



STRATFORD MINING COMPLEX ANNUAL REVIEW 2024


Name of operation	Stratford Mining Complex
Name of operator	Yancoal Australia Ltd
Development consent / project approval #	SSD-4966 (Stratford Extension Project)
Name of holder of development consent / project approval	Stratford Coal Pty Limited
Mining lease #	ML1360, ML1409, ML1447, ML1521, ML1528, ML1538, ML1577, ML1733, ML1787
Name of holder of mining leases	Gloucester Coal Ltd/CIM Stratford Pty Ltd/Stratford Coal Pty Ltd
Water licence #	WAL 41534, WAL 41535, WAL 41536, WAL 41537, WAL 41538
Name of holder of water licence	Gloucester Coal Ltd/CIM Stratford Pty Ltd/Stratford Coal Pty Ltd
RMP start date	1 August 2022
RMP end date	N/A
Annual Review start date	1 January 2024
Annual Review end date	31 December 2024
<p>I, John Cullen, certify this audit report is true and accurate record of the compliance status of Stratford Mining Complex for the period of 1 January 2024 to 31 December 2024 and that I am authorised to make this statement on behalf of Yancoal.</p> <p><i>Note.</i></p> <p>a) <i>The Annual Review is an 'environmental audit' for the purposes of section 122B(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.</i></p> <p>b) <i>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).</i></p>	
Name of authorised reporting officer	Mr John Cullen
Title of authorised reporting officer	Operations Manager – Stratford Coal
Signature of authorised reporting officer	
Date	28 March 2025

TABLE OF CONTENTS

1.0	STATEMENT OF COMPLIANCE.....	1
2.0	INTRODUCTION.....	3
2.1	Scope.....	4
2.2	Mine Contacts	4
3.0	APPROVALS	5
3.1	Status of Leases, Licences and Approvals	5
3.1.1	Environmental Management Plans.....	6
4.0	OPERATIONS SUMMARY	7
4.1	Exploration	8
4.2	Estimated Mine Life	8
4.3	Mining	8
4.4	Coal Handling and Beneficiation	9
4.4.1	CHPP Throughput and Rejects Management.....	9
4.4.2	Coal Stockpile Capacity (Rom and Product).....	9
4.4.3	Product Transport	9
4.4.4	CHPP Reject Management	10
5.0	ACTIONS REQUIRED FROM PREVIOUS ANNUAL REVIEW	11
6.0	ENVIRONMENTAL PERFORMANCE	12
6.1	Meteorological Monitoring	12
6.1.1	Rainfall	12
6.1.2	Wind Speed and Direction	13
6.1.3	Temperature	13
6.2	Air Quality	14
6.2.1	Review of Air Quality Monitoring Results and Performance	14
6.2.2	Greenhouse Gas.....	17
6.2.3	Air Quality Complaints	17
6.3	Biodiversity Management	17
6.3.1	Vegetation Clearance Report.....	18
6.3.2	Managing Access, Fencing, Gates and Signage.....	18
6.3.3	Revegetation Management	18
6.3.4	Weed Control and Monitoring.....	19
6.3.5	Feral Animal Control and Monitoring	19
6.3.6	Bushfire Management	20
6.3.7	Nest Box Program	20
6.3.8	Squirrel Glider Management Plan.....	20
6.3.9	Biodiversity Offset Monitoring and Reporting.....	21
6.3.10	Long Term Security and Conservation Bond.....	22
6.4	Blasting.....	22

6.4.1	Blast Criteria and Control Procedures.....	22
6.4.2	Review of Blast Monitoring Results and Performance	22
6.4.3	Property Inspections and Investigations.....	23
6.4.4	Blasting Complaints	24
6.5	Noise	24
6.5.1	Noise Criteria and Control Procedures	24
6.5.2	Review of Attended Noise Monitoring Results and Performance	24
6.5.3	Analysis of Data Trends and Comparison with EA Predictions	25
6.5.4	Real Time Noise Monitoring System.....	25
6.5.5	Noise Prediction and Forecasting System.....	25
6.5.6	Rail Noise Monitoring	26
6.5.7	Mobile Plant Noise Assessments	26
6.5.8	Noise Complaints	27
6.6	Heritage.....	27
6.6.1	Aboriginal Heritage	27
6.6.2	Non-Aboriginal Heritage	28
6.7	Waste Management.....	28
6.7.1	Waste Minimisation and Performance	29
7.0	WATER MANAGEMENT	32
7.1	Water Licences	32
7.1.1	Surface Water Licencing	32
7.1.2	Groundwater Licencing.....	32
7.2	Water Balance.....	32
7.3	Surface Water	33
7.3.1	Surface Water Management.....	33
7.3.2	Surface Water Monitoring and Performance	34
7.3.3	Analysis Data Trends and Comparison with EA Predictions	39
7.3.4	Biological Monitoring.....	39
7.4	Groundwater	40
7.4.1	Groundwater Analysis.....	40
7.4.2	Groundwater Monitoring Results and Performance	40
7.4.3	Analysis Data Trends and Comparison with EA Predictions	43
7.4.4	Groundwater Inflows to Open Cut Mining Operations.....	46
8.0	REHABILITATION.....	47
8.1	Buildings and Infrastructure.....	47
8.2	Rehabilitation of Disturbed Land	47
8.2.1	Rehabilitation Resources	48
8.2.2	Rehabilitation Maintenance	48
8.3	Rehabilitation Monitoring.....	48
8.3.1	Threats to Rehabilitation Completion.....	50

8.4	Rehabilitation Trials and Research	50
8.5	Rehabilitation Targets	50
8.6	Mine Closure Planning	50
8.6.1	Final Landform Designs	51
8.6.2	Final Void Management	51
8.6.3	Water Management	51
8.6.4	Contaminated Lands Assessment	52
8.6.5	EMPs, Post-Closure Monitoring and Maintenance Program	52
8.6.6	Stakeholder Consultation, Community and Human Resources Strategies	53
9.0	COMMUNITY	54
9.1	Community Engagement	54
9.2	Community Consultive Committee	54
9.3	Environmental Complaints	55
10.0	INDEPENDENT AUDIT	57
11.0	INCIDENTS AND NON-COMPLIANCES DURING THE REPORTING PERIOD	58
12.0	ACTIVITIES TO BE COMPLETED IN THE NEXT REPORTING PERIOD	60
13.0	REFERENCES	61

LIST OF TABLES

TABLE 1 STATEMENT OF COMPLIANCE	1
TABLE 2 NON-COMPLIANCES	1
TABLE 3 COMPLIANCE STATUS CATEGORIES	2
TABLE 4 SITE CONTACT PERSONNEL	4
TABLE 5 LEASES, LICENCES AND APPROVALS	5
TABLE 6 PRODUCTION SUMMARY	7
TABLE 7 PRODUCTION SUMMARY	7
TABLE 8 EXPORT TRAIN COAL TRANSPORTED BY MONTH	10
TABLE 9 MONTHLY RAINFALL RECORDS	12
TABLE 10 MONTHLY AVERAGE AND MAXIMUM WIND SPEEDS AND DOMINANT WIND DIRECTIONS BY MONTH	13
TABLE 11 MONTHLY MINIMUM, AVERAGE AND MAXIMUM AIR TEMPERATURES.....	13
TABLE 12 DUST DEPOSITION GAUGE RESULTS.....	14
TABLE 13 ANNUAL AVERAGE DUST DEPOSITIONAL GAUGE RESULTS.....	16
TABLE 14 ANNUAL AVERAGE HVAS (PM10) RESULTS.....	16
TABLE 15 GHG EMISSIONS	17
TABLE 16 ABORIGINAL CULTURAL HERITAGE SITES.....	27
TABLE 17 WASTE GENERATION.....	29
TABLE 18 WATER TAKE	32
TABLE 19 INPUT OUTPUT WATER BALANCE STATEMENT FOR SMC.....	33
TABLE 20 ROUTINE SURFACE WATER MONITORING SITES	35
TABLE 21 SUMMARY OF WATER MONITORING RESULTS – 2024 REPORTING PERIOD	36
TABLE 22 SURFACE WATER MONITORING PERFORMANCE OUTCOMES – 2024 REPORTING PERIOD.....	37
TABLE 23 SUMMARY OF MINE WATER STORAGE AND OPEN CUT MONITORING RESULTS – 2024	38
TABLE 24 SUMMARY OF SEDIMENT DAM/DISTURBED AREA DAM MONITORING RESULTS – 2024	38
TABLE 25 BORES MONITORED IN RELATION TO THE STRATFORD PROJECT – 2024	41
TABLE 26 BORES MONITORED IN RELATION TO ROSEVILLE PIT – 2024.....	42
TABLE 27 BORES MONITORED IN RELATION TO BOWENS ROAD NORTH PIT – 2024	42
TABLE 28 GROUNDWATER MONITORING PERFORMANCE OUTCOMES – 2024 REPORTING PERIOD.....	44
TABLE 29 REHABILITATION STATUS	47
TABLE 30 COMMUNITY COMPLAINTS SUMMARY	55
TABLE 31 ENVIRONMENTAL INCIDENT AND NON-COMPLIANCE SUMMARY 2024	58

LIST OF FIGURES

FIGURE 1: REGIONAL LOCATION

FIGURE 2: APPROVED GENERAL ARRANGEMENT

FIGURE 3: ENVIRONMENTAL MONITORING SITES

FIGURE 4: MINING AND REHABILITATION AREAS 2024

LIST OF APPENDICES

APPENDIX 1: FIGURES

APPENDIX 2: METEOROLOGICAL MONITORING

APPENDIX 3: AIR QUALITY MONITORING

APPENDIX 4: SURFACE WATER AND GROUNDWATER MONITORING

APPENDIX 5: BLAST MONITORING

APPENDIX 6: NOISE MONITORING

APPENDIX 7: COMPLAINTS LIST & CCC ANNUAL REPORT

APPENDIX 8: EXPORT TRAIN SUMMARY

APPENDIX 9: ANNUAL BIODIVERSITY REPORT 2024

APPENDIX 10: 2023 INDEPENDENT ENVIRONMENTAL AUDIT RESPONSE TABLE

1.0 STATEMENT OF COMPLIANCE

This Stratford Mining Complex (SMC) Annual Review has been prepared in accordance with Development Consent SSD-4966 *Schedule 5, Condition 4* for the Stratford Extension Project (SEP) for the period 1 January 2024 to 31 December 2024 (the reporting period). This report is also prepared in accordance with the annual reporting requirements for Mining Leases (ML) ML1360, ML1409, ML1447, ML1521, ML1528, ML1538, ML1577 ML 1733 and ML1787.

Table 1 provides a statement of compliance against SCPL's relevant approvals leases and licenses. A summary of compliance with relevant approval conditions within the reporting period is provided in **Table 2**. A compliance table key is provided below in **Table 3**.

Table 1 Statement of Compliance

Were all conditions of the relevant approval(s) complied with?	
SSD-4966	No
ML1360, ML1409, ML1447, ML1521, ML1528, ML1538, ML1577, ML 1733, ML1787	Yes

Table 2 Non-compliances

Relevant approval	Condition #	Condition description (summary)	Compliance status	Comment	Where addressed in Annual Review
SSD-4966 Schedule 3 EPL 5161	Condition 32 Condition L1.1	Return Water Dam (RWD) Pump Line Failure	Non-compliant	Pipeline transferring water from the RWD to the CHPP (Coal Handling and Preparation Plant) for coal processing failed.	Section 7.3.2
EPL 5161	Condition M2.3	EPL Point 2 less than required conductivity monitoring	Non-compliant	Less than required conductivity monitoring was undertaken at EPL Point 2 (W2). Continuous monitoring is required and data was not captured during non-daylight hours for a period of 161 days.	Section 7.3.2
SSD-4966 Schedule 3 EPL 5161	Condition 24 Condition M4.1	Less than required temperature lapse recorded at Point 32 (Upper Inversion Tower)	Non-compliant	Upper Inversion Tower (EPL Point 32) stopped transmitting temperature and humidity data. Continuous monitoring is required and monitoring was not captured for a period of 2 days.	Section 6.1

Table 3 Compliance Status Categories

Risk	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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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)

2.0 INTRODUCTION

Stratford Coal Pty Ltd (SCPL), a wholly owned subsidiary of Yancoal Australia Limited (Yancoal), owns the Stratford Coal Mine (SCM), which is located approximately 100 kilometres (km) north of Newcastle, New South Wales (NSW). SCPL also owns the Bowens Road North Open Cut (BRNOC), located to the immediate north of the SCM. The SCM and BRNOC are collectively referred to as the Stratford Mining Complex (SMC).

Yancoal also owns the Duralie Coal Mine (DCM), which is located approximately 20 km south of the SMC. Prior to the closure of the DCM in December 2021, run-of-mine (ROM) coal from the DCM was transported by rail to the SMC for processing and export.

The SMC was in continuous operation between 1995 and 2024. Mining activities approved under the SCM Development Consent and the BRNOC Development Consent were suspended in mid-2014, however, the export of product coals continued under the SCM Development Consent. The Development Consent SSD-4966 for the SEP was granted on 29 May 2015 and involved the extension and continuation of mine operations at the SMC.

Following final coal extraction in April 2024, the SMC transitioned into mine closure in July 2024 and is currently undertaking detailed mine closure planning, decommissioning of infrastructure and rehabilitation activities including bulk earthworks.

Rehabilitation at the SMC has been undertaken progressively over the life of the mine, with overburden emplacements and backfilled pits shaped and rehabilitated as areas become available.

A full SEP description, including baseline data and a history of operations, is provided in the SMC Rehabilitation Management Plan and SEP Project EIS.

The general arrangement of the approved SMC is provided in **Figure 2 (Appendix 1)**.

Current Status of the Stratford Mining Complex

SCPL has commenced the mine closure phase following the cessation of coal extraction and coal processing activities of run-of-mine (ROM) coal in July 2024.

Key activities of the mine closure phase include:

- undertaking technical studies and site investigations to address closure knowledge gaps and develop detailed decommissioning and rehabilitation execution plans that will deliver optimal rehabilitation outcomes at the site;
- infrastructure decommissioning and demolition;
- bulk rehabilitation earthworks (which may include blasting to achieve final landform design);
- revegetation of final landform in accordance with the Rehabilitation Management Plan (RMP);
- transition of all mining fleet to bulk material movement and rehabilitation activities
- removal of all drilling fleet from the SMC; and
- refinement of monitoring programs and environmental management plans to reflect current operational status.

2.1 Scope

This Annual Review (AR) has been prepared in accordance with *Schedule 5, Condition 4* of SSD-4966. This report is also prepared in accordance with the annual reporting requirements for the Mining Leases held by SCPL and in accordance with the *Annual Review Guidelines* issued by the then Department of Planning, Industry and Environment (DPE) in October 2015.

The AR describes the environmental performance, pollution control and rehabilitation activities at the SMC for the period 1 January 2024 to 31 December 2024. As required by SSD-4966, comparisons of environmental monitoring results have been made against relevant statutory requirements/performance criteria, monitoring results of previous years and relevant predictions of Environmental Assessments. This AR also reports on any non-compliances, trends in monitoring data and any discrepancies between the predicted and actual impacts of the development. Environmental management activities planned for the next 12 months are also discussed.

2.2 Mine Contacts

The SMC is an owner operated mine site by SCPL. Site personnel responsible for mining, CHPP, rehabilitation and environmental issues at the end of the reporting period are provided in **Table 4**.

Table 4 Site Contact Personnel

Position	Name	Contact	Email
Operations Manager, Stratford & Duralie Operations	Mr John Cullen	02 6538 4210	John.cullen@yancoal.com.au
Environment and Community Superintendent	Mr Thomas Kirkwood	02 6538 4208	Thomas.kirkwood@yancoal.com.au
CHPP Superintendent	Mr Bruce Robinson	02 6538 4235	Bruce.robinson@yancoal.com.au
Community Information Hotline	1300 658 239		
Postal Address	PO Box 168, Gloucester, NSW, 2422		

3.0 APPROVALS

3.1 Status of Leases, Licences and Approvals

The SMC operates in accordance with the approvals provided in **Table 5**.

Table 5 Leases, Licences and Approvals

Description	Date of Grant	Duration of Approval	Comment
NSW Development Consent			
Stratford Extension Project Development Consent SSD-4966	29 May 2015	31 December 2025 (mining operations)	<ul style="list-style-type: none"> Action commenced on 4 April 2018 MOD 2 granted 13/01/2020
Mining Leases and Exploration Licences			
ML 1360	21 December 1994 (renewed 21 December 2015)	21 December 2036	Variation of Conditions dated 22 June 2018
ML 1409	7 January 1997	7 January 2039	Renewed 7 March 2018 Variation of Conditions dated 8 October 2018
ML 1447	1 April 1999	1 April 2040	Renewed 14 March 2023
ML 1521	24 September 2002	23 September 2044	Renewed 24 September 2023
ML 1528	20 January 2003	19 January 2045	Renewed 30 July 2023
ML 1538	25 June 2003	24 June 2045	Renewed 31 August 2023
ML 1577	1 March 2006	1 March 2027	Variation of Conditions dated 8 October 2018
ML 1733	8 April 2016	8 April 2037	Variation of Conditions dated 19 February 2018
ML 1787	5 June 2019	5 June 2040	
AUTH 315	27 December 1982	18 January 2027	Renewed 21/12/2022
EL 6904	9 October 2007	9 October 2024	Renewal application withdrawn 17/12/2024
Environment Protection Licences			
Environment Protection Licence (EPL) 5161	1 July 2000	Until the licence is surrendered, or revoked	As modified by subsequent variations (refer to EPA website)
Radiation Licence	29 Jan 2024	29 Jan 2025	
EPBC Act Approval			
Commonwealth Approval (EPBC 2011/6176)	29 January 2016	30 November 2030	Commencement of Action 04/04/2018
Water Licences			
Water Access Licences (WAL 41534, WAL 41535, WAL 41536, WAL 41537, WAL 41538)	Various	Perpetuity	Groundwater extraction – open cut dewatering
Groundwater bore	Various	Perpetuity	Groundwater monitoring

Description	Date of Grant	Duration of Approval	Comment
licences – various			
Water Access Licences – Surface Water (WAL 19536, WAL 19514, WAL 19540)	Various	Perpetuity	Avon River Water Source

3.1.1 Environmental Management Plans

Environmental Management Plans (EMPs) have been prepared and approved for the SMC. The current versions approved by Department of Planning, Housing and Infrastructure (DPHI) are available on the Stratford Coal website.

Following the finalisation of the Detailed Mine Closure Plan (DMCP) during the next reporting period (refer to Section 12) EMPs will be amended to reflect current site operations within the mine closure phase.

- Environmental Management Strategy (revised). Approved 21 January 2022
- Air Quality Management Plan (revised). Approved 21 January 2022
- Biodiversity Management Plan (revised). Approved 24 February 2023
- Blast Management Plan (revised). Approved 21 January 2022
- Heritage Management Plan. Approved 30 January 2023
- Life of Mine Rejects Disposal Plan (revised), October 2018
- Noise Management Plan (revised). Approved 4 October 2022
- Water Management Plan (revised). Approved 18 October 2021
- Rehabilitation Management Plan (RMP). Revised October 2023
- Pollution Incident Response Management Plan (revised). November 2024
- Squirrel Glider Management Plan (revised). Approved 5 July 2023
- Transport Monitoring Program. Approved 8 March 2018

4.0 OPERATIONS SUMMARY

A summary of operations (Production), during the preceding and current reporting period as well as a forward forecast for the next reporting period is provided below in **Table 6**.

Table 6 Production Summary

Material	Approved limit (specify source)	Previous reporting period	This reporting period	Next reporting period
Waste Rock/ Overburden (BCM)	N/A	3,321,903	2,836,047*	3,335,985**
ROM Coal (tonnes)	2.6 million tonnes per annum	884,706	169,227	0
Co-disposal Reject (tonnes)	N/A	355,535	76,022	0
Saleable product Coal (tonnes)	N/A (Process limit of 5.6 million tonnes per annum)	553,765	93,205	0

* Includes waste rock / overburden and PAF material rehandle

** Forecasted waste rock / overburden for the next reporting period only includes rehandle as there is no longer any prime material movement

Total saleable product coal for the 12-month reporting period was 93,205 tonnes. In total, 2,836,047 BCM of waste rock/overburden was mined or rehandled at the SMC during the reporting period.

Saleable coal production by month for the reporting period is listed in **Table 7** below.

Table 7 Production Summary

Month	Coking Coal	Thermal Coal	Total Product Coal
January 2024	5,786	13,801	19,587
February 2024	8,550	17,508	26,058
March 2024	6,986	15,068	22,054
April 2024	4,470	9,929	14,399
May 2024	619	2,562	3,181
June 2024	0	4,151	4,151
July 2024	0	3,775	3,775
August 2024	0	0	0
September 2024	0	0	0
October 2024	0	0	0
November 2024	0	0	0
December 2024	0	0	0
Total Annual	26,411	66,794	93,205

4.1 Exploration

Exploration activities occur in the Mining Lease (ML) and Exploration Lease (EL) areas within, and external to, the open cut footprints and are used to investigate aspects such as geological features, seam structure and coal/overburden characteristics as input to detailed mine planning and feasibility studies.

An SMC Group ML Annual Exploration Report 2024 has been prepared and lodged for the period 21/12/2023 to 20/12/2024. Furthermore, Annual Exploration Reports and Community Consultation Reports have been prepared and lodged for AUTH 311, AUTH 315 and EL 6904.

Detailed hydrological studies (including groundwater and surface water studies), forming part of the mine closure studies are still ongoing.

During the reporting period exploration activity within AUTH 315 and ML1787 continued which included core drilling and costean sampling to prove or disprove coal resources as part of a feasibility study for future land use options.

During the reporting period EL 6904 was withdrawn in accordance with the provisions of Section 130 of the *Mining Act 1992*. The withdrawal took effect on 17 December 2024.

Exploration activities are undertaken in accordance with the RMP. Exploration outside the ML area requires a Review of Environmental Factors prior to activities commencing.

4.2 Estimated Mine Life

SCPL has commenced the mine closure phase following the cessation of coal extraction and coal processing activities, however, SSD-4966 provides approval for activities described in the SEP Environmental Impact Statement (EIS 2012) and includes:

- eleven (11) years of mining;
- up to 2.6 Mtpa ROM coal;
- three (3) new open cut mining areas; and
- use of existing CHPP and infrastructure.

Schedule 2, Condition 5 of SSD-4966 permits the carrying out of mining operations on the site until 31 December 2025.

SMC operates under a Rehabilitation Management Plan (RMP) which includes the ongoing compliance requirements in accordance with SSD-4966, ML1360, ML1409, ML1447, ML1521, ML1528, ML1538, ML1577, ML1733 and ML1787 including rehabilitation obligations. A Rehabilitation Report and Forward Program for SMC has also been prepared which provides details of the scheduled surface disturbance and rehabilitation activities at the SMC from 1 January 2022 to 31 December 2024.

4.3 Mining

During coal extraction the SMC consisted of an open-cut mine which utilised truck and excavator mining methods to produce ROM coal. ROM coal was processed at the CHPP and transported via train on the North Coast Railway to the Port of Newcastle for distribution to the export market.

The following key activities were undertaken during the reporting period:

- mining continued in the Avon North Open Cut within the existing footprint; and

- reprocessing of coal from the western co-disposal area (CODAM) continued during the reporting period.

Mining operations are permitted seven (7) days per week. Operational time restrictions apply as prescribed in SSD-4966. During the reporting period SCPL complied with the approved operating hours.

The rehabilitation and bulk earthworks activities proposed for the next reporting period are described in the *Stratford Coal Mine Forward Program 1 January 2024 – 31 December 2026* (Forward Program) available on the Stratford Coal Website.

Surface facilities at the mine are shown on **Figure 2 (Appendix 1)** and current mine development and rehabilitation as of 31 December 2024 are indicated within **Figure 4 (Appendix 1)**.

4.4 Coal Handling and Beneficiation

4.4.1 CHPP Throughput and Rejects Management

Prior to entering mine closure, coal at the SMC was processed in a 600 tonnes per hour (tph) coal handling and processing plant (CHPP) with coarse coal (i.e. 50mm down to 1mm) treated using dense medium cyclones (50mm to 1.5mm) and “teeter bed” separator/spirals (1.5mm to 0.4mm) and fine coal using floatation (0.4mm to <0.1mm). The CHPP operated on a two shift, 5 days per week basis. During the next reporting period, power supply to the CHPP will be terminated and infrastructure decommissioning works will commence.

Feed to the CHPP was by front end loader based on the blending of coal plies from the ROM stockpile. The essential elements of the CHPP and the design capacities were as follows:

ROM coal processing	5.6 Mtpa maximum
CHPP feed rate	600 tph
Product coal	3.3 Mtpa
Train load-out rate	3,000 tph

Reclaimed previously emplaced CHPP reject material was also used as feed for the CHPP, as an addition to SMC ROM coals during the reporting period.

4.4.2 Coal Stockpile Capacity (Rom and Product)

ROM coal stockpile capacity	150,000 t
Product coal stockpile capacity	400,000 t

4.4.3 Product Transport

All saleable (product) coal was transported from site by rail. A total of fifty (50) export trains were loaded during the reporting period. *Schedule 2, Condition 8* of SSD-4966 permits a maximum of six (6) laden trains per day and no more than two (2) laden trains during night-time hours to be dispatched. SCPL was compliant during the reporting period with regard to export trains.

A summary of product coal transported during the reporting period is provided below in **Table 8**. The minor difference in totals between Table 7 and Table 8 is due to stockpiled coal at the end of 2023 to be railed in 2024. Records of the export train movements are provided in **Appendix 8** and are also available on the Stratford Coal website. The last train railed from the SMC was on 23 July 2024.

Table 8 Export Train Coal Transported by Month

Month	Product Coal Transported (tonnes)
January 2024	46,271
February 2024	26,864
March 2024	28,741
April 2024	6,316
May 2024	10,125
June 2024	24,261
July 2024	12,660
August 2024	0
September 2024	0
October 2024	0
November 2024	0
December 2024	0
Total Annual	155,238

4.4.4 CHPP Reject Management

During coal extraction reject material produced at the SMC CHPP was disposed of in accordance with the SMC Life of Mine Rejects Disposal Plan (RDP) (SCPL, 2018). Reference should be made to the RDP for a detailed description of reject management at the SMC. Details of management measures undertaken at SMC are found in Section 7.3 of the SMC Surface Water Management Plan (SWMP).

Prior to the cessation of coal extraction, the coarse and fine reject materials were pumped via pipeline from the CHPP to the Stratford Main Pit where they were deposited in locations below the simulated final void groundwater levels. Monitoring results for the CHPP rejects are included in **Section 6.12**.

5.0 ACTIONS REQUIRED FROM PREVIOUS ANNUAL REVIEW

DPHI provided notification on 12 September 2024 that the SMC Annual Review 2023 satisfied the reporting requirements of the Development Consent (SSD-4966) and the Department's Annual Review guidelines. No additional actions were requested for future SCPL Annual Review documents.

6.0 ENVIRONMENTAL PERFORMANCE

A brief review of environmental performance in relation to SSD-4966 conditions is provided below. This performance is further discussed in the sections on environmental management activities and environmental monitoring. The location of environmental monitoring sites undertaken during the 2024 reporting period are identified in **Figure 3 (Appendix 1)**. This section provides summary details on:

- **Section 6.1** – Meteorological overview
- **Section 6.2** – Air Quality
- **Section 6.3** – Biodiversity
- **Section 6.4** – Blasting
- **Section 6.5** – Noise
- **Section 6.6** – Heritage

Water, Rehabilitation and Community aspects are reported in **Sections 7.0, 8.0 and 9.0** respectively.

6.1 Meteorological Monitoring

A meteorological station is operated at SMC as required by SSD-4966. The location of the meteorological station and the two inversion monitoring towers is shown on **Figure 3 (Appendix 1)**.

6.1.1 Rainfall

Table 9 below summarises rainfall records obtained from the site Weather Station rain gauge compared to the 1908 – 2007 district average. Graphical representation of the historical average and monthly recorded rainfall during the reporting period is provided in **Appendix 2**.

Table 9 Monthly Rainfall Records

Month	Year				Stratford District Average 1908-2007
	2024		2023		
	Monthly Total (mm)	No. of Rain Days/Month ^{1,2}	Monthly Total (mm)	No. of Rain Days/Month ^{1,2}	
January	51.8	13	154.0	10	113.7
February	135	13	49.6	7	114.8
March	53.6	11	161.0	11	129.3
April	153.8	14	58.8	13	78.2
May	146.8	22	33.2	4	71.6
June	106.4	11	11.6	2	69.4
July	32.6	12	18.4	5	52.7
August	42.4	13	15.8	6	47.1
September	102	8	4.6	2	50.5
October	64.4	13	62.0	6	65.5
November	107.2	11	91.2	8	82.7
December	38.2	8	103.2	11	102.2
Total	1034.2	149	763.4	85	977.7

Notes:

1. No. of Rain Days/Month - the number of days in the month on which rain fell

2. When tipping bucket rain gauge data used, a "rain day" by definition requires a minimum recording of >0.20mm comprising dew, heavy fog or light rain (or a combination thereof).

The 2024 calendar year rainfall total was higher than both the long-term district average and the 2023 calendar year rainfall total. Six of the twelve months in 2024 exceeded their respective long-term average.

6.1.2 Wind Speed and Direction

Table 10 below indicates the monthly average and maximum wind speeds and dominant wind directions for the reporting period. The graphical representation of the daily average and maximum wind speeds recorded and monthly wind roses for each month during this period are provided in **Appendix 2**.

Table 10 Monthly Average and Maximum Wind Speeds and Dominant Wind Directions by Month

Month	Average wind speed (k/hr)	Maximum wind speed recorded (k/hr)	Dominant wind directions
January	8.9	51.9	ESE
February	8.6	33.8	ESE
March	7.2	45.4	ESE
April	7.1	48.2	SSE
May	5.8	33.5	W
June	6.1	45.4	WNW
July	7.7	51.4	WSW
August	6.9	37.2	WSW
September	8.0	41.3	SW
October	8.2	45.3	SSE
November	8.5	52.8	E
December	9.3	39.6	SE

6.1.3 Temperature

Table 11 summarises monthly air temperatures. The graphical representation of the daily minimum, average and maximum atmospheric temperatures recorded for each month is provided in **Appendix 2**.

Table 11 Monthly Minimum, Average and Maximum Air Temperatures

Month	Minimum air temp recorded (°C)	Average air temp (°C)	Maximum air temp recorded (°C)
January	13.5	23.7	41.6
February	14.4	23.2	40.0
March	11.2	21.2	38.6
April	6.5	17.5	31.8
May	1.5	13.4	23.1
June	-0.1	10.6	23.4
July	-0.1	10.5	23.2
August	0.3	13.8	30.3
September	2.0	15.0	39.7
October	6.2	17.0	30.9
November	10.7	21.3	38.9
December	9.8	23.4	38.6

During the reporting period there was one (1) meteorological monitoring incident. This involved the Upper Inversion Town (EPL Point 32) failing to transmit temperature and humidity data causing less than required

temperature lapse rate recording at the monitoring point. Continuous monitoring is required *under Schedule 3, Condition 23* of SSD-4966 and *Condition M4.1* of EPL 5161 and monitoring was not continuous for a period of 39 hours between 9:15pm on 21 May 2024 until 6:15am on 23 May 2024. The inversion tower was promptly repaired by SCPL personnel and a specialised technician who replaced the module that collects temperature and humidity data.

6.2 Air Quality

SMC manages air quality in accordance with an Air Quality Management Plan (AQMP). The AQMP was revised and approved in January 2022. The monitoring network under the approved AQMP includes:

- seven (7) static dust deposition gauges
- five (5) high volume PM10 air samplers
- two (2) real-time dust monitors (TEOM); and
- one (1) meteorological monitoring station.

6.2.1 Review of Air Quality Monitoring Results and Performance

6.2.1.1 Dust Deposition Gauges

Table 12 shows the dust deposition results for seven (7) dust deposition gauges and annual averages at the end of the reporting period.

Table 12 Dust Deposition Gauge Results

Month	D5	D6	D7	D8	D9	D10	D11
January	1.1	0.9	1.4	1.1	1.6	2.1	1.7
February	0.5	0.4	1.4	0.3	3	0.6	0.6
March	2.1	1.1	1.0	7.6 ^{DCIV}	0.7	0.3	0.6
April	0.1	0.4	0.4	1.7	0.9	0.9	2.1
May	0.3	1.8	0.9	0.3	9.5 ^{DI}	0.1	0.5
June	0.1	0.2	0.1	0.3	1.3	0.1	0.1
July	0.2	0.2	0.1	1.7	0.3	0.1	0.2
August	0.4	0.4	0.1	0.7	0.3	0.3	0.4
September	0.2	0.1	<0.1	0.2	0.2	0.1	0.4
October	0.4	0.4	0.4	8.5 ^{DCIV}	0.9	0.4	0.2
November	0.2	0.2	0.3	0.3	0.4	0.4	0.4
December	0.4	0.5	0.8	0.2	0.9	1.2	1.0
Annual Average	0.4	0.6	0.6	0.7	1.0	0.6	0.7

Notes/excluded results, Visual Description Guide:

D=Dirt: Subhedral to euhedral crystalline grains including fine sand, clay and other fine mineral particulates.

C=Coal: Black sharp angled grains with glossy conchoidal fractures or dull with cellular feature.

I=Insects: Whole insects e.g. spiders, ants, moths or outer parts of insects including wings, legs and exoskeletons.

