CENTENNIAL

SSD_7592

SPRINGVALE WATER TREATMENT PROJECT

2023 ANNUAL REVIEW

March 2024

Annual Review Title Block

Name of Operation	Springvale Water Treatment Project
Name of Operator	Veolia Australia and New Zealand (VANZ)
Development Consent/ Project Approval #	SSD 7592 (as modified)
Name of holder of Development Consent/ Project Approval	Springvale Coal Pty Limited
Annual Review Start Date	1 January 2023
Annual Review End Date	31 December 2023

I, Greg Shields certify that this audit is a true and accurate record of the compliance status of Springvale Water Treatment Project for the period 1 January to 31 December 2023 and that I am authorised to make this statement on behalf of Springvale Coal Pty Limited.

Note:

a) *The Annual Review is an 'environmental audit' for the purposes of s122B(2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion) in an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, $1 million and for an individual, $250,000.*

b) *The Crimes Act 1900 contains other offences relating to false and misleading information: section 192G (intention to defraud by false or misleading statement – maximum penalty 5 years imprisonment); sections 307A, 307B and 307C (False or misleading applications/information/documents –maximum penalty 2 years imprisonment or $22,000,or both).*

Name of Authorised Reporting Officer	Greg Shields
Title of Authorised Reporting Officer	Executive General Manager Mining Risk and Compliance
Signature of Authorised Reporting Officer	
Date 28/03/2024	

Contents

1 STATEMENT OF COMPLIANCE 5
2 INTRODUCTION 7
2.1 Scope 7
2.2 Project Overview 7
2.3 Project Location 8
2.4 The Project Application Area 8
2.5 Responsibilities 8
3 APPROVALS 11
3.1 Project Approval (SSD 7592) 11
3.1.1 Changes During the Reporting Period 13
3.2 Other Approvals 13
3.3 Annual Reporting Requirements 15
4 OPERATIONS SUMMARY 16
4.1 Project Overview 16
4.2 Operations 16
4.2.1 Mine Water Treatment Maximum Daily Flow Rate 17
4.2.2 Residuals Delivery 18
4.2.3 Filtered Water to TCR Performance 19
4.3 Construction and Land Disturbance activities 20
4.4 Next Reporting Period 20
5 ACTIONS REQUIRED FROM PREVIOUS ANNUAL REVIEW 21
5.1 ACTIVITIES Conducted from Previous Annual Review 21
6 ENVIRONMENTAL PERFORMANCE 22
6.1 Statutory 26
6.2 Noise, Vibration, Air Quality and Odours 26
6.3 Biodiversity 26
6.3.1 Environmental Management 26
6.3.2 Environmental Performance 27
6.3.3 Long Term Analysis 28
6.3.4 Implemented / Proposed Improvements 29
6.3.5 Biodiversity Offsets 29
6.4 Heritage 31
6.4.1 Environmental Management 31
6.4.2 Environmental Performance 31
6.4.3 Comparison Against Predictions 31
6.4.4 Long Term Analysis 32
6.4.5 Implemented / Proposed Improvements 32
6.5 Other Matters 32

6.5.1 Waste 32
6.5.2 Bushfire Risk 33
7 WATER MANAGEMENT 34
7.1 Water Licenses 34
7.2 Water Balance 34
7.3 Surface Water 36
7.3.1 Environmental Management 36
7.3.2 Environmental Performance 39
7.3.3 Comparison against Predictions 43
7.3.4 Long Term Analysis 43
7.3.5 Implemented / Proposed Improvements 43
8 REHABILITATION 44
8.1 Rehabilitation Monitoring 44
9 COMMUNITY CONSULTATION 46
9.1 Community Liaison and Engagement 46
9.2 Community Complaints 46
10 INDEPENDENT ENVIRONMENTAL AUDIT 47
11 INCIDENTS AND NON-COMPLIANCES DURING THE REPORTING PERIOD 47
11.1 Notifiable Incident Classification 47
11.2 Incidents Recording and Reporting 47
11.3 Incident Reporting 48
12 ACTIVITIES TO BE COMPLETED IN THE NEXT REPORTING PERIOD 50
13 REFERENCES 51

List of Tables

Table 1-1 Statement of Compliance 5
Table 1-2 Non-Compliances 5
Table 2-1 Environmental Management Contact Details 8
Table 3-1Summary of the Project Development Consent Modifications 11
Table 3-2 Approvals held by the Project in the operations phase 13
Table 3-3 Annual Reporting Requirements 15
Table 4-1 Mine Water Transfer Rates via WTS 17
Table 4-2 Residuals Quality and Flow Performance Parameters 18
Table 4-3 Discharge of Partially Treated Water to TCR 19
Table 5-1Actions from Previous Annual Review and Regulator Requirements 21
Table 5-2 Summary of Activities Conducted from Previous Annual Review 21
Table 6-1 Environmental Performance Criteria and Monitoring Regime 23
Table 6-2 Summary of OEMP Monitoring and Inspections 25
Table 6-3 Summary of OEMP Monitoring Requirements 25
Table 6-4 Biodiversity Monitoring & Reporting Requirements (SWTP BMP) 28

Table 6-5 Long Term Biodiversity Compliance Trends (non-administrative) 29
Table 6-6 Long Term Heritage Compliance Trends (non-administrative) 32
Table 6-7 Waste Summary 33
Table 7-1Average total water volumes and salt loads from July 2019 to June 2020 (Source: GHD 2019b) 35
Table 7-2 Baseline Data Collection Sites and Current Monitoring Programs 37
Table 7-3 Treated Water to TCR Quality Performance 39
Table 8-1 Rehabilitation management measures during and post-construction 44
Table 9-1 Record of annual community complaints for 2017 to 2023 46
Table 11-1 Summary of Reportable Incidents and Regulatory Actions 48
Table 11-2 Incidents and Non-Compliances during the Reporting Period 49

List of Figures

Figure 2-1 Project Location and Overview 9
Figure 2-2 Water Treatment Facility Site Layout 10
Figure 4-1 Daily Mine Water Transfer Rate and Limit 17
Figure 4-2 Residuals Transferred to Western Coal Services 19
Figure 6-1 Western Region Biodiversity Offset Sites 30
Figure 7-1 Water Monitoring Locations (source: Springvale WTP WMP) 38
Figure 7-2 Electrical conductivity within Wangcol Creek (mid 2019 to December 2023) 41
Figure 7-3 : Electrical conductivity within Pipers Flat Creek (mid 2019 to December 2023 41
Figure 7-4 Electrical conductivity within Coxs River (Delta Site) (mid 2019 to December 2023) 42
Figure 7-5 Electrical conductivity within Thompsons Creek Reservoir (TC1) (mid 2019 to December 2023) 42

Appendices

APPENDIX 1: DAILY FLOW DATA 51

1 STATEMENT OF COMPLIANCE

Table 1-1 provides a statement of compliance with the relevant approvals during the reporting period. During the reporting period there was 1 non-compliance.

Table 1-2 presents a summary of the non-compliances.

Table 1-1 Statement of Compliance

Were all conditions of the relevant approval(s) complied with?	
Development consent SSD_7592 (as modified)	No

Table 1-2 Non-Compliances

Relevant Approval	Condition #	Condition summary	Compliance Status	Comment	Where Addressed in Annual Review
SSD_7592	Schedule 2, Condition 5	Maximum daily residual waste limit of 0.43ML/day	Non-Compliant	11 June 2023 – Due to misalignment between PLC and SCADA time the residuals limit was exceeded. The error with the PLC Time Synchronisation has been resolved by the SCADA Control System Contractor on 13 June 2023. Incident report provided to DPE 16 June 2023.	Section 11
SSD_7592	Schedule 2, Condition 5	Maximum daily residual waste limit of 0.43ML/day	Non-Compliant	On December 15, 0.567 ML of residuals were transferred from the SWTP to WCS, exceeding the approved maximum daily limit of 0.43 ML. The residuals transferred from SWTP to WCS exceeded the daily maximum flow volume 16 times during December 2023.	Section 11

Note: Compliance Status Key for Table 1-2

Risk Level	Colour Code	Description
High	Non-Compliant	Non-compliance with potential for significant environmental consequences, regardless of the likelihood of occurrence
Medium	Non-Compliant	Non-compliance with: ● Potential for serious environmental consequences, but is unlikely to occur; or ● Potential for moderate environmental consequences, but is likely to occur
Low	Non-Compliant	Non-compliance with: ● Potential for moderate environmental consequences, but is unlikely to occur; or ● Potential for low environmental consequences, but is likely to occur
Administrative	Non-Compliant	Only to be applied where the non-compliance does not result in any risk of environmental harm (e.g. submitting a report to government later than required under approval conditions)

2 INTRODUCTION

The Springvale Water Treatment Project (Project) was approved as State Significant Development (SSD) 7592 by the Planning Assessment Commission (PAC) on 19 June 2017, under delegation from the Minister for Planning. A Development Consent was granted under Section 89E of the *Environmental Planning and Assessment Act 1979* (EP&A Act) based upon the development described in the *Springvale Water Treatment Project Environmental Impact Statement* (EIS) (GHD 2016a) and the associated Response to Submissions as amended.[1]

Veolia Australia & New Zealand (Veolia) have been engaged as the construction and operations contractor to carry out the Project for MP Water Pty Ltd. MP Water is contracted to Boulder Mining Pty Limited, Springvale Coal Pty Limited (together, the Springvale Joint Venture) and EnergyAustralia NSW Pty Ltd (together, the Customer Group) for that purpose.

2.1 SCOPE

This Annual Review Report (Report) is the seventh report prepared to detail the environmental performance of Springvale Water Treatment Project (Project) during its operations stage. This Report covers the period 01 January 2023 to 31 December 2023 (reporting period).

This Report has been prepared in accordance with Schedule 4, Condition 5 of the Development Consent SSD 7592 as detailed further in Section 3.

2.2 PROJECT OVERVIEW

The Project aims to improve water quality in the upper Cox's River catchment through the transfer of water from existing underground mine dewatering facilities at the Springvale Coal Mine (Springvale) and Angus Place Colliery (Angus Place) for industrial reuse at the Mount Piper Power Station (MPPS), rather than discharge into the upper catchment of the Cox's River.

This is achieved by the construction and operation of a pipeline and a water treatment facility to transfer water from the existing dewatering facilities on the Newnes Plateau for treatment and reuse at MPPS as shown on **Figure 2-1** and **Figure 2-2.**

In detail, the Project involves construction and operation of the following elements:

- **Water transfer system (WTS)** – WTS is a 15 km water transfer pipeline, to transfer up to 42 ML a day of mine water from existing underground mine dewatering facilities (operated by Springvale Coal Pty Ltd) to MPPS (operated by EnergyAustralia Pty Ltd) and a 5 km residuals pipeline from the WTF site to the Springvale Coal Services Area.
- **Water treatment facility (WTF)** – WTF is a desalination plant designed to treat the mine water for use in the MPPS cooling towers and to discharge excess treated water to Thompson's Creek Reservoir (TCR) if required; discharge of treated water will only occur when MPPS is not operating at full capacity.

The Springvale WTP has allowed Springvale to cease mine water discharges to the Coxs River via LDP007 and enabled MPPS to reuse up to 42 megalitres (ML) per day of treated mine water in place of fresh water from the Cox's River catchment.

[1] see **Section 3.1** for a summary of the Project Development Consent Modifications (and associated EIS amendments)

2.3 PROJECT LOCATION

The Springvale WTP is located approximately 15 km northwest of Lithgow, adjacent to the MPPS at Lot 363 Boulder Road, Blackmans Flat, NSW.

Mine water is transferred from the nearby Angus Place and the Springvale Mines which are located in the western coalfield of NSW. The MPPS is located about 8 km west of the Springvale Mine pit top (see **Figure 2-1**).

2.4 THE PROJECT APPLICATION AREA

The Project Application area of the WTS comprises a number of infrastructure elements primarily including a 10 meter wide linear pipeline corridor extending between the existing mine water pump station (WBS002) on the Newnes Plateau and the WTF located within the MPPS site (see **Figure 2-1** and **Figure 2-2**).

This area is partially situated within the Gardens of Stone National Park (formerly Newnes State Forest), extending from the east on Newnes Plateau to the west into lower lying vegetated and disturbed lands.

The western half of the WTS application area is situated on largely disturbed lands due to existing farming lands, roads, easements and mining lands. Castlereagh Highway is situated to the north of this western portion of the WTS application area.

The WTF site located at MPPS has been extensively cleared and modified previously for construction of the power station and associated infrastructure.

2.5 RESPONSIBILITIES

Table 2-1 provides the names and contact details of the key personnel who are responsible for the environmental management of the Project during the reporting period.

Table 2-1 Environmental Management Contact Details

Name	Position	Contact Details
Ramona Bachu	National Environmental Compliance Manager / Service Provider Environmental Nominee	T: 0407 668 199
		E: ramona.bachu@veolia.com
Dora Ambrosi-Wall	Environmental Compliance Advisor (NSW/ACT) /Site Environmental Lead	T: 0409 971 474
		E: dora.ambrosi-wall@veolia.com
Shohidul Islam	Operations Manager	T: 0408 160 444
		E: shohidul.islam@veolia.com
Caitlin Cooper	Snr Process Engineer	T: 0418 119 073
		E: caitlin.cooper@veolia.com
Graham Brown	Compliance Supervisor	T: 0418 255 668
		E: graham.brown@veolia.com
Community Information and Complaints Line		T: 0436 482 794
		E: operations.springvale@veolia.com

