpmco.com.au>
Cc: John Pola <john.pola@gpmco.com.au>
Subject: RE: Ref: C25/94 - Re: Operational Surface Water Management Plan (OSWMP), Lidsdale Ash Repository (2024) - (MP07_0005-PA-30)

> Some people who received this message don't often get email from david.ward@dpird.nsw.gov.au. Learn why this is important

Hi Julian,

Thank you for your correspondence.

I have reviewed the updated OSWMP and am satisfied that my previous comments have been addressed and endorse the revised plan.

Cheers
David

Please note I will only be working Monday-Tuesday during the month of August.

David Ward
Fisheries Manager, Aquatic Ecosystem Assessment
Regulatory Reform and Engagement | Fisheries and Forestry
Department of Primary Industries
and Regional Development

T 02 6763 1255 **M** 04 2990 8856 **E** david.ward@dpi.nsw.gov.au

nsw.gov.au/dpird

4 Marsden Park Road CALALA NSW 2340

Department of Primary Industries
and Regional Development

We stand on Country that always was and always will be Aboriginal land. We acknowledge the Traditional Custodians of the land and waters, and we show our respect for Elders past, present and emerging. We are committed to providing places in which Aboriginal people are included socially, culturally and economically through thoughtful and collaborative approaches to our work.

From: Julian MacPhee <julian.macphee@gpmco.com.au>
Sent: Thursday, 24 July 2025 11:06 AM
To: David Ward <david.ward@dpi.nsw.gov.au>
Cc: John Pola <john.pola@gpmco.com.au>
Subject: Ref: C25/94 - Re: Operational Surface Water Management Plan (OSWMP), Lidsdale Ash Repository (2024) - (MP07_0005-PA-30)

Dear David,

I am contacting you regarding consultation advice for Wallerawang Power Station – Lidsdale Ash Dam – Operational Surface Water (MP07_0005-PA-30) Management Plan.

Consultation was received on 7/2/2025 from DPIRD Fisheries which included an amendment to be made in the SWMP for Lidsdale Ash dam (attached).

Subsequent consultation is required by DPHI after the requested amendment was made as the SWMP may not have been provided on the DPHI portal to DPIRD Fisheries .

I have attached the current version of the SWMP to review and endorse if satisfied with the document updates made in response to the comments received on 7/2/2025.

Many thanks.

Regards,

Julian MacPhee
Engineering Project Officer
GPM - **Generator Property Management Pty Ltd**
ABN: 73 615 047 295
Mobile: 0427 094 014
Julian.MacPhee@gpmco.com.au
110 Skelly Road, Lidsdale NSW 2790
301 Scenic Drive, Colongra NSW 2262
PO Box 132 Budgewoi NSW 2262

Nadia Eisenlohr

From: Nadia Eisenlohr
Sent: Monday, 8 September 2025 8:34 AM
To: Nadia Eisenlohr
Subject: RE: Attention Rizwana Rumman: Subject: Wallerawang Power Station Ash Dam – WaterNSW's Advice on proposed Operational Groundwater (MP07_0005-PA-29) and Surface Water (MP07_0005-PA-30) Management Plan

---

From: Rizwana Rumman <Rizwana.Rumman@waternsw.com.au>
Sent: Thursday, 7 August 2025 2:25 PM
To: Julian MacPhee <julian.macphee@gpmco.com.au>
Cc: John Pola <john.pola@gpmco.com.au>
Subject: RE: Attention Rizwana Rumman: Subject: Wallerawang Power Station Ash Dam – WaterNSW's Advice on proposed Operational Groundwater (MP07_0005-PA-29) and Surface Water (MP07_0005-PA-30) Management Plan

> You don't often get email from rizwana.rumman@waternsw.com.au. Learn why this is important

Hi Julian,

Thank you very much for sending through the updated plans. Water NSW has now reviewed the and have no further comments.

Just a quick note, the flow gauge upstream of LDP 3 operated by Water NSW is 212054 (Coxs River @ Wallerawang Power Station) , probably mistakenly reported as 12054.

Kind regards,

Rizwana Rumman
Catchment Assessment Officer

WaterNSW
We're at the source

Level 14, 169 Macquarie St (1PSQ)
Parramatta NSW 2150
Work location: remote, please reach via email
E: rizwana.rumman@waternsw.com.au

Follow us on socials:

From: Julian MacPhee <julian.macphee@gpmco.com.au>
Sent: Monday, 21 July 2025 9:44 AM
To: Environmental Assessments <Environmental.Assessments@waternsw.com.au>

Cc: John Pola <john.pola@gpmco.com.au>
Subject: [EXTERNAL] Attention Rizwana Rumman: Subject: Wallerawang Power Station Ash Dam – WaterNSW's Advice on proposed Operational Groundwater (MP07_0005-PA-29) and Surface Water (MP07_0005-PA-30) Management Plan

---

Dear Rizwana,

I am contacting you regarding consultation advice for Wallerawang Power Station – Lidsdale Ash Dam – Operational Groundwater (MP07_0005-PA-29) and Surface Water (MP07_0005-PA-30) Management Plan.

Consultation was received on 4/2/2025 from WaterNSW which included several amendments to be made in the OGWMP and SWMP for Lidsdale Ash dam (attached).

DPHI have indicated there was no subsequent consultation after the requested amendments were made as the updated OGWMP and SWMP may not have been provided on the DPHI portal to WaterNSW.

I have attached the current version's of the OGWMP and SWMP to review and endorse if satisfied with the document updates made in response to the comments received on 4/2/2025.

Many thanks.

Regards,

Julian MacPhee
Engineering Project Officer
GPM - **Generator Property Management Pty Ltd**
ABN: 73 615 047 295
Mobile: 0427 094 014
Julian.MacPhee@gpmco.com.au
110 Skelly Road, Lidsdale NSW 2790
301 Scenic Drive, Colongra NSW 2262
PO Box 132 Budgewoi NSW 2262