S=Polysaccharide Slime: Slimy gelatinous material including decomposed soft body parts of insects and vegetation.

V=Vegetation: Plant debris and algae including trichomes, decomposed organic matter and particulates showing characteristic cellular structures.

B=Bird droppings: The most common contamination.

O=Other contaminants not included above.

Dust levels recorded had an average value of 0.7 g/m²/month (contaminated results not counted). Elevated values were at times affected by various degrees of contamination from insects, bird droppings, vegetation (seeds/grasses) and algae. Three gauges were deemed contaminated during the reporting period; D8 in March and October 2024, and D9 in May 2024.

6.2.1.2 High Volume (PM10) Air Samplers

HVAS PM10 monitoring results show that all monitoring locations (in terms of monitored days) did not exceed the National Environmental Protection Measure (NEPM) of 50ug/m³/day, listed under *Schedule 3, Condition 19* of the Development Consent. **Figure 3 (Appendix 3)** shows the recorded PM10 24hr results across the five HVAS monitoring sites during the reporting period.

The HVAS annual rolling averages remained low, and fluctuations generally reflect changes in meteorological conditions throughout the year, i.e. rainfall and wind (refer **Figure 4, Appendix 3**).

6.2.1.3 High Volume (TSP) Calculation

A site-specific correlation between Total Suspended Particulates (TSP) and PM10 concentrations was developed by SCPL, based on co-located HVAS measuring PM10 and TSP as per the AQMP. From the monitoring, approximately 45% of TSP was PM10, which compares well with the relationship developed by the NSW Minerals Council for the Hunter Valley (NSW Minerals Council, 2000), which found that approximately 40% of TSP is PM10.

Figure 5 (Appendix 3) shows the TSP estimates across the five HVAS during the reporting period. The Development Consent Criteria of 90ug/m³ was not exceeded during the reporting period.

The HVAS monitoring results are generally similar to those reported in previous ARs and align with predictions made in the EIS (2012) that particulate levels (PM10 and TSP) would not exceed relevant air quality criteria at any residence.

6.2.1.4 TEOM (PM10) Monitoring

The annual average PM10 for the Stratford TEOM from 1 January 2024 to 31 December 2024 was 10.4ug/m³. The annual average PM10 for the Craven TEOM from 1 January 2024 to 31 December 2024 was 7.3ug/m³. The 24 hour average results for the reporting period and graphical representation of the rolling annual average of PM10 results are provided in **Appendix 3**.

The TEOM results are generally consistent with those measured by the HVAS units. The TEOM results continue to be utilised as a management tool for operations to determine proactive and reactive dust controls.

A register was maintained of any trigger alarms from the TEOM system to record the response implemented by SCPL. Alarms during the reporting period primarily resulted from either external events such as nearby demolition works, wind, rain, and bushfires, or system faults such as erroneous recorded values. The real-time dust monitoring response register for the reporting period is provided in **Appendix 3**.

TEOM data is screened to check the operating state of the instrument and the validity of air quality monitoring data through:

- checks on equipment status codes;
- comparison of measure values to upper and lower limits (range check);

- rate of change checks to identify data that changes too rapidly or not at all (stuck signal); and
- physical principle assessments relating two or more variables (e.g. dew point should never exceed the dry-bulb temperature).

6.2.1.5 Analysis of Data Trends and Comparison with EA Predictions

Table 13 presents the annual average dust deposition levels at the end of the reporting period (December 2024) along with the previous five years. The 2024 reporting period annual average dust deposition levels are within the range of results recorded in the previous five years at all sites, except D9 which is located near the Craven village, which had a negligible annual average increase. All 2024 annual averages are well below the performance criteria. Graphical representation of dust gauge results and annual rolling averages are provided in **Appendix 3**.

Table 13 Annual Average Dust Depositional Gauge Results

Reporting Period	Total Insoluble Solids (g/m ² /month)						
	D5	D6	D7	D8	D9	D10	D11
Criteria	4.0	4.0	4.0	4.0	4.0	4.0	4.0
2019	1.1	1.2	0.9	1.3	1.0	1.2	1.7
2020	0.6	1.1	1.2	1.0	0.8	1.1	0.9
2021	0.4	0.5	0.4	1.8	0.8	0.4	0.8
2022	0.5	0.5	0.4	2.3	0.9	0.6	0.5
2023	0.6	0.7	0.5	1.2	0.9	0.5	0.6
2024	0.5	0.6	0.6	1.9	1.7	0.6	0.7

The dust deposition monitoring results are similar to results presented in previous reports and align with predictions made in the SEP EIS (2012) that dust deposition levels would not exceed relevant air quality criteria at any private residence.

Table 14 presents the reporting period (December 2024) HVAS PM10 annual averages along with the previous five years.

Table 14 Annual Average HVAS (PM10) Results

Reporting Period	PM10 (µg/m3)				
	Stratford	Craven	Ellis	Clarke	Glen Road*
Criteria	30	30	30	30	30
2019**	16.1	15.7	24.6	16.1	30.7
2020	8.6	8.7	9.8	8.3	10.5
2021	6.2	6.0	6.3	5.8	8.0
2022	5.6	6.0	5.2	4.3	6.0
2023	7.7	7.5	7.7	7.2	9.6
2024	7.6	8.5	5.9	8.0	6.4

*Glen Road added to monitoring program late 2019

**High results recorded due to extraordinary bushfire events during 2019

Annual averages for all sampling locations were well below the 30 µg/m3/day criterion set under the Development Consent. The HVAS rolling averages generally consistent over the 12-month period but are consistent with previous years (excluding 2019 where widespread bushfires caused elevated results).

Results of HVAS monitoring are in concurrence with the EIS (2012), which predicts the annual average PM10 criteria of 30µg/m3 will not be exceeded at any private receiver and that project only 24-hour PM10 concentrations will not be above the 50 µg/m3 assessment criteria at any privately owned receiver. The HVAS annual rolling averages reduced to near background levels following exclusion of bushfire affected results. HVAS results remain low, and fluctuations generally reflect changes in meteorological conditions throughout the year, i.e. rainfall and wind.

6.2.2 Greenhouse Gas

Measures taken to minimise GHG emissions from the SMC are described in Section 6.2 of the AQMP.

Yancoal reports SMC emissions under the National Greenhouse and Energy Reporting Scheme (NGERS) each financial year. SMC Scope 1 and Scope 2 total emissions calculated for the 2023-2024 financial year were 19,486 tCO₂-e. SMC Scope 1 and Scope 2 total emissions calculated for the 2022-2023 financial year were 31,985 tCO₂-e. The approximate 39% decrease in emission can be attributed to coal mining activities reducing during the first quarter of 2024 and ceasing in April 2024. Emissions over recent reporting periods are shown in **Table 15**.

The Stratford Extension Project EIS (2012) provided estimates of direct (Scope 1) and indirect (Scope 2) greenhouse gas emissions based on projected operations over Year 1 (2013) to Year 11 (2024). Emissions during the reporting period are generally consistent with EIS predictions which indicated reduction in emissions during the final year of operations due to reductions in diesel use, fugitive emissions, and electricity usage.

The NGER data reported by SMC is subject to review by the (Commonwealth) Clean Energy Regulator under the NGER Act and includes third party assurance.

Table 15 GHG Emissions

	2020-2021	2021-2022	2022-2023	2023-2024
Scope 1	23,116	25,969	21,832	12,889
Scope 2	9,296	12,759	10,153	6,597
Total GHS Emissions (tCO₂-e)	32,412	38,728	31,985	19,486

6.2.3 Air Quality Complaints

There were nil complaints related to air quality received during the reporting period. SCPL continues to implement measures to reduce the impacts to air quality far as reasonably practicable. A full detailed complaints list is provided in **Appendix 7**.

6.3 Biodiversity Management

In accordance with *Schedule 3, Condition 33* of SSD-4966, SCPL is required to implement the Biodiversity Offset Strategy and achieve the broad completion criteria to the satisfaction of the Secretary of the DPHI. The management of biodiversity at the SMC in both the ML areas and the Biodiversity Areas is undertaken in accordance with the approved Biodiversity Management Plan (BMP).

The *Stratford Mining Complex Annual Biodiversity Report 2024* provides a review of the effectiveness of measures in the BMP for the annual year ending 31 December 2024 in accordance with Section 8.2.1 of the

BMP. The scope of the report includes the biodiversity management activities across the ML areas, the Biodiversity Offset Areas and the Biodiversity Enhancement Areas.

In accordance with the BMP, the *Stratford Mining Complex Annual Biodiversity Report 2024* is included in **Appendix 9**. A summary of the main biodiversity activities and conclusions are provided in the subsections below.

6.3.1 Vegetation Clearance Report

Vegetation clearance is undertaken in accordance with the BMP Section 4.1 Vegetation Clearance Protocol. Prior to any clearance operations being undertaken a Clearing Plan is prepared, and pre-clearance surveys are undertaken.

Information obtained during the preparation of the Clearing Plans and the vegetation clearance activities (i.e. habitat features, hollows cleared, and fauna observed) is used to determine the requirements for nest box replacement in the Biodiversity Offset and Enhancement Areas.

During the 2024 reporting period, minor vegetation clearance was undertaken as part of the exploration drilling program that commenced in 2023. There was no clearing of native vegetation as part of this program, all drillholes were placed on previously cleared pasture directly next to or on existing light vehicle tracks.

6.3.2 Managing Access, Fencing, Gates and Signage

Managing access, fencing, gates and signage is undertaken in accordance with the BMP Section 5.1 and 5.2.

During the reporting period, mapping of fencing, access tracks and signage has been completed to assist with ongoing management of the Biodiversity Offset and Enhancement Areas. During the reporting period the removal of redundant fencing has continued, and maintenance of existing fencing has been undertaken as required. Access tracks and previously erected signage have continued to be maintained.

6.3.3 Revegetation Management

Seed Collection and Propagation

Seed collection and propagation is undertaken in accordance with the BMP Sections 4.1.5 and 5.3.

Revegetation in the BMP Revegetation Areas occurs via seed and tube-stock. Local endemic (adapted) species are preferentially be used where a seed supply is available, however consideration will be given to the use of a high-quality seed sourced further from the site as required.

In preparation for revegetation works each year, SCPL has prepared a scope and schedule for the revegetation works to be implemented. The total volume of seed required was calculated based on the floral listings for the target communities in the BMP appendices.

Gloucester Worimi First Peoples Aboriginal Corporation, Hunter Indigenous Plants and Kleinfelder have been engaged to assist in the propagation of native plant species with tube-stock grown under controlled nursery conditions and delivered to site as required for revegetation works in the next reporting period.

Revegetation and Regeneration

Revegetation management is undertaken in accordance with the BMP Section 5.3. The aim of revegetation is to establish a range of habitat niches including native canopy, and understorey. The Revegetation Area in the Biodiversity Areas will continue to be progressively revegetated to substantially increase the area of

native vegetation in the area and maximise habitat diversity and a range of successional stages. Future vegetation monitoring will determine future infill planting programs.

During 2024, SCPL prepared a three-year scope and schedule for the revegetation works to be implemented in the Biodiversity Areas 2024-2027. The site planning included review of biodiversity monitoring and calculation of seed and tube-stock requirements based on monitoring results and the indicative lists of flora species in the BMP Appendices.

The last round of tube stock planting was finished in May 2023. The next round of tubestock planting is scheduled to commence in April 2025. Details of the 2025 revegetation works will be included in the next Annual Biodiversity Report.

Monitoring

Vegetation Monitoring commenced in 2019 to assess the effectiveness of revegetation in the Revegetation Area and to assess the natural regeneration in the Existing Remnant Vegetation Area. The data gathered in 2019 serves as a baseline to assess the success of the revegetation efforts for future reporting periods.

Within the reporting period, annual vegetation monitoring was undertaken in February 2024. Habitat and vegetation monitoring is discussed in Section 11 of the Annual Biodiversity Report (**Appendix 9**). Habitat and vegetation condition monitoring will continue to be undertaken annually to quantitatively measure the change in habitat and vegetation condition over time and to inform any ongoing maintenance requirements.

6.3.4 Weed Control and Monitoring

Weed control is undertaken in accordance with the BMP Sections 4.4 and 5.6. The weed control program aims to manage weeds to minimise their impact on native flora and fauna.

Three contracting companies are engaged at the SMC to undertake weed management activities on an ongoing basis. Weed management during Summer 2023/24 and was continued through Autumn. During Winter 2024, a manual weed control program was implemented in the Stratford woodland rehabilitation area. Summer 2024/25 weed spraying programme commenced again during October 2024 and will continue through Autumn 2024.

The weed control activities in 2024 continued to target areas of known weed infestation. The key species targeted included Blackberry, Lantana, Privet, Wild Tobacco, Giant Parramatta Grass and control of the Cadagi Tree.

Weeds mapping has been undertaken during the reporting period to assist in setting future management priorities and developing on-ground actions for weed control. Refer to the Annual Biodiversity Report (**Appendix 9**).

6.3.5 Feral Animal Control and Monitoring

Feral animal control is undertaken in accordance with the BMP Section 4.5 and Section 5.7. The objective of feral animal control program is to manage feral animals to minimise their impact on native flora and fauna in the Biodiversity Offset and Biodiversity Enhancement Areas or the impact on agricultural production in other surrounding areas.

MDP Vertebrate Pest Management has been engaged by SCPL since 2016 to implement wild dog and fox control programs across property owned by SCPL. During 2024, no feral animal control programs were undertaken. The last control program at the SMC was conducted between 28 August and 26 September 2023

and focused on wild dog, fox and cat control. The program was productive and successful with a total of 3 wild dogs, 2 foxes and 2 feral cats trapped over the 30-Day program. The next feral animal control program is scheduled for Autumn 2025.

6.3.6 Bushfire Management

Bushfire management is undertaken in accordance with the BMP Sections 4.7 and 5.9. The objective of bushfire management in the Biodiversity Areas is to prevent impacts from unplanned bushfire and to use fire to promote biodiversity.

Bushfire risk has continued to be mitigated through the maintenance and installation of new access tracks and fire breaks within the Biodiversity Offset Areas. Additionally, fuel loads have been reduced during 2024 by routine slashing in the Mining Leases, Biodiversity Areas and other mine owned land.

6.3.7 Nest Box Program

Nest box management is undertaken in accordance with the BMP Section 5.10. Nest boxes have been installed to provide habitat opportunities in the short to medium-term for a number of arboreal fauna species including the Squirrel Glider.

The nest box programme consists of two main components to replace any tree hollows cleared prior to operational activities:

- suitable nest boxes for the Squirrel Glider will be installed at a ratio of least 3:1 for each tree hollow cleared suitable for the Squirrel Glider; and
- for tree hollows that provide habitat to arboreal fauna species (other than the Squirrel Glider), nest boxes will be installed at a minimum ratio of 1:1 (i.e. one nest box of appropriate size to replace one hollow of similar size and properties).

Nest boxes are installed within the Biodiversity Offset Area and Biodiversity Enhancement Area in Existing Remnant Vegetation as well as the Revegetation Area.

In accordance with Section 5.10 of the BMP, nest boxes will be monitored by suitably qualified personnel with quarterly inspections during the first year followed by annual inspections in spring.

Nest box monitoring was undertaken during 9 September, 11 September, 8 to 11 October, and 13 to 14 November 2024. A summary of these monitoring reports is included in the Annual Biodiversity Report (**Appendix 9**).

Nest boxes will continue to be installed in accordance with the BMP.

6.3.8 Squirrel Glider Management Plan

The management of Squirrel Glider populations is undertaken in accordance with the Squirrel Glider Management Plan (SQMP). The SQMP has been prepared to facilitate the management of Squirrel Glider populations at the SMC, Biodiversity Enhancement Areas and Biodiversity Offset Areas.

Squirrel Glider management programs which have commenced include:

- definition of the squirrel glider colonies;
- identification of the squirrel glider home ranges;
- tree hollow census within the home ranges;

- targeted Squirrel Glider nest box program in conjunction with BMP nest box program;
- Squirrel Glider vegetation pathways in conjunction with BMP revegetation; and
- Squirrel Glider population monitoring in conjunction with BMP fauna monitoring.

6.3.9 Biodiversity Offset Monitoring and Reporting

The Biodiversity Offset monitoring program is prescribed in the BMP Section 7. The program aims to monitor and report on the effectiveness of the BMP management measures and progress against the detailed performance and completion criteria.

The Annual Biodiversity Report (**Appendix 9**) provides a review of the effectiveness of measures in the BMP for the annual year ending 31 December 2024. The annual report includes the results of the monitoring for:

- habitat and vegetation monitoring, including visual and photo monitoring;
- fauna monitoring program
- effectiveness of weed control;
- effectiveness of feral animal control; and
- nest box monitoring program.

Habitat and Vegetation Monitoring

Habitat and vegetation condition monitoring is undertaken to quantitatively measure the change in habitat and vegetation condition over time. The visual monitoring and photo monitoring programs are undertaken concurrently with the vegetation monitoring to provide additional information on the change of the Biodiversity Areas over time and inform maintenance requirements.

Annual vegetation monitoring was undertaken in February 2024. Habitat and vegetation condition monitoring will continue to be undertaken annually to quantitatively measure the change in habitat and vegetation condition over time and to inform any ongoing maintenance requirements.

Fauna Monitoring

Monitoring of fauna usage within the Biodiversity Offset and Enhancement Areas is conducted every three years to document the fauna species response to improvement in vegetation and habitat and assess the performance in providing habitat for a range of vertebrate fauna. The surveys include an assessment of habitat complexity, species richness and abundance.

Fauna surveys within the SMC Biodiversity Offset Areas, Biodiversity Enhancement Areas and Stratford Rehabilitation Areas was undertaken in November 2022. The full report is included as an Appendix in the Annual Biodiversity Report (**Appendix 9**) An extracted summary of the survey results is outlined below.

Targeted fauna surveys were undertaken at six sites within the Stratford Offset Areas, two sites within the Stratford Biodiversity Enhancement Area, and two sites within the Stratford Rehabilitation Area, from 7 to 12 November 2022 and 21 to 26 November 2022. At each site survey techniques included pitfall traps, funnel traps, Elliott traps, harp traps, ultrasonic call recording, spotlighting, diurnal bird surveys and reptile searches. Frog surveys were undertaken at four separate sites. Opportunistic observations of signs of fauna were noted throughout the field survey period, including travel to and during transit between surveys sites.

A total of 166 species of vertebrate were recorded, comprising 15 frogs, 13 reptiles, 100 birds and 38 mammals most of which were native.

The fauna surveys confirm that the Offset, Enhancement and Rehabilitation Areas provide foraging and breeding habitat for a range of native vertebrate fauna, including birds, mammals, reptiles, and frogs. Further detail of monitoring results can be found in **Appendix 9**.

6.3.10 Long Term Security and Conservation Bond

Long-term Security

In accordance with *Schedule 3, Condition 36* of Development Consent SSD-4966, SCPL is required to make suitable arrangements for the long-term security of the SEP Biodiversity Offset Area. SCPL has pursued the mechanisms available under section 88E(3) of the *NSW Conveyancing Act 1919*, namely:

- registration of a Positive Covenant under section 88E(3) of the *NSW Conveyancing Act 1919*; and
- registration of a Restriction on the Use of Land by a Prescribed Authority under section 88E(3) of the *NSW Conveyancing Act 1919*.

Public Positive Covenants and Restrictions on the Use of Land for the Biodiversity Offsets have been registered on title with NSW Land and Property Information (LPI) in October 2019. Copies of the executed Positive Covenants and notice of registration of the instruments was included in the 2019 SMC Annual Biodiversity Report.

Conservation Bond

In accordance with *Schedule 3, Condition 40* of Development Consent SSD-4966, SCPL is required to lodge a Conservation Bond with the DPHI which covers the cost of implementing the Biodiversity Offset Strategy detailed in the BMP.

The conservation bond calculation was prepared by Kleinfelder, and a verification of the costs was undertaken by Rider Levett Bucknall. The conservation bond calculation was submitted in January 2019 and subsequently approved by DPE on 15 January 2019.

The Conservation Bond in the form of a bank guarantee was executed and lodged with DPE on 8 February 2019. During 2023, a Conservation Bond review commenced by SCPL and will be finalised within the next reporting period.

6.4 Blasting

6.4.1 Blast Criteria and Control Procedures

Blasting at the SMC is conducted in accordance with *Schedule 3, Conditions 9-15* of SSD-4966, respective EPL conditions and the approved Blast Management Plan (BLMP).

6.4.2 Review of Blast Monitoring Results and Performance

Blasting activities during the reporting period were undertaken within the Avon North Pit.

A total of fourteen (14) blasts were conducted at the SMC during the reporting period, with the final blast being undertaken on 2 May 2024 in the Avon North Pit.

Prior to the final blast, blast monitors were located at the following residences:

- Isaac Property (mine owned) (south-west of blasting);
- Ex-Judge Property (mine owned) (west);
- Atkins Property (mine owned) (north-west);
- Greenwood Property (south); and
- Clarke Property (mine owned) (east).

The locations of blast monitoring units are shown on **Figure 3 (Appendix 1)**.

Monitoring is undertaken at the Clarke property due to restrictions with monitoring at the next closest residence on privately-owned land. Enviro Strata Consulting (ESC) has been previously engaged to undertake an independent assessment of blasting results and prepare a model to extrapolate the overpressure and ground vibration levels at private residences where monitoring is not possible.

Airblast overpressure and ground vibration results for all blasts undertaken during the reporting period are provided in **Appendix 5** and summarised below.

Overpressure Results

There were no exceedances of the overpressure criteria of 120 dBL or 115 dBL overpressure criteria during the reporting period.

Vibration Results

During the reporting period, there were no blasts where ground vibration exceeded 5 mm/s.

Fume Results

The level of blast fume generation is monitored for each blast by the shotfirer as described in the BLMP. During the reporting period, there was no occasion of blast fume being recorded.

The EIS (2012) provides predictions on blast emissions for various residential receivers. The blasting predictions indicate that blasting emissions would generally comply with airblast criteria of 115 dBL and ground vibration of 5 mm/s at nearby private receivers. During the reporting period, predicted blast emissions were generally consistent with measured values.

6.4.3 Property Inspections and Investigations

In accordance with the Development Consent *Schedule 3, Condition 12* landowners within 2km of blasting may request a property inspection to establish the baseline condition of a building. Additionally, in accordance with *Condition 13* if a landowner claims damage has been caused to a building as a result of blasting they may request a property investigation.

Prior to recommencing blasting activities at the SMC, SCPL notified all relevant landowners of their rights in accordance with the Development Consent.

During the reporting period no further building inspections were requested. Building inspections have previously been undertaken by Bill Jordon as a suitably qualified, experienced and independent person to undertake the building condition inspections.

Building condition inspections will continue to be undertaken on request. No requests have been received by SCPL for a property investigation due to claims of damage resulting from blasting activities.

6.4.4 Blasting Complaints

Nil (0) blast related complaints were received during the reporting period. A full list of complaints received, including responses by SCPL is provided in **Appendix 7**.

6.5 Noise

6.5.1 Noise Criteria and Control Procedures

SMC has an approved Noise Management Plan (NMP) that establishes a noise management strategy which:

- identifies noise criteria;
- outlines proactive and responsive noise management and control measures;
- formulates a noise monitoring program;
- establishes data assessment protocols; and
- details reporting and review requirements.

Noise emissions from the SMC are managed in accordance with the criteria and procedures described in the NMP. SCPL implements measures to ensure noise from the SMC is managed to approved levels, through a combination of the following:

- ensuring best management practices are implemented and reviewed;
- implementing noise controls to reduce noise from the source and attenuate noise transmission; and
- if necessary, implementing measures to control noise at receivers following a review of monitoring data.

The SMC noise monitoring program comprises attended noise surveys, real-time noise monitoring, rail noise monitoring, meteorological monitoring and sound power testing. The results of compliance attended monitoring are used to assess compliance with relevant noise impact assessment criteria in SSD-4966 and the NMP. Real-time noise monitoring results are used for ongoing performance assessment and will assist in the implementation of pre-emptive management actions to avoid potential non-compliances.

SCPL undertakes monthly attended noise monitoring surveys in accordance with the NMP to determine the status of compliance with noise limits provided in SSD-4966 and the EPL.

The Sentinex real-time noise (RTN) monitors are used as a management tool for operations to measure mine contribution noise emissions and implement management controls as outlined under the approved NMP. Sentinex RTN monitors are located near Stratford Village and Craven Village.

6.5.2 Review of Attended Noise Monitoring Results and Performance

The summary results of the attended noise surveys undertaken during the reporting period are provided in **Appendix 6**. Noise monitoring locations are shown on **Figure 3 (Appendix 1)**. The full Noise Survey Reports are available at the Stratford Coal website.

Operator-attended operational noise monitoring was conducted monthly at eight nominated locations in the NMP, as well as additional locations representative of receivers in the area surrounding the SMC, in January through to December 2024.

All noise performance assessments of day, evening and night operational noise emissions found SMC to be compliant with the relevant criteria, contained within SSD-4966, at all attended monitoring locations.

6.5.3 Analysis of Data Trends and Comparison with EA Predictions

The SEP EIS 2012 provides predictions on mine contributed noise emissions for various operational years. In terms of the nine monitoring locations (“Atkins”, “Clarke”, “Wadland”, “Hall”, “141 Deards Lane”, “Lowrey”, “Pryce-Jones”, “Van der Drift” and “Greenwood”) predicted mine contributed noise emissions were consistent with measured values for all locations.

Results of noise monitoring during 2017 to 2024 has shown mine contribution to be generally inaudible.

6.5.4 Real Time Noise Monitoring System

A real-time noise (RTN) monitoring system is described in the NMP. Real-time monitoring is used as a management tool to assist SCPL to take proactive management actions and implement additional noise mitigation measures to avoid potential non-compliances. A Sentinex RTN monitor is located near Craven Village and a second Sentinex unit is located near Stratford Village.

Noise investigation triggers have been established in the NMP which send alarms when noise emissions are approaching levels which may exceed the noise criteria at privately-owned receivers. Details of any RTN alarms and the operational responses implemented by SCPL are recorded in the RTN Response Register (**Appendix 6**).

In general, noise alarms during the reporting period related to abnormal meteorological conditions, environmental and traffic noise from The Bucketts Way. The SMC noise contribution was generally inaudible, and the alarms activated by external noise sources. The RTN response register details the response actions taken by SCPL.

To address any noise alarms regardless of abnormal meteorological conditions such as inversions, SCPL continue to implement the management measures described in the NMP. Additionally, SCPL implement operational management measures in accordance with the real-time noise monitoring response protocol described in the NMP Section 7.3.4.

6.5.5 Noise Prediction and Forecasting System

A noise and meteorological forecasting system is implemented at the SMC to predict meteorological conditions for the coming day to determine, one day in advance, where the risk of noise-enhancing meteorological conditions may occur (e.g. based on wind speed, direction and atmospheric stability).

Predictive noise and meteorological forecasting information is provided at the start of every operational shift to inform the need for any control of the locations of major mobile equipment (i.e. to maintain compliance with Development Consent SSD-4966 noise criteria). The predictive meteorological forecasting system operates in conjunction with the real-time monitoring system, providing an alert for the appropriate personnel to review the real-time data and manage the intensity of activities for that day, increase controls (e.g. gear restriction) or limit activity to various areas of the site.

6.5.6 Rail Noise Monitoring

The Stratford export train is required to be approved to operate on the NSW rail network in accordance with the noise limits specified in ARTC's EPL 3142, as per *Schedule 3, Condition 5(d)* of SSD-4966.

The NMP requires rail noise monitoring to be undertaken along the North Coast railway on a quarterly basis at the existing Wards River and Craven village monitoring points.

Rail noise monitoring is reported against rail noise criteria described in Section 4 of the NMP. Rail operations aim to progressively reduce noise levels to the goals of 65dB(A)_{Leq}, (daytime from 7am – 10pm), 60dB(A)_{Leq} (night-time from 10pm – 7am) and 85dB(A) (24hr) max pass-by noise, at one metre from the façade of affected residential properties. This is consistent with the criteria in the ARTC EPL noise limits.

Rail noise monitoring was conducted during the January 2024, June 2024, July 2024 noise surveys when export trains were operating. The last train railed from the SMC was in July 2024, hence no rail noise monitoring was undertaken during Q4. Rail noise survey results are included in the noise survey reports which are available at the Stratford Coal website. Attended noise measurements were conducted at two locations: TN1 (Craven) and TN2 (Wards River Village).

During the reporting period for all rail noise monitoring undertaken, the maximum SMC rail pass-by noise levels complied with the noise goal of 85 dBA at all monitoring locations, excluding the sounding of horns on approach to level crossings.

6.5.7 Mobile Plant Noise Assessments

Sound power testing is undertaken in accordance with the NMP. The indicative mine fleet at the SMC is provided in the SEP Noise Impact Assessment (NIA) (EIS 2012). The NIA provides the overall A-weighted and Linear Sound Power Levels (SWLs) for each item of plant and equipment proposed to be used at the SMC.

Sound power testing of existing equipment at the SMC was undertaken by SLR Consulting during September 2024 and included the entire SMC mobile fleet. This included one (1) excavator, four (4) dozers, two (2) wheel loaders, seven (7) dump trucks, two (2) water carts, two (2) graders and one (1) service truck. Measurements from the September 2024 testing indicated that some equipment exceeded the A-weighted and/or Linear SWL targets. A summary of the results from the sound power testing is included below.

- excavator (EX06) conformed with the A-weighted SWL target however exceeded the Linear target.
- all rear CAT 785 dump trucks (DT107, DT109, DT110, DT111, DT112, DT113 and DT115) exceeded the A-weighted SWL target, however conformed with the Linear target with the exception of DT112 where a negligible exceedance of 1 dB was measured.
- the CAT 988 ROM loader (WL402) conformed with both the A-weighted and Linear SWL target. The Hitachi WA900 loader (WL401) exceeded both the A-weighted and Linear SWL target.
- both water carts (WC502 and WC504) exceeded the A-weighted SWL targets during static and dynamic operation, however conformed with the Linear targets during dynamic operation. During static operation a negligible exceedance of 1 dB above the Linear SWL was measured.
- all dozers (DZ214, DZ217, DZ218 and DZ219) conformed to the A-weighted and Linear SWL targets during static operation. During dynamic operations DZ214 and DZ219 exceeded the A-weighted target SWL by 1 dB and 4 dBA, respectively during second gear operation.

- the results of equipment measured in both the 2022 and 2023 monitoring compared to 2024 showed noise emissions are generally consistent with the exception of DZ218 where significant reductions in 1st and 2nd gear operations were observed and WL401 where noise levels have increased by up to 8 dB.

Notwithstanding some equipment exceeding the relevant SWL targets, given the equipment fleet in use at SMC is considerably less than those predicted in the EIS, the overall sound power level from SMC is considerably less than the predicted 136 dBA.

SCPL is continuing to further develop solutions and reduce sound power levels on mobile equipment. Overall sound power results which exceeded the relevant criterion by 2 dB or less are considered minor and not significant enough to require additional investigation and results that exceeded by 3 dB or more were considered significant. Equipment that has exceeded targets are currently being reviewed to identify possible noise sources and potential noise mitigation options.

Within the next reporting period, SCPL will reconduct sound power testing on the fleet that has received sound attenuation and report in the next Annual Review.

6.5.8 Noise Complaints

Four (4) noise related complaints were received during the reporting period. SCPL continue to implement management and mitigation measures for noise. The complaints list is provided in **Appendix 7**.

6.6 Heritage

Aboriginal heritage and non-Aboriginal heritage at the SMC are managed in accordance with the approved Heritage Management Plan (HMP). The purpose of the HMP is to ensure that the development does not cause any direct or indirect impact on identified Aboriginal or non-Aboriginal heritage sites located outside the approved disturbance area of the development on the site.

6.6.1 Aboriginal Heritage

Aboriginal cultural heritage sites within the vicinity are shown on Figure 3 of the HMP and status of each site is outlined below in **Table 16**.

Table 16 Aboriginal Cultural Heritage Sites

Site Name	AHIMS ¹	Site Type	Status
OS-1	38-1-0087	Open Artefact Scatter	Monitored annually
OS-2	38-1-0088	Open Artefact Scatter	Monitored annually
OS-3	38-1-0089	Open Artefact Scatter	Salvaged 2018
OS-4	38-1-0077	Open Artefact Scatter	Salvaged 2018
OS-5	38-1-0008	Open Artefact Scatter	Salvaged 2019
ST-1	38-1-0079	Scarred Tree	Monitored annually
ST-2	38-1-0080	Scarred Tree	Relocated 2019
ST-3	38-1-0081	Scarred Tree	Monitored annually
ST-4	38-1-0082	Scarred Tree	Monitored annually
IF-1	38-1-0083	Isolated Find	Salvaged 2018
IF-2	38-1-0084	Isolated Find	Salvaged 2018

Site Name	AHIMS ¹	Site Type	Status
IF-3	38-1-0085	Isolated Find	Salvaged 2020
IF-4	38-1-0086	Isolated Find	Salvaged 2020
IF-5	38-1-0031	Isolated Find	Monitored annually
PAD-1	38-1-0101	PAD	Monitored annually
PAD-2	38-1-0078	PAD	Monitored annually
CTS-1	-	Cultural/Traditional Site	Monitored annually, access restricted

¹ AHIMS = Aboriginal Heritage Information Management System

During the reporting period SCPL continued the management of Aboriginal heritage sites associated with the project. The results of all survey activities during the period have been recorded and included on the SMC Heritage database. No salvage activities were completed during the reporting period.