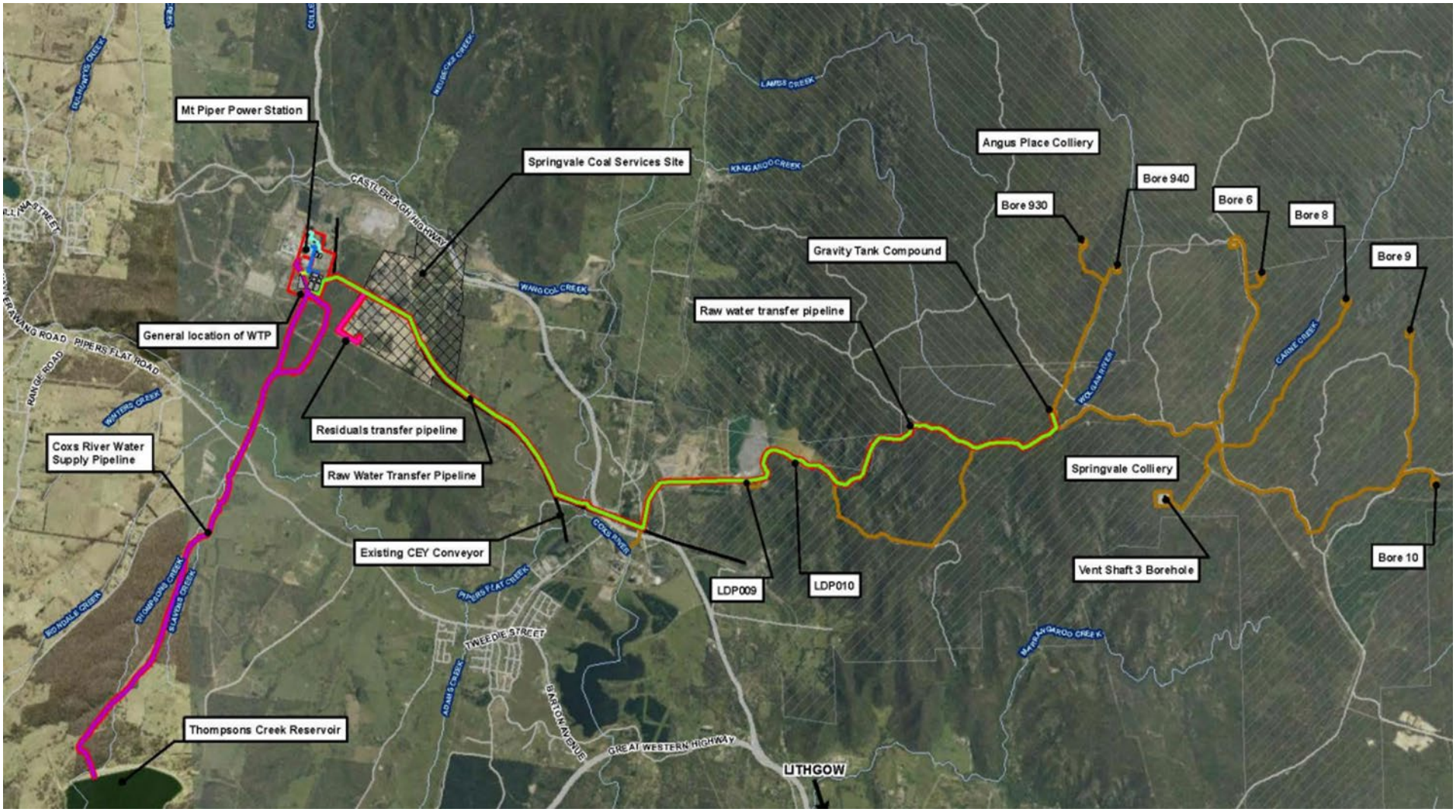

Figure 2-1 Project Location and Overview

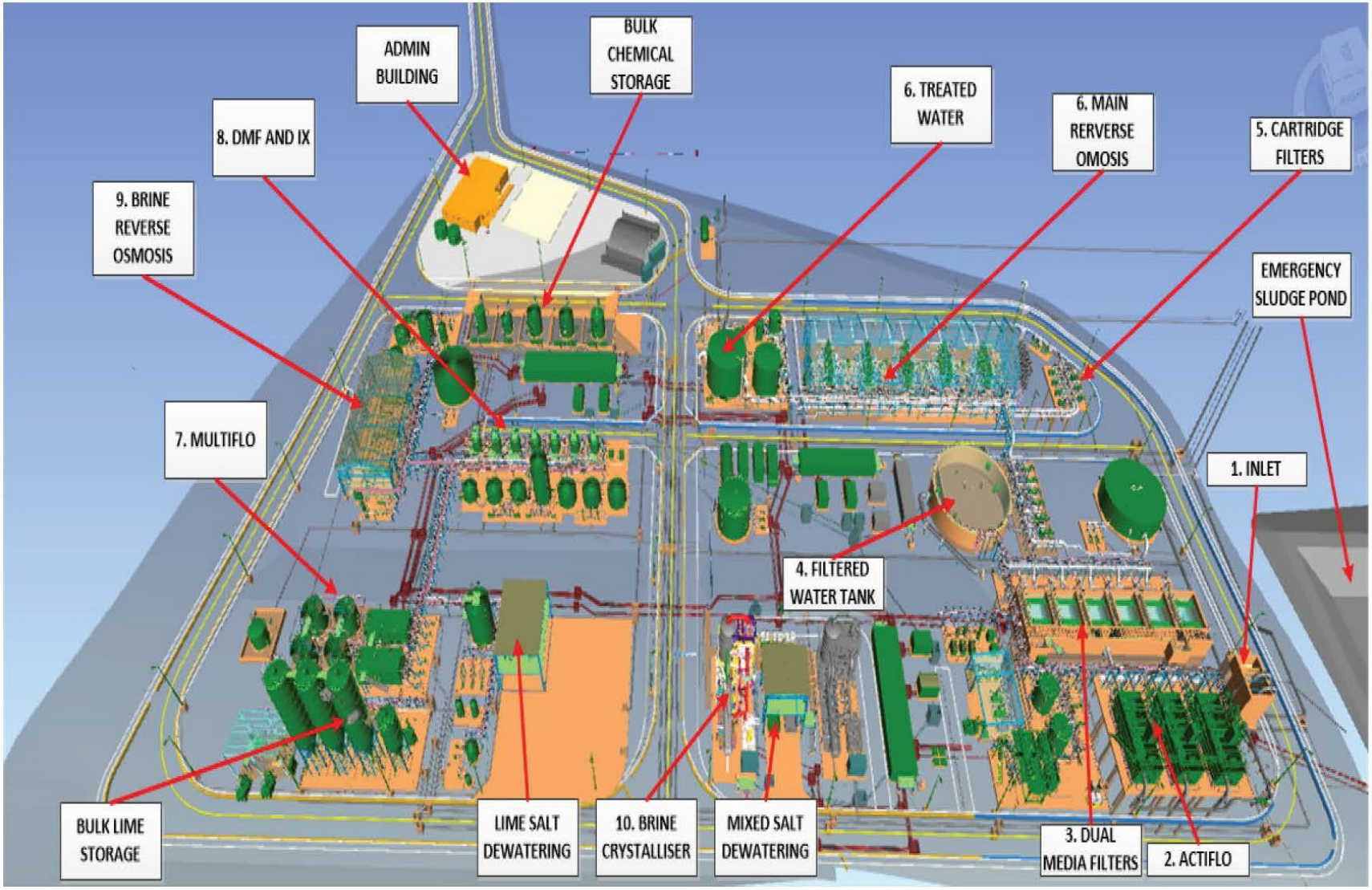

Figure 2-2 Water Treatment Facility Site Layout

3 APPROVALS

3.1 PROJECT APPROVAL (SSD 7592)

The NSW Department of Planning and Environment (Department) assessed the Project as a State Significant Development (SSD 7592) under Section 89(C) of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

SSD 7592 was delegated to the Planning Assessment Commission (PAC) for determination under the Minister of Planning's delegation of 14 September 2011. The project was determined by the PAC on 19 June 2017.

In developing its design solution, several design modifications were incorporated to improve the operational efficiency and risk profile for the Project. The Project remains substantially the same development as the Project described in the *Springvale Water Treatment Project EIS* (GHD 2016a) and in the *Springvale Water Treatment Project Amendment to Development Application* (GHD 2016b).

A summary of the Project development consent and modifications is provided in **Table 3-1**. A copy of the current development consent is available at the Springvale Water Treatment Facility website.[2]

Table 3-1Summary of the Project Development Consent Modifications

Approval (EIS)	Date of Determination	Description
SSD 7592 (GHD, 2016a & GHD, 2016b)	19 June 2017	Original project approval included the following: 15km pipeline from Springvale Mine to Mt Piper Power Station with a capacity of 42 megalitres per day; 1.8km residuals pipeline to transfer residual waste by-product from the water treatment facility to the Western Coal Services site; Desalination water treatment facility at Mt Piper Power Station, and integrated within the existing system; and Number of ancillary and construction features to the water treatment works
MOD1 (GHD, 2017)	12 January 2018	The modification included the following: Change to the management process for the brine stream, which includes brine being directed to an upgraded crystalliser, which would dehydrate the brine and allow it to be stored in existing ponds. Minor modifications, including minor realignment to both the water transfer and residual material transfer pipelines. An increase in the construction workforce from 50 to 120 people, and the operational workforce from 5 to 22 people.

[2] https://www.centennialcoal.com.au/operations/springvale-water-treatment-facility/

Approval (EIS)	Date of Determination	Description
N/A	16 April 2018	Construction hours were extended: For a single period of 48-hours for the Horizontal Directional Drilling (HDD) pipeline works associated with the pulling of pipe under the Castlereagh Highway; and To 24 hours per day, 7 days per week for construction of the WTF located at MPPS. The extension to construction hours was intended to mitigate risks with any program delay to ensure that the Project date for treatment of mine-water is achieved.
MOD2 (GHD, 2018)	29 October 2018	Springvale Mine Extension Project. This modification returns the pipeline alignment near Skelly Road approved under SSD 7592 MOD1 to the original designed outlined in the EIS.
MOD3 (GHD, 2019a)	31 May 2019	To implement an interim water management strategy which involves transferring up to 24 megalitres (ML) per day of partially treated mine water from the water treatment plant to Thompsons Creek Reservoir, up to a maximum of 2, 700 ML, until the end of January 2020.
MOD4 (GHD, 2019b)	5 November 2019	To increase the interim water storage strategy that was approved by MOD3, by transferring a further 3,060 ML (up to a maximum of 5,760 ML) of partially treated mine water to Thompsons Creek Reservoir at a rate of up to 36 ML per day, until the end of January 2020.
MOD5 (GHD, 2020a)	30 January 2020	An extension to the permissible time period for operation of the interim water management strategy outlined in MOD5 is required from 31 January 2020 to 30 June 2020.
MOD6 (GHD, 2020b)	19 March 2021	Updated consent definitions Project application area for the Springvale WTP extended to incorporate Pond D and authorise receipt of up to 2.6 ML/day of mine water from the Angus Place transfer system as part of the Springvale WTP MPPS water management system (incorporating brine concentrators and associated pipeline connections) to treat out of envelope mine water delivered to Pond D. Treated mine water or distillate from the brine concentrators to contribute to make-up water requirements for the power station cooling water system Treatment of generated salt load by Springvale WTF and MPPS blowdown water management system to continue as per the OPUS process with the exception of up to 2.6 ML/day of incoming mine water treated via the brine concentrators
MOD7 (Centennial, 2021)	8 June 2021	An extension to the permissible time period for operation of the interim water management strategy outlined in MOD5 from 30 June 2020 to 31 October 2021.
MOD8 (ADW Johnson, 2022)	21 October 2022	An extension to the permissible time period for operation of the interim water management strategy outlined in MOD7 until 31 October 2023.

3.1.1 Changes During the Reporting Period

There were no changes to SSD 7592 during the reporting period, however two modifications of consent were submitted.

In September 2023 Modification 9 was submitted to the Department to amend Condition 6A of Schedule 2 of SSD-7592 (MOD 9) to allow the continued transfer of partially treated mine water to the Thompson Creek Reservoir (TCR) for three years until 31 October 2026. The proposed extension of time will allow Springvale Coal time to finalise its ongoing investigations on medium to long-term strategies for the management of mine inflows at Springvale and Angus Place.

In October 2023 Modification 10 was submitted to the Department to modify SSD 7592 to increase the average annual and maximum residual transfer between the pre-treatment section of the SWTP to the WCS REA from:

- Annual average residual waste transfer via the RTP of 0.35 ML/day to 0.50 ML/day; and
- Maximum residual waste transfer via the RTP of 0.43 ML/day to 1.00 ML/day.

Both Modification 9 and 10 are currently under assessment,

3.2 Other Approvals

Table 3-2 provides a summary of the regulatory approvals that are required, in addition to the Development Consent for the Project's operation.

Table 3-2 Approvals held by the Project in the operations phase

Legislation/ Guideline	Approval/ License	Assessment Authority	Status
Crown Lands Act 1989	Approval	Lithgow City Council	Approval to be issued prior to any groundwater extraction, if required for any reason during operations of the Facility.
Environmental Planning and Assessment Act 1979 (part 4A)	Occupation Certificate	Accredited certifier or consent Authority	An occupation certificate gives approval to use or occupy a building (or other structure) in conjunction with the development consent.
Inclosed Lands Protection Act 1901	Consent / Lease Agreement	Owner of the Land (Janette Winifred Hunt)	Consent to access the land (if required during operation).
		Owner of the Land (Springvale Centennial)	
		Owner of the Land (EnergyAustralia)	

Legislation/ Guideline	Approval/ License	Assessment Authority	Status
Protection of Environment Operations (POEO) Act 1997	Environment Protection Licence	EPA	Consultation with the EPA confirmed that an EPL is not required for the operation and maintenance of the Project under Schedule 1 of the POEO Act. Notification procedure incorporated in the Project's Operational Environmental Management Plan and Springvale Incident and Emergency Response Plan.
Road Act 1993 (section 183)	Consent - Road Occupancy Licence (ROL)	RMS	Required for any works undertaken within the road reserve during operation of the Facility.
Water Management Act 2000 and Water Act 1912	Water Access Licences (WAL)	Water NSW	Springvale WTP does not require water licences for the extraction of surface water or groundwater under the *Water Act 1912* and *Water Management Act 2000*. Note, WAL conditions and combined approval issued to EnergyAustralia authorises the take and use of water from the Coxs River for power generation purposes and includes Lilyvale Dam (Lake Lyell), Wallerawang Dam (Lake Wallace) and TCR. Centennial Operations in the Western Region (Angus Place, Springvale and Clarence) hold WALs for the extraction of groundwater to dewater the underground mine workings.

3.3 ANNUAL REPORTING REQUIREMENTS

The Annual Review has been prepared to satisfy the requirements of SSD 7592 Schedule 4, Condition 5. **Table 3-3** details where the Condition has been addressed in this report.

Table 3-3 Annual Reporting Requirements

Condition of Consent	Definition	Annual Review Section
Development Consent (SSD 7592) Annual Review Requirements		
5	By the end of March each year, the Applicant must submit a review of the environmental performance of the development for the previous calendar year to the satisfaction of the Secretary. This review must:	This Report
5 (a)	describe the development (including any rehabilitation) that was carried out in the past year, and the development that is proposed to be carried out over the next year;	Section 4 Section 8
5 (b)	include a comprehensive review of the monitoring results and complaints records of the development over the past year, which includes a comparison of these results against the: ● relevant statutory requirements, limits or performance measures/criteria ● monitoring results of previous years; and ● relevant predictions in the EIS.	Section 3 Section 6 Section 7 Section 9
5 (c)	identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;	Section 11
5 (d)	identify any trends in the monitoring data over the life of the development;	Section 6 Section 7
5 (e)	identify any discrepancies between the predicted and actual impacts of the development, and	Section 6 Section 7
5 (f)	analyse the potential cause of any significant discrepancies; and	Section 6 Section 7
5 (g)	describe what measures will be implemented over the next year to improve the environmental performance of the development	Section 12

4 OPERATIONS SUMMARY

4.1 PROJECT OVERVIEW

Springvale WTP is licensed to receive up to 42 ML/day and has been designed to operate continuously 24 hours per day, seven days per week. The following progress has been achieved during the reporting period:

Water Transfer System (WTS)

- The 15 km pipeline from Springvale Mine to the WTF continues in operation.
- Roadworks maintenance was performed to minimise erosion along the pipeline corridor after rain events.
- Weed and erosion monitoring in the pipeline corridor was performed during the year.

Water Treatment Facility (WTF)

- 12978 ML of mine water was treated through the main Reverse Osmosis facility.
- The main Reverse Osmosis facility, the brine processing facility and brine crystalliser were optimised and achieved continuous operation.
- WTF delivered a total of 1706.67 ML of filtered water as part of MOD8 during the year. The total allowance of pretreated water discharged by the project accounts for 4400.03 ML out of the 5760 ML permitted by the consent.
- Treated water was delivered to the cooling tower and stabilised treated water was delivered to Thompsons Creek Reservoir.
- Regular operation and maintenance of plant equipment continued during the year.
- Weed management within the WTF continued during the year.
- A total of 52287 hours worked on site by contractors and staff.

General layout of the site can be seen in **Figure 2-1**.

4.2 OPERATIONS

Limits on the consent are detailed in Schedule 2 Conditions 5 and 6A of SSD 7592. Details of production and associated waste generated by Springvale WTP is provided in the following sections, including:

- Mine water flow (via the Raw Water Transfer Pipeline) – **Section 4.2.1**;
- Residuals (via the Residuals Transfer Pipeline) – **Section 4.2.2**; and
- Filtered water transfers to Thompsons Creek Reservoir – **Section 4.2.3**.

Daily flow data for mine water and residuals to provide evidence of compliance for Schedule 2, Condition 5(a) and 5(c) of SSD 7592 is contained in **Appendix 1**.

4.2.1 Mine Water Treatment Maximum Daily Flow Rate

In accordance with Schedule 2, Condition 5(a) of SSD 7592, a maximum of 42 ML of mine water can be transferred on any day via the WTS.

Table 4-1 shows the mine water daily flow rate performance for 2023, and provides the statistical results of previous annual reporting to date to assist longer term trend analysis. Daily mine water transfer rates for the period from 2020 to 2023 are presented graphically in **Figure 4-1**.

In 2023, the volume of mine water accepted at the WTF for treatment on a daily basis did not exceed the approved limit (42 ML of mine water on any day via the WTS) under the Development Consent.

Daily mine water volumes can be found within **Appendix 1**.

Table 4-1 Mine Water Transfer Rates via WTS

Parameter	Daily Average	Daily Maximum	Approved Daily Maximum Limit
2020[1]	27.59	36.03	42
2021	27.24	35.97	42
2022	31.44	37.64	42
2023	35.56	41.86	42

[1] *2020 was the first full year of operations following construction and commissioning*

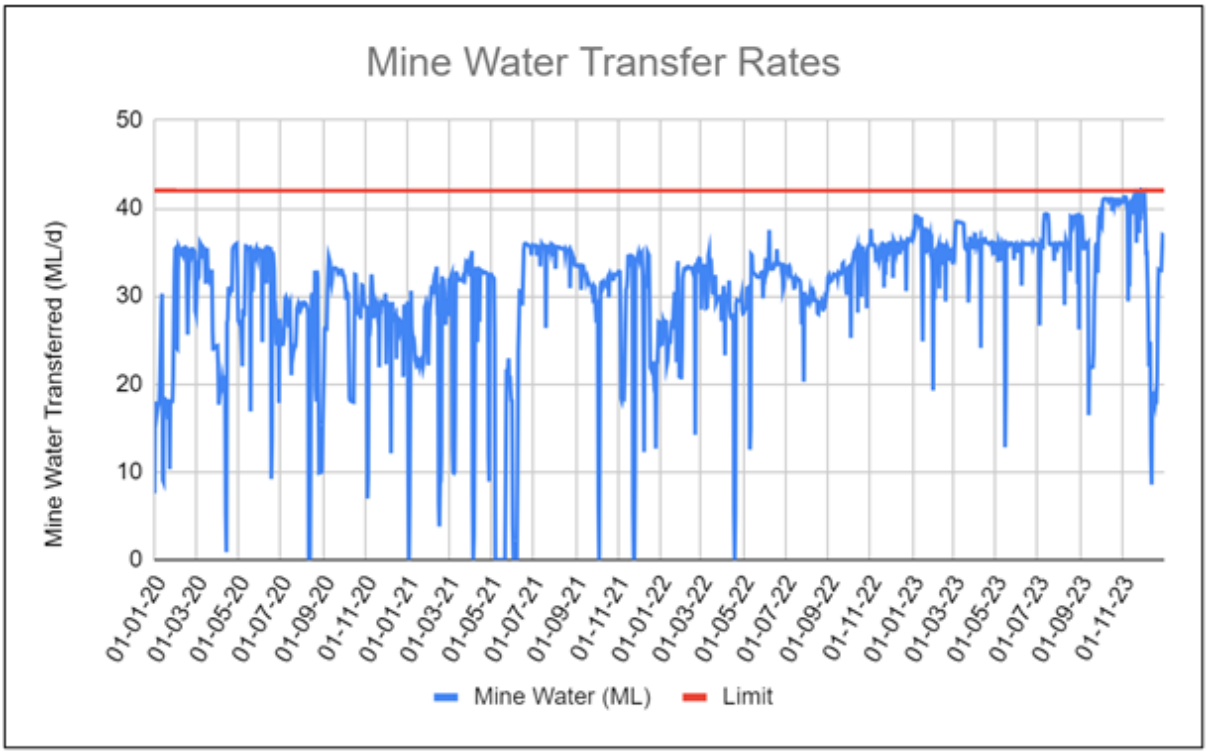

Figure 4-1 Daily Mine Water Transfer Rate and Limit

4.2.2 Residuals Delivery

Part of the waste streams generated from the water treatment process includes residuals from the WTF to the Rejects Emplacement Area (REA). In accordance with Schedule 2, Conditions 5(b) and 5(c) of SSD 7592, a maximum of 0.35 megalitres of residual waste can be transferred per day on an annual average basis and a maximum 0.43 megalitres of residual waste can be transferred on any day.

Table 4-2 shows the residuals quality and flow performance for 2023. Daily and rolling annual flow results for the period from 2020 to 2023 are presented graphically in **Figure 4-2.**

Daily residuals volumes can be found within **Appendix 1**.

Table 4-2 Residuals Quality and Flow Performance Parameters

Parameter	2020 Result	2021 Result	2022 Result	2023 Result	Approved Limit (Source)
Conductivity (uS/cm)	1034	1305	1127	1297	2500 (WMP)
pH	7.66	7.81	7.75	7.87	6.5 to 8.5 (WMP)
Average flow (ML/day)	0.235	0.318	0.255	0.323	<0.35 (SSD 7592)
Max daily flow (ML/day)	0.420	0.426	0.4415	0.614[1]	< 0.43 (SSD 7592)

[1] *This result is discussed in* ***Section 4.2.2***

The residual waste maximum daily limit specified in Schedule 2, Condition 5c of the Consent is 0.43 ML/day. On 11 June 2023, 0.43338 ML/day was delivered resulting in an exceedance of 0.00338 ML/day. No environmental harm occurred due to the nature of the exceedance. This is discussed in **Section 11**.

In response to a request for urgent assistance to prevent an uncontrolled discharge from Springvale and Angus Place Mine, the DPHI were advised of an emergency measure, being the increase in the daily residuals discharge limit from 0.43 megalitres per day to 1 megalitre per day. DPHI were advised that this emergency measure would be required between 8 December 2023 to 7 February 2024. During this time, a maximum of 0.614 megalitres per day was discharged, as noted in Table 4-2.

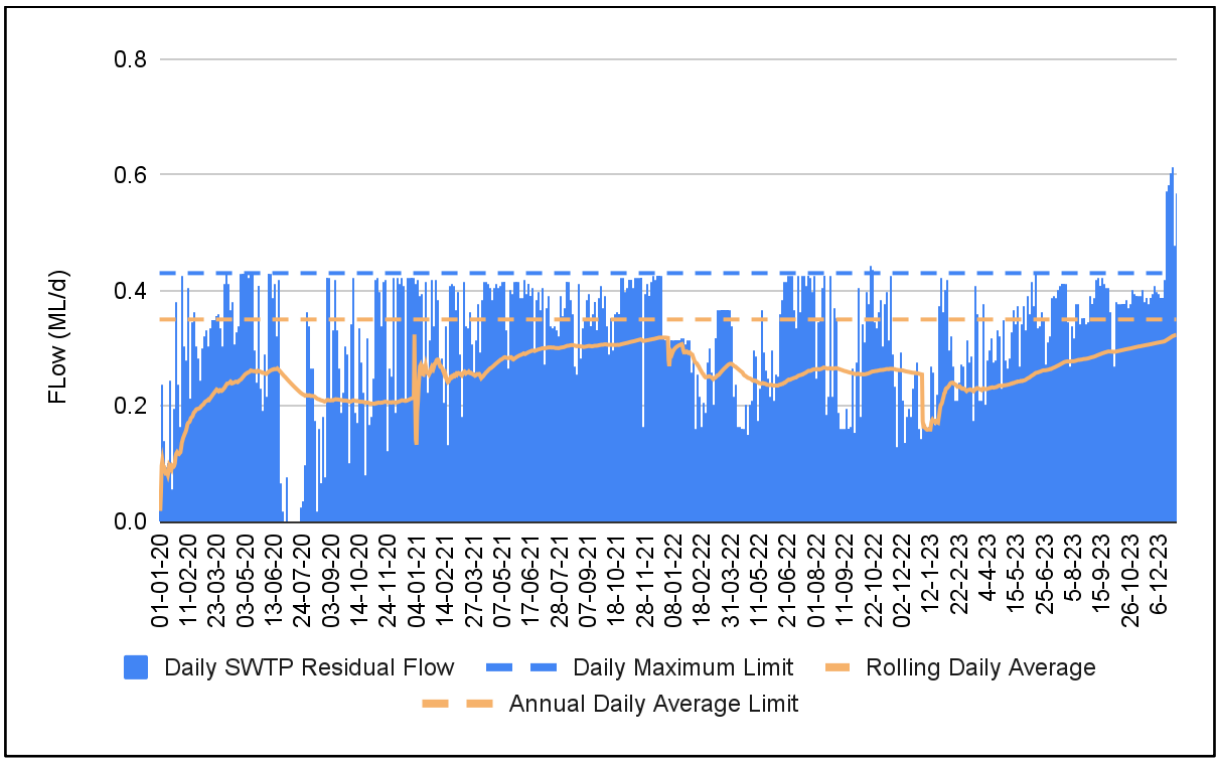

Figure 4-2 Residuals Transferred to Western Coal Services

4.2.3 Filtered Water to TCR Performance

In accordance with Schedule 2, Condition 6A of SSD 7592, a maximum of 5,760 ML of partially treated mine water can be delivered to Thompsons Creek Reservoir as per the interim water management strategy approved under Modifications 3, 4, 5, 7 and 8. MOD 8 extended the final date to use this volume to 31 October 2023.

MOD 9 is under approval pathway. MOD 9 Project Description is the following: Springvale Coal proposes to amend Schedule 2, Condition 6A of SSD-7592 (MOD 9) to allow the continued transfer of partially treated mine water to the Thompson Creek Reservoir by three years until 31 October 2026. The proposed extension of time will allow Springvale Coal time to finalise its ongoing investigations on medium to long-term strategies for the management of mine inflows at Springvale and Angus Place.

Table 4-3 shows the volume of partially treated water discharged to Thompsons Creek Reservoir.

During the reporting period, there was a total of 1,706.67 ML of filtered water directed to the Thompsons Creek Reservoir. Since the approval of the interim water management strategy a total of 4,400.03 ML of the approved transfer volume (5,760 ML) has been directed to the Thompsons Creek Reservoir.

For clarity, water quality monitoring results of treated water during 2023 are provided within **Section 7.3.2** (Water Management – Environmental Performance) of this Annual Review.

Table 4-3 Discharge of Partially Treated Water to TCR

Period	Total Filtered Water Estimated Delivered to TCR	Approved Limit of Discharge to TCR
31 May 2019 – 31 October 2023	4,400.03 ML	A maximum of 5,760 ML of partially treated mine water to TCR

4.3 Construction and Land Disturbance activities

There were no construction or land disturbance activities undertaken during the reporting period, other than maintenance as discussed in Section 8. Construction phase of the Project was completed in 2019.

4.4 Next Reporting Period

Works proposed for 2024 include:

- Continue the operations and optimisation of the facility by the Service Provider.
- Continue inspections on the WTF and WTS.

5 ACTIONS REQUIRED FROM PREVIOUS ANNUAL REVIEW

The Annual Review Report is the sixth report prepared to detail the environmental performance of the Project.

Actions required from the previous Annual Review (March 2022) are summarised in **Table 5-1** below, including where they have been addressed in this report.

Table 5-1Actions from Previous Annual Review and Regulator Requirements

Action Required	Requested By	Action Taken	Annual Review Section
Publish the Annual Review on Website	DPE	2022 Annual Review Available on the Centennial website	Not Applicable

5.1 ACTIVITIES CONDUCTED FROM PREVIOUS ANNUAL REVIEW

Activities from Section 9.1 of the previous Annual Review (2022) are summarised in Table 5-2:

Table 5-2 Summary of Activities Conducted from Previous Annual Review

Proposed Activity (2022 Annual Review)	2023 Status
Continue the operations and optimisation by the Service Provider	**ONGOING** (see **Section 4**)
Continue inspections on the WTF and WTS.	**ONGOING (**see **Section 6.1)**
The current Environmental Management Plans for the Project will be updated during 2023 to cover the yearly operational review of the Project.	The Operational Environmental Management Plan, Rev 6 dated 3 May 2021 (Schedule 4 Condition 4) was approved 8 December 2022. The MPSS Water Treatment Facility Water Management Plan, Rev 17 dated 9 August 2023 (Schedule 3 Condition 4) was approved 17 August 2023. The Aboriginal Cultural Heritage Management Plan, Rev 14 dated 2 November 2023 (Schedule 3 Condition 10) was approved 10 January 2024. The Biodiversity Management Plan, Rev 14 dated 7/12/2023 (Schedule 3 Condition 8) was approved on 19 January 2024.
Review of WTF site drainage and modifications to maintain erosion controls where required.	**ONGOING** - undertaken by operator

6 ENVIRONMENTAL PERFORMANCE

Springvale WTP implements an Environmental Management Strategy, including management plans, procedures and monitoring programs that provide a framework for managing environment and community risks and impacts.

Approval to stage the submission of the Environmental Management Strategy was received from the Department under Schedule 4, Condition 3 of the Development Consent (SSD 7592) on 21 August 2017. The three stages approved were:

- construction
- commissioning and
- operations.

This permitted the submission of the environmental management strategy, and other plans or programs required by the Consent on a progressive basis with the approval of the Department.

Springvale WTP is currently in the operations stage and operates in accordance with the *Springvale MPPS Water Treatment Facility Operational Environmental Management Plan* (OEMP) *(Revision 6, dated May 2021)*, developed in accordance with Schedule 4, Condition 1 of SSD 7592. The OEMP (Revision 6) was approved by DPE on 8 December 2022.

The OEMP provides a summary of the integrated Business Management System (BMS) for the Springvale Mount Piper Power Station (SMPPS) Water Treatment Facility.

Table 6-1 summarises the environmental performance criteria and monitoring regime as proposed within the OEMP.[3] The Springvale WTP environmental performance will be tracked through monitoring and inspections summarised in **Table 6-2**. Specific monitoring requirements are included in the supporting management plans and summarised in **Table 6-3.**

Environmental performance in the reporting period is detailed further in the following sections:

- **Section 6.1** – Statutory
- **Section 6.2** – Noise, Vibration, Air Quality and Odours
- **Section 6.3** – Biodiversity
- **Section 6.4** – Heritage
- **Section 6.5** – Other Matters
    - Waste (**Section 6.5.1**)
    - Bushfire Risk (**Section 6.5.2**)

Note, there are separate sections for reporting the environmental performance for Water (**Section 7**), Rehabilitation (**Section 8**) and Community Consultation (**Section 9**).