There was no unapproved or unplanned disturbance of any Aboriginal heritage sites during the reporting period. No previously unidentified heritage sites were identified during the reporting period.

6.6.2 Non-Aboriginal Heritage

No items of state or regional non-Aboriginal heritage significance were identified in the vicinity of the SMC (EIS, 2012). If sites with suspected non-Aboriginal heritage significance are identified in the future, an appropriately qualified individual will be required to determine management measures.

There was no unapproved or unplanned disturbance of any non-Aboriginal heritage sites during the reporting period. No previously unidentified heritage sites were identified during the reporting period.

6.7 Waste Management

All waste streams generated at the SMC are managed in accordance with the SMC Waste Management and Minimisation Strategy. Key waste streams (apart from waste rock) generated at the SMC comprise:

- recyclable and non-recyclable wastes;
- sewerage and wastewater; and
- other wastes from mining, bulk earthworks and workshop activities (e.g. used tyres, scrap metal and waste hydrocarbons and oil filters).

All general domestic waste (e.g. general solid [putrescibles] waste and general solid [non-putrescible] waste as defined in *Waste Classification Guidelines Part 1: Classifying Waste* [EPA, 2014]) and general recyclable products are collected by an appropriately licensed contractor. SMC will maintain a register of regulated waste collected by the licensed waste contractor.

Heavy vehicle waste tyres at the SMC are to be disposed into the open cut voids (Bowens Road North Pit and Roseville West Pit) in accordance with the methodology described in the SEP (SCPL, 2012), Condition L3.1 of EPL 5161 and the Waste Management and Minimisation Strategy which is summarised below.

- tyres are stockpiled before disposal in discrete patches;
- overburden is segregated into potential acid-forming and non acid-forming (NAF) materials. Tyres are placed with NAF overburden into backfilled sections of the open cut voids, with approximately 20 m coverage in unsaturated zones above the groundwater table;

- each tyre has a unique serial number that is recorded before disposal; and
- burial locations are recorded in the used tyre register that is maintained on a regular basis by SCPL, and land surveyed (location and depth) (consistent with the SMC Waste Management and Minimisation Strategy)

Scrap metal is collected by a licensed waste contractor for recycling.

Sewage and wastewater from ablution facilities on-site is collected and transferred via a sewerage system to the existing on-site sewage treatment plant. Sewage is treated in the on-site sewage treatment plant (that consists of an aerobic treatment system) and is disposed of in a manner to the satisfaction of the EPA and the MidCoast Council.

6.7.1 Waste Minimisation and Performance

The waste management contractor provides monthly reporting on all waste streams disposed from the SMC. The monthly reports also provide details of recycling achieved and hazardous substances.

A review of the effectiveness of waste minimisation and management measures is provided below, including a comparison against results of previous years and assessment of any trends over time. The volume of waste generated at the SMC decreased from the previous reporting period.

As SMC continues to move into the mine closure phase of operations it is anticipated that waste generation will potentially increase over this period.

During the reporting period the SMC recycled 85.68% of the total waste generated. This is slightly less than previous reporting periods, as the mine has entered the mine closure phase as shown in **Table 17**.

Table 17 Waste Generation

	2020	2021	2022	2023	2024
Total Waste (t)	431.41	521.70	578.12	500.11	526.02
Recycled Waste (t)	375.86	463.29	521.42	429.00	450.71
Percentage Recycled	87.12%	88.80%	90.19%	88.42%	85.68%

6.8 Hazardous and Explosive Materials Management

Hazardous materials are stored and used in accordance with relevant safety data sheets (SDS). SDS's are kept in a file inside the First Aid Room, Emergency Manifest Box at the SMC site entry gate and are available from an online database on the company intranet.

All hazardous waste is appropriately disposed of by a fully accredited waste contractor and waste tracking certificates are supplied to SCPL.

6.9 PAF Material Management and Spontaneous Combustion

An assessment of the geochemical characteristics of the waste rock material associated with the development of the SEP is provided in the Geochemistry Assessment (EIS 2012 Appendix L) prepared by EGi (2012). The Geochemistry Assessment (EGi, 2012) concluded that the waste rock materials generated from

three of the four SMC open cut mining areas are likely to be non-acid forming (NAF). The acid base accounting test work indicates that the Stratford East Open Cut waste rock materials would be expected to be generally potentially acid forming (PAF), with some potentially acid forming – low capacity (PAF-LC) and NAF materials also expected to be present (EIS Appendix L).

PAF material is managed in accordance with Section 7.2 of the SMC SWMP. PAF waste rock material is segregated and selectively handled and then placed in in-pit (below the predicted final water table recovery level) waste rock emplacements.

During operations, limestone is placed on the open pit floor and interim waste rock in-pit and historical out-of-pit waste rock emplacement lifts/faces where PAF material is present, to minimise the generation of acid rock drainage.

SCPL monitors the water quality of contained water storages (i.e. pH and solute concentrations) as part of the existing surface water monitoring program. If in the event acid rock drainage is identified through the surface water monitoring program, specific acid rock drainage controls will be implemented. Refer to the surface water monitoring results in **Section 7.2.2** of this report.

During the reporting period PAF materials have been appropriately managed to minimise the potential for any short-term or long-term effects of acid rock drainage.

Any incidences of spontaneous combustion at the SMC are managed in accordance with a Spontaneous Combustion Management Procedure. Management and mitigation practices generally involve reducing the interaction of potentially reactive materials with water and oxygen by appropriate dumping practices, profiling and capping any materials likely to heat and reducing the time coal faces are exposed prior to mining.

There have been very few occurrences of spontaneous combustion on the Stratford site during the 20 years of operation. During the reporting period there were no spontaneous combustion events on site or observed heating in any stockpiles.

6.10 CHPP Reject Management

Prior to entering mine closure and during coal extraction reject coal material produced at the Stratford CHPP was disposed of in accordance with the SMC Life of Mine Rejects Disposal Plan (SCPL, 2018).

The Development Consent SSD-4966 Table 8 prescribes the performance criteria for CHPP rejects. Reference should be made to the RDP for a detailed description of reject management at the SMC. Rejects, both coarse and fine fractions, were pumped via pipeline from the CHPP to the Stratford Main pit where they were deposited below final void groundwater levels.

Rejects at the SMC have been previously characterised as being PAF and the EIS 2012 geochemical assessment report concluded that implementation of appropriate management measures would be required to manage potential acid rock drainage (ARD) impacts associated with the existing and proposed co-disposed CHPP rejects. Rejects management measures included placement into the Stratford Main Pit where they were inundated with water to prevent significant pyrite oxidation and acid generation in the long term, with monitoring of water quality undertaken during operations and provision for lime (calcium hydroxide - CaOH_2) dosing and limestone (calcium carbonate - CaCO_3) treatment as required.

Reject placement in the Stratford Main Pit for the reporting period involved sub-aqueous deposition only, eliminating the use of reject beaches. Hence, no liming or monitoring of the exposed reject beach was undertaken during the reporting period. Lime dosing of the reject stream was continued.

Water quality monitoring in the Stratford Main Pit is undertaken monthly, refer to the results in **Section 7**. The management measures implemented have successfully controlled the formation of acid conditions in the Stratford Main Pit, with recorded pH circum neutral.

7.0 WATER MANAGEMENT

Water management is undertaken in accordance with the approved Water Management Plan (WMP) and sub-components of the plan including surface water, groundwater and site water balance required under SSD-4966. The local and regional hydrological setting along with the baseline data is provided in the WMP.

SCPL has investigated options for the beneficial reuse of mine water however continue to maintain zero discharge of mine water from site. The mine water balance at SMC is managed predominantly through storage within on site containment facilities. Where possible all clean water is diverted offsite.

7.1 Water Licences

7.1.1 Surface Water Licencing

The SMC is located within the mapped extent of the Avon River Water Source under the *Water Sharing Plan for the Lower North Coast Unregulated and Alluvial Water Sources 2009*. SMC is a water surplus site and no extraction of surface water from any unregulated stream is proposed for the SMC.

7.1.2 Groundwater Licencing

The groundwater systems within which the SMC lies, specifically relate to:

- Gloucester Basin Water Source (i.e. porous rock aquifer) under the *Water Sharing Plan for the North Coast Fractured and Porous Rock Groundwater Sources 2016*
- Avon River Water Source (i.e. alluvial aquifers) under the *Water Sharing Plan for the Lower North Coast Unregulated and Alluvial Water Sources 2009*

SCPL currently holds several WALs in the Gloucester Basin Groundwater Source, for a total of 1,476 share components under the *Water Sharing Plan for the North Coast Fractured and Porous Rock Groundwater Sources 2016*, to account for direct and indirect take of groundwater from the porous rock aquifer.

SCPL holds existing groundwater licences for dewatering issued by the NSW DPE Water that allow for the dewatering requirements from the open cut pits. The estimated groundwater inflows at the SMC during 2024 were below the annual extraction limits as shown in **Table 18**.

Table 18 Water Take

Water Licence	Operation	Entitlement	Estimated 2024 take total (ML)
WAL 41534 (20BL169400)	Stratford Main Pit, Avon North Pit, Stratford East Pit	500ML extraction	122
WAL 41535 (20BL169101)	Stratford (Roseville) Pit	20ML extraction	0
WAL 41536 (20BL169102)	Roseville Extended and West Pit	315ML extraction	167
WAL 41538 (20BL169103)	Bowens Road North Pit	410ML extraction	0
WAL 41537 (20BL169104)	Parkers Pit	186ML extraction	-

7.2 Water Balance

SCPL monitors the water balance for the operation to assist in forecasting and management of site water. The site water balance (**Table 19**) for the reporting period was prepared by ATC Williams.

During the reporting period, no water was extracted from licenced production bores.

Table 19 Input Output Water Balance Statement for SMC

Description	Volume (ML)
Total Inputs	3,523
Total Outputs	1,724
Total Inputs minus Total Outputs	1,799
Storage at Start of 2024	29,212
Storage at End of 2024	31,335
Change in Storage over 2024	2,123

7.3 Surface Water

7.3.1 Surface Water Management

Surface water management is managed in accordance with the SWMP, Appendix 2 of the WMP. The SWMP outlines the procedures and strategies for surface water management at the SMC to ensure compliance with SSD-4966. The SWMP includes the management of clean water and mine related water as outlined below. Mine related water comprises both mine water and sediment laden/turbid water. The local and regional hydrological setting along with the baseline data is provided in the SWMP.

7.3.1.1 Erosion and Sediment Control

The primary objectives of the erosion and sediment control strategy at the SMC are to:

- minimise and control soil erosion and sediment generation in areas disturbed by ongoing mining and construction activities; and
- minimise the potential for mine related activities to lower the water quality (particularly in terms of total suspended solids content) of downstream local watercourses.

Control strategies for soil erosion and sediment migration for the SMC include:

- maximum separation of runoff from disturbed and undisturbed areas;
- construction of sediment dams downstream of disturbed areas to contain runoff up to specified design criteria (refer Design Criteria below);
- subsequent priority use of these waters in SMC related activities and/or natural controlled release to substantial buffer zones in a manner that minimises the potential for change to downstream turbidity;
- selective use of benign flocculants such as gypsum to assist in the settlement of suspended solids if required;
- construction of surface drains to facilitate the efficient transport of surface runoff;
- construction of silt fences downslope of disturbed sites; and

- rapid and progressive stabilisation of disturbed surfaces.

SMC operate a network of sediment control structures to control sediment laden runoff from disturbed areas and operational areas. All sediment control structures at the SMC were reviewed during 2018 following the approval of the SWMP with maintenance or upgrades undertaken in accordance with the SWMP as required. Within the reporting period, no new sediment control structures were constructed.

All sediment dams are inspected/monitored on a minimum quarterly basis or following receipt of sufficient rain whereby such dams have the potential to spill. Maintenance activities are undertaken on sediment dams as required. Sediment dams are cleaned out when the storage volume is reduced by sediment deposition (i.e. when 30% of storage volume is lost to sediment build up) and inspected after major rainfall events. Silt fences are cleaned out and/or repaired to maintain their effectiveness.

During the reporting period there were no sediment dam spills.

In addition to dedicated sediment dams, clean water is directed around disturbed areas (where practicable) using diversion drains/bunds to minimise sediment laden water. Areas under rehabilitation are stabilised by structural controls such as bench drains and contour banks (as required), to break up effective slope length exposed to erosion. Final slopes will generally not exceed 14 degrees to limit the potential for erosion and sediment generation.

Inspections of diversion structures were undertaken during and after rainfall events of >50mm/day or a minimum of every 6 months. Remedial and maintenance works were completed as required within the diversion drains and dams during the reporting period.

7.3.2 Surface Water Monitoring and Performance

SCPL monitors surface water quality on and surrounding the mine site by sampling from a series of selected locations. These locations comprise both streams and water storage structures. A meteorological monitoring station (i.e. weather station) provides site rainfall data. The general locations of these monitoring sites are shown on **Figure 3 (Appendix 1)**.

Surface water monitoring is conducted in accordance with the approved SWMP and EPL 5161.

Surface water is sampled and analysed on a weekly, monthly, event basis or following a sediment dam spill.

Water sampling is not undertaken in no-flow conditions. Collected waters are analysed for a suite of physical and chemical parameters. Results are compared with the performance indicators and measures described in the SWMP Section 9 (WMP Appendix B).

During the reporting period there were two (2) surface water related (minor) incidents. Further details regarding the water related incident are included in **Section 1, Table 3**.

The first incident involved the failure of a Return Water Dam (RDW) Pump Line for 15 minutes, resulting in mine affected water being released into clean water catchment and Biodiversity Enhancement Area and subsequent equipment damage. The second incident involved insufficient water conductivity monitoring at EPL Point 2 (W2) during non-daylight hours due to undiagnosed backup battery failure, resulting in a 37% loss in data. The data was not captured for the period between 20 January 2024 and 30 June 2024 for non-daylight hours only. Since the incident telemetry has been installed at W2 to assist with remote monitoring and transmit real-time data.

The routine surface water monitoring sites at the SMC are described in **Table 20**.

Table 20 Routine Surface Water Monitoring Sites

Site	Area	Property	Hydrological location
W1	Wenham Cox Road	Glenavon	Avon River upstream of the mine (i.e. upstream of junction with Dog Trap Creek)
W2	Marengo	Bignall	Avon River downstream of the mine (i.e. downstream of junction with Dog Trap Creek)
W3	Dog Trap Creek	Ex-Ellis/SMC	Upstream Dog Trap Creek (above junction with Avondale Creek)
W3A	Dog Trap Creek	Ex-Ellis/SMC	Upstream Dog Trap Creek (above junction with Avondale Creek) and Upstream of BRN Operations
W4	Dog Trap Creek	Ex-Atkins/SMC	Dog Trap Creek downstream of junction with Avondale Creek and upstream of Avon River
W5	Wenham Cox Road	SMC	Avondale Creek downstream of mine and upstream of junction with Dog Trap Creek
W6	Parkers Road	SMC	Upstream of Mine on Avondale Creek
W8	Bowens Road	SMC	Avondale Creek in the centre of operations
W9	Glen Road	SMC	Upper Avondale Creek
W10	Lemon Tree Creek - Bowens Road	SMC	"Lemon Tree" Creek upstream of Avondale Creek junction
W11	Dog Trap Creek	Ex-Ellis	Dog Trap Creek upstream of Avon North operations

7.3.2.1 Review of Local Streams Monitoring Results

Reference should be made to accompanying data tables provided in **Appendix 4**.

Assessment of Performance Indicators

The surface water monitoring results are used to assess the SMC against the performance indicators and performance measures as detailed in Section 9 Table 12 of the SWMP. If data analysis indicates a performance indicator has been exceeded or is likely to be exceeded, an assessment will be made against the performance measure. If a performance measure is considered to have been exceeded, the Contingency Plan will be implemented (SWMP Section 10). If data analysis indicates that the performance measure has not been exceeded, SCPL will continue to monitor.

Table 21 provides a summary of surface water analysis of the monitoring data to assess against the surface water performance indicators and measures outlined in Table 12 of the SWMP.

Table 21 Summary of Water Monitoring Results – 2024 Reporting Period

Monitoring Site	Indicator	Long Term Mean	Standard Deviation	12 Month Mean 2024
W4	pH	7.0	0.4	7.0
	EC	566	372	390
	Sulphate	34	56	23
	Iron	0.97	0.92	1.11
W3	pH	7.2	0.4	7.0
	EC	413	201	300
	Sulphate	11	11	13
	Iron	0.99	1.18	1.93
W1	pH	7.1	0.4	7.2
	EC	321	179	270
	Sulphate	8	8	6
	Iron	1.88	2.76	2.61
W11	pH	6.58	0.18	6.62**
	EC	245	104	223**
	Sulphate	18	18	17**
	Iron	0.28	0.73	0.36**
W6	pH	6.7	0.6	6.48*
	EC	660	715	449*
	Sulphate	19	88	4*
	Iron	1.57	1.67	2.6*
W9	pH	6.7	0.6	6.7*
	EC	175	210	113*
	Sulphate	5	5	10*
	Iron	2.26	1.27	2.26*

*Average/mean based on four results only

** Average/mean based on six results only

Assessment of the Performance Indicators and Performance outcomes are presented in **Table 22**. Monitoring results during the reporting period were influenced by below average rainfall resulting in dry/no flow conditions across most upstream sites during the fourth quarter of 2023, and above average rainfall in 2024.

Table 22 Surface Water Monitoring Performance Outcomes – 2024 Reporting Period

Performance Measure	Specific Performance Indicators	Data Analysis to Assess against Performance Indicators	Monitoring			Cascading Trigger Levels	Assessment of Performance Indicator and Performance Measure	Relevant Management and Contingency Measures
			Sites	Parameters	Frequency			
No impact on water quality in Avondale Creek as a result of the SMC.	Greater than negligible decline in water quality at W4 or W3.	<p>Select water quality data analysed annually (as part of Annual Review):</p> <p>The mean and standard deviation for each water quality parameter at W4 and W3 will be calculated from the long-term monitoring data.</p> <p>The mean and standard deviation for each water quality parameter at upstream control sites (W1, W11, W6 and W9) will be calculated from the long-term monitoring data.</p>	<p>W4 (and W3)</p> <p>W1, W11, W6 and W9</p>	EC, pH, SO ₄ , Iron	Monthly/Event	<p>Low Risk (Negligible) Outcome: The 12 month mean is within the long-term data ‘mean plus 1.5 standard deviation’, and the same trigger has not been exceeded at an upstream control site.</p> <p>Moderate Risk Trigger: The 12 month mean exceeds the long term data ‘mean plus 1.5 standard deviation’, and the same trigger has not been exceeded at an upstream control site.</p> <p>High Risk Trigger: The 12 month mean exceeds the long term data ‘mean plus 2 standard deviations’, and the same trigger has not been exceeded at an upstream control site.</p>	<p>Analysis of the monitoring data indicates no statistically significant change in the quality of water at W4 and W3 compared to the long- term data. The 12 month mean for all water quality parameters did not exceed the long-term data mean plus 1.5 standard deviation.</p> <p>Additionally, a similar trend was observed at the reference sites.</p> <p>No further requirement for assessment of Performance Measure.</p>	Continue monitoring as per SWMP.

7.3.2.2 Review of Mine Water Monitoring Results

Mine Water Storages

The monitoring program for the water management system is described in the SWMP Section 8.2.

The performance measure and performance indicator for the mine water storages (SWMP Table 12) states “No discharge of mine affected water to downstream surface waters” indicated by “Modelled forward risk of spill from Stratford Main Pit is negligible”.

Table 23 provides a summary of Stratford mine water storage surface water analysis. The full results are included in **Appendix 4**.

Table 23 Summary of Mine Water Storage and Open Cut Monitoring Results – 2024

Site	pH		EC (µS/cm)		TSS (mg/L)	
	Range	Average	Range	Average	Range	Average
Stratford Main Pit	8.0 - 8.3	8.2	3110 - 3600	3308	5 - 36	9.3
Stratford East Dam	8.2 - 8.9	8.6	651-752	694	5 - 17	6.3
Return Water Dam	7.2 – 8.5	8.0	1984-3550	2664	N/A	N/A
Parkers Pit	6.9 – 8.4	7.7	978 – 2620	1803	8 - 39	21.3
Roseville West Pit	7.8 – 8.4	8.2	3380 – 3860	3673	5 – 12	7.4
Stratford East Pit	7.6 – 8.1	7.8	3330 – 5010	4091	5 – 310	47.6
Avon North Pit	*	8.3**	*	2790**	*	65.0**

N/A = Not applicable

*= Only one sample taken during reporting period.

** Only one value used for average calculation.

Sediment Dams

The management of sediment dams is described in **Section 7.3.1** of this report. The monitoring program for the water management system is described in the SWMP Section 8.2. Monitoring of sediment dams was undertaken on a monthly and rain event basis as required in the SWMP.

During the reporting period there were no spills from sediment dams and disturbed area dams.

Table 24 Summary of Sediment Dam/Disturbed Area Dam Monitoring Results – 2024

Site	pH		EC (µS/cm)		TSS (mg/L)	
	Range	Average	Range	Average	Range	Average
SD12	7.6 – 8.1	7.7	356 – 787	521	5 – 29	11.5
SD15	7.2 – 7.7	7.4	3100 – 4430	3723	5 – 29	7.3
SD16	7.4 – 8.6	7.9	98 – 347	204	17 – 100	48.8
SD17	7.8 – 9.5	8.4	1040 – 3710	1880	5 – 81	14.0
DAD4	8.0-9.5	8.5	1190-3090	2166	5-112	15.6

Site	pH		EC (µS/cm)		TSS (mg/L)	
	Range	Average	Range	Average	Range	Average
DAD10	7.9-8.8	8.3	434-829	664	5-97	23.2
DAD13	7.7-9.1	8.2	631-2080	1251	5-142	35
DAD14	7.5-8.0	7.8	573-2570	1661	5-153	25.1
DAD19	7.1-8.9	7.8	93-981	506	11-128	41.6
DAD20	7.6-8.4	8.0	2320-4430	3463	5-118	19.7

7.3.3 Analysis Data Trends and Comparison with EA Predictions

7.3.3.1 Local Streams Monitoring

As shown in **Table 22**, the monitoring results during the reporting period did not exceed any of the performance indicators or measures. Results of surface water monitoring during the reporting period are consistent with previous year's monitoring results are in concurrence with the EIS 2012 that concluded *"mining operations at the SMC would not jeopardise local or regional water quality"*.

During the reporting period the Gloucester region experienced above average rainfall. This is reflected in the monitoring results.

7.3.3.2 Mine Water Monitoring

The simulated water quality for the SMC water management system was prepared for the EIS 2012 including a salinity balance. Mine water pH has remained generally near neutral or slightly alkaline for the life of the project. The Stratford Main Pit EC trend has been generally consistent with the simulated EC.

7.3.4 Biological Monitoring

As part of SMC's environmental monitoring program, Invertebrate Identification Australasia has been commissioned to conduct biological (aquatic ecology – macroinvertebrates) monitoring of the streams near the SMC. Biological monitoring has been conducted each year since the start of mining operations.

The twenty-third (23) annual biological monitoring was conducted in September 2024 and involved sampling from six sites. For the September 2024 survey a total of 39 families of aquatic macroinvertebrates were recorded (Invertebrate Identification Australasia, 2024). The report concluded that;

"there are no adverse impacts on the Avon River and its tributaries that are associated with the Stratford Mine complex and its operations." (Invertebrate Identification Australasia, 2024).

Biological monitoring reports to date have not indicated any significant adverse effects on the aquatic ecosystem as a result of the mine's operations as per predictions made in the environmental assessments.

7.4 Groundwater

7.4.1 Groundwater Analysis

A Groundwater Management Plan (GWMP) (WMP Appendix 3) has been prepared to control potential impacts on local and regional groundwater resources and includes a monitoring program to validate and review the groundwater model predictions.

Groundwater characteristics of the mine have been studied prior to and over the life of the SMC and for the SEP EIS. A hydrogeological characterisation of the Gloucester Basin is included in the GWMP.

Groundwater resources within the project area were utilised in the early stages of the Stratford Project, as required, to provide make-up water for the CHPP. Since the mine start-up period, water has not been in deficit and no groundwater harvesting has occurred.

Locally there is little reliance on groundwater bores as a source of water, as agricultural enterprises predominantly rely on surface water sources which are more abundant and generally better quality. There are no high priority groundwater dependent ecosystems (GDEs) identified within the WSP as occurring in the vicinity of the SMC.

Prior to entering mine closure, groundwater reporting to the SMC mining areas (open cut pits and voids) was actively dewatered to the mine water storage areas as required to facilitate mining activities. During the reporting period, mining areas including Avon North Pit have transitioned to facilitate water storage.

7.4.2 Groundwater Monitoring Results and Performance

SCPL monitors a network of groundwater bores in accordance with the GWMP. The groundwater monitoring network includes:

- Stratford Village Bores;
- Stratford Project Bores (GW Series);
- Roseville Series Bores (RB Series);
- BRN Series Bores (MW Series); and
- Stratford Extension Project Bores (F Series).

Further detail on the groundwater monitoring program is included in the GWMP Section 7. The network of monitoring bores will be used to monitor the potential impacts on aquifers, groundwater levels and quality in the vicinity of the SMC. The general location of these bores is shown on **Figure 3 (Appendix 1)**.

Stratford Village Bores

Monitoring of the Stratford Village bores, during the reporting period, was undertaken in April 2024 and October 2024. SCPL Germon and Bagnall bores are sampled monthly in accordance with the approved WMP. Full results are included in **Appendix 4**. Sampling is not undertaken at the Stratford Village bores when access cannot be organised via the landholder. Sampling of the Stratford Village bores was also limited during the reporting period predominantly due to denied access and/or resident unavailability.

Sampling to date shows no significant changes in groundwater level or quality and no evidence of impacts from mining operations. The groundwater quality is highly variable, with better quality generally in the shallower bores such as Smith. It is understood that these bores are relatively shallow, and given the lower

elevations of the sites are tapping into the shallower alluvial aquifers, as opposed to the deeper groundwater.

Results show that there has been no significant difference in depth to standing water level for the bores gauged to date.

Stratford Project Bores (GW Series)

Monitoring of the GW bores was undertaken on a 6-monthly basis in line with the approved GWMP. Monitoring is undertaken for both groundwater depth and water quality. The general locations of these bores are shown on **Figure 3 (Appendix 1)**. Full analytical results are also shown in **Appendix 4**.

A summary of monitoring results for the Stratford Project GW bores is provided in **Table 25**.

Table 25 Bores Monitored in Relation to the Stratford Project – 2024

Site	Average Depth to Water (m)	Average pH	Average EC (uS/cm)	Average Na (mg/l)	Average Cl (mg/l)	Average Fe (mg/l)	Average SO4 (mg/l)
GW1	16.12**	*	*	*	*	*	*
GW2	17.05	6.6	5065	805	1445	23.9	32
GW3	6.40	6.1	3175	534	862	41.5	153
GW4	5.98	6.7	14850	2440	4610	1.4	105
GW5	8.23	6.5	11900	1895	3590	7.1	433
GW7	8.56	6.4	3370	495	949	20.4	1
GW8	12.97	5.1	1860	381	319	49.4	413
BRWN1	0.56	6.0	5650	1055	1440	2.0	423

* Too low for sample

** Average/mean based on one sample only

Monitoring for the GW series bores during the reporting period has indicated (when compared to historic data):

- water table levels across all bores were comparable to the previous reporting periods;
- average pH units recorded were similar to historical results across the data set with neutral pH at all bores except GW8 which showed slightly acidic pH. This is consistent with baseline data;
- electrical conductivities were generally similar to the historical results;
- water quality parameters had similar average levels to the previous period results and baseline data; and
- GW1 was too low to obtain a sample during the February and August 2024 sampling periods.

Roseville Pit Bores (RB Series)

The RB series monitoring is undertaken on a quarterly basis for depth to water level and water quality. The general locations of these bores are shown on **Figure 3 (Appendix 1)**.

Monitoring results for the Roseville groundwater bores are provided in **Table 26** below with full analytical results within **Appendix 4**.

Table 26 Bores Monitored in Relation to Roseville Pit – 2024

Site	Average Depth to Water (m)	Average pH	Average EC (uS/cm)	Average SO4 (mg/l)	Average Na (mg/l)	Average Cl (mg/l)
RB1	3.13	6.9	10825	40	1660	3883
RB2	1.02	6.8	10950	126	1747	3425
RB3	9.82	4.2	4420	1334	648	661

Monitoring data recorded during the reporting period indicated:

- prevailing high water table near Avondale creek – particularly for RB1 and RB2;
- neutral pH at RB1 and RB2; this is consistent with historic monitoring results; An acidic pH at RB3 which is consistent with historical results particularly following dry spells;
- electrical conductivity is consistent with historical data. Average electrical conductivity readings for RB1 and RB2 bores were similar to those of previous reporting periods. Average electrical conductivity readings for RB3 were similar to historical data; and
- water quality parameters had similar average levels to the previous period results and baseline data.

Bowens Road North Pit Bores (MW Series)

Monitoring results for the BRN groundwater bores are provided in **Table 27** below with full analytical results within **Appendix 4**.

Table 27 Bores Monitored in Relation to Bowens Road North Pit – 2024

Site	Average Depth to Water (m)	Average pH	Average EC (uS/cm)	Average SO4 (mg/l)
MW3	*	*	*	*
MW4	*	*	*	*
MW6	5.65	6.3	294	16
MW7	8.80	5.5	1588	141.8
MW8	*	*	*	*
MW11	7.78	6.7	887	32.5
MW12	3.14	6.6	728	20.3
Griffin	1.67	7.9	2390	1

* Unable to retrieve sample due to dry bore

Monitoring data recorded during the reporting period indicated:

- depth to water measurement generally indicated a similar water table relative to results from previous reporting periods;
- pH results were neutral across all sampled bores except MW7 which has a slightly acidic average pH. Results were consistent with historical data;
- electrical conductivity was consistent with historical data and comparable with those in the previous reporting period; and
- water quality parameters had similar average levels to the previous period results and baseline data.

MW3, MW4 and MW8 were dry and unable to be sampled during the reporting period.

7.4.3 Analysis Data Trends and Comparison with EA Predictions

Groundwater monitoring data from the Stratford project bores during the reporting period demonstrates no significant or measurable change in water table level or groundwater quality that could be attributed to the mining activities across the SMC. These results concur with predictions made in the EIS 2012 and the groundwater assessment 2012 that negligible impact on groundwater levels or quality, from mining in the long term is likely. Localised groundwater drawdown is consistent with EIS 2012 predictions.

Groundwater monitoring data from the Roseville Pit bores during the reporting period demonstrates no significant or measurable change in water table level or groundwater quality that could be attributed to the mining activities across the SMC. These results concur with predictions made in the EIS 2012 and the groundwater assessment 2012 that negligible impact on groundwater levels or quality, from mining in the long term is likely.

Groundwater monitoring data from the BRN pit bores during the reporting period demonstrates no significant or measurable change in water table level or groundwater quality that could be attributed to the mining activities across the SMC. These results concur with predictions made in the EIS 2012 and the groundwater assessment 2012 that negligible impact on groundwater levels or quality, from mining in the long term is likely. Localised groundwater drawdown is consistent with EIS 2012 predictions.

Assessment of Performance Indicators

Groundwater monitoring results are assessed against performance indicators and measures as described in Section 8 and Table 10 of the GWMP. If data analysis indicates a performance indicator has been exceeded or is likely to be exceeded, an assessment will be made against the performance measure. If a performance measure is determined to have been exceeded, the contingency plan will be implemented. Monitoring data for the reporting period assessed against the performance measures and indicators is shown in **Table 28** below.