[3] Environmental Performance Criteria are detailed in Section 4.2 (Table 2) of the OEMP

Table 6-1 Environmental Performance Criteria and Monitoring Regime

Aspect	Performance Criteria	Management Measure	Annual Review Section
Statutory	• No written warnings or infringement notices	• Implementation of the Operational Environmental Management Plan (OEMP)[MAN-3652] and sub-plans. • Compliance tracking. • Monthly inspections - WTS & WTF. • Monthly reporting assists with tracking & monitoring. • Annual reporting and progress reporting.	Section 6.1
Social	• 100% of complaints to be responded to within agreed timeframes of the OMP	• Implementation of the Operational Management Plan (OMP) [MAN-3649] (section 11).	Section 9
Water Quality	• 100% compliance with Water Management Plan (WMP) • No impacts to surface water. • No erosion and sedimentation on site. • 100% compliance with treated water performance standards set up in the WMP. • 100% compliance with residuals performance standards set up in the WMP.	• Implementation of the Water Management Plan [MAN-3659].	Section 7
Biodiversity	• 100% compliance Biodiversity Management Plan (BMP) • No impacts to native vegetation and fauna. • No increase in diversity or coverage of weed species within the water transfer system corridor and immediate area.	• Biodiversity Management Plan (BMP)[MAN-3654] recommendations included in OEMP. • Maintain habitat connectivity in the surrounding landscape. • Undertake weed management as required.	Section 6.3

Aspect	Performance Criteria	Management Measure	Annual Review Section
Aboriginal Cultural Heritage	• 100% compliance with approved Aboriginal Cultural Heritage Management Plan (ACHMP) • Prevent accidental harm to previously undiscovered items of Aboriginal heritage items	• All management recommendations within approved Aboriginal Cultural Heritage Management Plan (ACHMP)[MAN-3655] implemented. • Follow contingency requirements set out within approved ACHMP in the event of unexpected discovery of Aboriginal cultural heritage.	Section 6.4
Noise and Vibration	• No complaints relating to noise and vibration	• Stop work and investigate noise complaints. • Additional noise mitigation measures will be implemented if assessed as being required (See Section 5.3.4 of the OEMP).	Section 6.2
Traffic and Transport	• No complaints/incidents relating to site traffic and transport	• Traffic Management Plan (MAN-7031). (See Section 5.3.5 of the OEMP).	Section 9
Waste	• Minimisation of generating waste during operations and maintenance	• Monitor waste levels and ensure diversion of materials from landfill where possible. • Waste management guidelines implemented (See Section 5.3.6.3 of the OEMP).	Section 6.5.1
Bushfire Risk	• Minimise Bushfire Risk	• Incident and Emergency Response Management Plan (MAN-3651).	Section 6.5.2

Table 6-2 Summary of OEMP Monitoring and Inspections

Monitoring Type	Requirement	Responsibility
Inspection	Monthly environmental inspections - WTF and WTS form part of Veolia's KPI's. Corrective actions identified will be recorded in the RIVO Management System.	Environmental Nominee
Monitoring	Specific monitoring requirements are included in the supporting management plans. Monitoring results and any corrective actions identified will be recorded in the RIVO Management System. Monthly report records KPI's & statistics (including inspections completed).	Refer to Table 6-3

Table 6-3 Summary of OEMP Monitoring Requirements

Aspect	Monitoring Required	Reference Document	Type of monitoring	Responsibility
Water Quality	Surface water quality Wangcol Creek *Coxs River Thompsons Creek Reservoir Thompsons Creek *Pipers Flat Creek	Water Management Plan [MAN-3659] (Refer Table 9 & 10 of WMP for testing parameters)	Water quality sampling *Aquatic ecology monitoring	EnergyAustralia & Centennial
Biodiversity	Rehabilitation Monitoring until area is stabilised Weed and hygiene controls in place Weed inspections No new weed incursion / establishment	Biodiversity Management Plan (BMP) [MAN-3654]	Monthly inspection	Veolia weed removal/ spraying (include method & chemical used)
Noise	Investigation to respond to complaints	Section 5.3.4 of the OEMP	As required	Veolia EA
Air / odour	Investigation to respond to complaints	Section 5.3.6.4 of the OEMP	As required	Veolia EA
Waste	Monitoring of waste	Section 5.3.6.3 of the OEMP	Monthly Enviro inspection	Veolia Manager Enviro nominee

6.1 STATUTORY

During 2023, the Services Provider continued operations, implementing the OEMP as required.

With the implementation of the management plans, there were continuous inspections of the Water Transfer System (WTS) and the Water Treatment Facility (WTF), which were able to identify issues to implement corrective actions. An example of this was the erosion identified along the track of the WTS after a significantly wet season, which required ongoing maintenance activities to maintain the integrity of the access road to the WTS.

Finally, monthly performance monitoring and reporting continued, with constant communication between stakeholders to maximise the output of the facility and mitigate mine water quality risks as they are identified.

No written warning or infringement notices were received from regulators during 2023.

6.2 NOISE, VIBRATION, AIR QUALITY AND ODOURS

Operations Stage

The Environmental Monitoring Program and associated management measures were followed as outlined in the Operational Environmental Management Plan (OEMP) [MAN-3652], in effect during the reporting period.

The OEMP Rev.6, dated 3 May 2021 was approved by the Department on 8 December 2022 was in effect in the reporting period. The OEMP does not anticipate any sources of excessive noise, vibration, air emissions or odours during the operations phase and requires a review of the operational conditions if complaints are received. No complaints relating to noise, vibrations, air emissions or odour were received during 2023.

The Environmental Impact Statement (EIS) prepared for the project predicted that operation of the project:

- was not expected to generate any significant air emissions (Section 15.4 of the EIS Volume 1, GHD 2016a).
- Noise during the operation of the Project is predicted to comply with operational noise criteria and not predicted to cumulatively contribute to ambient noise in the area (Section 13 of the EIS Volume 1, GHD 2016a).
- Road traffic noise levels during the operation and construction of the Project are not expected to increase traffic noise levels more than 2 dBA and would not impact sensitive receivers near the traffic routes (Section 14 of the EIS Volume 1, GHD 2016a).

Under the OEMP, *Environmental Site Inspection Forms* are used to report effectiveness of air quality control measures and any additional mitigation measures that may need to be implemented during adverse meteorological weather conditions (i.e. high winds) in order to ensure compliance with Schedule 3 Conditions 17 and 18 of SSD 7592, requiring minimisation of dust generation and to ensure no offensive odours are emitted from the site.

6.3 BIODIVERSITY

6.3.1 Environmental Management

Springvale WTP manages Biodiversity in accordance with the *Springvale Water Treatment Plant Biodiversity Management Plan* (*SWTP BMP*, Revision 14, dated 7 December 2023), developed in accordance with Schedule 3 Condition 8 (BMP) and 6 (Restrictions on Clearing)

of SSD 7592. Rev 14 of the SWTP BMP was approved by DPE on 19 January 2024. Revision 13 and 14 were in effect throughout the 2023 reporting period.

The *SWTP BMP* has been prepared in order to fulfil the regulatory requirements for the Project and provide Project employees and contractors with a clear understanding of the requirements of the plan. The BMP outlines the requirements for maintenance and protection of existing biodiversity values to minimise the potential long-term effects of clearing required for construction works and ongoing operations (e.g. emergency and planned maintenance) on the surrounding vegetation communities and habitats.

The SWTP BMP aims to primarily demonstrate how the Facility will maintain or enhance benchmark biodiversity values throughout the landscape following construction. The Plan addresses the management of all flora and fauna, including aquatic and riparian habitats, undertaken during the construction of the project, and which will continue through the operation of the Facility.

Key biodiversity management objectives for Springvale WTP are:

- To manage weeds in the Facility footprint;
- To encourage the recovery and reuse of existing natural resources (e.g. cleared vegetation, bush rock, topsoil, lead litter) and to reduce material disposal offsite;
- Avoid impacts on threatened species, populations and ecological communities;
- To describe monitoring and reporting strategies to monitor impacts on flora and fauna and assess the effectiveness of any mitigation measures during operation;
- Protect native vegetation and key fauna habitat outside of the approved disturbance area.

Biodiversity monitoring is undertaken in accordance with Section 8.1 of the SWTP BMP, and consists of routine rehabilitation and weed monitoring. Incident and annual reporting (via this Annual Review) is also undertaken in accordance with Section 8.1 of the SWTP BMP.

As the project was expected to result in the disturbance of some native vegetation and habitat suitable for threatened flora and fauna species during construction, the Centennial Coal Western Operations Biodiversity Offset Strategy (WR-BOS) provides a suitable offset for the project in accordance with Schedule 3, Condition 7 of SSD7592.

6.3.2 Environmental Performance

Inspections, observations, monitoring and reporting requirements relevant to the management of flora and fauna are identified in Section 8.1 of the SWTP BMP, as summarised in **Table 6-4** below. This includes standards requirements (performance measures) for each aspect.

Table 6-4 Biodiversity Monitoring & Reporting Requirements (SWTP BMP)

Project Activity	Standards	Reporting	Responsibility
Monitoring			
Rehabilitation Monitoring	Until area is stabilised Weed and hygiene controls in place No new weed incursion / establishment	Environmental Inspection Checklist	Contractor Supervisors Environmental Nominee
Weed Monitoring	No new weed incursion / establishment	Removal/Spraying program	Weed Control Contractor Environmental Nominee
Reporting			
Annual Report	As per Consent Condition Schedule 4 Condition 5	Annual Report	Operations Manager
Incident	As per incident response reporting	Incident Report	Environmental Nominee

Removal of vegetation

No additional vegetation was cleared during the 2023 reporting period.

Monitoring of Feral Animals

No feral animals were observed and reported, during the 2023 reporting period.

Weed Monitoring

Regular weed inspections were undertaken during 2023 as part of monthly site inspections, including within the pipeline corridor of the WTS and at the WTF.

No new weed incursion / establishment areas were identified during the 2023 reporting period. Weed removal/spraying wasn't required.

Site Inspections

Monthly Inspections were conducted during the operational phase of the project to assess compliance with the BMP.

No non-compliances were registered during the 2023 reporting period.

Monitoring of rehabilitation during the 2023 reporting period is discussed in further detail in **Section 8** of this Annual Review.

Offsets Monitoring

Annual monitoring is undertaken in accordance with the WR-BOS and annual reports are required to be submitted to BCT.

6.3.3 Long Term Analysis

Table 6-5 summarises biodiversity compliance reporting (non-administrative aspects) over the last five (5) Annual Review reporting periods.

Table 6-5 Long Term Biodiversity Compliance Trends (non-administrative)

Aspect	Annual Review Reporting Period				
	2019	2020	2021	2022	2023
Biodiversity-related reported non-compliances (NC)	0	0	0	0	0

6.3.4 Implemented / Proposed Improvements

The results of biodiversity monitoring at the SWTP remain generally in accordance with the predictions made in the *Springvale WTP Project EIS* (GHD, 2017) as approved for the project, therefore current management measures are considered adequate.

6.3.5 Biodiversity Offsets

Construction of the project was expected to result in the disturbance of 27.84 ha of protected native vegetation and habitat suitable for threatened flora and fauna species, offsets were subsequently required in accordance with Schedule 3, Condition 7 of SSD7592. Western Region offset sites under the WR-BOS are illustrated on **Figure 6-1.**

The *Western Region Biodiversity Offset Strategy (WR-BOS)* provides a suitable offset for the project meeting the requirements of Schedule 3, Condition 7 of SSD7592.

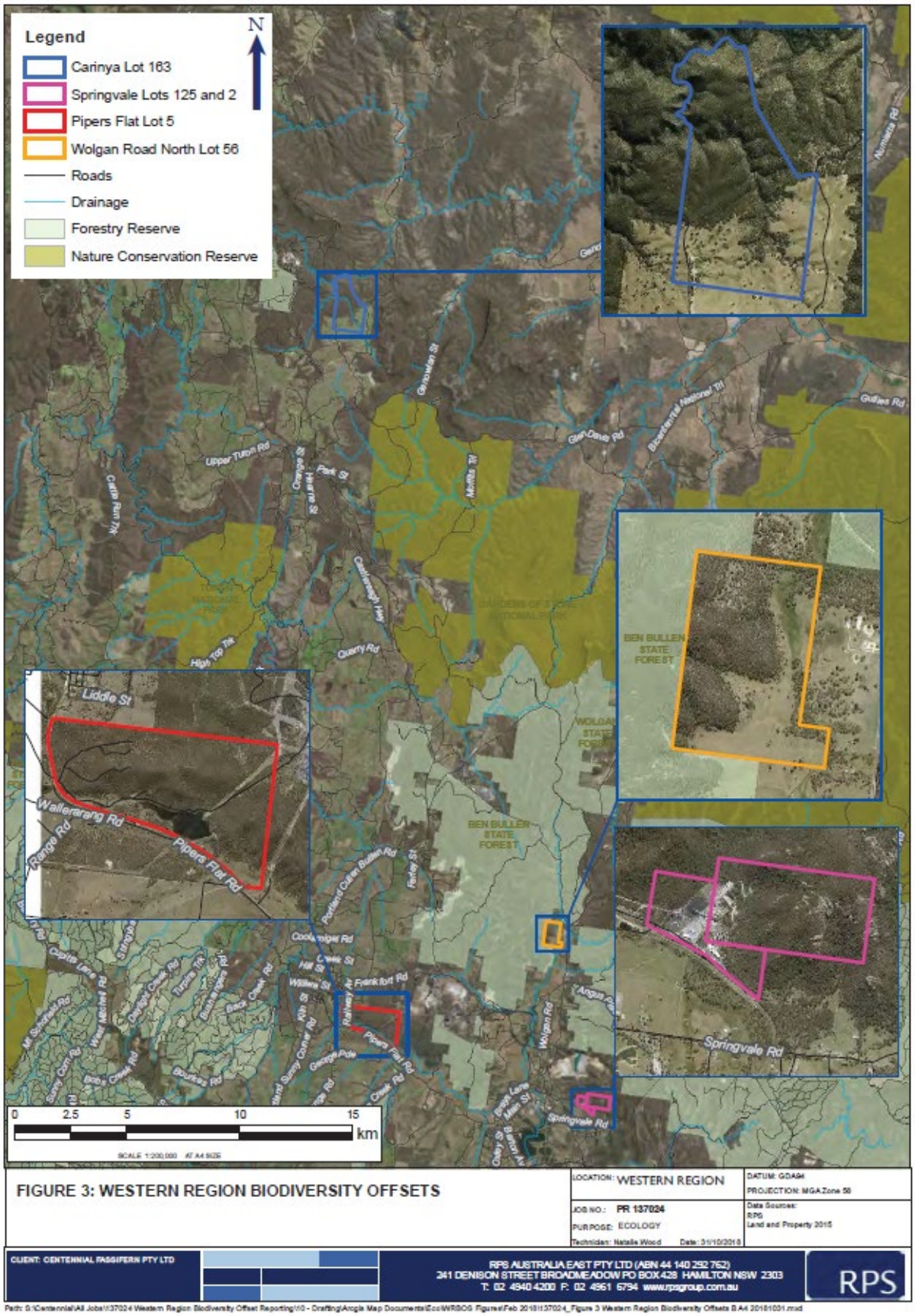

FIGURE 3: WESTERN REGION BIODIVERSITY OFFSETS

LOCATION: WESTERN REGION
DATUM: GDA94
PROJECTION: MGA Zone 56
JOB NO.: PR 137024
PURPOSE: ECOLOGY
Technician: Natalie Wood Date: 31/10/2018
Data Sources: RPS Land and Property 2015

CLIENT: CENTENNIAL PASSIFERN PTY LTD

RPS AUSTRALIA EAST PTY LTD (ABN 44 140 292 762)
241 DENISON STREET BROADMEADOW PO BOX 428 HAMILTON NSW 2303
T: 02 4940 4200 F: 02 4961 6794 www.rpsgroup.com.au

RPS

Path: S:\Centennial\All Jobs\137024 Western Region Biodiversity Offset Reporting\IS - Drafting\Arcgis Map Documents\Eco\WRBOS Figures\Feb 2018\137024_Figure 3 Western Region Biodiversity Offsets B A4 20181031.mxd

Figure 6-1 Western Region Biodiversity Offset Sites

6.4 HERITAGE

6.4.1 Environmental Management

Non-Aboriginal Heritage

There are two historic heritage items identified *within or abutting* the Project application area (the Cottage (I191) and the European Surveyors Tree (EST JN1) both of which were not predicted to be impacted by the Project. The Cottage has local heritage listing under the Lithgow LEP, the Surveyors Tree did not meet criteria for local heritage listing.