Table 28 Groundwater Monitoring Performance Outcomes – 2024 Reporting Period

Performance Measure	Specific Performance Indicators	Data Analysis to Assess against Performance Indicators	Monitoring			Cascading Trigger Levels	Assessment of Performance Indicator and Performance Measure	Relevant Management and Contingency Measures
			Sites	Parameters	Frequency			
No more than a negligible impact on water levels in groundwater bores on privately-owned land as a result of the SMC.	No groundwater related notification received	If a notification is received, an investigation will be conducted to determine if the SMC has resulted in a greater than negligible change in water levels in the Stratford Village bores.	NA	Notification	When received	<p>Notification Received.</p> <p>Investigation (monitoring) confirms that the SMC has resulted in a greater than negligible change in water levels in the Stratford Village bores (refer below).</p> <p>Low Risk (Negligible) Outcome: No more than two successive monthly readings at MW12 or SCPL bore are below the P20 groundwater level (116.8 mAHD and 114.8m AHD, respectively).</p>	<p>No notifications received.</p> <p>Analysis of the monitoring data indicates no statistically significant change in water levels at MW12 and SCPL bores.</p> <p>A similar trend was observed in the reference sites.</p>	Continue monitoring
	No significant decline in groundwater level at MW12 (Mine Site) or SCPL Bore (Stratford Village).	An investigation will be conducted to determine if the SMC has resulted in a greater than negligible change in water levels in the Stratford Village bores.	<p>MW12 (Control Site: MW11)</p> <p>SCPL Bore (Control Sites: Germon & Bagnall)</p>	Groundwater level	<p>Monthly (MW12, MW11 & SCPL Bore)</p> <p>Monthly (Germon & Bagnall)</p>	<p>Moderate Risk Trigger: More than two successive monthly readings at MW12 or SCPL bore are below the P20 groundwater level (116.8 mAHD and 114.8m AHD, respectively) and the equivalent P20 historical groundwater levels have not been exceeded at other shallow control sites (e.g. dry conditions or other anthropogenic changes are not prevalent).</p> <p>High Risk Trigger: More than two successive monthly readings at MW12 and SCPL bore are below the P5 groundwater level (116.3 mAHD and 114.4m AHD, respectively) and the equivalent P5 historical groundwater levels have not been exceeded at control sites (e.g. dry conditions or other anthropogenic changes are not prevalent).</p>	<p>No further requirement for assessment of Performance Measure.</p>	

Performance Measure	Specific Performance Indicators	Data Analysis to Assess against Performance Indicators	Monitoring			Cascading Trigger Levels	Assessment of Performance Indicator and Performance Measure	Relevant Management and Contingency Measures
			Sites	Parameters	Frequency			
No impact on regional groundwater quality that reduces the beneficial use as a result of the SMC.	No lowering of the beneficial use category (based on groundwater quality) at a groundwater production bore as a result of the SMC.	Each bore to be assigned a beneficial use category based on EC (refer Table 8 of GWMP). If data analysis indicates the performance indicator has been exceeded, the performance measure will be assessed to determine if there has been a reduction in regional groundwater quality that has lowered the beneficial use.	SCPL Bore (Control Sites: Germon and Bagnall)	EC (field)	Monthly	<p>Low Risk (Negligible) Outcome: No more than two successive monthly readings at the SCPL bore are outside the applicable beneficial use category range based on EC.</p> <p>Moderate Risk Trigger: More than two successive monthly readings at the SCPL bore are outside the applicable beneficial use category range (based on EC) and the equivalent beneficial use categories at the control sites have not been lowered.</p> <p>High Risk Trigger: More than two successive monthly readings at the SCPL bore are outside the applicable beneficial use category range (based on EC) and the equivalent beneficial use categories at the control sites have also been lowered.</p>	<p>Beneficial use categories (SWMP Section 5.1.3 Table 8): SCPL bore - 3 Irrigation Germon - 3 Irrigation Bagnall - 2 Marginal Potable</p> <p>Analysis of the monitoring data indicates no more than one (1) readings at the SCPL bore was outside the applicable beneficial use category range based on EC (i.e. 3 Irrigation).</p> <p>Average results at SCPL Bore during the reporting period show average EC to be lower than 7,800µS/cm upper level for irrigation beneficial use category (i.e. 4 Saline).</p> <p>No results are available for comparison at either of the control sites as both bores are now disused.</p> <p>No significant change identified at any other monitoring bores.</p> <p>No evidence of a reduction in regional groundwater quality that has lowered the beneficial use.</p>	<p>Continue monitoring at SCPL Bore.</p> <p>Update GWMP and establish replacement control sites for Bagnall and Germon.</p>

7.4.4 Groundwater Inflows to Open Cut Mining Operations

Prior to the cessation of coal extraction activities, groundwater seepage inflows to mining voids were directed and collected in pit sumps along with rainfall and surface water runoff and seepage through backfilled pit areas. Water levels and water quality analysis of the pit sumps was undertaken on a monthly basis. The volumes of water extracted from the pit sumps is recorded where practicable.

The water quality monitoring results for the open cut pits during the reporting period is included in **Section 7.3.2** of this report.

A site water balance review is undertaken on an annual basis to monitor the status of inflows (including groundwater inflows to open pits), storage and consumption. The site water balance review includes an assessment of the measured groundwater inflows (groundwater take) compared to the predicted/modelled groundwater inflow. This is also compared to the groundwater licence extraction entitlements. A summary of the 2024 site water balance review is included in **Section 7.2** of this report.

The measured groundwater inflows at the SMC during 2024 were below the annual licenced extraction limits and also remain below the predicted/modelled groundwater inflow rates.

SCPL is currently developing the detailed mine closure plan in accordance with the Rehabilitation Management Plan, which includes refinement of the final landforms and other closure strategies. Following this, further updates to both the post-mining groundwater model and site water balance will be required.

8.0 REHABILITATION

Rehabilitation of disturbed land and land management activities at SMC are undertaken in accordance with the Stratford RMP (July 2022) and Forward Program (1 January 2024 – 31 December 2026).

Consistent with the rehabilitation schedule and Forward Program, Bowens Road north Pit and Roseville West pit commenced landform establishment works. no rehabilitation areas were relinquished or signed off by the Resources Regulator during the reporting period.

During the next reporting period, SCPL will revise relevant EMPs to reflect the current stage of the SMC following the cessation of mining operations and the finalisation of the sites detailed mine closure plan. Updates to the EMPs will describe mine closure activities and describe the change to potential environmental impacts, mitigation measures and monitoring programs at the SMC for the mine closure phase.

A summary of the rehabilitation objectives, performance indicators and completion criteria relevant to the SMC rehabilitation domains is provided in the RMP. Plan 1 in the RMP shows the conceptual final landform, relevant primary domains and secondary rehabilitation domains.

8.1 Buildings and Infrastructure

Buildings and infrastructure at the SMC have been utilised during the life of the operations, the infrastructure areas are currently active. The existing infrastructure and services at the SMC will continue to be utilised throughout the mine closure phase with the exception of the CHPP. Decommissioning of the CHPP buildings and infrastructure commenced in July 2024 which included site tidy up and removal of electrical infrastructure.

No buildings or infrastructure were constructed or demolished during the reporting period. Building and infrastructure decommissioning is further addressed in the **Section 8.6**.

8.2 Rehabilitation of Disturbed Land

Rehabilitation of disturbed areas has been undertaken progressively and concurrently with mining operations. Rehabilitation planning, management, stage plans and implementation is described in the RMP.

The SMC rehabilitation progress is generally in accordance with the planned activities described in the RMP 2023 Plan 3A to Plan 3D – Life of Mine Rehabilitation Schedule. The current (June 2024) total mine footprint area (disturbance) is 758.15 hectares.

Table 29 presents a summary of the rehabilitation undertaken at the SMC up to the current reporting period. The current mining areas and rehabilitation as of 31 December 2024 are shown in **Figure 4** in **Appendix 1**.

Table 29 Rehabilitation Status

Mine Area Type	Previous RP (actual hectares)	Current RP (actual hectares)	Next RP (forecast hectares)
Total Mining Lease	1580	1580	1580
Total Mine Footprint – Surface Disturbance	758.15	758.15	758.15

Mine Area Type	Previous RP (actual hectares)	Current RP (actual hectares)	Next RP (forecast hectares)
Total Active Disturbance	524.1	456.4	286.91
Rehabilitation – Land Preparation	5.23	71.53	169.49
Ecosystem and Land Use Development	228.8	230.2	301.73
Rehabilitation Completion	0	0	0

Note: The rehabilitation and disturbance boundaries have been realigned and the areas recalculated for the provision of the RMP. This includes the disturbance of previously rehabilitated land.

8.2.1 Rehabilitation Resources

Topsoil resources are managed in accordance with the RMP Section 6.2.4. No topsoil stripping was undertaken during the reporting period. Minor clearance will be required during the mine closure phase to achieve long term safe and stable approved final landform.

During disturbance activities the site topsoil balance is updated annually to track the recovery and usage of topsoil and to ensure adequate resources are available for rehabilitation of disturbed areas at the SMC. The latest topsoil balance was updated in December 2022 as no topsoil stripping has been undertaken since. At December 2022, an estimated 401,578 cubic metres of topsoil was held in various stockpiles at the SMC. This would provide for rehabilitation of approximately 401 ha to the nominal topsoil depth of 100mm. The current area of disturbance which will require topsoil (i.e. not including final void areas (estimated 138ha) or permanent water bodies (estimated 32ha)) is 326 ha. Hence, the SMC currently holds sufficient topsoil resources to complete all rehabilitation works. There has been no change to the topsoil balance during the reporting period.

Existing topsoil stockpiles will continue to be managed to maintain soil viability until they are all utilised as part of the rehabilitation program at the SMC.

8.2.2 Rehabilitation Maintenance

During the reporting period maintenance activities focussed on the improvement of pasture rehabilitation across the Stratford Waste Emplacement and included slashing and the removal of woody acacia regrowth. Slashing was also undertaken on the rehabilitated CODAM pasture area. Weed control has been undertaken across all rehabilitation areas targeting lantana, blackberry and wild tobacco. No infill planting was conducted in rehabilitation areas during the reporting period.

8.3 Rehabilitation Monitoring

SCPL undertakes a monitoring program of rehabilitation areas in accordance with the RMP. The annual rehabilitation monitoring program includes the areas designated for agriculture (grazing) and native ecosystem final land uses. The monitoring program includes visual monitoring, ecosystem function analysis and fauna monitoring.

Visual Monitoring

Rehabilitation monitoring includes a visual assessment:

- monitoring of soil erosion status and the effectiveness of erosion control methods;
- assessing germination success and vegetation establishment (diversity and abundance);
- usage of habitat enhancement features;
- the presence of weeds or feral animals; and
- mine landform runoff water quality.

The visual monitoring provides an early identification of areas requiring remedial planting or other maintenance works to maintain rehabilitation progress. The rehabilitation reports provide a list of maintenance recommendations predominantly relating to erosion control, weeds control and vegetation management and enhancement.

Ecosystem Function Analysis

In-depth monitoring and assessment of the quality and ecological value of native ecosystem rehabilitation will be required prior to lease relinquishment. This assessment will be conducted using Ecosystem Function Analysis (EFA). EFA aims to measure the progression of rehabilitation areas towards self-sustaining ecosystems. EFA has been incorporated into the overall SMC rehabilitation monitoring program to provide an assessment of ecosystem functionality (refer to Section 8 of the RMP).

The EFA is comprised of the following components:

- Landscape Function Analysis (LFA);
- vegetation dynamics; and
- habitat complexity.

EFA Analogue Transects have been established in proximal areas to the SMC which represent the varying landscapes (i.e. slopes and aspects) and target communities planned for each rehabilitation area.

The rehabilitation transects were assessed again in February 2024 as part of the tenth annual round of monitoring in accordance with Section 8 of the RMP. Survey results from the monitoring state that the revegetation program is progressing well with all areas where installation has occurred having some success and well over half of the areas achieving or exceeding target densities. Conclusions and recommendations from the *2024 Biodiversity Offsets Strategy Flora Monitoring Report* (Wedgetail Project Consulting, 2024) are discussed in the Annual Biodiversity Report (**Appendix 9**).

Fauna Monitoring

Fauna usage of the native ecosystem rehabilitation areas is monitored and documented over time. Fauna monitoring is conducted every three years to assess the success of the rehabilitation and revegetation activities in providing habitat for a range of vertebrate fauna. The surveys include an assessment of habitat complexity, species richness and abundance.

Recent fauna surveys conducted over the SMC rehabilitation areas, Biodiversity Offset Areas and Biodiversity Enhancement Areas indicate that these areas provide habitat for a range of native vertebrate fauna, including birds, mammals, reptiles and frogs.

Fauna monitoring is undertaken every three years and was last undertaken in November 2022. A total of 166 species of vertebrate were recorded, comprising 15 frogs, 13 reptiles, 100 birds and 38 mammals most of which were native (Annual Biodiversity Report (**Appendix 9**)).

8.3.1 Threats to Rehabilitation Completion

The SMC RMP Section 4 establishes the rehabilitation objectives and completion criteria for the rehabilitation of the SMC. Section 10 of the RMP includes a description of intervention and adaptive management for threats to achieving the rehabilitation completion criteria. SCPL has successfully undertaken rehabilitation activities at the SMC since 1997 with the results of rehabilitation monitoring continuing to inform the effectiveness of rehabilitation methods and requirements for contingency measures.

The 2012 ERA (SP Solutions, 2012), 2020 Rehabilitation Risk Assessment (CKC, 2020) (RMP Section 3.1) and the 2021 Closure & Rehabilitation Risk Assessment (IEMA, 2021) identified potential issues and risks associated with rehabilitation and mine closure at the SMC. These risks/threats to rehabilitation are outlined in the rehabilitation trigger, action, response plan (TARP) in the RMP Table 10 (Section 10) along with actions that will be undertaken to mitigate these risks.

8.4 Rehabilitation Trials and Research

SCPL has extensive experience in both native woodland/forest revegetation and agricultural pasture rehabilitation, with successful rehabilitation areas completed over the past 20 years at both the Stratford and Duralie mine sites. Learnings from the rehabilitation works undertaken onsite to date along with industry best practice guidelines are employed in the methodology for new rehabilitation areas.

Rehabilitation trials have been also undertaken in the Duralie Coal Mine Biodiversity Offset Areas. These trials have provided learnings and methods for the rehabilitation and biodiversity offset work at SMC.

8.5 Rehabilitation Targets

The rehabilitation targets reported in the previous AR, have been replaced and outlined in the new RMP.

The rehabilitation targets and proposed rehabilitation schedule over the life of the SMC are described in Section 6.1 of the RMP. The rehabilitation target is a cumulative total of 525.3ha. The total area of land proposed for rehabilitation during the 3 year forward program reporting period target 169.5ha in year 1, year 2 targets 57.7ha and year 3 targets 52.1ha.

8.6 Mine Closure Planning

Schedule 2, Condition 5 of the SMC's Development Consent (SSD-4966) authorises mining operations to be carried at the SMC until 31 December 2025. Accordingly, SCPL has transitioned to mine closure following the cessation of mining operations in July 2024. Mine closure at the SMC is managed in accordance with the RMP which incorporates a Mine Closure Plan (Appendix 1 of the RMP).

Mine closure planning continued during the period, including technical and environmental reviews to support the decommissioning and rehabilitation of SMC. The planning and studies scope have been revised to reflect the cessation of mining operations without recovering all approved resource. The technical assessments included in Mine Closure Planning have been informed by the key risks and risk reduction strategies associated with rehabilitation and mine closure of the SMC.

SCPL has commenced revising relevant EMPs to reflect the transition to mine closure and describe the change to activities, environmental impacts, mitigation measures and monitoring programs at the SMC for the mine closure phase.

The Mine Closure Planning Program is provided in Appendix 1 of the RMP. The subsections below provide progressive updates on the key mine closure planning requirements for the SMC and the actions completed during the reporting period.

8.6.1 Final Landform Designs

The proposed final landforms for the SMC include a combination of pasture and native ecosystem, water storages, final void and infrastructure areas for retained features.

The rehabilitation objectives for the final landforms requires final landform designs which sustain the intended post-mining land use. Final landforms are to be consistent with and complement the topography of the surrounding region to minimise the visual prominence of the final landforms in the postmining landscape. Final landforms are to incorporate design relief patterns and principles consistent with natural drainage.

SCPL have continued to develop the detailed final landform designs consistent with the conceptual rehabilitation strategy in the EIS 2012 and rehabilitation objectives in the Development Consent. The RMP also includes detail regarding the rehabilitation implementation requirements and the conceptual final rehabilitated landform for the SMC.

Technical assessments are being undertaken including refinements of the final landform design. These include a geotechnical assessment of the final voids, final void water balance, final void water quality review landform stability assessment and erosion modelling for the final landform design. These assessments are iterative and inform landform revisions. The final extent of mining at cessation of mining operations has also contributed to final landform revisions. The revised final landform will be included in future RMP revisions.

8.6.2 Final Void Management

The SMC final landform will include partially backfilled final voids located at Roseville West Pit, Avon North Open Cut, and Stratford Main Pit. SCPL is required to rehabilitate the final void to ensure the landform is safe, stable and non-polluting. The final void design aims to minimise the overall extent of the final void as much as is reasonably feasible and within the Development Consent constraints.

The refined final landform of Roseville West, Avon North and Stratford Main Pit voids is described in the SMC Mine Closure Plan and Schedule (Appendix 1 of the RMP) and depicted in Plan 1 of the RMP.

8.6.3 Water Management

Site Water Balance

A site water balance has been prepared for the SEP EIS by a suitably qualified and experienced person (Gilbert and Associates, 2012). A revised post-mining site water balance is currently being undertaken to reflect the refined final landform and final void designs, including all surface water inflows and outflows.

Water Infrastructure

Minor water management structures and sediment control dams will be decommissioned and rehabilitated or retained as farm water dams in consultation with relevant regulatory authorities and private landholders (if applicable).

Sediment dams downstream of the waste rock emplacements will be maintained until the revegetated surface is stable and the runoff water quality is suitable for release off-site. The stability of the landform will be determined by rehabilitation monitoring.

Decommissioning of water management infrastructure and on-site irrigation system infrastructure that will not be utilised for closure activities will commence during the next reporting period. Pumps and pipelines will be removed from site unless required for the final land use. A Detailed Decommissioning Strategy is detailed in the SMC Mine Closure Plan and Schedule (Appendix 1 of the RMP).

Retained water infrastructure will include Stratford East Dam, permanent up-catchment diversion structures (associated with final voids) and some irrigation structures.

Post-mining, the Stratford East Dam will be retained for future agricultural (grazing) use, use by a public authority and/or environmental benefit.

A number of up-catchment diversions associated with the catchments reporting to the final voids will be permanent structures that would remain post-mining.

Infrastructure that is retained will be determined in consultation and is further described in the SMC Mine Closure Plan and Schedule (Appendix 1 of the RMP).

8.6.4 Contaminated Lands Assessment

A Contaminated Land Assessment for the SMC was completed during the previous reporting period. The report included an assessment of areas potentially impacted by carbonaceous material (e.g. coal spillage, coal storage), by hydrocarbon spillage (e.g. workshops, fuel storage areas) or by sedimentation (e.g. dams which have directly received pit water).

A Remediation Action Plan (RAP) has been prepared based on site investigations including infrastructure and infrastructure areas. The RAP informs future contamination clean-up and/or remediation. As closure activities are continuing beyond the current period, the RAP will be reviewed and revised if required.

8.6.5 EMPs, Post-Closure Monitoring and Maintenance Program

The development of the post-closure monitoring and maintenance program is described in Section 11 of the SMC Mine Closure Plan and Schedule (RMP, Appendix 1).

Over the next reporting period, SCPL will continue to revise EMPs to reflect the transition to closure and describe anticipated mine closure activities and describe the change to environmental impacts, mitigation measures and monitoring programs at the SMC.

SCPL will refine its monitoring and maintenance programs in consultation with the relevant government agencies during the mine closure planning phase. Amendments to the monitoring programs during the post-closure phase will be reflected in further environmental management plan revisions. It is expected that the residual monitoring programs will be undertaken for approximately ten years following mine closure.

Post-closure maintenance activities will continue until the specific completion criteria has been met and confirmation has been received from the relevant authority.

8.6.6 Stakeholder Consultation, Community and Human Resources Strategies

Mine Closure Planning includes the development of a Stakeholder Consultation Strategy and Human Resources Strategy. The Stakeholder Consultation Strategy is described conceptually in Section 4.2 of the RMP. The strategies have been further developed and incorporated into the Mine Closure Plan and Schedule. SCPL will continue to consult with relevant government agencies and the community throughout mine closure.

9.0 COMMUNITY

9.1 Community Engagement

During 2024, SCPL continued to foster positive relationships with the local community through engagement and ongoing support provided to a range of community groups and events. SCPL is committed to a policy of regular liaison with the local community and strives to maintain positive relationships with stakeholders. SCPL's community objectives aim to:

- ensure employees and contractors are informed about SCPL's policies and are made aware of their environmental and community responsibilities in relation to SCPL's activities;
- inform the community of SCPL's activities and consult with the community in an open and honest fashion in relation to SCPL's projects; and
- address complaints/conflicts and consult to achieve mutually acceptable outcomes.

Community/Stakeholder related activities undertaken during the reporting period include:

- Yancoal Vacation and Cadet student placements
- Community Support Program
- Education Support Fund; and
- direct engagement with nearby landholders.

While SMC transitions and enters mine closure, SCPL is still part of the local community and will continue to support the existing Community Support Program (CSP) until 2028. SCPL will consider capacity building and economic transition projects.

SCPL continued to provide the community with information on its website. Information available included project approvals, CCC meeting minutes, community complaint records, environmental monitoring information, environmental audits, EMPs and Annual Reviews.

SMC maintains a 24-hour Community Information Hotline (1300 658 239). This Hotline is available to receive any complaints, compliments, information requests and to assist with creating a direct line to speak with a Mine Representative.

9.2 Community Consultative Committee

The Stratford Coal Community Consultative Committee (CCC) operates under the guidance of the NSW DPHI. Meetings were held quarterly during 2024 and provide a forum for open discussion between the community, Council, the Company and other stakeholders on issues relating to the mine's operations, environmental performance and community engagement.

The CCC for the SMC is currently comprised of:

- one independent Chairperson;
- five (5) local community representatives;
- two (2) local government representatives (MidCoast Council); and
- two (2) SCPL representatives.

The CCC was formed in accordance with *Schedule 5, Condition 6* of SSD-4966. The CCC operates in such a manner as to satisfy the *Community Consultative Committee Guidelines - State Significant Projects* (DPE, 2019) and to the satisfaction of the Secretary of the DPHI.

During the reporting period, quarterly meetings were held in February, May, August and November 2024. Items raised and/or discussed during these CCC meetings include but are not limited to:

- environmental management and monitoring;
- rehabilitation and land management;
- Independent Environmental Audit;
- community sponsorship; and
- future land use opportunities.

A tour of the communications tower on top of rehabilitation pasture land, the Old Main Pit (OMP) emplacement / rehabilitation area, the Stratford East and Avon North Pits was conducted during the May 2024 CCC meeting. A site tour was planned for the November meeting but weather conditions prevented this from occurring. To overcome the unpredictability of inclement weather around meeting schedules, Stratford Coal offered to accommodate future tours on alternate date options to suit the members.

An Annual Report for the Stratford Coal CCC was prepared by the Chair and submitted to DPHI on 19 February 2024 (**Appendix 7**).

9.3 Environmental Complaints

SCPL manages complaints received at the SMC in accordance with the protocol established in the Environmental Management Strategy (EMS). SCPL aims to address all complaints/conflicts and consult to achieve mutually acceptable outcomes. In accordance with the conditions of SSD-4966, SCPL is required to establish and maintain a complaint handling and response procedure. SCPL operates a system to receive, handle, respond to and record complaints or information requests relating to operation of the SMC which is described in the EMS.

SCPL operates a 24-hour Community Information Hotline (1300 658 239). Details for the Hotline are available on the Stratford Coal Website and in Community Newsletters.

Complaints (by category) received by SMC over the last 5 reporting years are shown in **Table 30**:

Table 30 Community Complaints Summary

Complaint Category	2020	2021	2022	2023	2024
Noise	28	12	2	0	4
Blasting	6	4	1	0	0
Air Quality	2	1	1	0	0
Water	0	0	0	0	0
Lighting	6	4	2	0	0
Other	1	0	0	0	0
Total Complaints	43	19*	3*	0	4

*Note some complaints included multiple categories

During the reporting period, a total of four (4) complaints were received. **Table 30** shows that all complaints were related to noise (100%). The number of complaints reported represents an increase compared to the previous reporting period but highlights the trend of reduced complaints since 2022.

SCPL continues to implement mitigation measures described in the EMPs and identify improvements to reduce the overall level of offsite emissions/impacts. SCPL continues to engage with complainants to achieve mutually acceptable outcomes.

A full complaints listing is provided in **Appendix 7** and includes details of SCPL's responses to complaints. A summary of complaints by category is provided in the relevant sections of the report.

10.0 INDEPENDENT AUDIT

An Independent Environmental Audit (IEA) was undertaken during the previous reporting period in accordance with SSD-4966 *Schedule 5, Conditions 9 and 10*. The purpose of the audit was to review compliance over the 2021-2023 with the conditions and obligations of the SMC environmental licences, approvals and management plans.

The SMC 2023 IEA site inspection was undertaken in December 2023 and the *SMC 2023 Independent Environmental Audit* (RPS, 2023) was submitted to DPHI on 7 August 2024. The audit report is available on the Stratford Coal website. The IEA presents a summary of compliance with the SMC statutory requirements. Non-compliances identified during the site inspection, interviews and document reviews are recorded in detail in the Compliance Registers in Appendix C of the 2023 IEA. Recommendations have been made by the lead auditor to address all identified non-compliances.

The IEA identified a total of 13 non-compliances and associated recommendations. The key findings/recommendations in the IEA related to the following matters:

- water management;
- air quality;
- noise monitoring;
- incident reporting;
- additional information in the Annual Reports/Reviews; and
- Management Plan revisions.

SCPL's responses to the recommendations contained in the IEA Report and a status update of SPL's progress against the recommendations are included in **Appendix 10** of this report.

The next independent audit will be undertaken within the 2026 reporting period.

11.0 INCIDENTS AND NON-COMPLIANCES DURING THE REPORTING PERIOD

Activities at the SMC continue to be carried out in accordance with Development Consent SSD-4966 for the SEP. Additionally, activities at the SMC are undertaken in accordance with EPL 5161 and the SMC Mining Leases.

A protocol for managing incidents and non-compliances is included in the SMC EMS.

A statement of compliance is included in **Section 1** of this report. During the reporting period there were three incidents/non-compliances recorded in accordance with SSD-4966 at the SMC which are summarised below in **Table 31**.

Incidents/non-compliances at the SMC are reported and recorded in Yancoal's compliance management system. The severity of the incident will determine the level of investigation required. The reporting of incidents to regulators is conducted in accordance with the EMS specifically, *Schedule 5, Condition 7* of SSD-4966 as well as EPL 5161 as applicable.

Table 31 Environmental Incident and Non-Compliance Summary 2024

Relevant Approval	Date	Details of Non-Compliance	Cause of Non-Compliance	Actions to Address Non-Compliance
SSD-4966 EPL 5161	23/5/24	Less than required temperature lapse rate (inversion) data recorded Continuous monitoring of temperature lapse rate was not maintained at the Upper Inversion Tower monitoring location. Equipment failure resulted in missed data capture for approximately 34hrs from 9:15pm 21 May 2024 until 07:00am 23 May 2024.	Failure of data logger unit which captures and logs data from the temperature probe.	Data logger unit replaced. All equipment using similar logging units inspected. Logger unit at Lower Inversion Tower replaced.
SSD-4966 EPL 5161	26/6/24	Return Water Dam (RWD) Pump Line Failure Spill of water from mine water pipeline into Avondale Creek catchment. From 6:30am on 26 June 2024, water was being transferred by pipeline from the RWD to the CHPP. At approximately 9:35am a low-pressure alert was received. Subsequent inspection identified split pipeline and pumping was stopped. The failure occurred for approximately 15 minutes between 9:35am and 9:50am. Water from the failure eroded a containment bund and flowed into the Avondale Creek clean water catchment and Biodiversity Enhancement Area (BEA). The volume of water released was estimated to be negligible compared to the flow in Avondale Creek which was flowing at the time due to recent rainfall.	A horizontal spilt in the pipeline (45cm x 2cm) allowed water to be released. The cause of the pipeline splitting was not identified.	Pumping stopped upon identification of the failure. PIRMP triggered and implemented. Additional water quality monitoring was undertaken. Sediment fencing installed to prevent potential migration from spill site into BEA and clean catchment. Bunding separating the mine water and clean catchments reinstated. Pipeline permanently decommissioned.

Relevant Approval	Date	Details of Non-Compliance	Cause of Non-Compliance	Actions to Address Non-Compliance
EPL 5161	20/1/24 to 30/6/24	<p>Less than required conductivity monitoring</p> <p>Continuous monitoring of electrical conductivity (EC) was not maintained at EPL Point 2 (W2 – Avon River Downstream).</p> <p>Failure of the solar system battery resulted in the monitor operating only when directly powered by the solar panel between 20 January 2024 and 30 June 2024. Monitoring occurred during periods of adequate daylight only resulting in 37% loss of data.</p>	Undiagnosed failure of unit battery.	<p>Replacement battery installed.</p> <p>Telemetry installed in June 2024 following upgrade of the local mobile network to 4G coverage.</p>

12.0 ACTIVITIES TO BE COMPLETED IN THE NEXT REPORTING PERIOD

During the next reporting period, SMC will have progressed to being wholly in mine closure following the cessation of production activities within this reporting period. The following is a summary of measures to be implemented and environmental targets for the next 12 months:

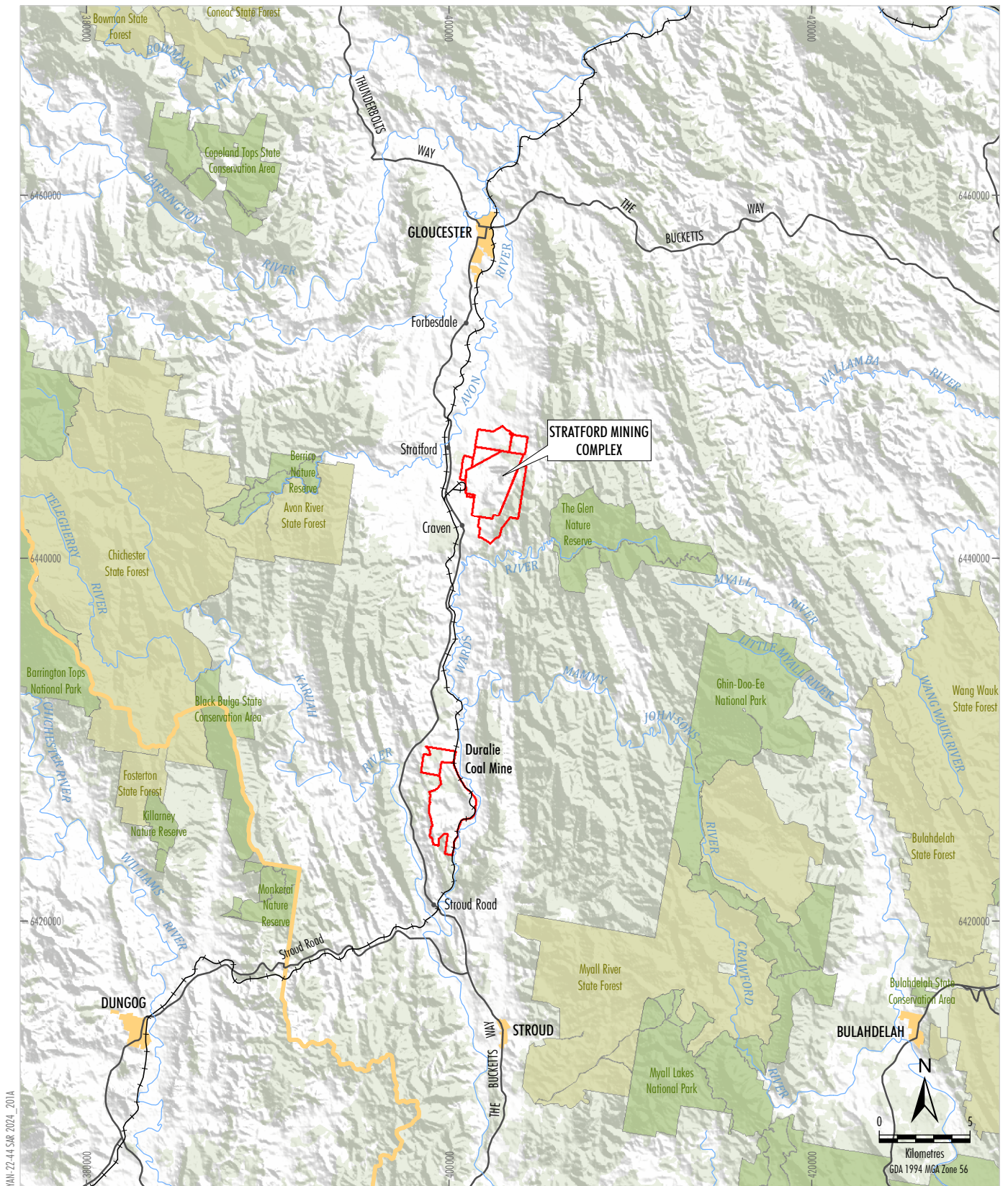
- liaise with the EPA to finalise the 5-year Environment Protection Licence review;
- review the Stratford Clearing Plan documentation and processes;
- continue developing and finalise the detailed Mine Closure Plan;
- commence CHPP infrastructure decommissioning works;
- review and update the Conservation Bond;
- implement the rehabilitation activities in accordance with the timing in stage plans in the SMC RMP and Forward Program;
- review and revise EMPs as necessary;
- progress biodiversity offset works in accordance with the BMP including full implementation of the revegetation works;
- continue to meet the environmental management, monitoring and reporting requirements in accordance with the Development Consents conditions; and
- maintain low level of complaints and non-compliances.