Aboriginal & Cultural Heritage

Springvale WTP manages Aboriginal heritage in accordance with the *Springvale Water Treatment Plant Aboriginal Cultural Heritage Management Plan (SWTP ACHMP, Rev 14, November 2023)*, developed in accordance with Schedule 3, Condition 10 of SSD 7592. The SWTP ACHMP was approved by DPE on 10 January 2024. The SWTP ACHMP outlines the requirements for the avoidance, management and mitigation of impacts to Aboriginal cultural heritage and includes management recommendations for any Aboriginal heritage that may be potentially impacted by the Project.

Nine Aboriginal cultural heritage sites located within 30m of the Project Application Area are managed by the SWTP ACHMP. In summary these comprise three artefact scatters, four isolated finds, one scarred tree (AHIMS #45-1-2758), and an Open Campsite (AHIMS #45-1-0209). The Project was not predicted to impact Aboriginal cultural heritage sites. Nonetheless, mitigation measures were conservatively adopted within the SWTP ACHMP to prevent any potential for future impact to these sites, including by emergency or ongoing maintenance activities.

Monitoring of Aboriginal heritage sites is undertaken in accordance with Section 7.1 of the SWTP ACHMP, and consists of inspections undertaken during routine general site inspections, and additional targeted inspections if triggered by proposed ground disturbance (e.g. during site maintenance works). Incident and annual reporting (via this Annual Review) is undertaken in accordance with Section 7.2 of the SWTP ACHMP.

Whilst unexpected, in the case of discovery of additional sites during operations (e.g. maintenance), regional protocols will be followed described within the Centennial Coal *Western Region Aboriginal Cultural Heritage Management Plan (WR-ACHMP)*.

6.4.2 Environmental Performance

Historic heritage items were not disturbed by the Project during the 2023 reporting period.

No signs of noticeable damage to Aboriginal sites was observed during inspections undertaken during the 2023 reporting period. No other items of Aboriginal or cultural significance were found during the operation activities of 2023.

6.4.3 Comparison Against Predictions

There were no non-compliances identified relating to historic or Aboriginal heritage matters during the 2023 reporting period.

Results obtained from heritage monitoring to date are compliant with the performance measures in Schedule 3 Condition 9 (Protection of Aboriginal Heritage Sites) of SSD 7592 and generally in accordance with the predications made in the *Springvale WTP EIS* (RPS/GHD, 2016a), therefore current management measures are considered adequate.

6.4.4 Long Term Analysis

Monitoring reported in Annual Reviews since 2018 for the SWTP has not identified impacts to (or reported non-compliances for) Aboriginal or Historic heritage aspects.

Table 6-6 summarises heritage compliance reporting (non-administrative aspects) over the last five Annual Review reporting periods.

Table 6-6 Long Term Heritage Compliance Trends (non-administrative)

Aspect	Annual Review Reporting Period				
	2019	2020	2021	2022	2023
Heritage-related reported non-compliances	0	0	0	0	0

6.4.5 Implemented / Proposed Improvements

As the results obtained from heritage monitoring to date have been compliant with the performance measures in Schedule 3, Condition 9 (Protection of Aboriginal Heritage Sites) of SSD 7592, and are generally in accordance with the predications made in the *Springvale WTP EIS* (RPS/GHD, 2016a), current management measures and controls are considered adequate.

The pre-clearance permit system provides the land disturbance due diligence process, implemented by the site and is considered appropriate for the management of heritage sites and items.

6.5 Other Matters

6.5.1 Waste

The following waste streams were generated from the water treatment process during the reporting period:

- Residuals from the WTF to the REA
- Brine for co-disposal with ash
- Lime and Mixed salt for co-disposal with ash
- General waste and recycling

These are discussed further in the following sections below.

Brine and Residuals Waste (from Water Treatment):

Springvale WTP manages brine and residual waste in accordance with the Springvale WTP Brine and Residual Waste Disposal Plan (BRWDP) prepared in consultation with Water NSW and the EPA in accordance with Schedule 3, Condition 5 of SSD 7592. The BRWDP was approved by DPE on 14 May 2019.

A summary of the brine and residuals waste generated by the Project during the reporting period is outlined in **Table 6-7.**

General Waste:

Springvale WTP manages general waste in accordance with Schedule 3, Condition 20 of SSD 7592 and includes measures to minimise the waste, ensuring waste is appropriately stored, handled and disposed.

Waste is generated on the WTF through offices, laboratory, lunch rooms and other site activities. These waste streams included:

- General solid waste (putrescible) – mixed residual waste
- General solid waste (non-putrescible) – recyclable materials (such as paper, plastic containers, glass containers and aluminium cans), cardboard and plastic packaging, and maintenance items consumables
- Liquid waste – wastewater and sewage generated from site offices/amenities.

Sewage is stored in an underground collection tank before being removed off site by a licensed contractor for treatment.

General waste is disposed of to landfill by licensed waste contractors.

Due to remoteness of the location and volume of generated waste, there is limited scope for recycling waste other than scrap metal, paper and cardboard products.

Waste Management Summary for 2023 Reporting Period

A summary of treatment and general waste and recycling generated by the Project during the reporting period is outlined in **Table 6-7**.

Table 6-7 Waste Summary

Type of Waste	Quantity	Waste Management
Residuals from the WTF to the REA	111.24 ML	Western Coal Services Residual Emplacement Area
Brine for co-disposal with ash	88.01 ML	EnergyAustralia Brine Waste Ponds
Mixed salt for co-disposal with ash (lime salt and mixed salt)	20,898 t	EnergyAustralia Ash Emplacement Area
General solid waste (putrescible) – mixed residual waste	345 m^3	Landfilling (licensed facility)
Cardboard and paper	78 m^3	Recycling (licensed facility)
Sewage	248 m^3	Treatment (licensed facility)

6.5.2 Bushfire Risk

Bushfire management of the Facility boundary is undertaken in accordance with Section 7.5 of the *SWTP Biodiversity Management Plan (SWTP BMP)* and the *Incident and Emergency Response Management Plan* [MAN-3651] and includes provisions for the following:

- Perimeter asset protection zones;
- Fuel load reduction where necessary; and
- Works in hotter months of the year;
- Work restrictions during the threat period.

The bushfire risk control program and associated management measures were followed as outlined in the OEMP Rev 6, dated 3 May 2021, in effect during the reporting period.

Following the major bushfire season in summer 2019/20, 2023 was a year of sustained rainfall, drastically reducing the bushfire risk for the project with no fire events reported in the area of the project.

The perimeter asset protection zone was maintained during 2023.

7 WATER MANAGEMENT

Springvale WTP manages and monitors water in accordance with the *Springvale MPPS Water Treatment Facility Water Management Plan* (WMP) (Revision 17, dated 9 August 2023).

The WMP has been developed to meet the requirements for a Water Management Plan in accordance with Schedule 3, Condition 4 of SSD 7592. The primary objective the WMP is to manage and minimise the impact of the construction, commissioning and operation of the Project on the local water resources by:

- outlining procedures to ensure adherence to all guidelines and legislative requirements relevant to water management on the Facility;
- addressing the following conditions of the Development Consent (SSD 7592):
    - Schedule 2, Conditions 1, 5 and 6
    - Schedule 3, Conditions 1, 3 and 4
    - Schedule 4, Conditions 2, 4, 5 and 6
- describing procedures to enable compliance with the water management performance measures detailed in Table 1 of the Development Consent.

During the reporting period, Springvale WTP operated the water management system in accordance with the WMP. Monitoring and data review was undertaken in accordance with the WMP and development consent SSD 7592 requirements.

A summary of water management and performance in the reporting period is provided in the following sections, including:

- **Section 7.1** – Details of water licensing and associated take
- **Section 7.2** – A summary of the review of the site salt and water balance
- **Section 7.3** – A summary of surface water management and monitoring results for the reporting period.

7.1 WATER LICENSES

Springvale WTP does not require water licences for the extraction of surface water or groundwater under the *Water Act 1912* and *Water Management Act 2000*.

Note, WAL conditions and combined approval issued to Energy Australia authorises the take and use of water from the Coxs River for power generation purposes and includes Lilyvale Dam (Lake Lyell), Wallerawang Dam (Lake Wallace) and TCR.

Springvale and Angus Place coal mines both also separately hold WALs for the extraction of groundwater to dewater the underground mine workings.

7.2 WATER BALANCE

A water and salt balance model was developed for Springvale WTP as part of the *Springvale Water Treatment Project EIS* (GHD 2016a) and *Springvale Water Treatment Project Amendment to Development Application* (GHD 2016b) to assess flow volumes and electrical conductivities within the broader Coxs River catchment. The water resources assessment (GHD 2016b) found that:

- Total inflows to Lake Wallace, Lake Lyell and Lake Burragorang from the Coxs River were predicted to decrease as part of the Project when compared to existing conditions and the do nothing scenario. This is due to the predicted increase in future mine water make compared to existing conditions and maximising the use of treated water within the cooling water system as part of the Project.

- The EC of the Coxs River at the inflow to the surface water storages is predicted to decrease by more than 50% for flows into Lake Wallace and Lake Lyell and decrease by more than 25% for flows into Lake Burragorang in Sydney's drinking water catchment. This occurs as a result of the desalination achieved within the treatment process and the reuse achieved by the Project in comparison to the modelled discharge to via LDP009 to Sawyers Swamp Creek in the Do Nothing Scenario.

The water and salt balance model was revised to assess the impacts of the interim water management strategy as part of Modification 3 (GHD 2019a) and Modification 4 (GHD 2019b) to SSD 7592.

The water and salt balance modelling for the interim water management strategy indicates minimal potential for predicted increases in EC within Thompsons Creek Reservoir to impact upon water quality in the downstream receiving water environment. The assessment notes that the minor increases in EC in the Coxs River at the confluence with Pipers Flat Creek and upstream of Lake Wallace are a function of the underlying assumptions in mine water transfer volumes utilised in the regional water balance model rather than the volume of filtered water directed to Thompsons Creek Reservoir. The increase is a function of disposal of residuals at the Springvale Coal Services site resulting in an increase in discharge from LDP001 (formerly LDP006) to Wangcol Creek which is driven by mine dewatering volumes rather than operation of the desalination system. The potential increases in EC associated with environmental flow releases from Thompsons Creek Reservoir to Pipers Flat Creek and the wider Coxs River catchment are considered negligible (GHD 2020a).

A summary of the average total water volumes and salt loads over the 12 month period from July 2019 to June 2020 are presented in

Table 7-1**.** The water and salt balance modelling demonstrates a significant improvement to catchment water quality in terms of flow weighted EC and total salt loads in comparison to the Baseline scenario of continued discharge from LDP009 (GHD 2019b) with results generally in accordance with the *Springvale Water Treatment Project EIS* (GHD 2016a) and *Springvale Water Treatment Project Amendment to Development Application* (GHD 2016b).

Table 7-1Average total water volumes and salt loads from July 2019 to June 2020 (Source: GHD 2019b)

Location	Parameter (units)	Baseline scenario Value	Approved scenario Value[1]	Baseline vs Proposed Change (%)
MOD3 mine water transfers to TCR	Total (ML)	0	2700	N/A
MOD4 mine water transfers to TCR	Total (ML)	0	3060	N/A
Coxs River at Pipers Flat Creek	Total flow (ML/year)	15112	7854	-48.0%
Coxs River at Pipers Flat Creek	Total salt load (tonnes/year)	6753	1432	-78.8%
Coxs River at Pipers Flat Creek	Flow weighted average EC (µS/cm)	667	272	-59.2%
Coxs River upstream Lake Wallace	Total flow (ML/year)	15945	8685	-45.5%
Coxs River upstream Lake Wallace	Total salt load (tonnes/year)	8900	3578	-59.8%

Location	Parameter (units)	Baseline scenario Value	Approved scenario Value[1]	Baseline vs Proposed Change (%)
Coxs River upstream Lake Wallace	Flow weighted average EC (µS/cm)	833	615	-26.2%
Coxs River upstream Lake Burragorang	Total flow (ML/year)	64280	63746	-0.8%
Coxs River upstream Lake Burragorang	Total salt load (tonnes/year)	11669	10947	-6.2%
Coxs River upstream Lake Burragorang	Flow weighted average EC (µS/cm)	271	256	-5.4%

[1] as per the water and salt balance model results presented for Modification 4 (GHD 2019b)

7.3 SURFACE WATER

7.3.1 Environmental Management

Monitoring of surface water quality is completed in accordance with the approved WTF Water Management Plan (WMP) [MAN-3659] and Development Consent SSD 7592. Revision 17 (August 2023) of the Springvale MPPS Water Treatment Facility Water Management Plan was approved by the Department on 17 August 2023.

The site has also developed trigger action response plans (TARP) to identify and manage potentially adverse impacts from the quantity and quality of treated water being discharged into TCR and the quantity and quality of residuals being transferred to the REA.

Surface water monitoring includes:

- Quality of water from the WTF to the TCR
- Quantity and Quality of Residuals from the WTF to the REA (see **Section 4.2.2**)
- Quality Parameters Compliance Monitoring and Sampling

Baseline datasets and continued monitoring considered relevant to assessing the predictions made in the *Springvale Water Treatment Project* EIS (GHD, 2016b) are shown in **Table 7-2** and **Figure 7-1**. Following consultation with DPE it was considered that the collection and reporting of data that is also undertaken as part of the commitments of Energy Australia and Centennial Springvale would not be required under Springvale WTP WMP.