13.0 REFERENCES

- CK Consultants Pty Ltd (CKC) (2020). *Stratford Mining Complex Rehabilitation & Mine Closure Risk Assessment*
- Department of Planning, Industry and Environment (October 2015). *Annual Review Guidelines*
- Department of Planning and Environment (2019). *Community Consultative Committee Guidelines – State Significant Projects*
- Environmental Geochemistry International Pty Ltd (EGi) (2012). *Geochemical Assessment of the Stratford Assessment Project*
- EPA (2014). *Waste Classification Guidelines Part 1: Classifying Waste*
- Gilbert and Associates (2012). *Stratford Extension Project Surface Water Assessment for Stratford Coal Pty Ltd, Gloucester*
- Integrated Environmental Management Australia (IEMA) (2021). *Stratford Mining Complex: Closure & Rehabilitation Risk Assessment: Summary of Key Risks and Controls*
- Invertebrate Identification Australasia (2023). *Biological Monitoring of the Stratford Mining Complex Survey 27 September 2024*
- NSW Minerals Council (2000). *Technical Paper – Particulate Matter and Mining: Interim Report*
- Safe Production Solutions Pty Ltd (SP Solutions) (2012). *Stratford Extension Project Environmental Risk Assessment*
- Stratford Coal Pty Ltd (2012) *Stratford Extension Project Environmental Impact Statement (EIS)*
- Stratford Coal Pty Ltd (2018). *Stratford Mining Complex (Stratford Extension Project) Life of Mine Rejects Disposal Plan*
- Stratford Coal Pty Ltd (2018a). *Stratford Mining Complex (Stratford Extension Project) Squirrel Glider Management Plan*
- Stratford Coal Pty Ltd (2021). *Stratford Mining Complex (Stratford Extension Project) Water Management Plan*
- Stratford Coal Pty Ltd (2022). *Stratford Mining Complex (Stratford Extension Project) Air Quality Management Plan*
- Stratford Coal Pty Ltd (2022a). *Stratford Mining Complex (Stratford Extension Project) Blast Management Plan*
- Stratford Coal Pty Ltd (2022b). *Stratford Mining Complex (Stratford Extension Project) Noise Management Plan*
- Stratford Coal Pty Ltd (2023). *Stratford Mining Complex Rehabilitation Management Plan*
- Stratford Coal Pty Ltd (2023a). *Stratford Mining Complex (Stratford Extension Project) Heritage Management Plan*
- Stratford Coal Pty Ltd (2023b). *Stratford Mining Complex (Stratford Extension Project) Biodiversity Management Plan*

APPENDIX 1:

Figures



- LEGEND**
- Mining Lease Boundary
 - NSW State Forest
 - National Park, Nature Reserve or State Conservation Area
 - Local Government Area Boundary

Source: Geoscience Australia (2006); Yancoal (2019);
NSW Department of Planning & Environment (2017)



STRATFORD MINING COMPLEX 2024 ANNUAL REVIEW

Regional Location

Figure 1



- LEGEND**
- Mining Lease Boundary
 - Electricity Transmission Line
 - Approximate Extent of Existing/Approved Surface Development
 - Conceptual Up-Catchment Diversion

Monitoring Sites

- Groundwater Monitoring Site
- Surface Water Quality Monitoring Site
- ✱ Meteorological Station
- ◆ Static Dust Gauge
- ★ High Volume Air Sampler
- Noise Monitoring Site
- ⊗ Real-time Noise Monitoring Site
- + Blast Monitoring Site
- TEOM Monitoring Site
- ▼ Macroinvertebrate Monitoring Site
- ▲ Inversion Tower

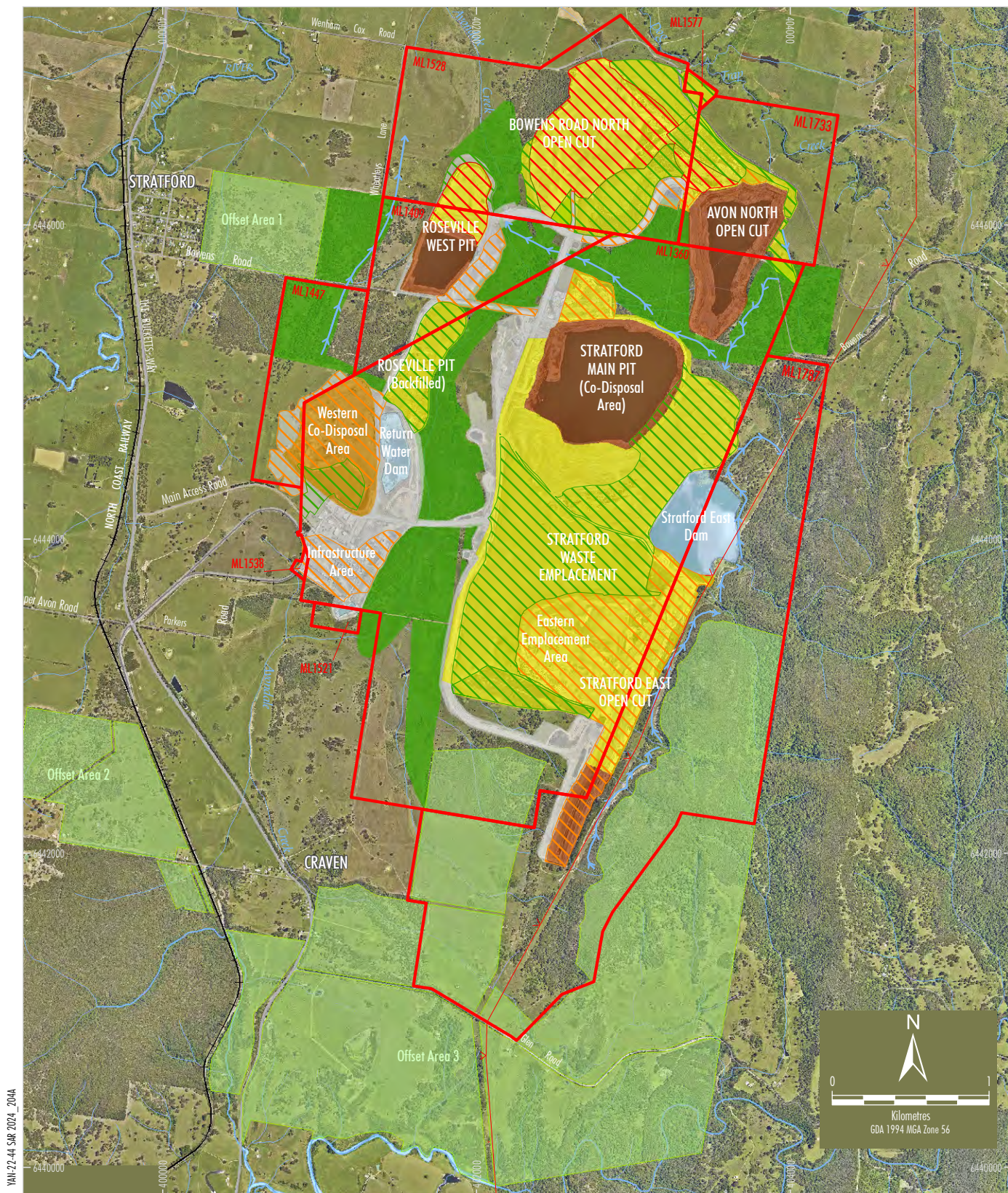
Source: Orthophoto - Yancoal (2024);
NSW Department of Planning & Environment (2017)



STRATFORD MINING COMPLEX 2024 ANNUAL REVIEW

Environmental Monitoring Sites

Figure 3



YAN-22-44 SAR 2024_204A

Figure 4

APPENDIX 2:

Meteorological Monitoring

Figure 1: Monthly Recorded Rainfall (1 January 2024 – 31 December 2024)

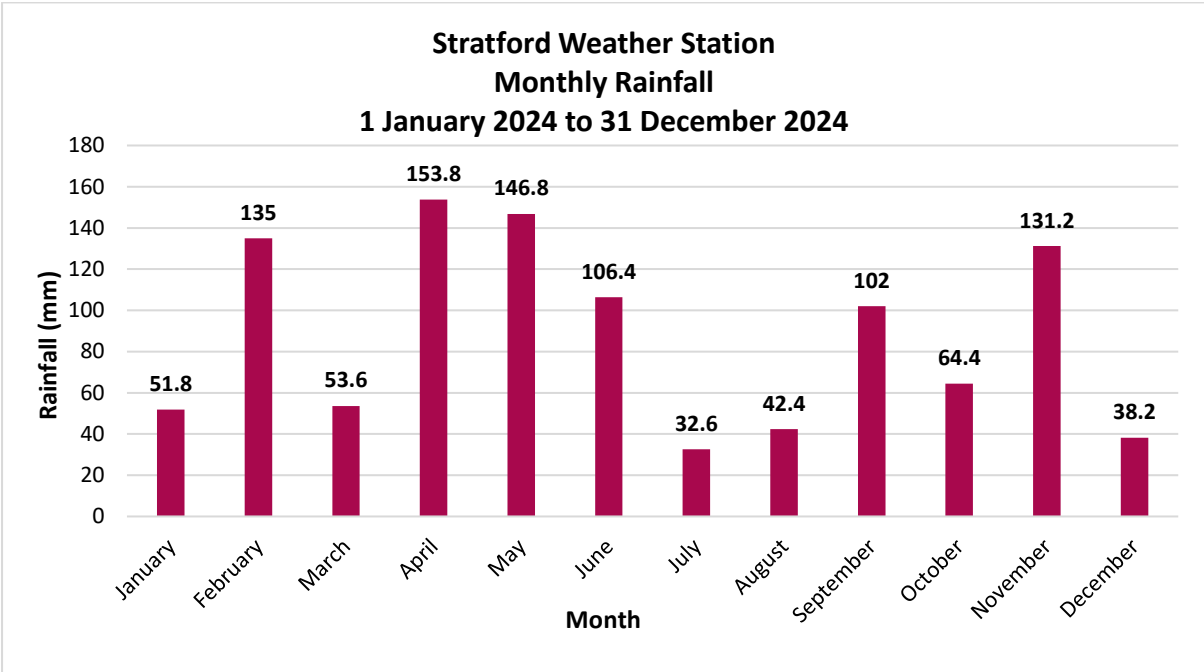


Figure 2: Maximum, Average and Minimum Wind Speeds (1 January 2024 – 31 December 2024)

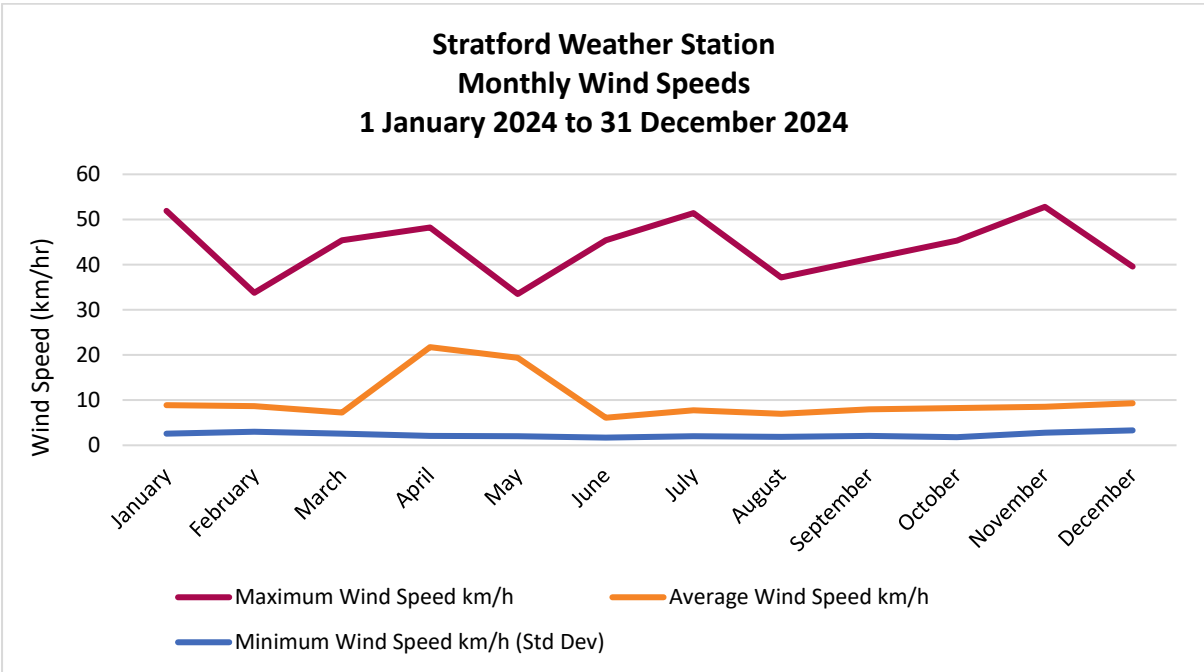


Figure 3: Minimum, Maximum and Average Temperatures (1 January 2024 – 31 December 2024)

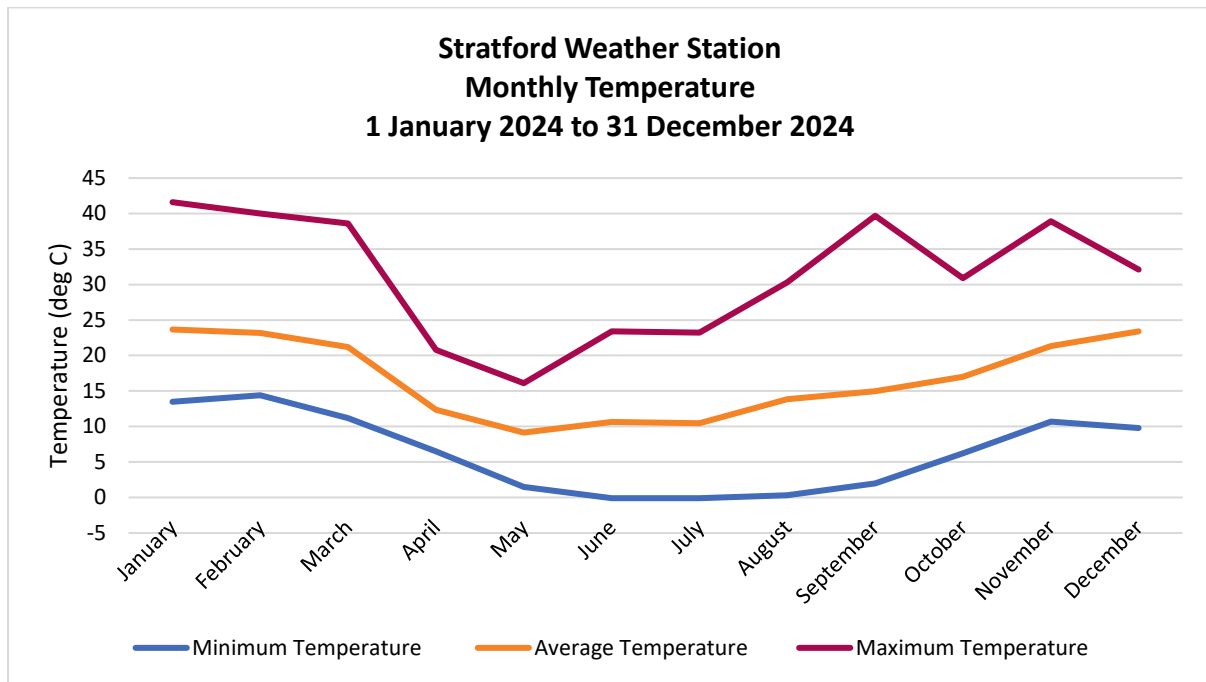
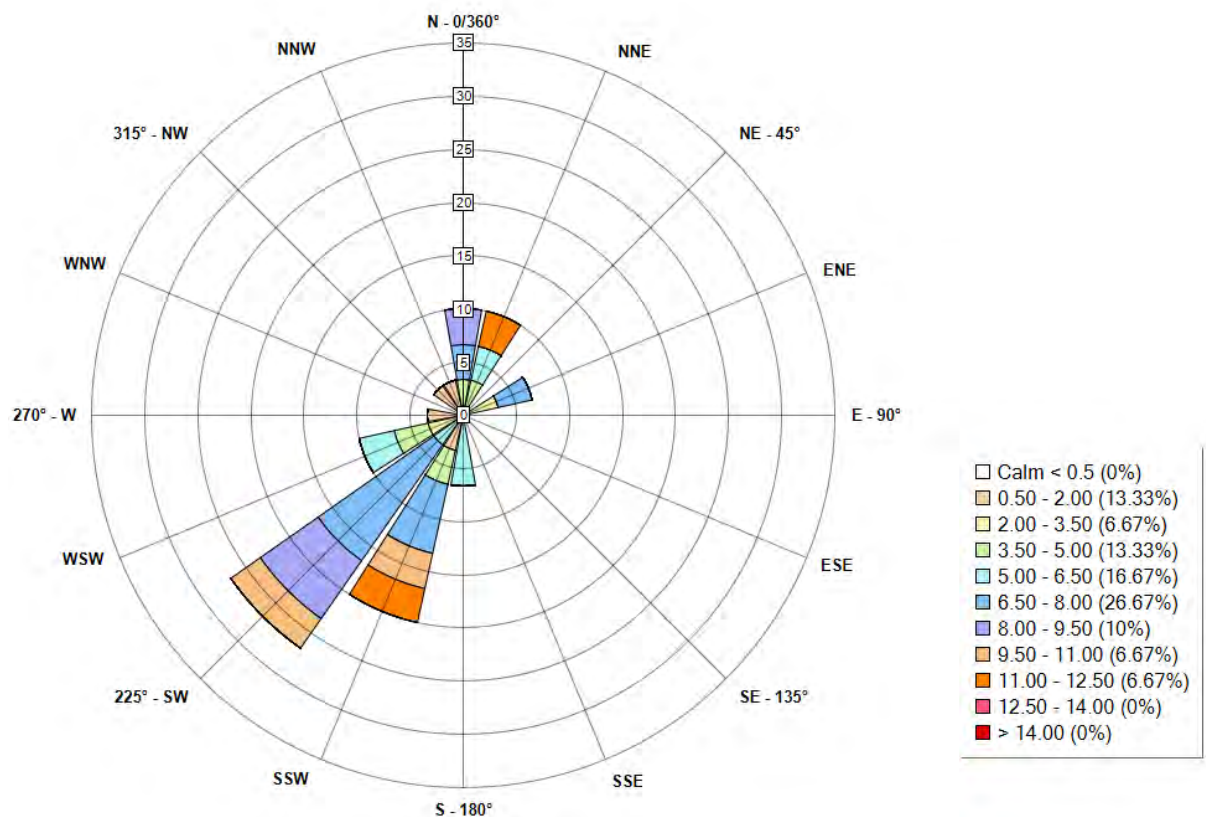
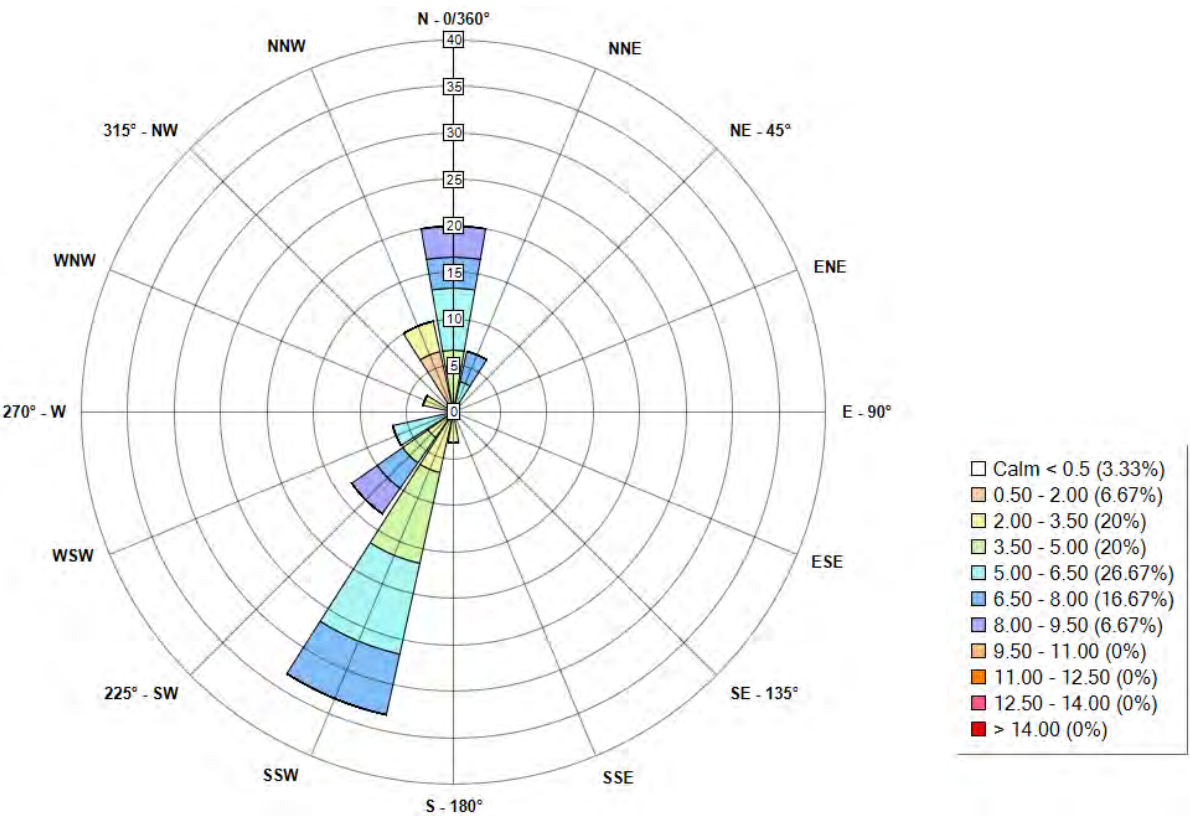
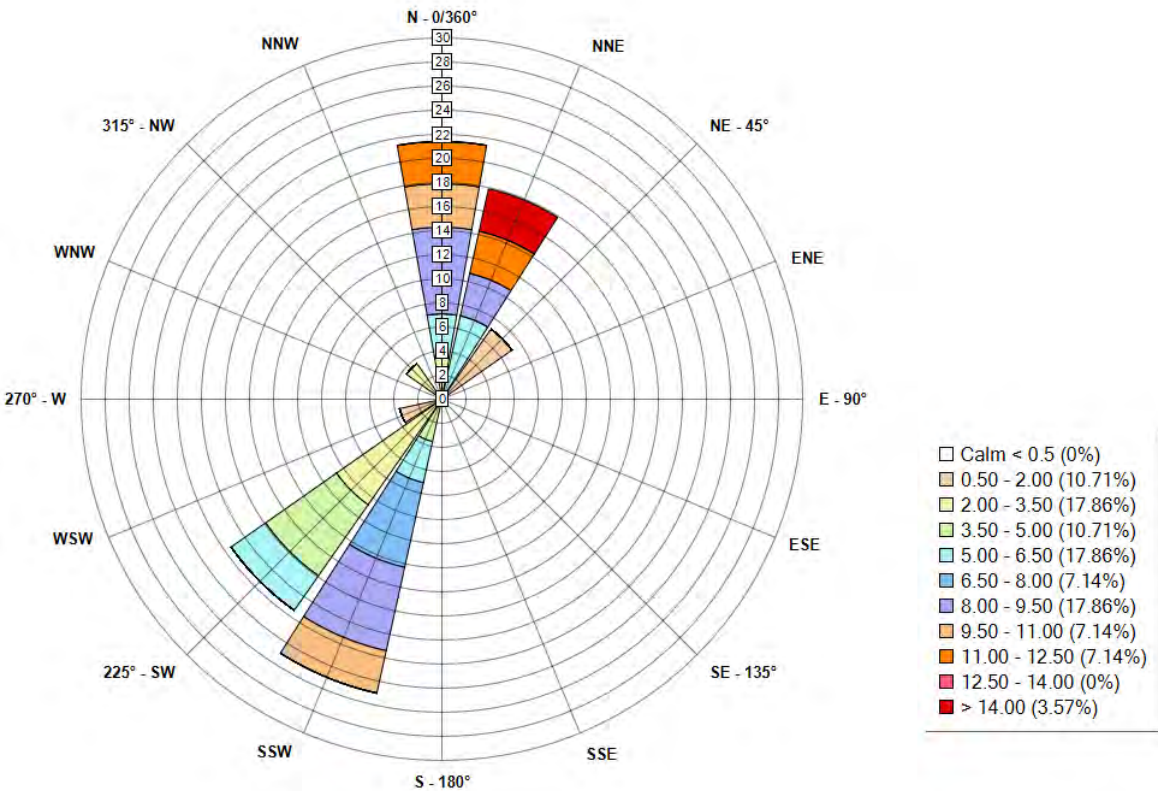
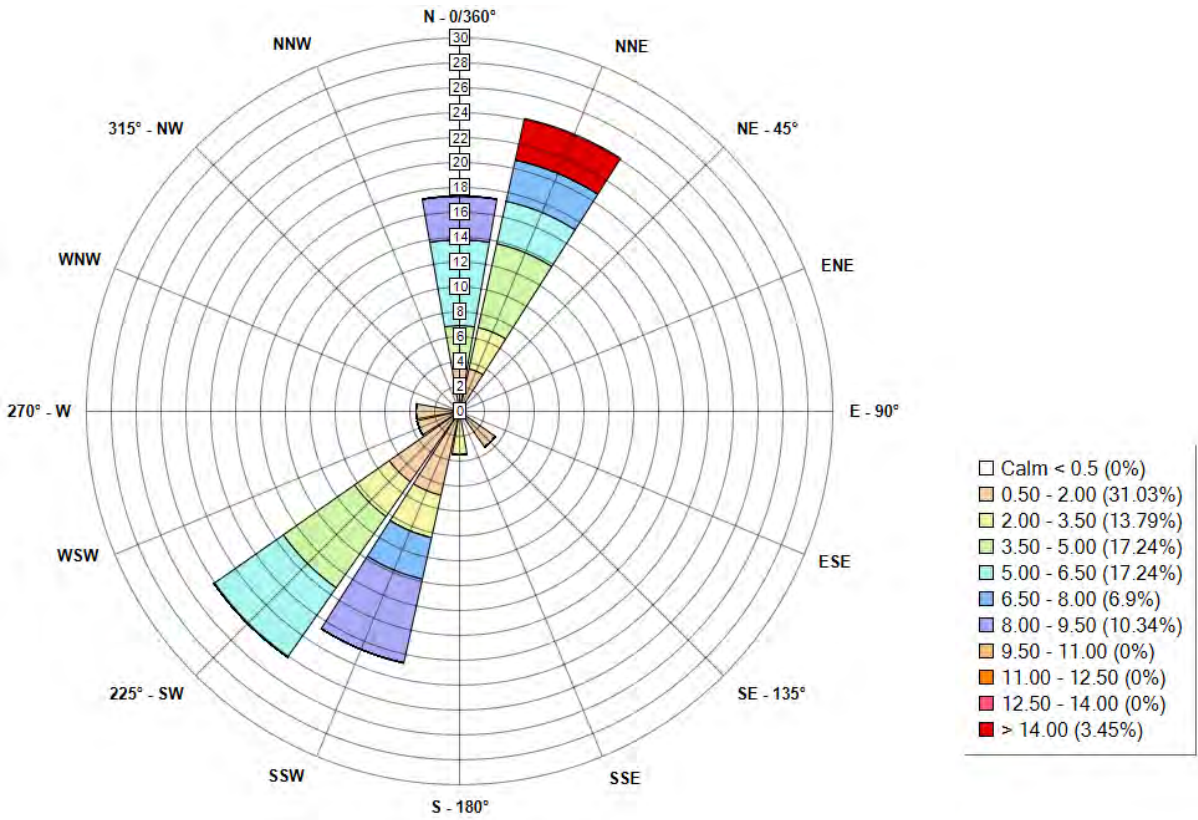
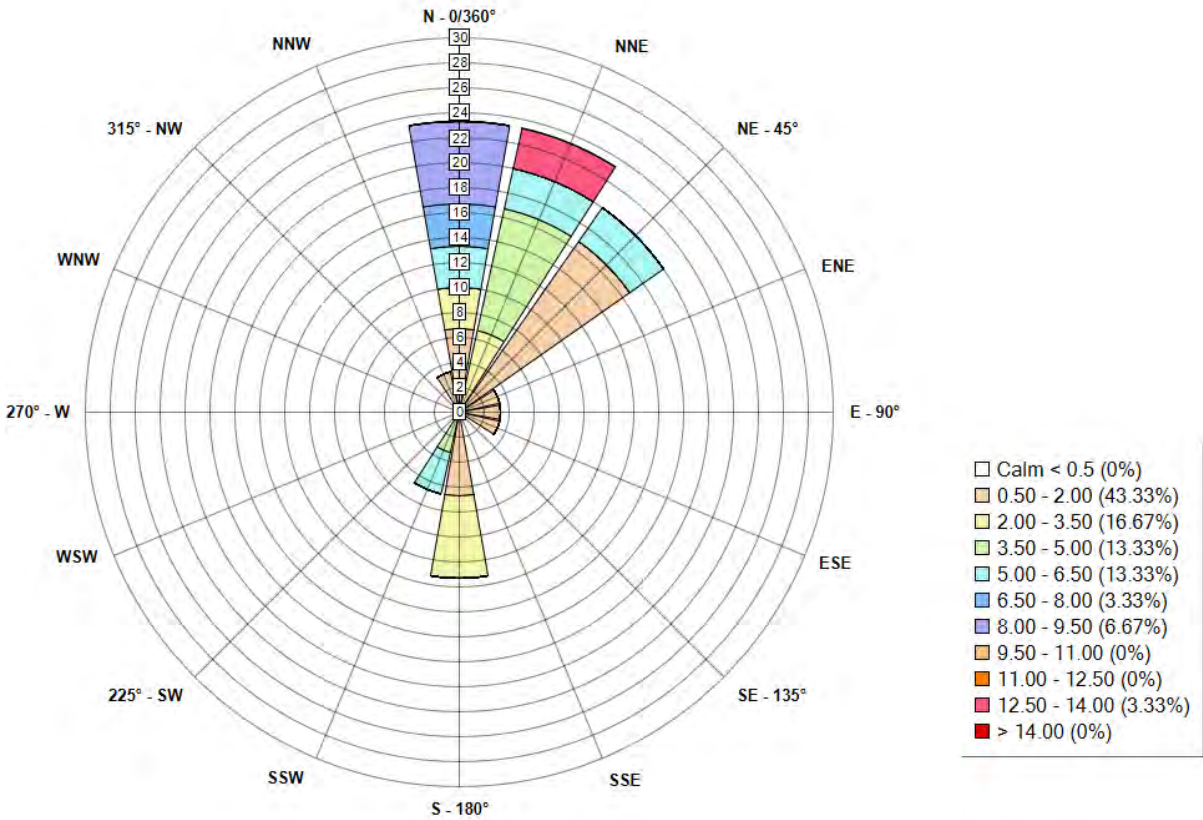
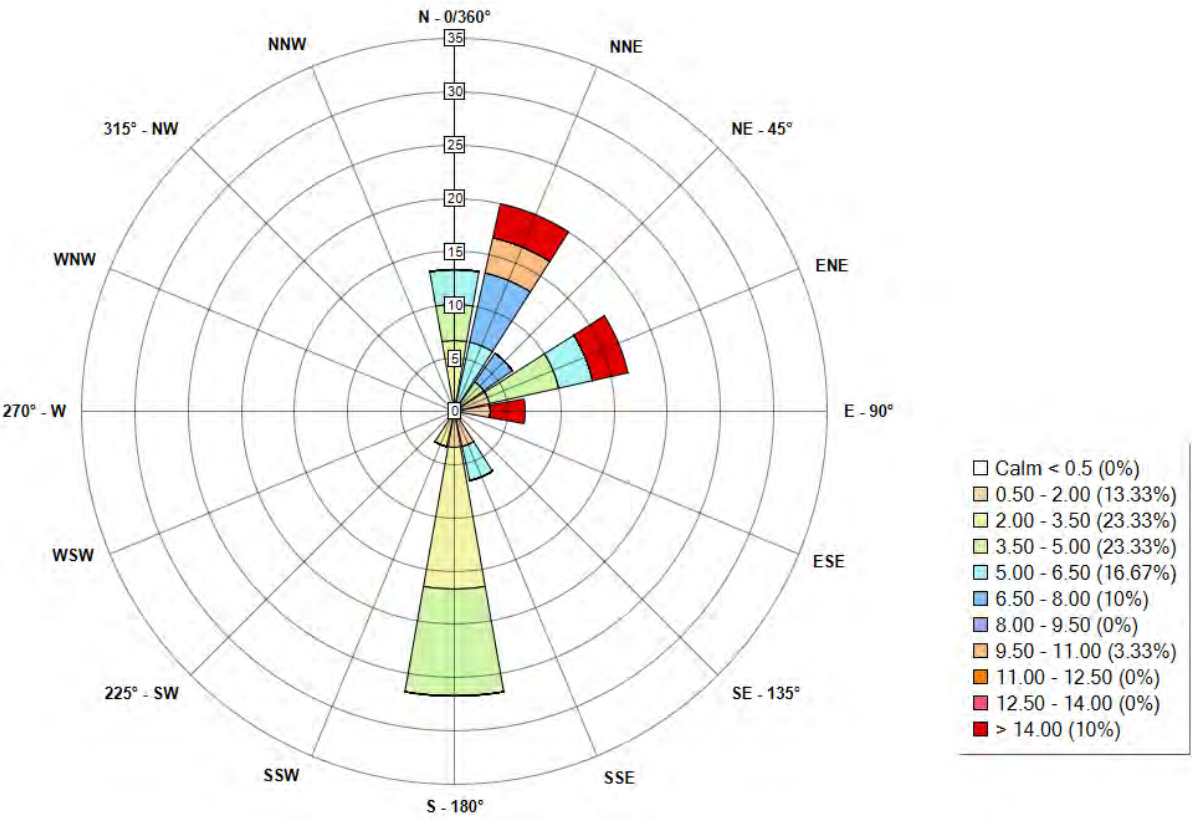
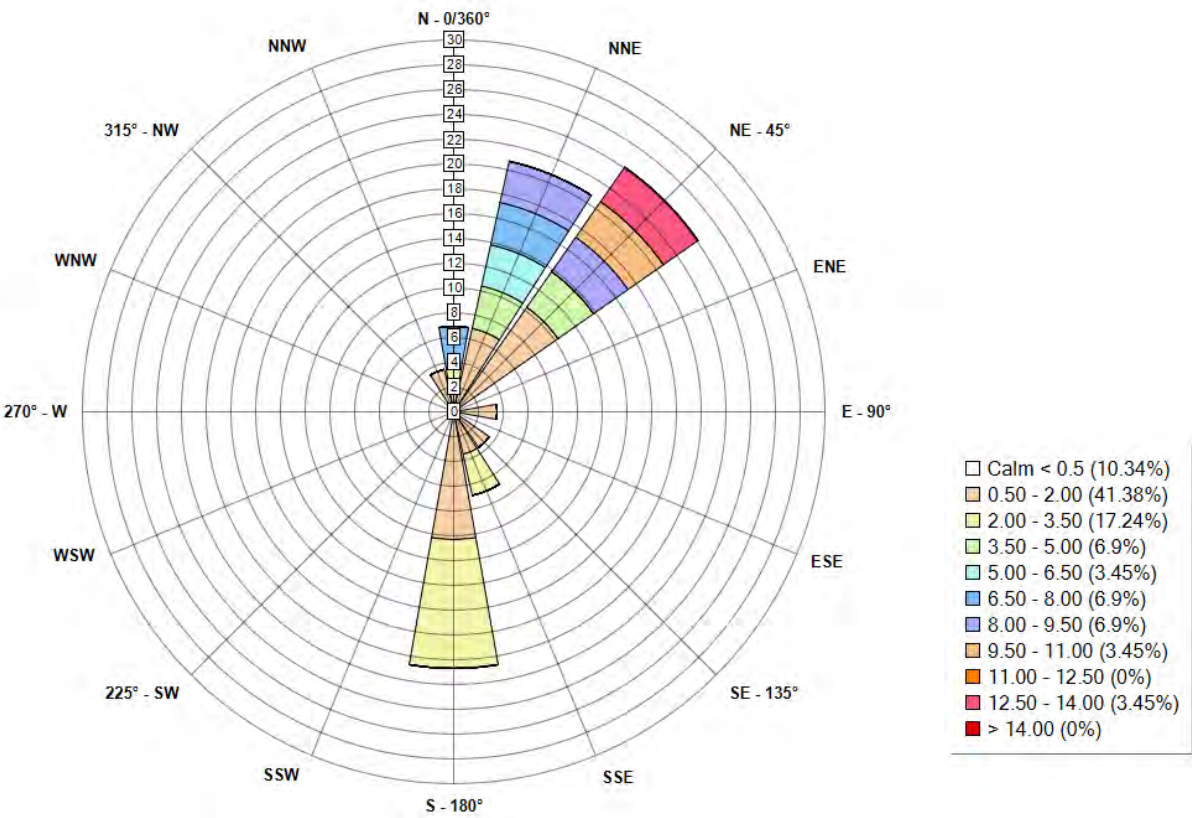