Table 7-2 Baseline Data Collection Sites and Current Monitoring Programs

Watercourse	Monitoring Sites	Data Owner	Current Monitoring Program
N/A	LDP006	Western Coal Services	Volume and quality Daily, monthly and quarterly during discharge
Wangcol Creek	Wangcol Creek Gauge	Western Coal Services	Monthly water quality sampling
Wangcol Creek	Wangcol Creek Upstream (US)	Western Coal Services	Monthly water quality sampling
Wangcol Creek	Wangcol Creek Downstream (DS)	Western Coal Services	Monthly water quality sampling
Wangcol Creek	Wangcol Creek Far Downstream (DS)	Western Coal Services	Monthly water quality sampling
Coxs River	Coxs River (Delta Site) Downstream of Lake Wallace	Springvale Coal	Biannual water quality sampling [1]
Thompsons Creek Reservoir	TC1	Energy Australia	Monthly / Weekly water quality sampling [2]
Thompsons Creek	Confluence Thompsons Creek and Pipers Flat Creek	Energy Australia	One event prior to the Project EIS At least quarterly water quality sampling recommended
Pipers Flat Creek	PFup	Energy Australia	Monthly / Quarterly water quality sampling Biannual aquatic ecology monitoring
Coxs River	CR5	Springvale Coal	Biannual aquatic ecology monitoring

[1] Minimum frequency of historical data (GHD, 2016b)
[2] Frequency increased from Monthly to weekly in May 2016 (GHD, 2016b)

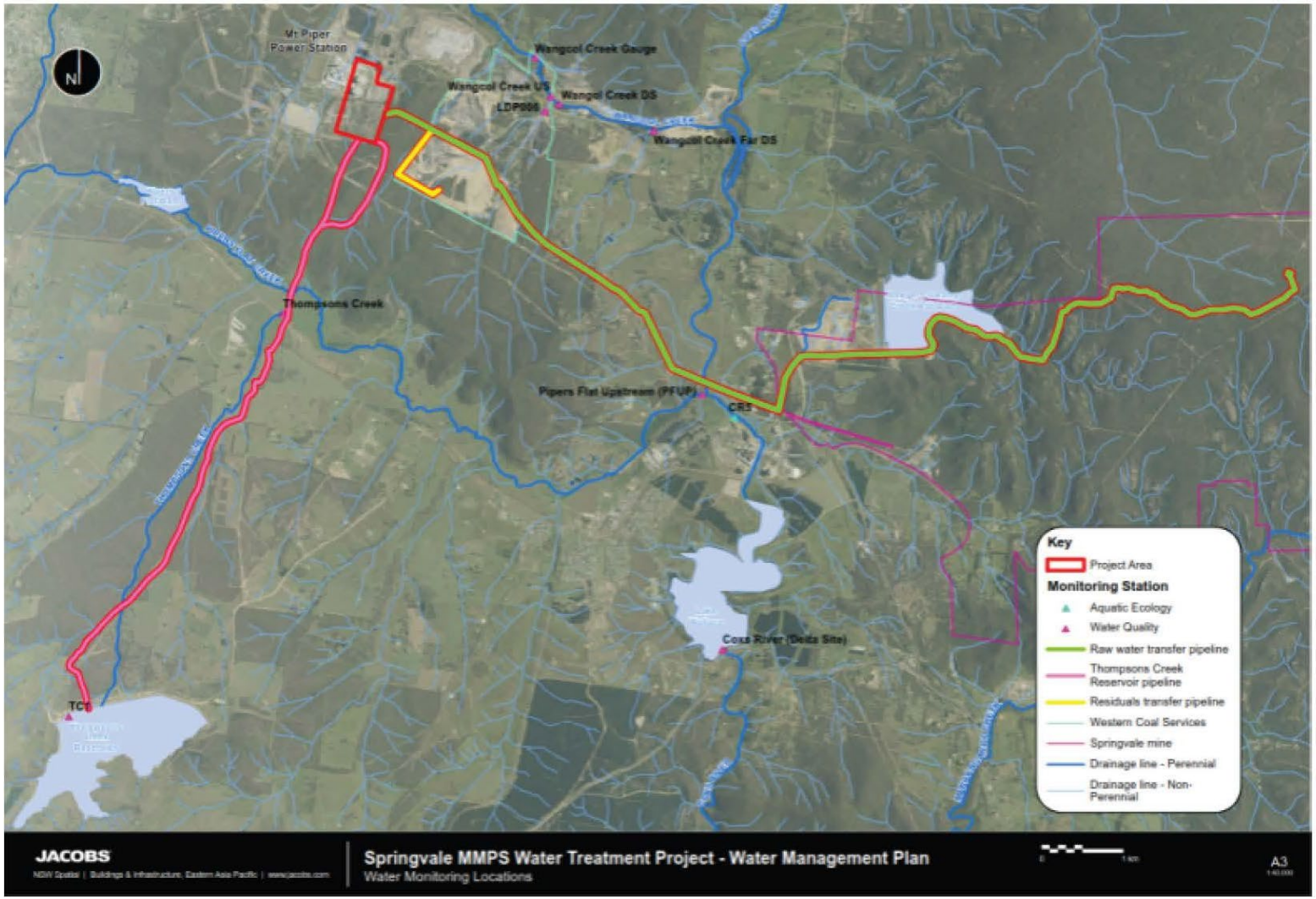

Figure 7-1 Water Monitoring Locations (source: Springvale WTP WMP)

7.3.2 Environmental Performance

Treated Water to TCR - Water Quality Performance

Excess treated water produced by the WTF is stabilised for Langelier Saturation Index correction and pumped to TCR. **Table 7-3** shows the treated water to TCR average water quality performance for 2023.

There was no treated water to TCR non-compliances registered during this reporting period.

During the reporting period, there was a total of 1706.67 ML of filtered water directed to the Thompsons Creek Reservoir as part of MOD8.

Table 7-3 Treated Water to TCR Quality Performance

Parameter	2021 Yearly Average	2022 Yearly Average	2023 Yearly Average	Limits[1]
Treated Water Electrical Conductivity (µS/cm)	291	274	359[4]	300 (50%ile)[2]
pH	8.20	7.85	7.78	6.5 - 8.5
Turbidity (NTU)	1.61	4.4	3.01	-
Temperature (deg C)	21.34	22.39	23.31	-
Aluminium (total) (mg/L)	0.03	0.035	0.030	0.08
Arsenic III (mg/L)	0.0007	0.0005	0.0005	0.024
Arsenic V (mg/L)	0.002	0.001	0.001	0.01
Boron (total) (mg/L)	0.05	0.07	0.07	0.37
Cadmium (total) (mg/L)	0.00005	0.00005	0.00005	0.0004
Chromium (total) (mg/L)	0.0003	0.0003	0.0003	0.0005
Cobalt (total) (mg/L)	0.00014	0.0001	0.0001	0.0018
Copper (total) (mg/L)	0.00058	0.0006	0.0008	0.0018
Iron (total) (mg/L)	0.02	0.02	0.02	0.05
Langelier Saturation Index[3]	-0.25	-0.20	-0.20	-0.5 - 1
Lead (dissolved) (mg/L)	0.00007	0.00009	0.00012	0.001
Manganese (total) (mg/L)	0.005	0.005	0.003	0.5
Mercury (total) (mg/L)	0.00005	0.00005	0.00005	0.0006
Nickel (dissolved) (mg/L)	0.0004	0.00035	0.0006	0.013
Selenium (dissolved) (mg/L)	0.00026	0.0003	0.0003	0.005
Total Suspended Solids (mg/L)	1.37	0.63	0.64	10

Parameter	2021 Yearly Average	2022 Yearly Average	2023 Yearly Average	Limits[1]
Zinc (dissolved) (mg/L)	0.003	0.004	0.005	0.015

[1] Treated Water Performance Standards (Veolia, 2017a)
[2] Salinity corrected to 25°C
[3] Langelier Saturation Index only applies to Stabilised Treated Water delivered to the TCR Delivery Point (TWDP2)
[4] Annual Average Conductivity higher in 2023 due to the portion of Filtered Treated Water sent to TCR under MOD 8.

Erosion and Sedimentation

Sensitive receptors located in proximity to the Project application area include Wangcol Creek and Coxs River. Erosion and sediment (ERSED) controls were developed for the both the WTF site and for installation of the WTS in accordance with *Managing Urban Stormwater: Soils and Construction Manual 4th edition, "The Blue Book"* (Landcom, 2004).

With the operation of the WTS, continuous monthly inspections were performed to detect erosion along the pipeline corridor and to assess the condition of the erosion control systems installed.

Inspections of silt erosion controls continue identifying material accumulated on the WTS after rain events. As a result, maintenance activities for cleaning the silt accumulation continue being performed regularly during the year.

Additional ERSED controls measures were implemented at the WTF site to avoid pollution of the MPPS stormwater system and were continuously monitored to detect silt releases. The controls in place include:

- Sealing entry/exit access roads
- Sealing internal traffic roads
- Cleaning of the diversion channels
- Seeding exposed areas inside the WTF

No unauthorised discharge from the site was observed in this reporting period.

Surface Water Quality

A review of Electrical Conductivity (EC) was undertaken at various monitoring locations to understand the general trends within the Upper Coxs River catchment for the period between mid 2019 and December 2023 following the implementation of the WTF.

Surface water quality monitoring results within Wangcol Creek are provided in **Figure 7-2**. Monitoring results are generally consistent for EC at all monitoring points over the period.

Surface water quality monitoring results within Pipers Flat Creek are provided in **Figure 7-3**. Monitoring results are within historic ranges for EC in monitoring upstream of Centennial's Lidsdale Siding Site during 2023.

Surface water quality monitoring results within Coxs River (Delta Site) are provided in **Figure 7-4.** Results obtained during the reporting period vary between 500 and 1000 uS/cm. Monitoring undertaken at Thompsons Creek and Thompsons Creek Reservoir (TC1) is part of the Mt Piper Power Station (MPPS) environmental monitoring program. Water Quality data for TC1 is shown in **Figure 7-5**, collected by MPPS.

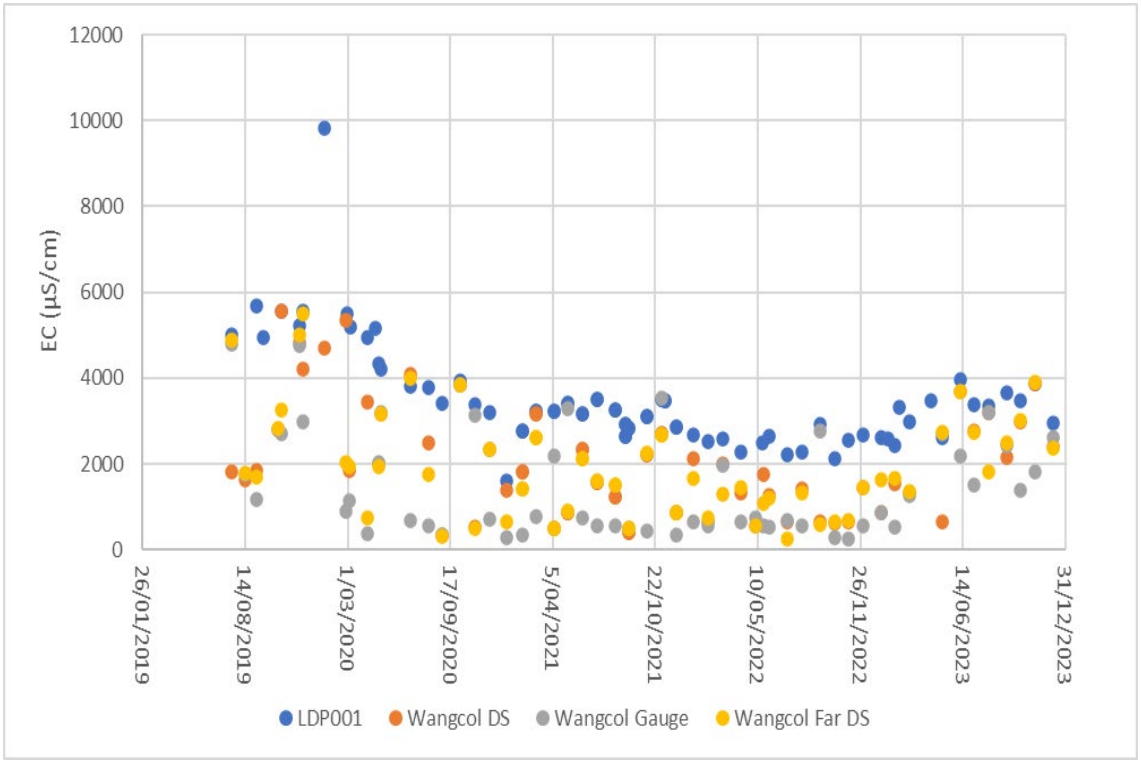

Figure 7-2 Electrical conductivity within Wangcol Creek (mid 2019 to December 2023)

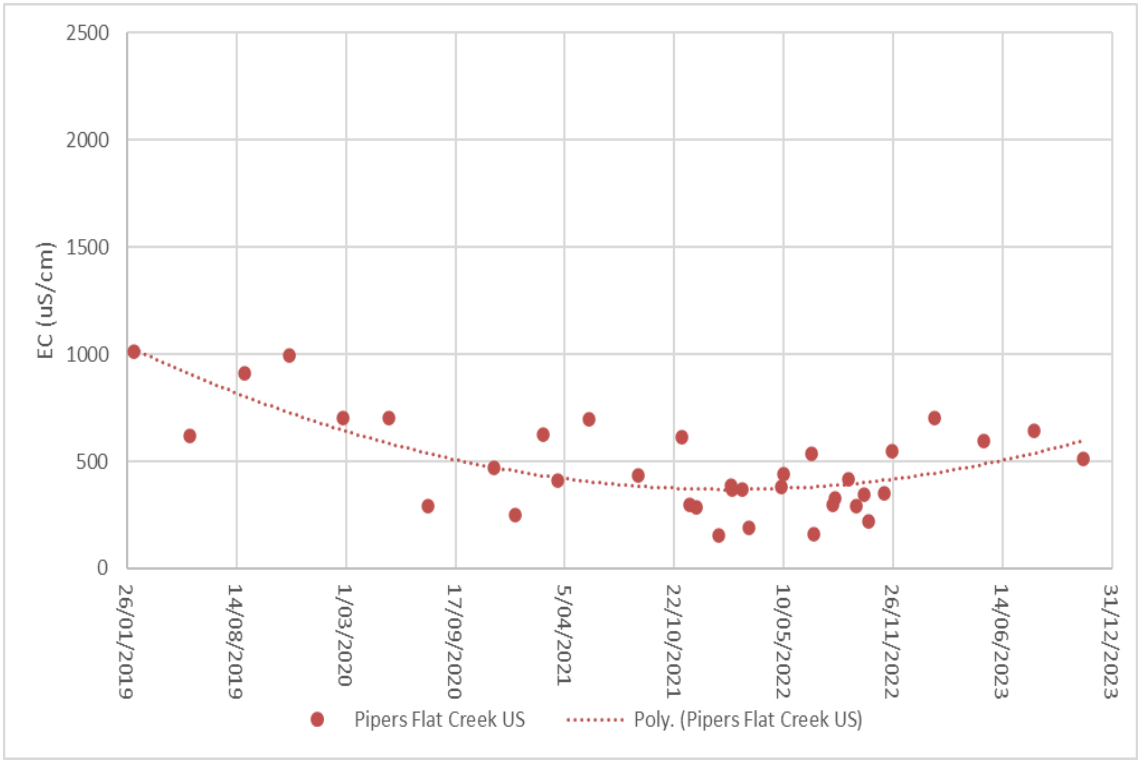

Figure 7-3 : Electrical conductivity within Pipers Flat Creek (mid 2019 to December 2023

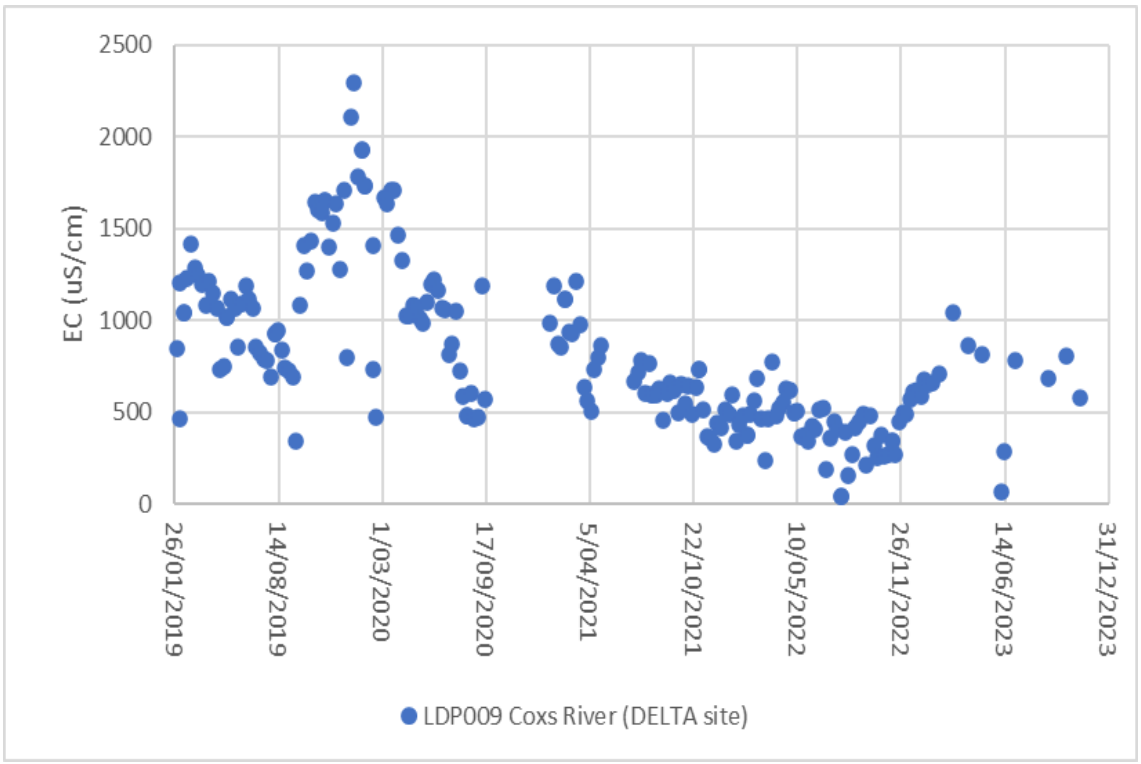

Figure 7-4 Electrical conductivity within Coxs River (Delta Site) (mid 2019 to December 2023)

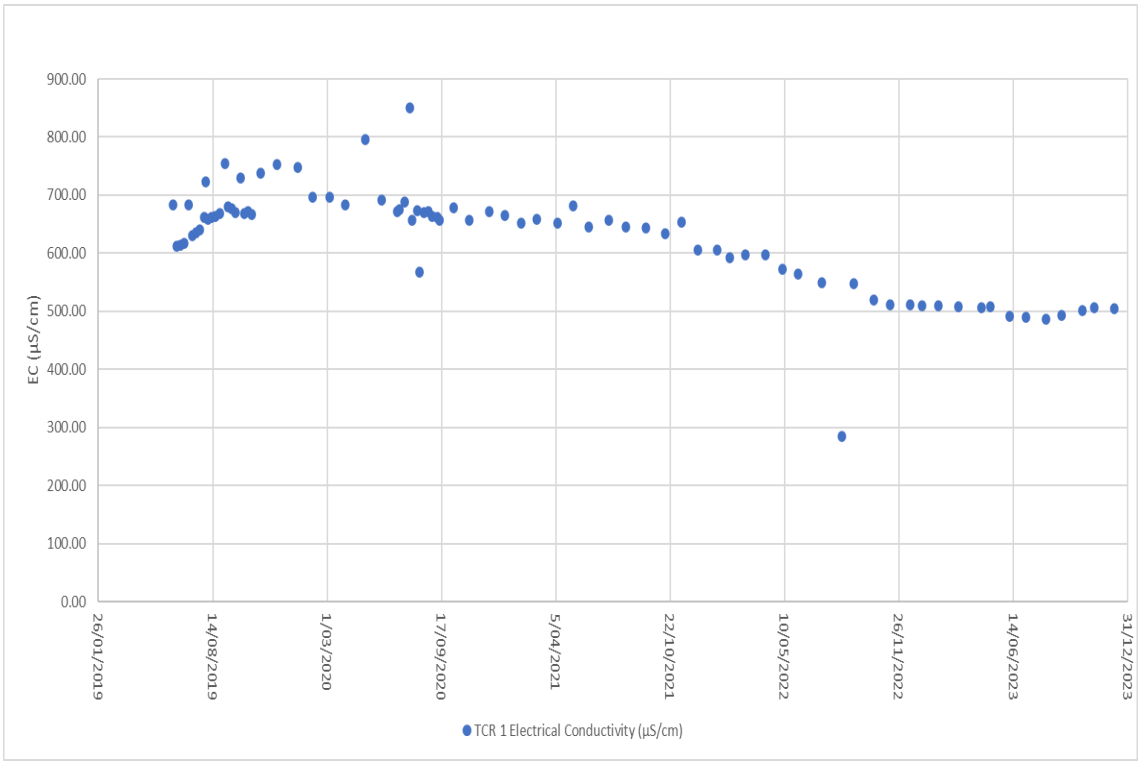

Figure 7-5 Electrical conductivity within Thompsons Creek Reservoir (TC1) (mid 2019 to December 2023)

7.3.3 Comparison against Predictions

Surface water related predictions during the operation of the Project were outlined in the *Springvale WTP Project EIS* (GHD, 2016b) and summarised within the water management performance measures as required by Condition 3 in Schedule 3 of SSD 7592.

The results obtained from the surface water monitoring program during the reporting period are compliant with the performance measures of the development consent SSD 7592 and generally in accordance with the predications made in the *Springvale WTP Project EIS* (GHD, 2016b), therefore current management measures are considered adequate.

7.3.4 Long Term Analysis

Table 7-3 shows the treated water to TCR quality performance for 2021, 2022 and 2023. Water quality has met the established treated water to TCR quality performance concentration limits for all parameters.

Based on the information reported, the results of the surface water monitoring are generally in accordance with the predications made in the *Springvale WTP Project EIS* (GHD, 2016b) and approved for the project.

A review of Electrical Conductivity (EC) was undertaken at various monitoring locations to understand the general trends within the Upper Coxs River catchment for the period between mid 2019 and December 2023 following the implementation of the WTF. Monitoring results indicate a general decline in EC since the operation of the Springvale WTP.

7.3.5 Implemented / Proposed Improvements

The Springvale WTP WMP Revision 17 (2023) was updated during the 2023 reporting period, with WMP Revision approved by DPE on 17 August 2023.

Continue inspections related to the previous incidents on the drainage network

The monitoring program in the Water Management Plan will continue to be implemented at the Springvale WTP.

8 REHABILITATION

Rehabilitation at Springvale WTP is undertaken in accordance with Schedule 3, Conditions 24 (Rehabilitation Objectives) and 25 (Progressive Rehabilitation) of SSD7592. The SWTP BMP describes the management of rehabilitation at Springvale WTP and was developed to meet the requirements of SSD 7592.

In accordance with Schedule 3, Condition 25 (a-c) of SSD 7592, progressive rehabilitation during operations is required to:

a) Rehabilitate all areas of the site not proposed for future disturbance (including pipeline routes) progressively, that is, as soon as reasonably practicable following construction or decommissioning;
b) minimise the total area exposed at any time; and
c) employ interim rehabilitation strategies to minimise dust generation, soil erosion and weed incursion on parts of the site that cannot yet be permanently rehabilitated.

Rehabilitation monitoring requirements are addressed in Section 7.4 of the SWTP BMP and summarised in **Table 8-1**.

Table 8-1 Rehabilitation management measures during and post-construction

Project Phase	Activity	Management Practices	Responsibility
Construction	Weed monitoring	Ongoing treatment of weed infestations is required throughout construction and as part of rehabilitation monitoring.	Contractor
Post-Construction / Operations	Rehabilitation Monitoring	Monitoring of rehabilitation against rehabilitation success criteria (all seeded vegetation must achieve 60% soil surface coverage before soil and erosion controls can be removed). Identification of required maintenance actions.	Environmental Nominee
	Rehabilitation Maintenance	Weed control measures such as spraying, physical removal, or planting native species to suppress weed growth.	Environmental Nominee

8.1 REHABILITATION MONITORING

The extent of rehabilitation required is relatively minor as the area disturbed for construction was small and in some areas rehabilitation was not required, for example where the pipeline was located above the ground, in the sections where the pipe was installed using directional drilling and where the pipeline was coated in the road reserve.

The immediate intent of rehabilitation actions throughout construction is to re-establish site surfaces as soon as possible after disturbance to assist with erosion mitigation, and to prevent the establishment of weed species.

A measure of successful rehabilitation would meet the following performance criteria:

- self-sustaining vegetative cover
- no signs of subsidence or erosion

- representative of species richness and diversity of pre-disturbed condition
- plants showing healthy growth and signs of recruitment
- free of noxious weeds.

Rehabilitation monitoring of the WTS corridor continued in 2023 to assess the progress of rehabilitation against the objectives and criteria outlined in the BMP. Similar to the findings from 2022's inspections, the native vegetation growth continued at a rapid pace and now covers all of the areas affected by the bushfires from early 2020. In addition to this, weed monitoring hasn't detected an intrusion of a significant amount of vegetation on the pipeline corridor. Weed monitoring and, if necessary, control measures will be undertaken during 2024 as required.

Chemical spraying for weed control was continued inside the WTF area during 2023.

9 COMMUNITY CONSULTATION

9.1 COMMUNITY LIAISON AND ENGAGEMENT

As part of the monthly and annual operations performance reports, the community complaints were reported for action generation if required.

A community information line 24 hours a day, 7 days a week is in place, which enables the receipt of queries and complaints from the community. Contact details were provided to the community on all communication materials (e.g. Formal letters).

All information received from the community is recorded in a Project Communication Register which is available on a cloud-based drive. This work management tool designed to be simple and easy to use by the Project team.

9.2 COMMUNITY COMPLAINTS

Table 9-1 below shows the community complaints record for the period 2017 to 2023. No community complaints were received during the reporting period.

There is no evidence of an identifiable trend in the frequency of community complaints being received by Springvale WTP. There have been no community complaints received during the operation stage of the Project.

The Complaints Register for the reporting period is also available on the Springvale Water Treatment Facility website.[4] The Register details the complaint type, investigation and actions being taken to address the queries or complaint.

Table 9-1 Record of annual community complaints for 2017 to 2023

Year	Type of Complaints					Total
	Air	Water	Noise	Waste	Other	
2017	0	0	0	0	0	**0**
2018	0	0	1	0	3	**4**
2019	0	0	0	0	0	**0**
2020	0	0	0	0	0	**0**
2021	0	0	0	0	0	**0**
2022	0	0	0	0	0	**0**
2023	0	0	0	0	0	**0**

[4] https://www.centennialcoal.com.au/operations/springvale-water-treatment-facility/

10 INDEPENDENT ENVIRONMENTAL AUDIT

There is no requirement under Development Consent (SSD 7592) to conduct an Independent Environmental Audit, however, an ISO Surveillance audit was conducted in March 2023 with an independent auditor to verify compliance with the ISO Standards.

Audit findings have been finalised and all actions raised have been completed and closed out.

11 INCIDENTS AND NON-COMPLIANCES DURING THE REPORTING PERIOD

11.1 NOTIFIABLE INCIDENT CLASSIFICATION

Environmental incidents are classified as either notifiable or non-notifiable:

- **Notifiable incidents** are those incidents or potential incidents that *cause actual or potential harm* to the health or safety of human beings or to ecosystems that is not trivial, or where results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000
- **Non-notifiable incidents** are those that *do not trigger the threshold* but have the potential to impact on human health and the environment.

11.2 INCIDENTS RECORDING AND REPORTING

Incidents are managed, recorded and reported in accordance with the Project Incident and Emergency Response Management Plan (IERMP)[MAN-3651]. The IERMP outlines the management and response elements to ensure incidents or emergencies are appropriately and effectively responded to. The management plan covers:

- Reporting of the incident - outlines the immediate onsite reporting requirements associated with incidents. It also includes all hours contact details of key site personnel who are to be contacted in the event of any incident, their roles, and responsibilities.
- Classification of the incident - outlines how an incident is to be classified and provides a classification matrix (e.g. No Impact, Minor, Moderate, Major or Crisis) in order to score and then action the relevant further notification and additional response required.
- Stakeholder notification - outlines the stakeholder notification requirements and timeframes based on initial incident classification. It also includes all hours contact details of key stakeholders and entities required to be notified in the event of an Environmental Water incident.
- Responding to the incident - outlines immediate response procedures associated with environmental emergencies or crises as well as response requirements associated with any original incident classification. This includes general, emergency, environmental, water, water quality and unplanned incident response procedures. Specific notification and reporting requirements are defined in emergency and crisis response procedures.
- Escalation - outlines emergencies, crises or certain incident classifications that warrant escalation within the management structure and stakeholders. This includes crisis or incident management team (IMT or CMT) assembling, working methods and quality system definition.
- Incident Investigation - outlines the level of incident investigation and record requirements based on Environmental Water incident classification. Includes

references to basic, general and ICAM investigation requirements, response, and management.

- Incident Management System - outlines Veolia's incident management and reporting database (Rivo) and procedures on how to use it.
- Incident or Emergency Termination - outlines the requirements, specifications and responsibilities of when an incident can be closed/terminated or emergency is over.
- Evaluation and Review - outlines the steps and response required after an incident, crisis or emergency. This includes completion of records and reviews/updates to relevant Plans, Procedures and Registers.

11.3 Incident Reporting

A summary of reportable incidents and regulatory actions identified during the 2023 reporting period is provided in **Table 11-1.**

Notifiable incidents and non-compliances, including the corrective action taken in response to the incident/non-compliance are summarised in **Table 11-2**.

Table 11-1 Summary of Reportable Incidents and Regulatory Actions

Compliance Type	Agency	Number	Response
Notifiable Incidents	NSW EPA & Department	2	Non Compliance 1: Notification provided 14 June 2023 and Investigation Report Submitted 16 June 2023. Non Compliance 2: On 8 December 2023, Centennial Coal Company Pty Limited provided notification to the Department of Planning and Environment of an urgent requirement to increase the transfer of residuals from SWTP to WCS at a rate consistent with the Modification 6 to WCS Consent and Modification 10 to the SWTP consent of up to a maximum of 1,000KL per day for up to 60 days. The Investigation Report was submitted 22 December 2023.
Non-notifiable incidents	Not required	0	N/A
Caution Notices	NSW EPA	0	N/A
Warning Letters	NSW EPA	0	N/A
Penalty Notices	Not required	0	N/A

Table 11-2 Incidents and Non-Compliances during the Reporting Period

Compliance[5]	Overview of incident/non-compliance	Description of incident/non-compliance	Actions	Status of Actions
Non-Compliance 1	Residuals Daily Discharge Limit	On 11 June 2023, the volume transferred was 0.43338 ML resulting in exceedance of (0.00338 ML).	The error with the PLC Time Synchronisation has been resolved by the SCADA Control System Contractor on 13 June 2023 resulting in the correction of the PLC time and the totaliser. The Totaliser's resetting time has been verified to be occurring at 12 midnight.	**Complete.** This incident is closed as all corrective actions and mitigation methods have been implemented.
Non-Compliance 2	Residuals Daily Discharge Limit	On December 15, 0.567 ML of residuals were transferred from the SWTP to WCS, exceeding the approved maximum daily limit of 0.43 ML. The residuals transferred from SWTP to WCS exceeded the daily maximum flow volume 16 times during December 2023. The residuals were transferred via an enclosed pipeline and discharged into the REA at WCS due to an increase in the transfer of turbid water at Springvale mine.	Springvale undertook the action of increased transfer of residuals from SWTP to WCS to prevent flooding which would result in an interruption of coal supply to Mt Piper Power Station and could lead to a potential energy emergency.	**Complete.**

[5] See Compliance Status Key beneath **Table 1-1** for risk level, colour code and description.

12 ACTIVITIES TO BE COMPLETED IN THE NEXT REPORTING PERIOD

The following work and environmental measures are scheduled to be completed in the next 12-month reporting period (January 2024 to December 2024):

- Continue the operations and optimisation of the facility by the Service Provider.
- Continue inspections on the WTF and WTS.
- The current Environmental Management Plans for the Project will be updated during 2024 to cover the yearly operational review of the Project.
- Review of WTF site drainage and modifications to maintain erosion controls where required.

13 REFERENCES

ADW Johnson (2022). *MOD 8 – 'Springvale Water Treatment Project (SSD 7592 Modification 8) S4.55(1A) Modification Report Proposed Extension of Timeframe to Interim Water Management Strategy & Administrative Amendment'*, dated May 2022 prepared by ADW Johnson Pty Ltd for Springvale Coal Pty Ltd

Centennial (2021). *MOD 7 – 'Modification Report – Springvale Water Treatment Project – SSD-7592 Mod 7'*, dated June 2021 prepared for Springvale Coal Pty Ltd

GHD (2016a) *Springvale Water Treatment Project Environmental Impact Statement*, dated September 2016 prepared by GHD Pty Ltd for Springvale Coal Pty Ltd and EnergyAustralia NSW Pty Ltd.