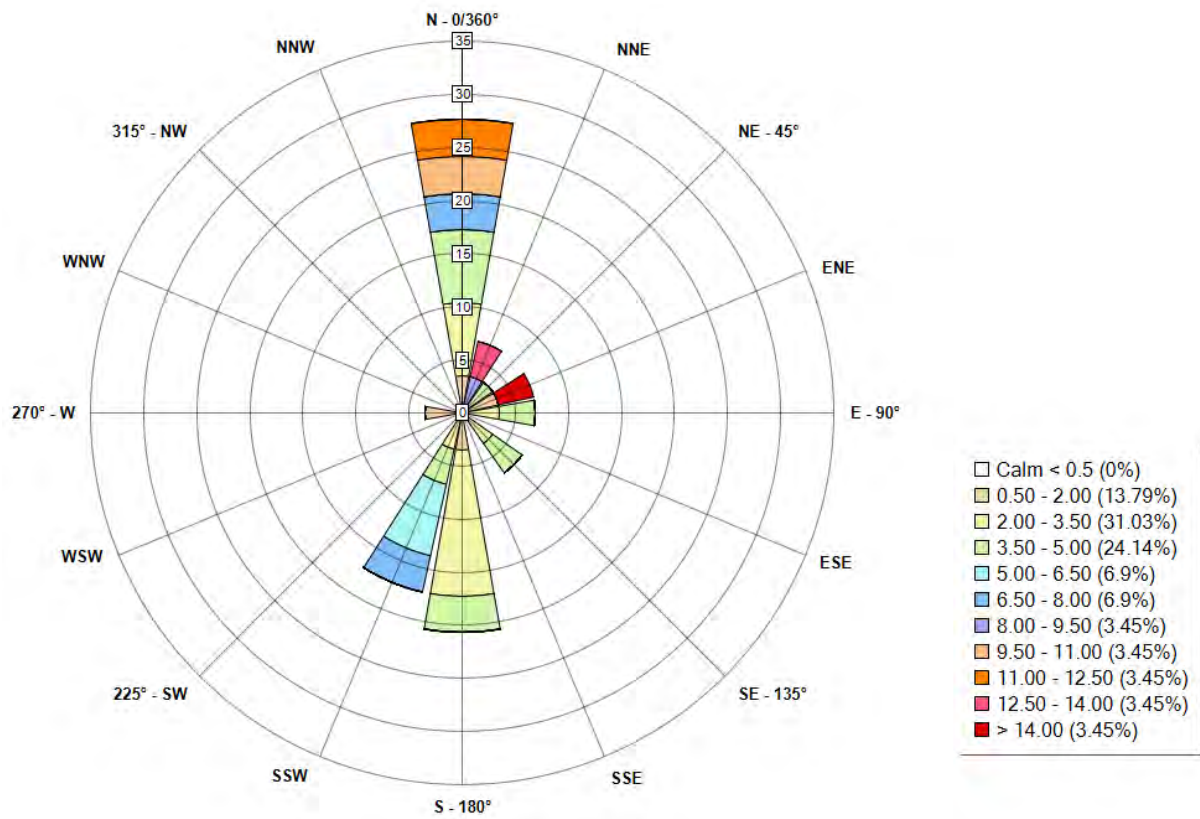
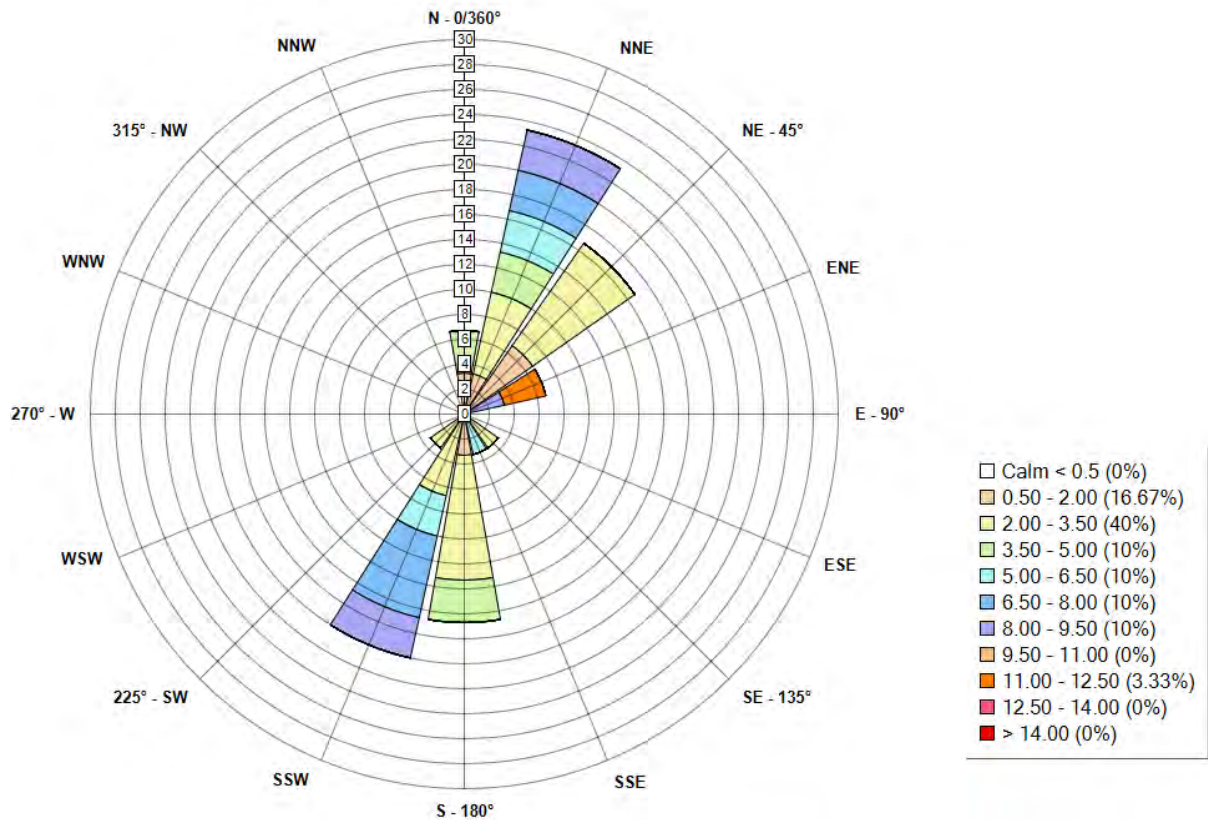
Figure 4: Monthly Wind Roses Displaying Wind Direction and Speed Frequencies (1 January 2024 – 31 December 2024)

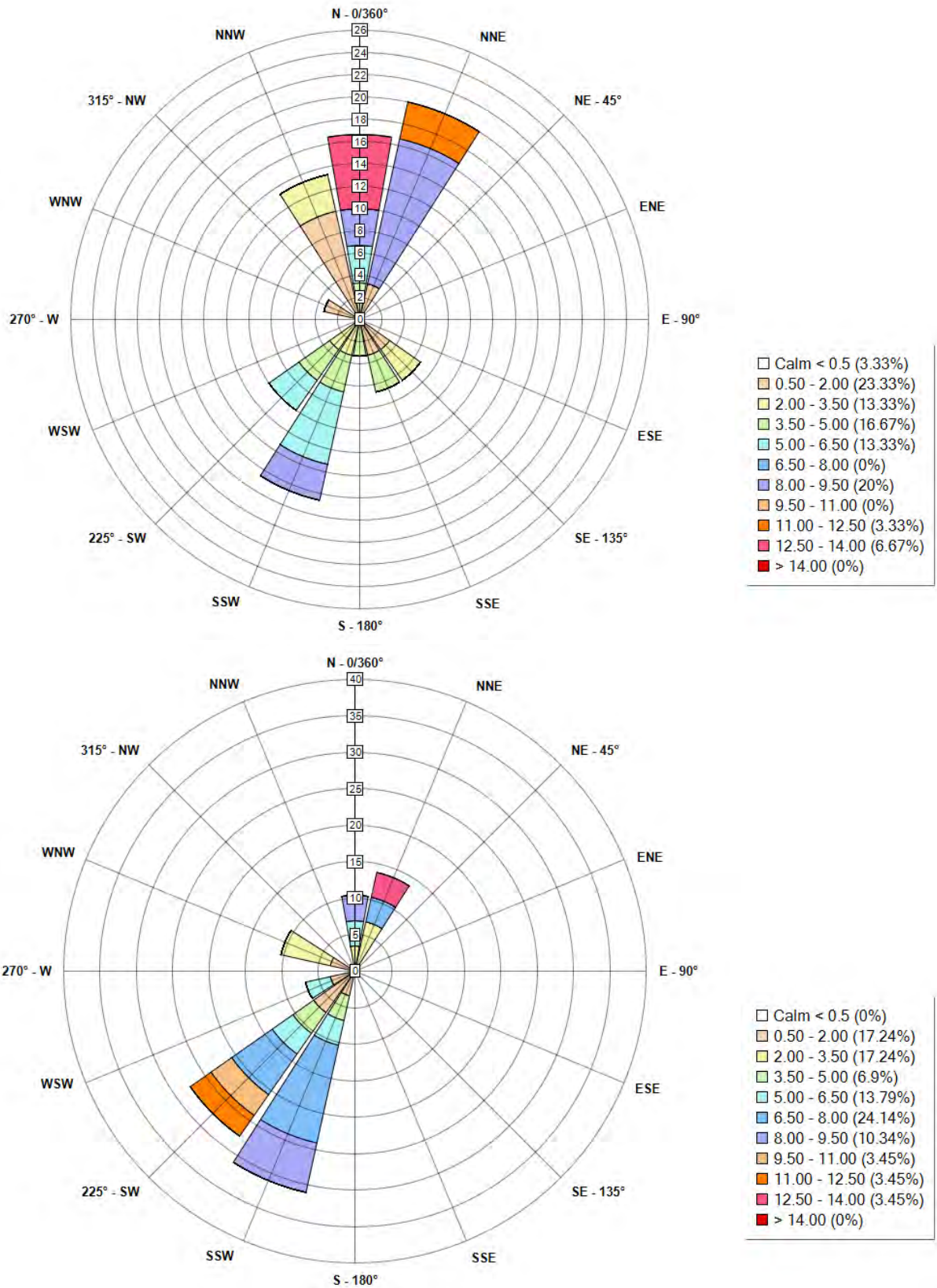


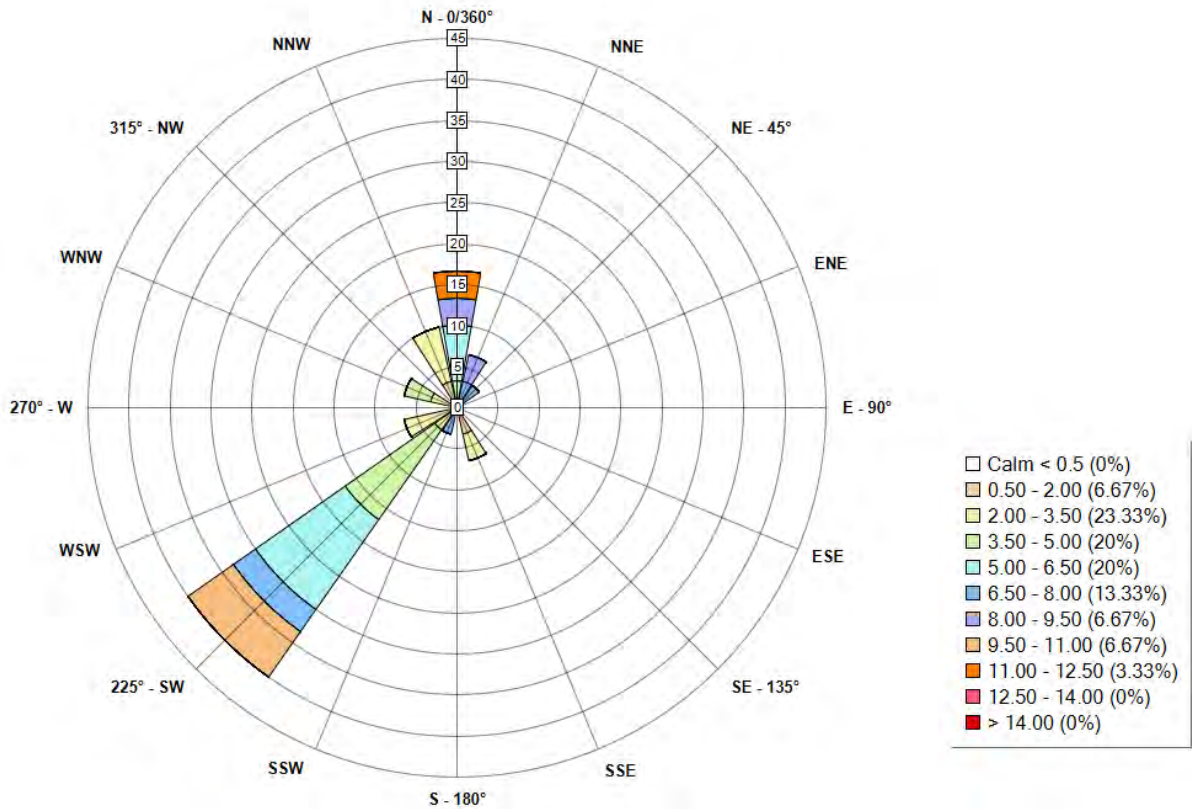












APPENDIX 3:

Air Quality Monitoring

Figure 1: Depositional Dust Monitoring Results

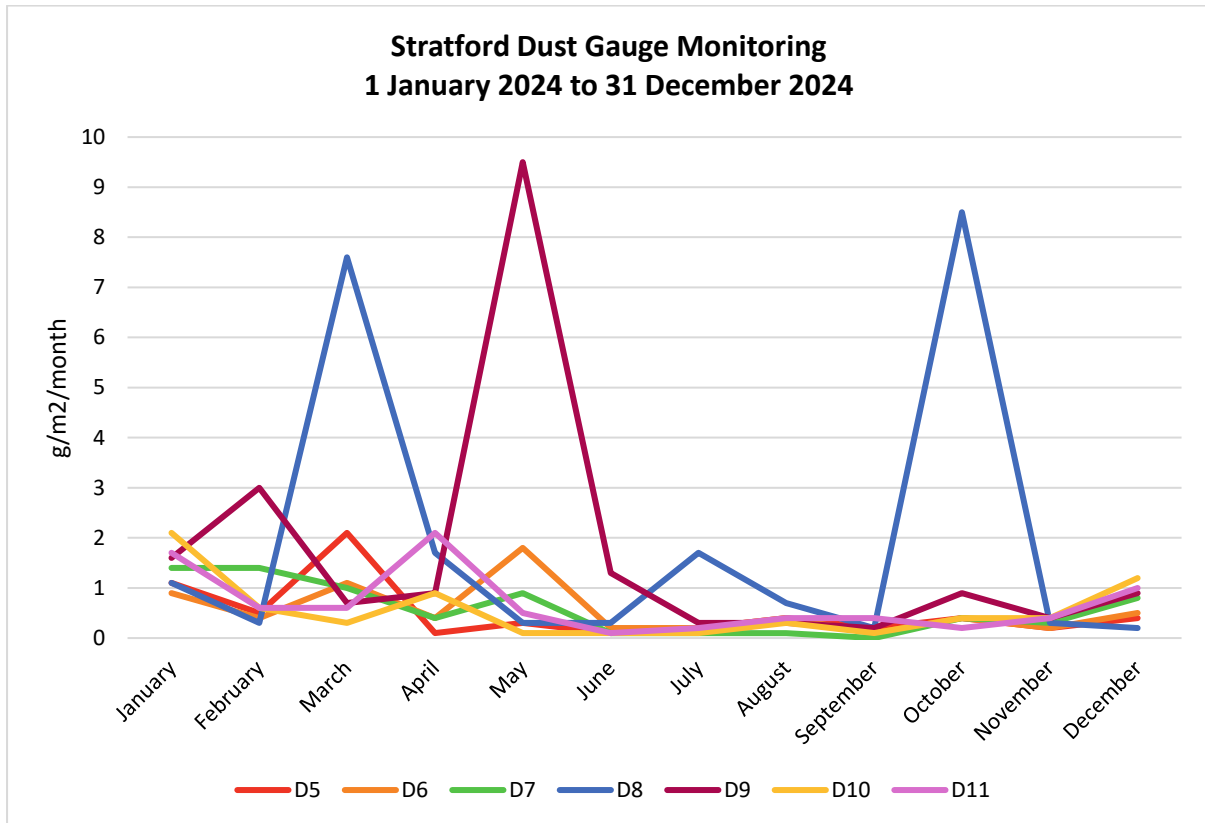


Figure 2: Depositional Dust Annual Averages

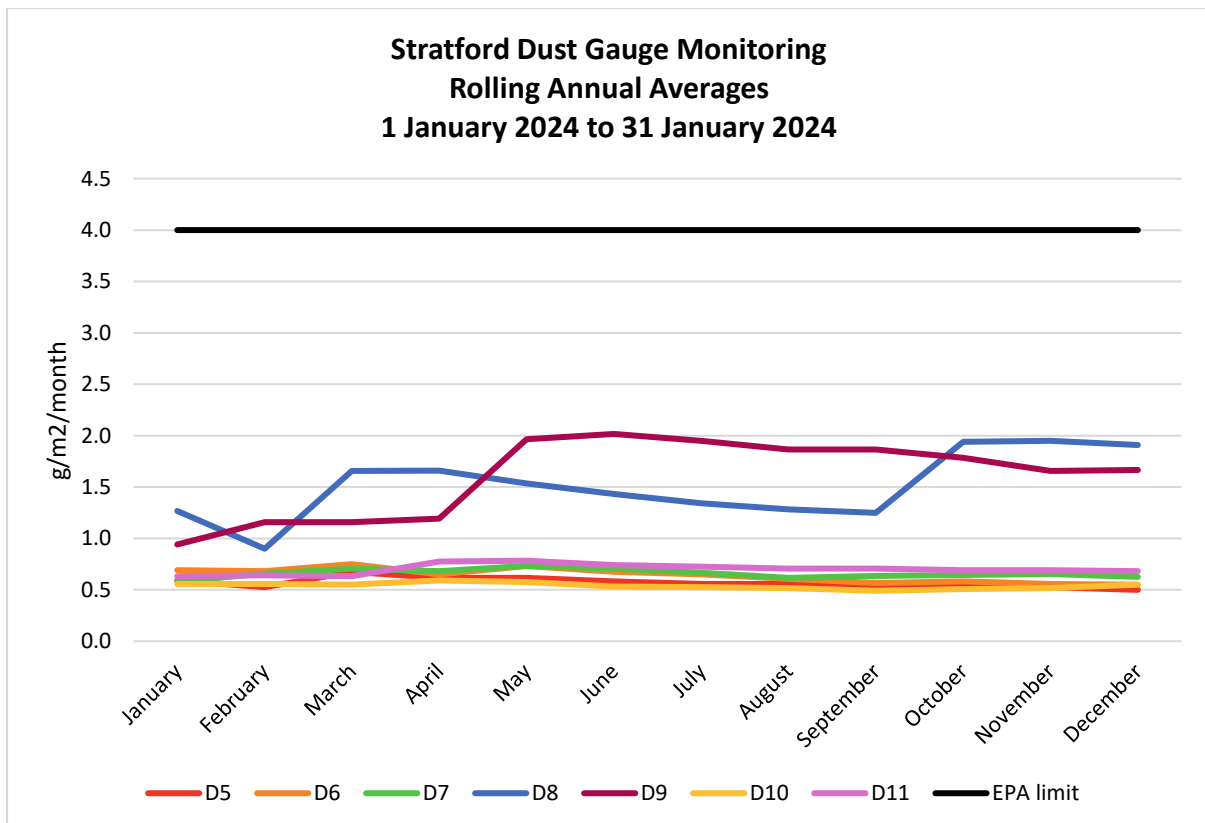


Figure 3: High Volume Air Sampler (HVAS) PM10 Results

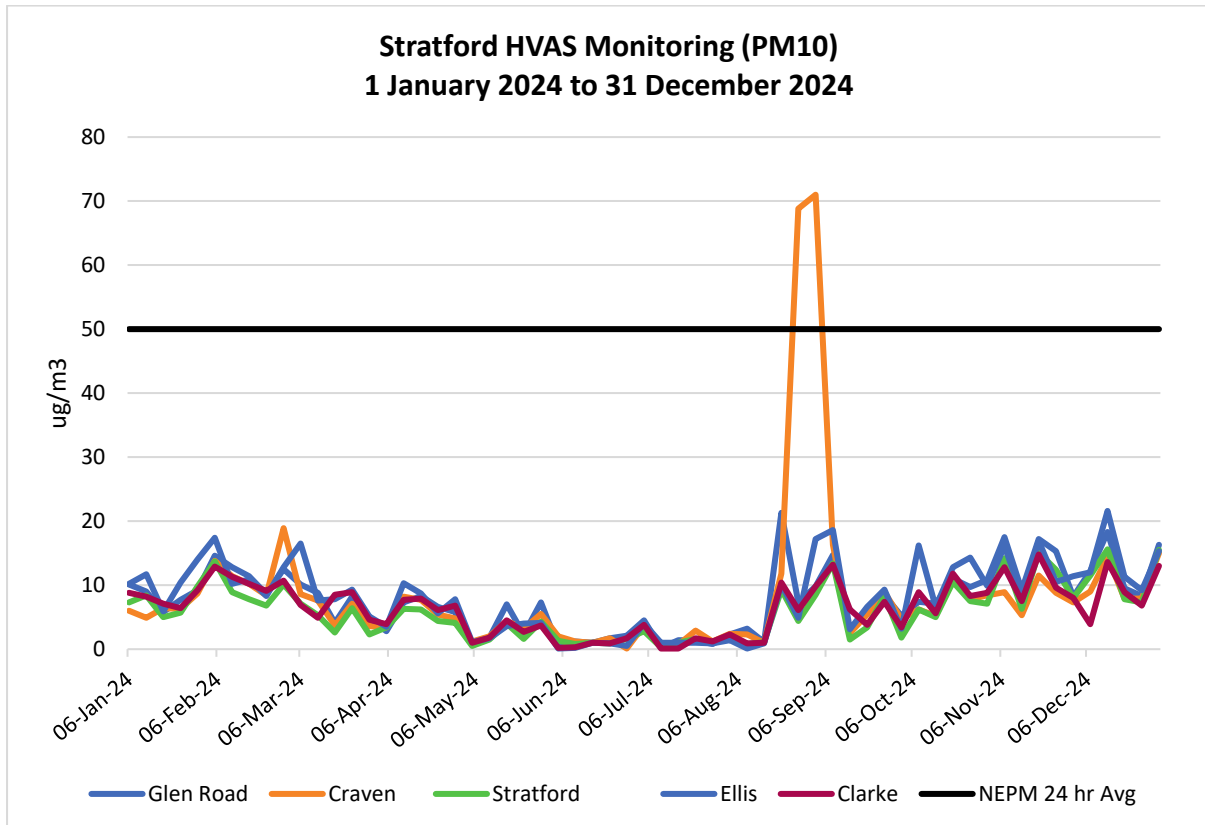


Figure 4: HVAS PM10 Rolling Annual Average Results

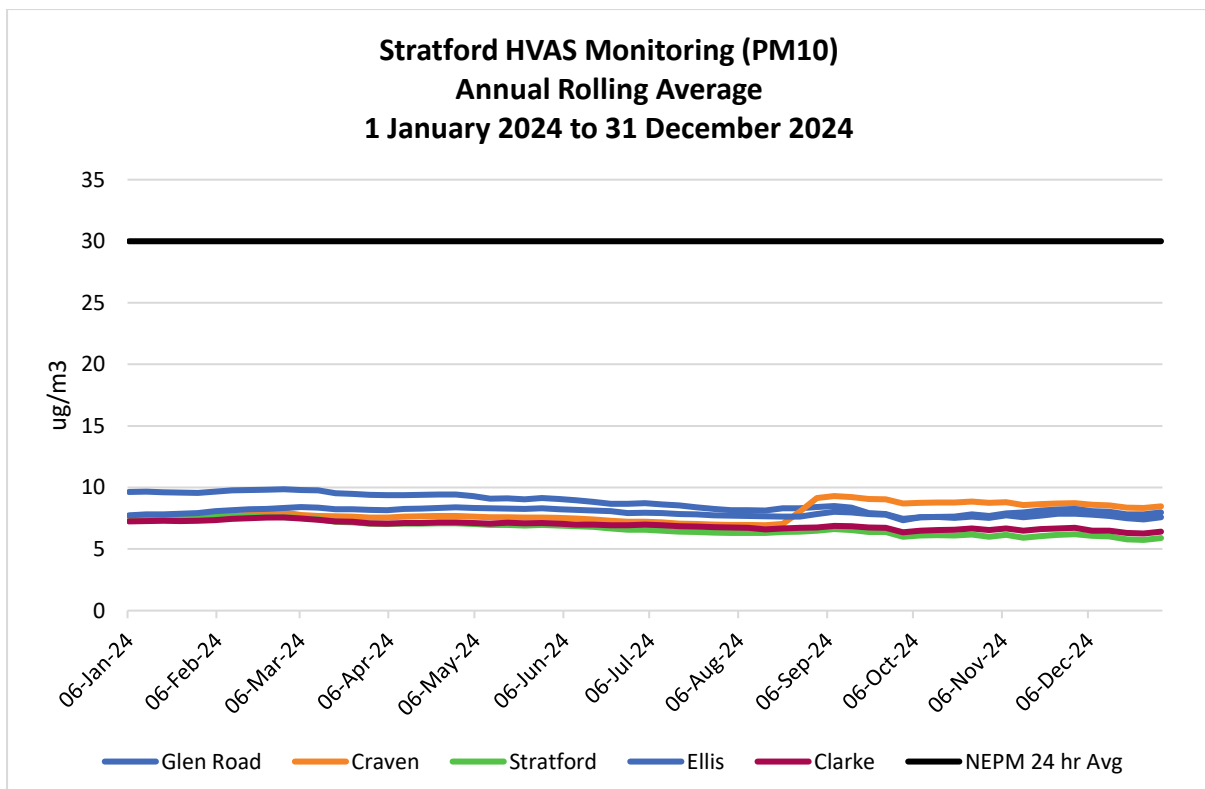


Figure 5: HVAS Total Suspended Particulates (TSP) Results

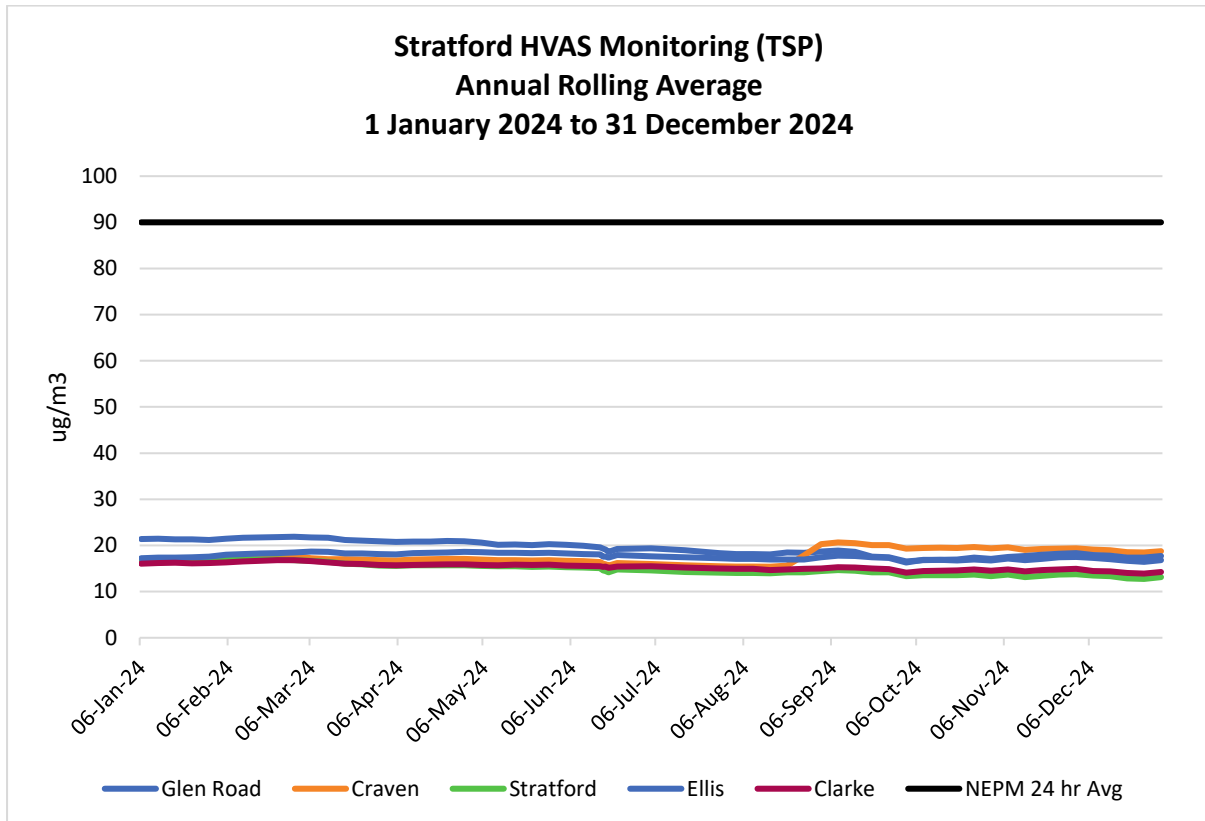


Figure 6: Stratford TEOM Real Time Dust Monitoring PM10 Results

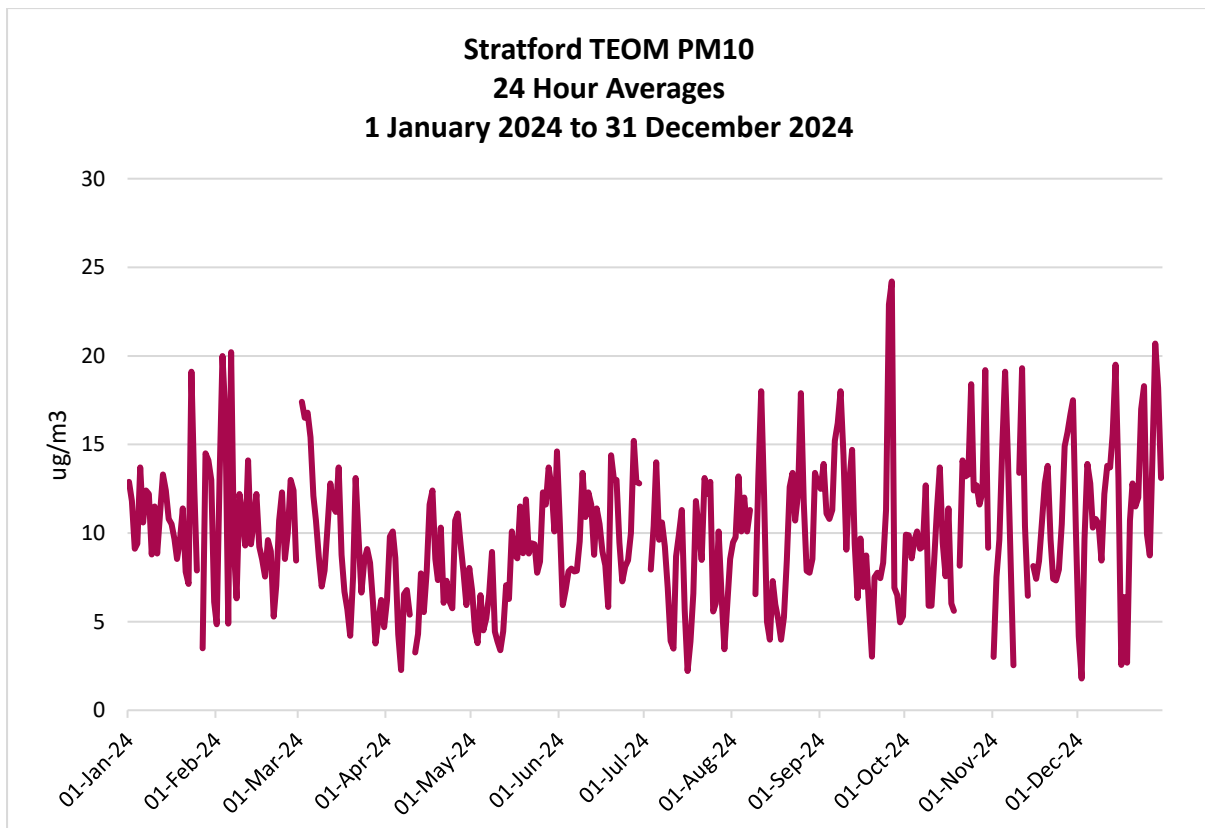


Figure 7: Stratford TEOM Rolling Annual Average PM10 Results

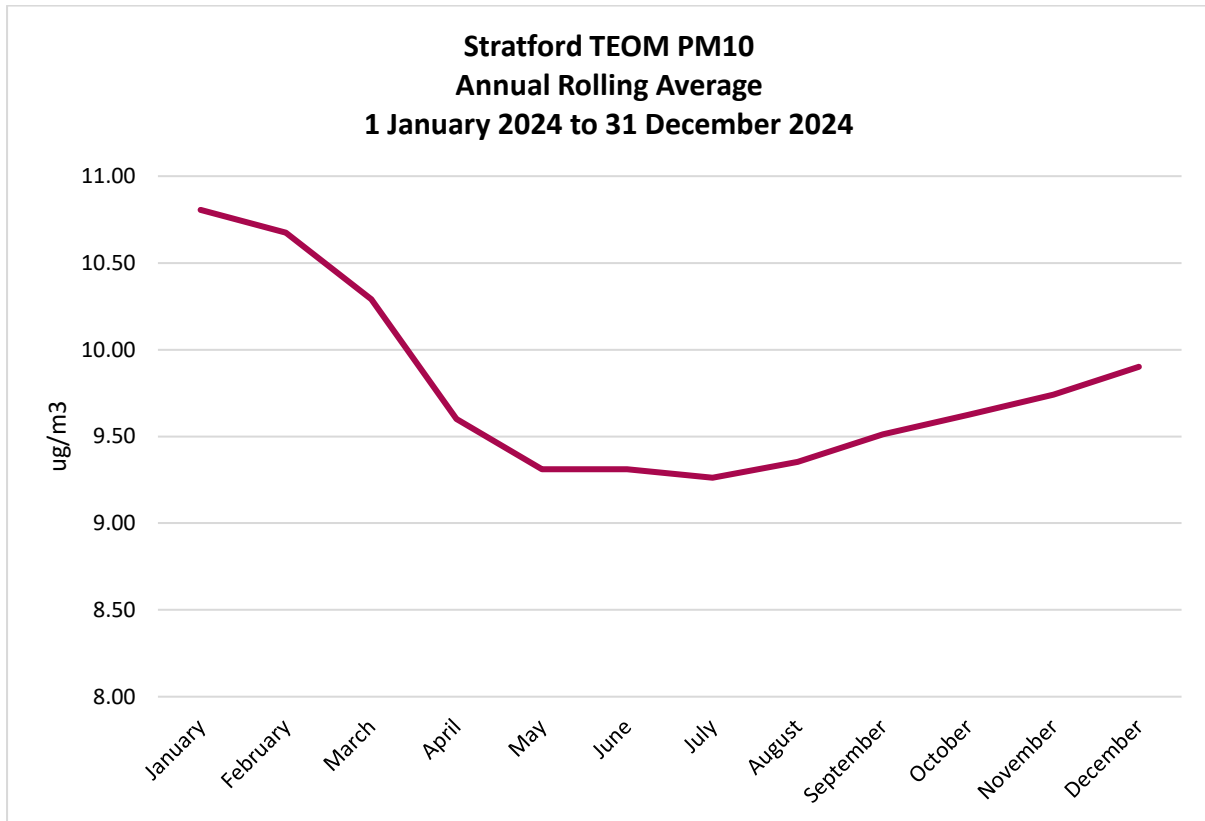


Figure 8: Craven TEOM Real Time Dust Monitoring PM10 Results

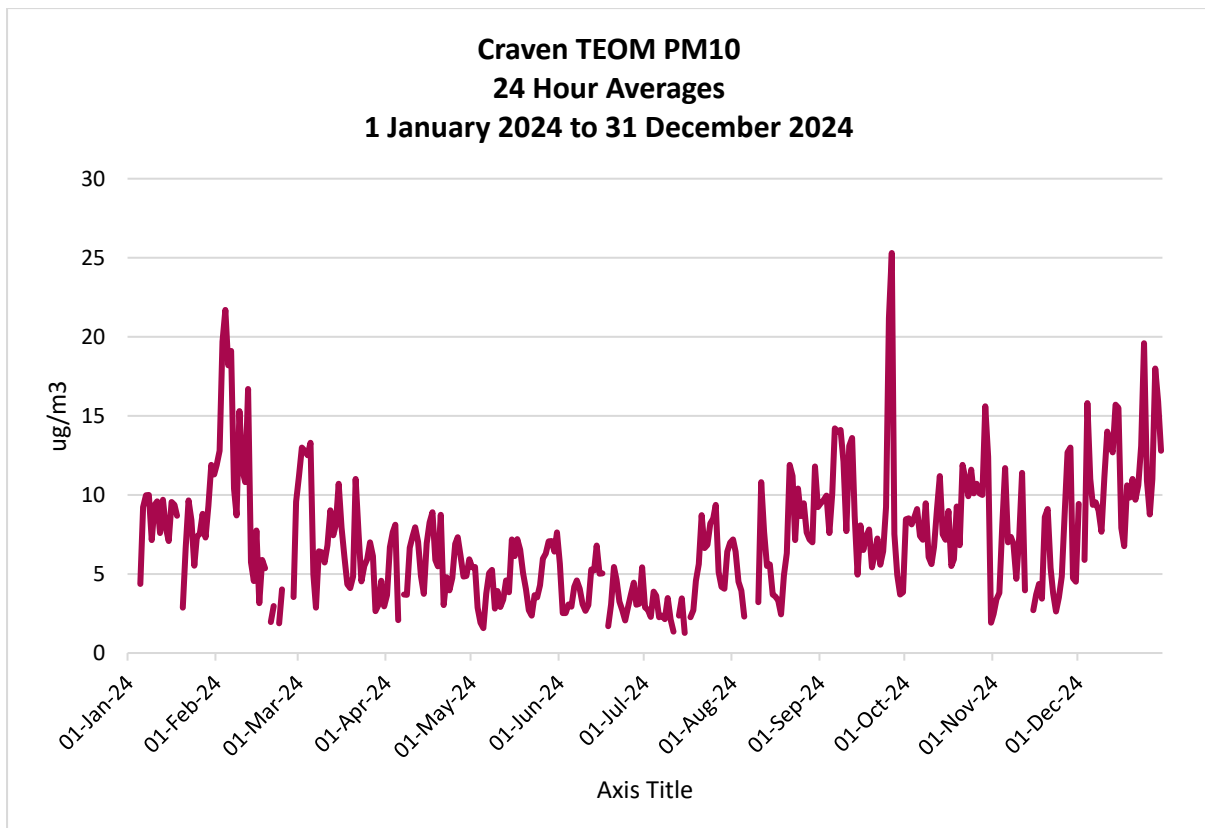
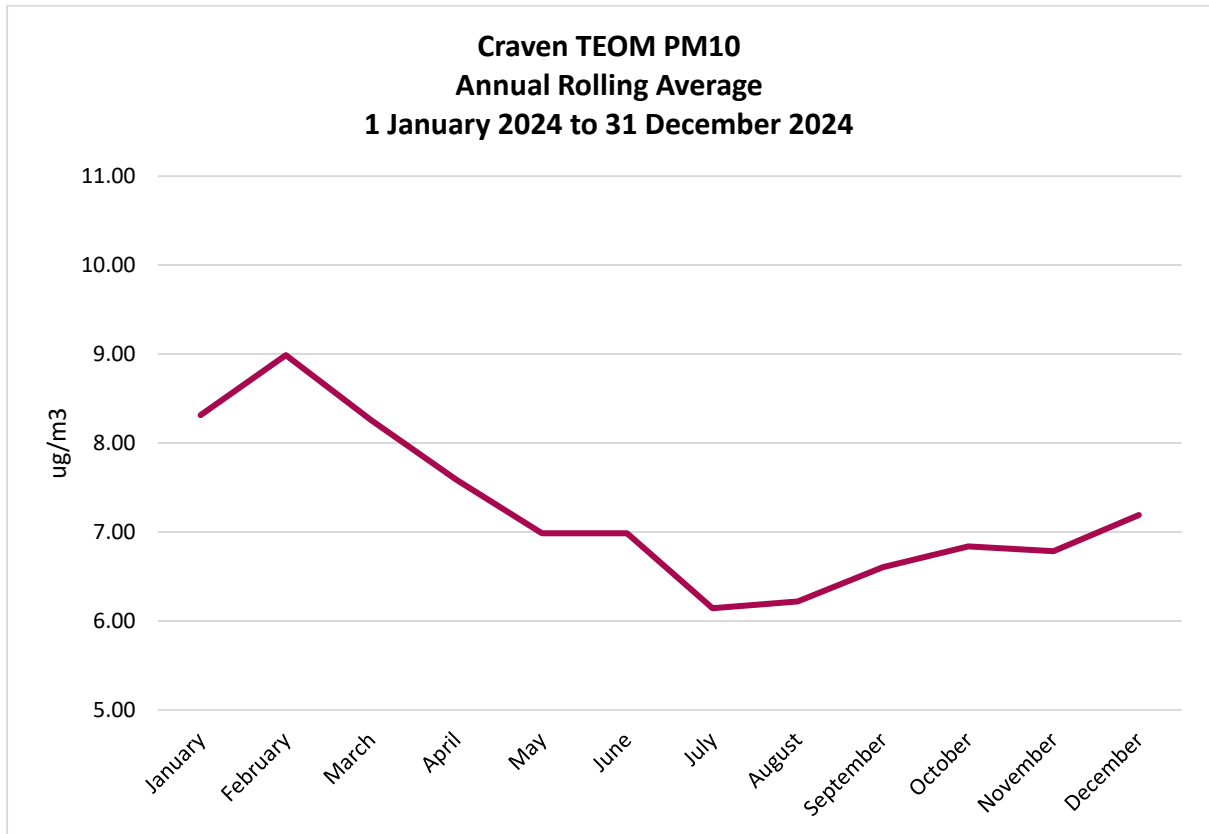


Figure 9: Craven TEOM Rolling Annual Average PM10 Results



SMC Real-Time Dust Monitoring Response Register 2024

Alarm			Validate Data	Source Identification	Management Strategy	Review
Alarm Date/Time	Monitoring Location	What Performance Indicator has been exceeded?	Assess potential for influence of extreme activities or irregular events non-mine related.	Visually assess if excessive dust being generated and identify source?	Management measure taken, i.e. Additional mitigation measures applied or ceasing of activities.	Review of real-time data to determine whether the management strategy has resulted in a discernible dust reduction.
2024-01-22, 23:15:12	Stratford Village	DMC24>25.0 ug/m3	Light-moderate wind from south (183 degrees at 5.7m/s).	Mining in Avon North and dumping in Roseville. Watercart manned. Pit remains wet following rain. Dust not observed.	Receptor to west of operations and not impacting.	N/A
2024-01-22, 21:59:48	Stratford Village	PM10>25.0 ug/m3	Low wind from north (315 degrees at 1.1m/s).	Mining in Avon North and dumping in Roseville. Watercart manned. Pit remains wet following rain. Dust not observed.	Receptor to west of operations and not impacting.	N/A
2024-02-03, 21:55:48	Stratford Village	PM10>25.0 ug/m3	No mining operations at time of alarm (no operations Friday NS to Sunday NS inclusive). Unknown external influence. No further action.	N/A	N/A	N/A
2024-02-03, 21:59:59	Stratford Village	DMC24>25.0 ug/m3	No mining operations at time of alarm (no operations Friday NS to Sunday NS inclusive). Unknown external influence. No further action.	N/A	N/A	N/A
2024-02-03, 22:58:11	Craven Village	DMC24>25.0 ug/m3	No mining operations at time of alarm (no operations Friday NS to Sunday NS inclusive). Unknown external influence. No further action.	N/A	N/A	N/A

APPENDIX 4:

Surface Water & Groundwater Monitoring

Surface Waters

W1 Upstream Avon River
(Wenham Cox Road – Glenavon)

DATE	EVENT	Flow - Comments	Temp	Turbidity	pH	Cond.	TDS	TSS	Alkalinity	Sulphate	Chloride	Calcium	Mg	Al	Arsenic	Cd	Cr	Copper	Lead	Mn	Boron	Iron (total)	Mercury	Tot. N	Tot. P
			°C	(NTU)		(uS/cm)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
31-Jan-24	Monthly	No flow																							
7-Feb-24	Rain	No flow																							
27-Mar-24	Monthly	Steady	20.9	5.95	7.08	290	165	<5	69	3	53	14	8	0.04	0.003	0.0005	0.002	0.012	0.002	0.046	<0.05	1.54	<0.0001	0.5	0.06
5-Apr-24	Rain	Slow - clear & brown	20.3	3.39	7.55	307	164	6	72	2	51	32	19	0.07	0.001	<0.0001	<0.001	<0.001	<0.001	0.205	<0.05	1.2	<0.0001	0.5	0.05
1-May-24	Rain	Steady - turbid & brown	14.2	101	7.20	196	200	72	35	7	41	8	4	0.61	0.001	<0.0001	<0.001	<0.001	0.002	0.085	<0.05	1.81	<0.0001	1.8	0.18
1-Jun-24	Rain	Slow - turbid and brown	13.4	313	6.91	186	209	364	35	9	25	10	5	5.5	0.003	<0.0001	0.003	0.004	0.006	0.330	<0.05	7.5	<0.0001	8.0	0.79
30-Jul-24	Monthly	Slow - slightly turbid and brown	10.7	7.76	7.39	320	180	<5	64	10	44	17	9	0.06	<0.001	<0.0001	<0.001	<0.001	<0.001	0.068	<0.05	1.82	<0.0001	0.3	0.08
26-Aug-24	Monthly	Slow - clear and colourless	16.5	6.47	7.27	368	239	<5	80	9	57	17	10	0.05	<0.001	<0.0001	<0.001	<0.001	<0.001	0.075	<0.05	1.87	<0.0001	0.6	0.09
27-Sep-24	Rain	Steady - clear and brown	14.6	7.29	6.99	360	222	5	81	5	65	20	10	0.04	<0.001	<0.0001	<0.001	<0.001	<0.001	0.323	<0.05	2.85	<0.0001	0.4	0.02
30-Oct-24	Monthly	Slow - slightly turbid and brown	14.2	20.4	7.14	238	189	<5	56	6	44	11	7	0.96	0.001	0.0001	<0.001	<0.001	<0.001	0.114	<0.05	2.82	<0.0001	1.0	0.08
14-Nov-24	Rain	Steady - Slightly turbid and brown	16.9	120	7.08	131	142	76	30	<10	23	5	3	1.37	0.002	<0.0001	<0.001	0.002	0.002	0.065	<0.05	2.29	<0.0001	1.7	0.2
30-Dec-24	Monthly	Trickle	22.5	4.48	7.35	300	180	<5	84	<1	39	17	8	<0.01	0.002	<0.0001	<0.001	<0.001	<0.001	0.146	<0.05	1.65	<0.0001	0.6	0.1

W2 Downstream Avon River
(Marengo – Bignall)

DATE	Event	Flow - Comments	Temp	Turbidity	pH	Cond.	TDS	TSS	Alkalinity	Sulphate	Chloride	Calcium	Mg	Al	Arsenic	Cd	Cr	Copper	Lead	Mn	Boron	Iron (total)	Mercury	Tot. N	Tot. P
			°C	(NTU)		(uS/cm)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
31-Jan-24	Monthly	No flow																							
7-Feb-24	Rain	No flow																							
27-Mar-24	Month	Steady	22.6	7.98	7.07	281	181	13	71	2	50	14	8	0.07	0.002	0.0002	<0.001	0.009	<0.001	0.054	<0.05	1.01	<0.0001	0.7	0.1
5-Apr-24	Rain	Slow - clear & brown	21.5	6.42	7.45	310	177	6	74	2	52	15	8	0.07	0.001	<0.0001	0.001	<0.001	<0.001	0.372	<0.05	1.22	<0.0001	0.9	0.1
1-May-24	Rain	Steady - turbid & brown	14.2	347	7.16	470	438	123	56	18	106	12	9	0.63	0.001	<0.0001	<0.001	0.001	0.003	0.113	<0.05	1.86	<0.0001	1.9	0.24
1-Jun-24	Rain	Slow - slightly turbid and brown	12.9	37.3	6.88	264	200	17	44	14	40	12	7	1.08	0.001	<0.0001	<0.001	<0.001	<0.001	0.101	<0.05	2.22	<0.0001	0.9	0.12
30-Jul-24	Monthly	Slow - Clear and brown	10.8	12.16	7.30	360	198	<5	60	10	57	17	9	0.11	<0.001	<0.0001	<0.001	<0.001	<0.001	0.08	<0.05	1.94	<0.0001	0.5	0.03
26-Aug-24	Monthly	Steady - Clear and brown	17.3	13.87	7.31	530	302	<5	78	19	119	19	13	0.43	<0.001	<0.0001	<0.001	<0.001	<0.001	0.217	<0.05	1.62	<0.0001	0.7	0.08
27-Sep-24	Rain	Steady - Clear and brown	16.2	4.93	7.02	423	241	<5	90	6	84	21	13	0.03	<0.001	<0.0001	<0.001	<0.001	<0.001	0.366	<0.05	1.18	<0.0001	0.6	0.02
29-Oct-24	Monthly	Slow - slightly turbid and brown	18.8	26.7	7.08	387	278	<5	52	21	83	11	11	1.49	0.001	<0.0001	<0.001	<0.001	<0.001	0.215	<0.05	2.49	<0.0001	1.3	0.11
14-Nov-24	Rain	Slow - slightly turbid and brown	19.9	110	6.79	185	178	69	31	8	37	6	5	1.07	0.002	<0.0001	<0.001	0.002	0.002	0.109	<0.05	1.83	<0.0001	1.7	0.23
30-Dec-24	Monthly	Trickle	22.8	5.03	7.21	278	172	<5	76	1	37	15	8	0.02	0.002	<0.0001	<0.001	<0.001	<0.001	0.196	<0.05	1.63	<0.0001	0.7	0.11

W3 Upstream Dog Trap Creek
(Dog Trap Creek – Ellis)

DATE	Event	Flow - Comments	Temp	Turbidity	pH	Cond.	TDS	TSS	Alkalinity	Sulphate	Chloride	Calcium	Mg	Al	Arsenic	Cd	Cr	Copper	Lead	Mn	Boron	Iron (total)	Mercury	Tot. N	Tot. P
			°C	(NTU)		(uS/cm)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
31-Jan-24	Monthly	No flow																							
7-Feb-24	Rain	No flow																							
27-Mar-24	Monthly	No flow																							
5-Apr-24	Rain	No flow																							
1-May-24	Rain	Slow - slightly turbid & brown	15.0	8.98	7.12	323	216	<5	35	28	61	13	7		0.002	<0.0001	<0.001	<0.001	<0.001	0.092	<0.05	0.92	<0.0001	0.7	0.07
1-Jun-24	Rain	Steady -turbid and brown	13.2	183	6.89	163	178	250	36	4	23	8	5		0.005	<0.0001	0.002	0.003	0.004	0.823	<0.05	7.10	<0.0001	3.2	0.53
30-Jul-24	Monthly	Slow - clear and brown	11.9	20.5	7.08	338	184	25	44	19	60	13	9		0.002	<0.0001	<0.001	<0.001	<0.001	0.355	<0.05	1.21	<0.0001	1.7	0.08
26-Aug-24	Monthly	Trickle - clear and colourless	18.1	5.36	7.11	338	186	<5	55	16	57	13	8		0.001	<0.0001	<0.001	0.001	<0.001	0.327	<0.05	1.17	<0.0001	0.4	0.06
27-Sep-24	Rain	Steady - Clear and colourless	16.1	11.24	7.01	370	227	16	60	16	79	16	10		0.002	<0.0001	<0.001	<0.001	<0.001	0.576	<0.05	1.33	<0.0001	0.5	0.08
30-Oct-24	Monthly	Trickle - Clear and colourless	13.8	4.98	6.91	297	170	<5	54	10	62	11	8		0.003	0.0002	<0.001	<0.001	<0.001	0.202	<0.05	1.08	<0.0001	0.4	0.04
14-Nov-24	Rain	Slow - slightly turbid and brown	16.5	58.5	6.89	177	162	30	36	7	28	7	5		0.002	<0.0001	<0.001	0.001	<0.001	0.146	<0.05	1.63	<0.0001	1.0	0.13
30-Dec-24	Monthly	Trickle	25.3	5.24	7.22	392	231	<5	79	6	61	15	10		0.002	<0.0001	<0.001	<0.001	<0.001	0.324	<0.05	1.02	<0.0001	0.6	0.09

W3A Upstream Dog Trap Creek
(Dog Trap Creek – Ellis)

DATE	Event	Flow - Comments	Temp	Turbidity	pH	Cond.	TDS	TSS	Alkalinity	Sulphate	Chloride	Calcium	Mg	Al	Arsenic	Cd	Cr	Copper	Lead	Mn	Boron	Iron (total)	Mercury	Tot. N	Tot. P
			(°C)	(NTU)		(uS/cm)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
31-Jan-24	Monthly	No flow																							
7-Feb-24	Event	No flow																							
27-Mar-24	Monthly	No flow																							
5-Apr-24	Rain	No flow																							
1-May-24	Rain	Slow - Slightly turbid & brown	14.5	16.07	7.05	283.0	206	<5	35	45	58	12	7		0.002	<0.0001	<0.001	<0.001	<0.001	0.183	<0.05	1.21	<0.0001	1.0	0.09
1-Jun-24	Rain	Steady - slightly turbid and brown	13.3	137	6.89	121.0	144	129	25	<1	17	6	3		0.002	<0.0001	0.002	0.002	0.002	0.205	<0.05	3.63	<0.0001	2.3	0.29
30-Jul-24	Monthly	Slow - clear and brown	13.7	6.73	6.54	265	158	<5	34	15	41	10	6		0.003	<0.0001	<0.001	<0.001	<0.001	0.958	<0.05	3.03	<0.0001	0.3	0.02
26-Aug-24	Monthly	Slow - clear and colourless	19.4	8.33	6.50	275	179	<5	40	13	48	10	7		0.003	<0.0001	<0.001	<0.001	<0.001	0.906	<0.05	2.36	<0.0001	0.3	0.06
27-Sep-24	Rain	Steady - clear and brown	15.0	24.1	6.58	286	175	8	44	12	55	12	7		0.004	<0.0001	<0.001	<0.001	<0.001	1.4	<0.05	4.52	<0.0001	0.3	0.04
30-Oct-24	Monthly	Trickle - Clear and colourless	13.3	14.89	6.52	280	184	<5	48	10	51	10	7		0.004	<0.0001	<0.001	<0.001	<0.001	0.839	<0.05	4.65	<0.0001	0.4	0.04
14-Nov-24	Rain	Slow - Slightly turbid and brown	16.5	51.8	6.85	174	137	24	35	8	27	7	5		0.001	<0.0001	<0.001	<0.001	<0.001	0.116	<0.05	1.25	<0.0001	1.0	0.09
30-Dec-24	Monthly	Trickle - clear and light brown	21.9	36.5	6.47	310	184	28	62	7	48	12	8		0.004	<0.0001	<0.001	<0.001	<0.001	1.47	<0.05	4.6	<0.0001	0.4	0.06

W4 Avondale Creek – Downstream of Dog Trap Creek
(Avondale Swamp – Atkins)

DATE	Event	Flow - Comments	Temp	Turbidity	pH	Cond.	TDS	TSS	Alkalinity	Sulphate	Chloride	Calcium	Mg	Al	Arsenic	Cd	Cr	Copper	Lead	Mn	Boron	Iron (total)	Mercury	Tot. N	Tot. P
			°C	(NTU)		(uS/cm)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
31-Jan-24	Monthly	No flow																							
7-Feb-24	Rain	No flow																							
27-Mar-24	Monthly	Slow	21.3	4.21	7.06	291.0	187	<5	72	3	53	14	8	0.04	0.002	0.0002	<0.001	0.002	<0.001	0.163	<0.05	1.07	<0.0001	0.6	0.07
5-Apr-24	Rain	No flow																							
1-May-24	Rain	Steady - slightly turbid & brown	14.2	26.7	6.97	474.0	308	7	28	57	98	14	11		0.001	<0.0001	<0.001	<0.001	<0.001	0.133	<0.05	1.51	<0.0001	1.1	0.13
1-Jun-24	Rain	Slow- slightly turbid and brown	13.2	66.7	6.82	291.0	252	45	38	21	46	11	7			0.002	<0.0001	0.001	<0.001	0.001	0.206	<0.05	2.64	<0.0001	1.40
30-Jul-24	Monthly	Slow - Clear and brown	11.2	16.78	6.92	442	248	<5	46	27	98	15	12		0.001	<0.0001	<0.001	<0.001	<0.001	0.232	<0.05	1.48	<0.0001	0.9	0.06
26-Aug-24	Monthly	Trickle - clear and colourless	16.0	10.96	7.04	561	328	<5	55	40	130	17	16		<0.001	<0.0001	<0.001	<0.001	<0.001	0.427	<0.05	1.19	<0.0001	1.0	0.07
27-Sep-24	Rain	Steady - clear and brown	15.9	11.25	7.01	521	310	10	81	17	124	20	16		<0.001	<0.0001	<0.001	<0.001	<0.001	1.38	<0.05	1.11	<0.0001	0.8	0.09
29-Oct-24	Monthly	Slow - Slightly turbid and brown	18.9	23.1	7.06	437	308	<5	46	26	107	11	12		0.002	<0.0001	<0.001	<0.001	<0.001	0.299	<0.05	2.00	<0.0001	1.4	0.13
14-Nov-24	Rain	Slow- slightly turbid and brown	19.6	86.6	6.71	218	204	48	28	16	38	6	6			0.001	<0.0001	<0.001	0.001	0.001	0.147	<0.05	1.95	<0.0001	1.2
30-Dec-24	Monthly	Trickle	25.1	3.73	7.18	278	178	<5	75	<1	36	15	8		0.002	<0.0001	<0.001	<0.001	<0.001	0.183	<0.05	1.54	<0.0001	0.6	0.1

W5 Downstream of Mine – Upstream of Avondale Swamp
(Wenham Cox Road – SCPL)

DATE	Event	Flow - Comments	Temp	Turbidity	pH	Cond.	TDS	TSS	Alkalinity	Acidity	Sulphate	Chloride	Calcium	Mg	Al	Arsenic	Cd	Cr	Copper	Lead	Mn	Boron	Iron (total)	Mercury	Tot. N	Tot. P
			°C	(NTU)		(uS/cm)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
31-Jan-24	Monthly	No flow																								
7-Feb-24	Rain	No flow																								
27-Mar-24	Monthly	No flow																								
5-Apr-24	Rain	No flow																								
1-May-24	Rain	Slow - slightly turbid & brown	14.5	28.8	6.92	510	378	<5	18		108	107	15	12	0.46	<0.001	<0.0001	<0.001	<0.001	<0.001	0.024	<0.05	1.14	<0.0001	1.2	0.1
1-Jun-24	Rain	Slow - slightly turbid and brown	12.9	147	6.81	268	296	63	26		40	34	9	9	3.94	<0.001	<0.0001	0.001	<0.001	0.002	0.075	<0.05	2.7	<0.0001	1.7	0.15
30-Jul-24	Monthly	Trickle - slightly turbid and brown.	12.4	6.38	6.92	504	276	10	27		53	118	14	14	0.2	<0.001	<0.0001	<0.001	<0.001	<0.001	0.140	<0.05	0.81	<0.0001	0.7	0.02
26-Aug-24	Monthly	Trickle - clear and colourless.	20.5	4.22	6.80	727	455	<5	16		86	170	19	22	0.06	<0.001	<0.0001	<0.001	<0.001	<0.001	0.160	<0.05	0.34	<0.0001	0.5	0.03
27-Sep-24	Rain	Steady - Clear and brown	16.1	15.09	6.89	674	448	<5	25		83	189	20	21	0.42	<0.001	<0.0001	<0.001	<0.001	<0.001	0.720	<0.05	1.02	<0.0001	0.6	0.04
30-Oct-24	Monthly	Trickle - slightly turbid and brown.	13.3	9.01	7.02	500	334	<5	51	4	33	127	11	15	0.26	<0.001	<0.0001	<0.001	<0.001	<0.001	0.156	<0.05	1.52	<0.0001	1.3	0.06
14-Nov-24	Rain	Slow - slightly turbid and brown	16.6	91.3	6.92	228	236	29	34	6	36	29	7	7	1.58	<0.001	<0.0001	<0.001	0.001	0.001	0.053	<0.05	2.10	<0.0001	1.3	0.10

W6 Upstream of Mine of Avondale Creek
(Parkers Road – SCPL)

DATE	Event	Flow - Comments	Temp	Turbidity	pH	Cond.	TDS	TSS	Alkalinity	Acidity	Sulphate	Chloride	Calcium	Mg	Arsenic	Cd	Cr	Copper	Lead	Mn	Boron	Iron (total)	Mercury	Tot. N	Tot. P
			°C	(NTU)		(uS/cm)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
31-Jan-24	Monthly	No flow																							
7-Feb-24	Rain	No flow																							
27-Mar-24	Monthly	No flow																							
5-Apr-24	Rain	No flow																							
1-May-24	Rain	Slow - slightly turbid and brown	14.3	71.8	6.47	290	301	17	10		<1	84	5	6	<0.001	<0.0001	0.003	0.002	0.001	0.056	<0.05	3.56	<0.0001	2.1	0.27
1-Jun-24	Rain	Fast - slightly turbid and brown	15.5	62.8	6.60	148	170	31	13		<1	28	3	4	0.001	<0.0001	<0.001	0.001	<0.001	0.052	<0.05	2.01	<0.0001	3.2	0.46
30-Jul-24	Monthly	No flow																							
26-Aug-24	Monthly	No flow																							
27-Sep-24	Rain	Slow - Clear and brown	14.8	73.9	6.17	798	615	21	6		9	294	21	23	<0.001	<0.0001	0.001	0.002	<0.001	0.721	<0.05	2.25	<0.0001	1.2	0.16
30-Oct-24	Monthly	No flow																							
14-Nov-24	Rain	Slow - slightly turbid and brown	18.6	77.5	6.18	560	494	24	9	7	6	191	12	15	<0.001	<0.0001	0.001	0.002	0.001	0.141	<0.05	2.44	<0.0001	1.2	0.10

30-Dec-24	Monthly	Dry																							
-----------	---------	-----	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