GHD (2016b) *Springvale Water Treatment Project Amendment to Development Application*, dated December 2016 prepared by GHD Pty Ltd for Springvale Coal Pty Ltd and EnergyAustralia NSW Pty Ltd.

GHD (2017). *Springvale Water Treatment Project Modification 1 Statement of Environmental Effects*, dated November 2017 and associated Response to Submissions dated December 2017 prepared by GHD Pty Ltd for Springvale Coal Pty Ltd and EnergyAustralia NSW Pty Ltd

GHD (2018). *Springvale Water Treatment Project Modification 2 – Skelly Road Statement of Environmental Effects*, dated September 2018 prepared by GHD Pty Ltd for Springvale Coal Pty Ltd and EnergyAustralia NSW Pty Ltd

GHD (2019a). *Springvale Water Treatment Project Modification 3 – Modification Report*, dated March 2019 prepared by GHD Pty Ltd for Springvale Coal Pty Ltd and EnergyAustralia NSW Pty Ltd

GHD (2019b). *Springvale Water Treatment Project Modification 4 – Modification Report*, dated September 2019 and associated Response to Submissions dated 8 October 2019 and additional information dated 24 October 2019 prepared by GHD Pty Ltd for Springvale Coal Pty Ltd and EnergyAustralia NSW Pty Ltd

GHD (2020a). *Springvale Water Treatment Project Modification 5 – Modification Report*, dated January 2020 prepared by GHD Pty Ltd for Springvale Coal Pty Ltd and EnergyAustralia NSW Pty Ltd

GHD (2020b). *Angus Place Coal Project (MP_06_0021) and Springvale Water Treatment Project (SSD 7592) Modification 6 – Modification Report*, dated November 2020, associated Submissions Report (undated) and additional information dated 8 February 2021, 23 February 2021 and 12 March 2021 prepared by GHD Pty Ltd for Springvale Coal Pty Ltd and EnergyAustralia NSW Pty Ltd

Landcom (2004). *Managing Urban Stormwater: Soils and Construction*, *Volume 1*, 4th

Appendix 1:
Daily Flow Data

JANUARY			FEBRUARY		
Date	Mine Water (ML)	Residuals (ML)	Date	Mine Water (ML)	Residuals (ML)
1-1-23	36.80	0.174	1-2-23	34.30	0.402
2-1-23	36.51	0.157	2-2-23	29.63	0.265
3-1-23	36.77	0.167	3-2-23	33.15	0.417
4-1-23	37.24	0.153	4-2-23	35.03	0.295
5-1-23	39.10	0.156	5-2-23	34.95	0.231
6-1-23	39.15	0.157	6-2-23	35.39	0.285
7-1-23	39.12	0.150	7-2-23	35.57	0.294
8-1-23	39.04	0.158	8-2-23	35.83	0.295
9-1-23	39.02	0.162	9-2-23	30.85	0.322
10-1-23	38.41	0.162	10-2-23	35.83	0.314
11-1-23	38.70	0.156	11-2-23	35.86	0.267
12-1-23	38.80	0.159	12-2-23	34.18	0.253
13-1-23	38.80	0.267	13-2-23	33.55	0.250
14-1-23	38.79	0.259	14-2-23	35.82	0.207
15-1-23	32.04	0.207	15-2-23	35.18	0.168
16-1-23	24.85	0.145	16-2-23	35.76	0.210
17-1-23	37.46	0.165	17-2-23	35.74	0.209
18-1-23	36.91	0.167	18-2-23	29.39	0.190
19-1-23	37.49	0.149	19-2-23	35.34	0.168
20-1-23	37.39	0.220	20-2-23	35.77	0.155
21-1-23	34.82	0.176	21-2-23	35.54	0.237
22-1-23	37.12	0.115	22-2-23	34.66	0.239
23-1-23	37.41	0.157	23-2-23	34.03	0.274
24-1-23	37.27	0.374	24-2-23	35.23	0.166
25-1-23	37.18	0.381	25-2-23	35.22	0.155
26-1-23	36.15	0.423	26-2-23	35.26	0.160
27-1-23	36.65	0.344	27-2-23	34.90	0.202
28-1-23	35.53	0.229	28-2-23	33.62	0.268
29-1-23	35.83	0.301			
30-1-23	32.58	0.364			
31-1-23	19.25	0.349			

MARCH			APRIL		
Date	Mine Water (ML)	Residuals (ML)	Date	Mine Water (ML)	Residuals (ML)
1-3-23	34.89	0.231	1-4-23	35.94	0.202
2-3-23	35.48	0.176	2-4-23	37.22	0.213
3-3-23	35.13	0.155	3-4-23	35.82	0.243
4-3-23	37.39	0.153	4-4-23	36.05	0.279
5-3-23	38.42	0.148	5-4-23	36.04	0.262
6-3-23	38.50	0.313	6-4-23	36.14	0.295
7-3-23	38.49	0.246	7-4-23	35.62	0.275
8-3-23	38.46	0.277	8-4-23	35.82	0.228
9-3-23	38.40	0.214	9-4-23	36.11	0.318
10-3-23	38.40	0.285	10-4-23	24.10	0.229
11-3-23	38.40	0.212	11-4-23	36.24	0.277
12-3-23	38.40	0.166	12-4-23	36.00	0.190
13-3-23	38.38	0.168	13-4-23	36.03	0.199
14-3-23	38.30	0.173	14-4-23	36.37	0.280
15-3-23	38.25	0.186	15-4-23	36.50	0.247
16-3-23	38.24	0.409	16-4-23	36.53	0.284
17-3-23	36.82	0.265	17-4-23	36.26	0.230
18-3-23	35.52	0.258	18-4-23	36.12	0.332
19-3-23	35.40	0.361	19-4-23	36.09	0.322
20-3-23	35.85	0.276	20-4-23	36.01	0.261
21-3-23	35.88	0.209	21-4-23	35.94	0.315
22-3-23	35.81	0.185	22-4-23	36.02	0.231
23-3-23	29.27	0.168	23-4-23	36.04	0.200
24-3-23	31.89	0.209	24-4-23	36.10	0.207
25-3-23	36.80	0.162	25-4-23	36.12	0.203
26-3-23	35.62	0.181	26-4-23	35.65	0.279
27-3-23	35.89	0.175	27-4-23	36.11	0.350
28-3-23	35.98	0.350	28-4-23	36.08	0.232
29-3-23	36.12	0.378	29-4-23	34.67	0.220
30-3-23	35.36	0.196	30-4-23	36.02	0.279
31-3-23	36.23	0.183			

MAY			JUNE		
Date	Mine Water (ML)	Residuals (ML)	Date	Mine Water (ML)	Residuals (ML)
1-5-23	36.02	0.266	1-6-23	34.94	0.359
2-5-23	35.98	0.246	2-6-23	35.92	0.338
3-5-23	35.96	0.282	3-6-23	34.93	0.327
4-5-23	35.94	0.271	4-6-23	35.94	0.391
5-5-23	33.89	0.269	5-6-23	35.09	0.415
6-5-23	36.12	0.274	6-6-23	35.92	0.393
7-5-23	35.85	0.327	7-6-23	35.93	0.368
8-5-23	35.86	0.295	8-6-23	31.20	0.365
9-5-23	35.93	0.222	9-6-23	35.48	0.372
10-5-23	35.90	0.367	10-6-23	36.01	0.396
11-5-23	33.98	0.265	11-6-23	35.91	0.433
12-5-23	36.00	0.229	12-6-23	35.90	0.401
13-5-23	35.84	0.340	13-6-23	35.93	0.336
14-5-23	35.93	0.322	14-6-23	35.98	0.285
15-5-23	12.81	0.265	15-6-23	35.89	0.313
16-5-23	19.42	0.256	16-6-23	35.93	0.328
17-5-23	36.09	0.374	17-6-23	35.92	0.327
18-5-23	36.06	0.258	18-6-23	35.96	0.339
19-5-23	35.95	0.239	19-6-23	35.99	0.331
20-5-23	35.90	0.270	20-6-23	35.89	0.343
21-5-23	35.78	0.274	21-6-23	35.96	0.365
22-5-23	35.89	0.340	22-6-23	36.00	0.348
23-5-23	36.03	0.189	23-6-23	36.00	0.338
24-5-23	36.03	0.246	24-6-23	35.64	0.269
25-5-23	35.88	0.373	25-6-23	36.02	0.272
26-5-23	35.88	0.249	26-6-23	35.84	0.250
27-5-23	35.76	0.287	27-6-23	35.97	0.305
28-5-23	34.12	0.330	28-6-23	35.94	0.309
29-5-23	35.92	0.336	29-6-23	35.94	0.298
30-5-23	35.92	0.389	30-6-23	35.98	0.309
31-5-23	35.98	0.363			

JULY			AUGUST		
Date	Mine Water (ML)	Residuals (ML)	Date	Mine Water (ML)	Residuals (ML)
1-7-23	35.95	0.316	1-8-23	35.96	0.301
2-7-23	35.77	0.322	2-8-23	36.07	0.337
3-7-23	35.46	0.388	3-8-23	36.05	0.330
4-7-23	26.65	0.238	4-8-23	35.96	0.251
5-7-23	31.59	0.374	5-8-23	35.87	0.272
6-7-23	36.06	0.388	6-8-23	35.94	0.316
7-7-23	35.92	0.391	7-8-23	35.98	0.299
8-7-23	35.86	0.349	8-8-23	35.84	0.378
9-7-23	35.32	0.362	9-8-23	28.99	0.342
10-7-23	38.20	0.366	10-8-23	35.07	0.377
11-7-23	39.31	0.386	11-8-23	36.34	0.364
12-7-23	39.35	0.400	12-8-23	36.05	0.363
13-7-23	39.31	0.386	13-8-23	36.02	0.321
14-7-23	39.30	0.376	14-8-23	36.01	0.269
15-7-23	39.33	0.394	15-8-23	35.96	0.341
16-7-23	39.26	0.393	16-8-23	35.99	0.354
17-7-23	38.36	0.408	17-8-23	32.81	0.274
18-7-23	35.94	0.410	18-8-23	39.03	0.353
19-7-23	35.89	0.412	19-8-23	38.96	0.354
20-7-23	35.96	0.411	20-8-23	39.00	0.349
21-7-23	35.93	0.411	21-8-23	38.99	0.343
22-7-23	35.94	0.411	22-8-23	38.45	0.263
23-7-23	35.84	0.411	23-8-23	38.86	0.317
24-7-23	35.90	0.381	24-8-23	39.09	0.329
25-7-23	34.02	0.350	25-8-23	39.03	0.345
26-7-23	35.95	0.320	26-8-23	39.06	0.314
27-7-23	36.00	0.346	27-8-23	39.10	0.388
28-7-23	35.98	0.337	28-8-23	31.40	0.347
29-7-23	35.65	0.231	29-8-23	39.49	0.391
30-7-23	35.48	0.215	30-8-23	26.22	0.376
31-7-23	35.91	0.269	31-8-23	38.96	0.359

SEPTEMBER			OCTOBER		
Date	Mine Water (ML)	Residuals (ML)	Date	Mine Water (ML)	Residuals (ML)
1-9-23	39.05	0.375	1-10-23	38.42	0.253
2-9-23	39.06	0.372	2-10-23	38.19	0.266
3-9-23	39.05	0.329	3-10-23	40.44	0.269
4-9-23	37.79	0.386	4-10-23	41.00	0.301
5-9-23	36.14	0.395	5-10-23	41.06	0.374
6-9-23	35.20	0.402	6-10-23	41.10	0.381
7-9-23	36.12	0.420	7-10-23	41.08	0.373
8-9-23	35.95	0.420	8-10-23	41.07	0.375
9-9-23	35.91	0.420	9-10-23	41.06	0.375
10-9-23	35.90	0.407	10-10-23	41.04	0.374
11-9-23	35.96	0.407	11-10-23	40.85	0.364
12-9-23	36.06	0.408	12-10-23	41.06	0.376
13-9-23	16.46	0.407	13-10-23	41.06	0.376
14-9-23	21.90	0.416	14-10-23	41.06	0.375
15-9-23	21.95	0.421	15-10-23	41.06	0.376
16-9-23	21.96	0.411	16-10-23	41.06	0.377
17-9-23	21.96	0.396	17-10-23	39.68	0.377
18-9-23	21.92	0.391	18-10-23	41.02	0.377
19-9-23	21.95	0.396	19-10-23	40.99	0.382
20-9-23	23.76	0.403	20-10-23	40.46	0.369
21-9-23	29.58	0.376	21-10-23	40.98	0.367
22-9-23	31.71	0.391	22-10-23	40.99	0.368
23-9-23	35.64	0.404	23-10-23	40.98	0.360
24-9-23	35.94	0.382	24-10-23	40.73	0.375
25-9-23	35.96	0.364	25-10-23	40.98	0.362
26-9-23	32.62	0.260	26-10-23	40.97	0.353
27-9-23	36.83	0.281	27-10-23	40.99	0.391
28-9-23	39.20	0.297	28-10-23	40.61	0.398
29-9-23	38.72	0.258	29-10-23	40.76	0.400
30-9-23	40.13	0.265	30-10-23	40.66	0.394
			31-10-23	40.65	0.386

NOVEMBER			DECEMBER		
Date	Mine Water (ML)	Residuals (ML)	Date	Mine Water (ML)	Residuals (ML)
1-11-23	40.75	0.380	1-12-23	41.40	0.399
2-11-23	40.97	0.390	2-12-23	40.61	0.395
3-11-23	41.28	0.389	3-12-23	40.93	0.394
4-11-23	41.30	0.390	4-12-23	38.72	0.388
5-11-23	41.02	0.386	5-12-23	34.92	0.388
6-11-23	40.65	0.386	6-12-23	34.93	0.388
7-11-23	40.82	0.389	7-12-23	31.85	0.387
8-11-23	40.45	0.388	8-12-23	28.16	0.387
9-11-23	29.41	0.288	9-12-23	22.00	0.386
10-11-23	40.82	0.401	10-12-23	23.07	0.389
11-11-23	31.10	0.392	11-12-23	24.85	0.388
12-11-23	39.27	0.385	12-12-23	12.15	0.392
13-11-23	39.32	0.374	13-12-23	8.55	0.417
14-11-23	40.84	0.382	14-12-23	19.18	0.391
15-11-23	40.82	0.377	15-12-23	18.50	0.567
16-11-23	40.99	0.388	16-12-23	18.48	0.572
17-11-23	41.24	0.389	17-12-23	18.46	0.570
18-11-23	40.90	0.385	18-12-23	17.93	0.575
19-11-23	39.27	0.372	19-12-23	18.81	0.581
20-11-23	41.34	0.364	20-12-23	18.61	0.582
21-11-23	36.08	0.377	21-12-23	21.00	0.587
22-11-23	41.84	0.388	22-12-23	29.63	0.597
23-11-23	41.78	0.386	23-12-23	32.99	0.602
24-11-23	41.68	0.387	24-12-23	32.93	0.597
25-11-23	37.16	0.390	25-12-23	32.88	0.614
26-11-23	41.58	0.395	26-12-23	32.92	0.605
27-11-23	38.63	0.390	27-12-23	32.92	0.478
28-11-23	41.86	0.394	28-12-23	35.17	0.469
29-11-23	41.64	0.407	29-12-23	36.96	0.455
30-11-23	41.50	0.401	30-12-23	36.92	0.569
			31-12-23	36.90	0.373


CENTENNIAL