W8

DATE	Event	Flow - Comments	Temp	Turbidity	pH	Cond.	TDS	TSS	Alkalinity	Acidity	Sulphate	Chloride	Calcium	Mg	Arsenic	Cd	Cr	Copper	Lead	Mn	Boron	Iron (total)	Mercury	Tot. N	Tot. P
			°C	(NTU)		(uS/cm)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
31-Jan-24	Monthly	No flow																							
7-Feb-24	Rain	No flow																							
27-Mar-24	Monthly	No flow																							
5-Apr-24	Rain	No flow																							
1-May-24	Rain	Slow - slightly turbid and brown	14.3	13.94	6.21	432	327	<5	12		36	116	8	9	<0.001	<0.0001	<0.001	<0.001	<0.001	0.195	<0.05	2.89	<0.0001	1.6	0.18
1-Jun-24	Rain	Fast - slightly turbid and brown	15.3	221	6.63	212	243	78	29		42	17	10	8	0.002	<0.0001	0.001	<0.001	0.003	0.074	<0.05	3.44	<0.0001	1.2	0.12
30-Jul-24	Monthly	Slow - clear and colourless	10.4	4.44	6.33	495	286	<5	13		42	126	10	13	<0.001	<0.0001	<0.001	<0.001	<0.001	0.05	<0.05	0.59	<0.0001	0.6	0.04
26-Aug-24	Monthly	Trickle - Clear and colourless.	18.4	2.55	6.19	717	444	<5	13		74	165	16	21	<0.001	<0.0001	<0.001	<0.001	<0.001	0.408	<0.05	0.96	<0.0001	0.6	0.03
27-Sep-24	Rain	Steady - clear and brown	15.3	27.2	6.67	589	402	17	39		48	154	16	19	<0.001	<0.0001	<0.001	<0.001	<0.001	1.9	<0.05	4.42	<0.0001	1.2	0.11
30-Oct-24	Monthly	Trickle - Clear and colourless.	17.4	2.64	6.85	515	336	<5	59	6	25	130	10	15	<0.001	<0.0001	<0.001	<0.001	<0.001	1.03	<0.05	1.64	<0.0001	1.5	0.11
14-Nov-24	Rain	Trickle - Slightly turbid and brown	19.3	43	6.65	265	195	21	37	8	24	45	6	8	0.001	<0.0001	<0.001	<0.001	<0.001	0.248	<0.05	3.74	<0.0001	1.6	0.19
30-Dec-24	Monthly	Dry																							

W9 Upper Avondale Creek
(Off Glen Road – SCPL)

DATE	Event	Flow - Comments	Temp	Turbidity	pH	Cond.	TDS	TSS	Alkalinity	Acidity	Sulphate	Chloride	Calcium	Mg	Arsenic	Cd	Cr	Copper	Lead	Mn	Boron	Iron (total)	Mercury	Tot. N	Tot. P
			°C	(NTU)		(uS/cm)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
31-Jan-24	Monthly	No flow																							
7-Feb-24	Rain	No flow																							
27-Mar-24	Monthly	No flow																							
5-Apr-24	Rain	No flow																							
1-May-24	Rain	Slow - slightly turbid & brown	14.0	78.2	6.48	125	243	146	13		2	30	4	2	<0.001	<0.0001	0.001	0.002	<0.001	0.024	<0.05	1.02	<0.0001	2	0.18
1-Jun-24	Rain	Steady - turbid and brown	14.8	82.6	6.70	58	135	23	10		<10	8	2	2	<0.001	<0.0001	0.003	<0.001	<0.001	0.042	<0.05	2.33	<0.0001		
30-Jul-24	Monthly	No flow																							
26-Aug-24	Monthly	No flow																							
27-Sep-24	Rain	No flow																							
29-Oct-24	Monthly	Trickle - slightly turbid and brown	19.1	11.59	7.14	147	146	<5	52	4	28	23	7	6	<0.001	<0.0001	0.008	<0.001	<0.001	0.177	<0.05	1.33	<0.0001	1.1	0.05
14-Nov-24	Rain	Trickle - Slightly turbid and brown	16.1	47.6	6.67	121	158	23	39	9	<1	15	6	5	0.001	<0.0001	<0.001	0.001	<0.001	1.39	<0.05	4.35	<0.0001	1.8	0.11
30-Dec-24	Monthly	Still - no flow																							

W10 Lemon Tree Creek
(Off Bowens Road – SCPL)

DATE	Event	Flow - Comments	Temp	Turbidity	pH	Cond.	TDS	TSS	Alkalinity	Sulphate	Chloride	Calcium	Mg	Al	Arsenic	Cd	Cr	Copper	Lead	Mn	Boron	Iron (total)	Mercury	Tot. N	Tot. P
			°C	(NTU)		(uS/cm)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
31-Jan-24	Monthly	No flow																							
7-Feb-24	Rain	No flow																							
27-Mar-24	Monthly	No flow																							
5-Apr-24	Rain	No flow																							
1-May-24	Rain	Slow - slightly turbid & brown	14.0	72.5	6.82	158	220	9	30	5	29	6	3	0.54	<0.001	<0.0001	<0.001	<0.001	<0.001	0.012	<0.05	0.65	<0.0001	1.1	0.07
1-Jun-24	Rain	Steady - turbid and brown	13.3	151	6.62	87	167	96	12	<10	14	3	2	3.1	<0.001	<0.0001	<0.001	<0.001	0.002	0.028	<0.05	1.72	<0.0001	1.6	0.13
30-Jul-24	Monthly	No flow																							
26-Aug-24	Monthly	No flow																							
27-Sep-24	Rain	Trickle - slightly turbid and brown	14.5	111	6.78	250	258	36	26	19	50	11	5	5.68	0.001	<0.0001	0.002	0.001	0.004	0.067	<0.05	3.51	<0.0001	1.2	0.14

W11[illegible]

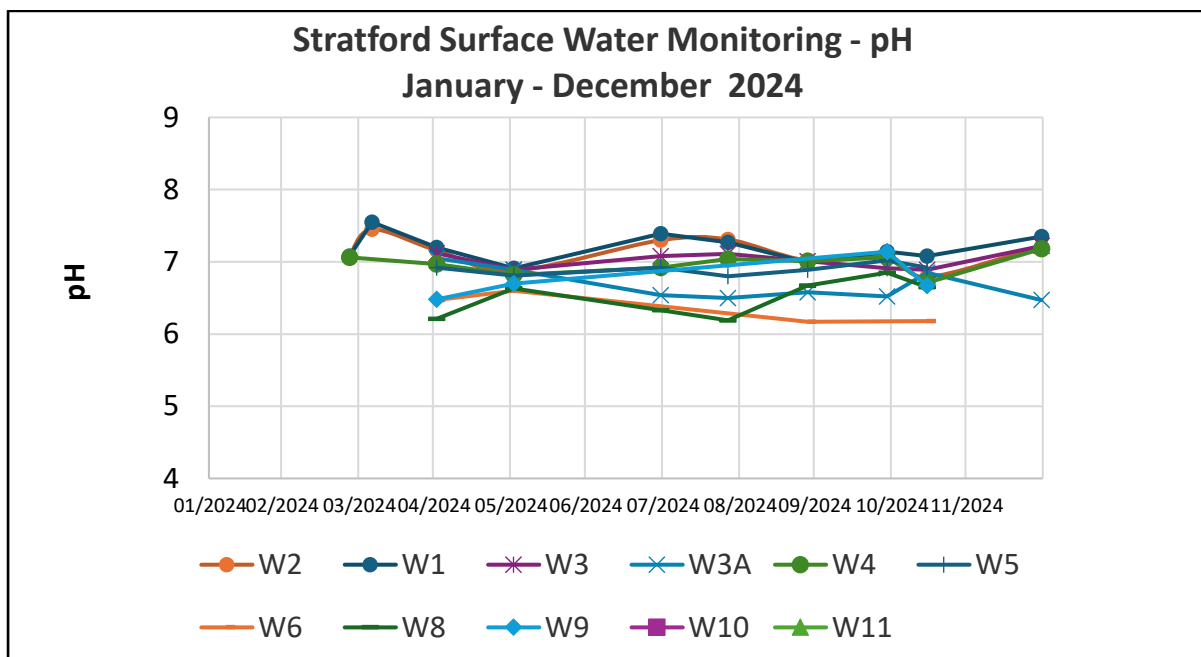


Figure 1: Surface Water Monitoring Results – pH

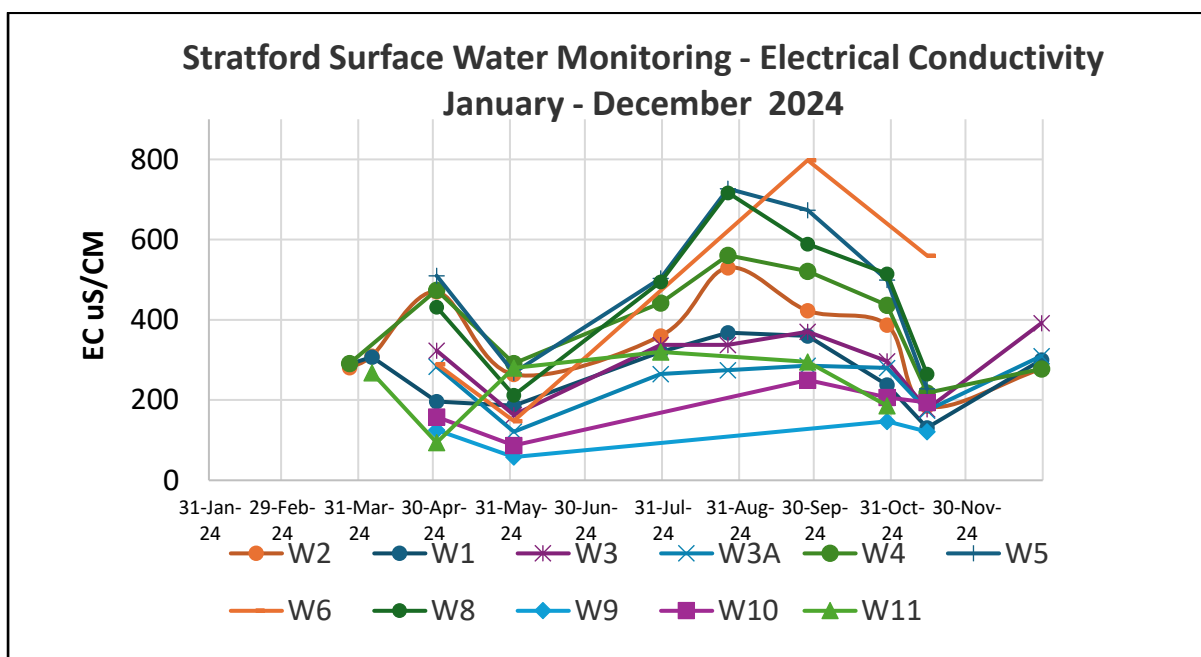


Figure 2: Surface Water Monitoring Results – Electrical Conductivity

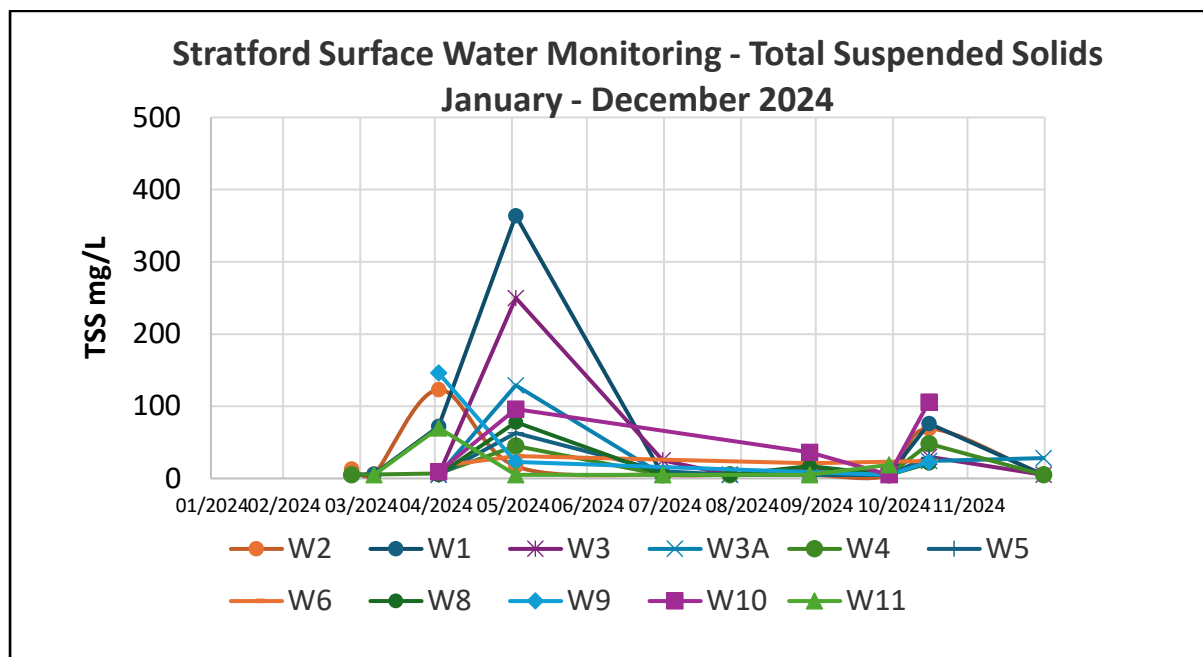


Figure 3: Surface Water Monitoring Results – Total Suspended Solids

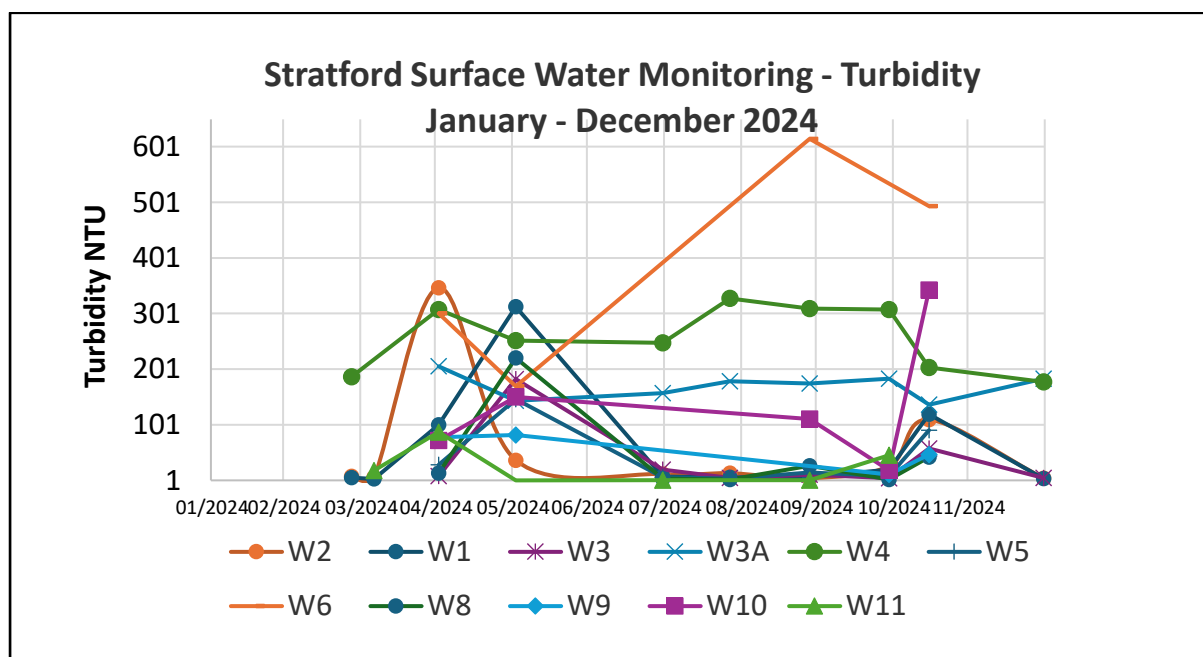


Figure 4: Surface Water Monitoring Results – Turbidity

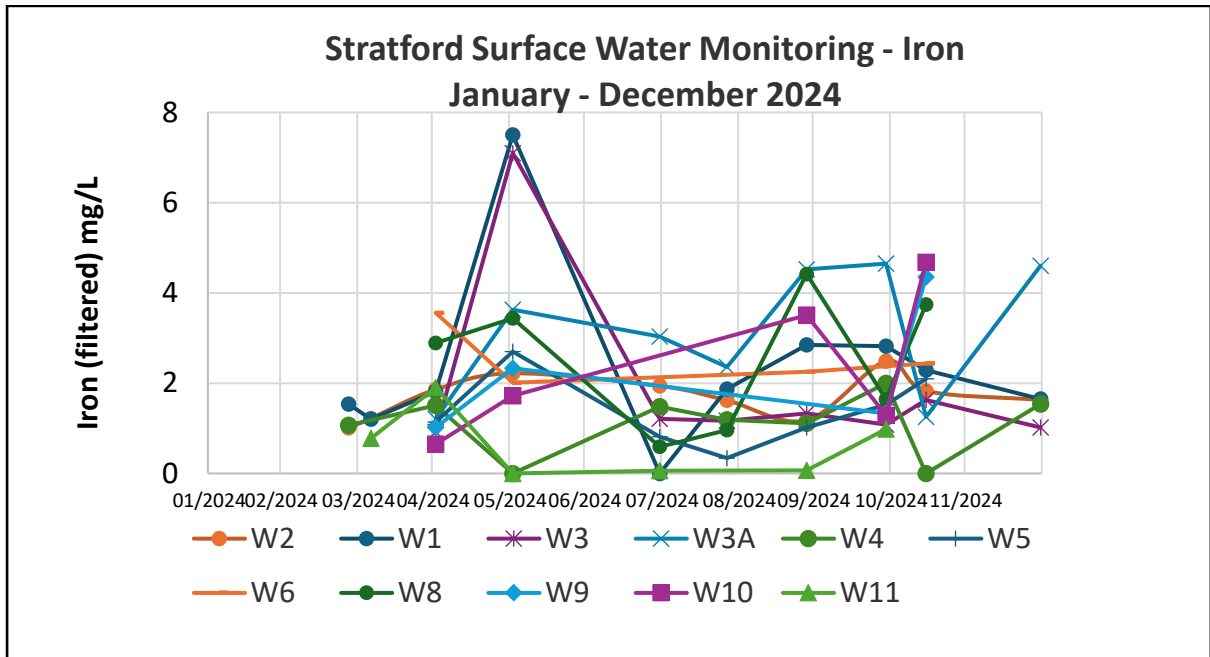


Figure 5: Surface Water Monitoring Results – Iron

Summary of Results – Mine Water Storage Monitoring Points

Site	Roseville West Pit			BRW (Parkers) Pit		
Parameter	Min	Max	Average	Min	Max	Average
pH	7.82	8.39	8.16	6.90	8.35	7.70
EC	3380.00	3860.00	3672.50	978.00	2620.00	1802.57
ORP	99.00	189.00	143.71	20.00	206.00	122.00
Acidity	2.00	9.00	4.80	1.00	8.00	4.14
Aluminium	<0.1	0.05	0.03	0.06	0.42	0.21
Sulphate	969.00	1280.00	1117.75	365.00	996.00	643.14
Sodium	534.00	703.00	647.88	85.00	279.00	186.14
Calcium	114.00	222.00	162.00	74.00	235.00	158.43
Chloride	334.00	500.00	382.75	72.00	318.00	207.86
Iron	<0.05	0.05	0.05	0.17	0.96	0.39
Zinc	<0.005	0.02	0.02	0.01	0.04	0.02
Magnesium	53.00	98.00	63.75	33.00	93.00	66.71
Manganese	0.01	0.12	0.03	0.26	1.58	0.76
Site	RWD (Return Water Dam)			ESD (East Stratford Dam)		
Parameter	Min	Max	Average	Min	Max	Average
pH	7.20	8.49	8.00	8.19	8.89	8.59
EC	1984.00	3550.00	2663.58	651.00	752.00	693.55
ORP	30.00	251.00	162.42	43.00	201.00	110.25
Acidity	NA	NA	NA	<1	<1	<1
Aluminium	NA	NA	NA	0.03	0.11	0.06
Sulphate	NA	NA	NA	38.00	48.00	42.84
Sodium	NA	NA	NA	87.00	103.00	95.09
Calcium	NA	NA	NA	26.00	32.00	28.92
Chloride	NA	NA	NA	96.00	126.00	108.83
Iron	NA	NA	NA	<0.05	0.12	0.07
Zinc	NA	NA	NA	<0.005	0.01	0.01
Magnesium	NA	NA	NA	18.00	23.00	20.18
Manganese	NA	NA	NA	0.01	0.15	0.03
Site	Stratford Main Pit			Stratford East Pit		
Parameter	Min	Max	Average	Min	Max	Average
pH	8.01	8.33	8.21	7.61	8.08	7.81
EC	3110.00	3600.00	3308.33	3330.00	5010.00	4091.11
ORP	9.00	215.00	134.92	37.00	213.00	131.56
Acidity	<1	3.00	2.40	3.00	9.00	6.11
Aluminium	<0.01	0.26	0.05	0.02	2.42	0.41
Sulphate	973.00	1780.00	1410.25	1870.00	2500.00	2162.22
Sodium	336.00	412.00	362.42	265.00	412.00	342.78
Calcium	272.00	388.00	304.08	415.00	636.00	535.33
Chloride	298.00	372.00	331.17	218.00	374.00	281.44
Iron	<0.05	0.42	0.18	0.16	13.50	2.06
Zinc	<0.05	0.01	0.01	<0.005	0.17	0.04
Magnesium	104.00	140.00	118.17	120.00	192.00	158.22
Manganese	0.01	0.27	0.10	0.08	2.86	1.12
Site	Avon North Pit					
Parameter	Min	Max	Average			
pH	8.34	8.34	8.34			
EC	2790	2790	2790			
ORP	61	61	61			
Acidity	<1	<1	<1			
Aluminium	0.41	0.41	0.41			
Sulphate	163	163	163			
Sodium	704	704	704			
Calcium	16	16	16			
Chloride	472	472	472			
Iron	0.98	0.98	0.98			
Zinc	0.06	0.06	0.06			
Magnesium	5	5	5			
Manganese	0.03	0.03	0.03			

Groundwaters

GW Series Groundwater Monitoring Bores

GW Series Bores	DATE	Depth to Water	Well Depth	DtoW	3 Bore	ORP	Temp	pH	EC	TDS	SO4	Cl	Ca	Mg	Na	Fe (Total)
GW1	26-Feb-24	16.07	16.12	15.17												
GW1	27-Aug-24	DRY														
GW2	26-Feb-24	11.61	17.05	10.41	No	-24	24.3	6.49	4870	2770	31	1490	56	139	855	23.40
GW2	27-Aug-24	11.68	17.05	10.48	No	-8	19.7	6.70	5260	2870	33	1400	62	132	755	24.4
GW3	26-Feb-24	2.56	6.4	1.66	No	84	21.5	5.58	2760	1660	110	824	25	44	541	5.86
GW3	27-Aug-24	1.40	6.4	0.50	No	123	18.2	5.61	3590	1940	196	900	36	54	527	77.20
GW4	26-Feb-24	0.83	5.98	0.13	Yes	45	24.9	6.64	14300	9040	101	4760	326	400	2530	1.62
GW4	27-Aug-24	0.76	5.98	0.06	Yes	69	17.6	6.55	15400	9060	109	4460	367	392	2350	1.20
GW5	26-Feb-24	2.39	8.3	1.39	No	18	24.2	6.32	12200	7440	375	3900	189	368	2060	6.05
GW5	27-Aug-24	2.09	8.16	1.09	No	119	18.7	6.62	11600	7020	490	3280	174	311	1730	8.23
GW7	26-Feb-24	3.24	8.56	2.49	Yes	-17	26.2	6.29	3390	1990	<1	1060	70	90	540	21.30
GW7	27-Aug-24	2.88	8.56	2.13	Yes	-10	18.1	6.42	3350	1840	<1	837	68	77	449	19.50
GW8	26-Feb-24	7.62	13.2		No	62	22.1	4.90	2180	1570	430	409	6	26	468	49.80
GW8	27-Aug-24	6.17	12.74		No	122	19.2	5.20	1540	2110	395	228	6	26	293	49.0

Bore Id	DATE	Depth	Bore	Volume	3 Bore Volume Purge?	ORP	Temp	pH	Cond.	TDS (mg/L)	Sulfate	Chloride	Calcium	Magnesium	Sodium	Iron	TSS
		(m)	Volume	Purged	(Yes/No)	(mV)	°C		(uS/cm)		(mg/L)	(mg/L)			(mg/L)	(mg/L)	mg/L
BRWN1	26-Feb-24	0.59	7.59	23	Yes	64	25.2	5.88	4770	2850	379	1320	35	58	1020	1.06	
	27-Aug-24	0.52	23.05	12	No	96	18.5	6.2	6530	3650	466	1560	70	82	1090	3.01	

Bore Id	DATE	Depth to Water Level	Corrected	ORP	pH	Cond.	TDS	Sulphate	Chloride	Calcium	Mg	Sodium	Iron
		(m)	DTWL (m)	(mv)		(µS/cm)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
RB1	26-Feb-24	4.03	3.43	28	6.97	10700	6380	43	4810	300	272	1740	12.9
	29-May-24	3.71	3.11	18	7.04	10600	6730	39	3810	305	268	1630	5.75
	26-Aug-24	3.68	3.08	-3	6.79	11400	6830	32	3580	316	263	1570	2.40
	21-Nov-24	3.49	2.89	123	6.74	10600	7960	46	3330	289	268	1700	9.47
	Averages	3.73	3.13	41.50	6.89	10825.00	6975.00	40.00	3882.50	302.50	267.75	1660.00	7.63
RB2	26-Feb-24	2.59	1.49	90	6.72	10800	6480	101	3290	252	250	1840	0.15
	29-May-24	2.37	1.27	56	6.82	11000	7080	118	3710	266	253	1780	0.28
	26-Aug-24	1.88	0.78	81	6.80	11100	6430	132	3410	249	229	1660	0.67
	21-Nov-24	1.63	0.53	114	6.79	10900	7360	151	3290	216	228	1710	0.38
	Averages	2.12	1.02	85.25	6.78	10950.00	6837.50	125.50	3425.00	245.75	240.00	1747.50	0.37
RB3	26-Feb-24	10.57	9.72	178	3.95	3940	2770	856	628	21	93	756	73.9
	29-May-24	11.32	10.47	129	4.98	3190	1820	788	646	30	21	91	89.5
	26-Aug-24	10.82	9.97	177	3.84	4870	3260	1480	678	26	110	770	46.4
	21-Nov-24	9.97	9.12	162	4.12	5680	4530	2210	690	45	175	973	120
	Averages	10.67	9.82	161.50	4.22	4420.00	3095.00	1333.50	660.50	30.50	99.75	647.50	82.45

Bowns Road North Groundwater Monitoring Bores

Bore Id	MONTH- YR	DATE	Depth to Water Level (m)	Correcte d DTWL (m)	Bore Vol. (L)	Purge d Vol. (L)	3 Bore Volume Purge? (Yes/No)	pH	Cond. (µS/cm)	OR P (mv)	Bicarbonat e (as CaCO3) (mg/L)	Sulphat e (mg/L)	Chlorid e (mg/L)	Calciu m (mg/L)	Magnesi um (mg/L)	Sodiu m (mg/L)	Potassiu m (mg/L)	Lead (mg/L)	Manganes e (mg/L)	Zinc (mg/L)	Iron (mg/L)	Phosphoru s (mg/L)
GRIFFIN	Feb-24	14-Feb-24	2.49	2.09				No access - shed over bore														
GRIFFIN	May-24	28-May-24	2.22	1.82				7.79	2290	114	571	<1	518	30	12	481	2	<0.00 1	0.014	0.009	0.76	0.14
GRIFFIN	Aug-24	26-Aug-24	1.85	1.45																		
GRIFFIN	Nov-24	21-Nov-24	1.71	1.31				7.95	2490	206	512	<1	508	20	10	530	4	<0.00 1	0.016	<0.00 5	0.64	0.10
MW3	Feb-24	14-Feb-24	Dry @ 5.38m																			
MW3	May-24	28-May-24	5.20	4.70																		
MW3	Aug-24	26-Aug-24	5.27	4.77																		
MW3	Nov-24	21-Nov-24	5.28	4.78																		
MW4	Feb-24	14-Feb-24	Dry @ 16.12m																			
MW4	May-24	28-May-24	Dry @ 15.75m																			
MW4	Aug-24	26-Aug-24	Dry @ 15.74m																			
MW4	Nov-24	21-Nov-24	15.61	15.11																		
MW6	Feb-24	14-Feb-24	6.48	5.98	8.19	15.0	No	6.13	429	135	95	28	54	10	9	58	2	0.003	0.175	0.028	2.13	0.15
MW6	May-24	28-May-24	5.52	5.02	10.1 9	18.0	No	6.43	232	88	49	8	37	5	5	37	1	0.004	0.167	0.017	2.45	0.52
MW6	Aug-24	26-Aug-24	6.82	6.32	7.68	15.0	No	6.20	292	65	58	17	38	7	6	44	1	0.004	0.160	0.018	2.14	0.34
MW6	Nov-24	21-Nov-24	5.77	5.27	9.76	29.0	Yes	6.42	222	46	53	10	30	5	5	39	1	0.017	0.220	0.045	4.85	1.08
MW7	Feb-24	14-Feb-24	9.26	8.76	2.92	5.0	No	5.37	1680	42	26	117	424	20	35	209	4	0.004	1.19	0.134	5.77	0.17
MW7	May-24	28-May-24	8.47	7.97	4.46	11.0	No	5.21	1800	142	7	158	554	23	45	272	4	0.014	1.5	0.263	12.2	0.32
MW7	Aug-24	26-Aug-24	9.27	8.77	2.90	7.0	No	5.47	1300	97	40	143	331	15	28	214	3	0.012	0.838	0.180	6.74	0.47
MW7	Nov-24	21-Nov-24	10.20	9.70	1.13	2.0	No	5.83	1570	98	73	149	448	23	39	250	6	0.063	1.32	0.676	22.8	1.02
MW8	Feb-24	14-Feb-24	Moist @ 7.41m																			
MW8	May-24	28-May-24	7.08	6.58																		
MW8	Aug-24	26-Aug-24	7.31	6.81																		
MW8	Nov-24	21-Nov-24	7.02	6.52																		
MW11	Jan-24	31-Jan-24	8.41	7.91				6.42	840													
MW11	Feb-24	14-Feb-24	8.51	8.01	60.1 5	182.0	Yes	6.83	1020	90	258	26	161	52	11	121	2	<0.00 1	0.120	0.008	0.86	0.07
MW11	May-24	25-Mar-24	9.02	8.52				6.99	1148													
MW11	Apr-24	23-Apr-24	8.78	8.28				7.06	1192													
MW11	May-24	28-May-24	8.38	7.88	60.8 0	185.0	Yes	6.63	828	71	191	33	157	43	11	130	2	<0.00 1	0.108	0.014	1.42	0.06
MW11	Jun-24	11-Jun-24	8.19	7.69				6.64	789													
MW11	Jul-24	29-Jul-24	8.26	7.76				6.66	821													
MW11	Aug-24	26-Aug-24	8.17	7.67				6.59	815													
MW11	Aug-24	26-Aug-24	8.17	7.67	60.9 3	185.0	Yes	6.58	844	26	177	33	135	44	11	124	2	<0.00 1	0.108	0.015	1.49	0.07
MW11	Sep-24	25-Sep-24	8.08	7.58				6.42	808													
MW11	Oct-24	23-Oct-24	7.95	7.45				6.54	806													
MW11	Nov-24	21-Nov-24	7.94	7.44	61.6 6	195.0	Yes	6.69	797	94	162	38	140	40	10	120	3	<0.00 1	0.119	0.006	1.67	0.07
MW11	Dec-24	12-Dec-24	7.83	7.33				6.44	817													

[illegible]

Stratford Groundwater Monitoring Bores

[illegible]

[illegible]

APPENDIX 5:

Blast Monitoring

Shot #	Location	Date	Time	Isaac (B1) <u>7432</u>		Ex-Judge (B2) <u>7441</u>		Atkins (B6) <u>7434</u>		Greenwood <u>7422</u>		Clarke (B5) (Mine-owned) <u>7433</u> (previously 7377)		Bagnall (Extrapolated result)		Powerline Monitor Result		PPV CTS-1 (Extrapolated Result)		Overpressure Site Exceedance	Overpressure "Cumulative Exceedance"	Ground Vibration Site Exceedance	Ground Vibration "Cumulative Exceedance"	Monitored Blasts	Fume Rating
				mm/s	dBL	mm/s	dBL	mm/s	dBL	mm/s	dBL	mm/s	dBL	mm/s	dBL	mm/s	dBL	mm/s	dBL	%		%			
AN382	Avon North	Friday, 12 January 2024	12:37:13	<0.24	<114	<0.24	<114	0.32	106.8	<0.24	<114	0.96	102.0	0.68	98.3					0.00%	0	0.0%	0	1	Nil
AN383	Avon North	Wednesday, 17 January 2024	12:41:20	<0.24	<114	<0.24	<114	<0.24	<114	<0.24	<114	1.18	94.3	0.78	89.9					0.00%	0	0.0%	0	2	Nil
AN385	Avon North	Wednesday, 31 January 2024	12:29:35	<0.24	<114	<0.24	<114	0.24	103.7	<0.24	<114	0.24	99.0	0.16	94.8					0.00%	0	0.0%	0	3	Nil
AN386	Avon North	Thursday, 8 February 2024	12:30:49	0.25	94.7	<0.24	<114	0.25	101.0	<0.24	<114	0.94	102.5	0.63	98.2					0.00%	0	0.0%	0	4	Nil
AN387	Avon North	Wednesday, 14 February 2024	12:36:12	<0.24	<114	<0.24	<114	<0.24	<114	<0.24	<114	0.99	91.4	0.65	87.0					0.00%	0	0.0%	0	5	Nil
AN372	Avon North	Thursday, 22 February 2024	12:51:06	<0.24	<114	<0.24	<114	<0.24	<114	<0.24	<114	1.61	95.5	1.07	91.2					0.00%	0	0.0%	0	6	Nil
AN388	Avon North	Monday, 26 February 2024	12:35:00	<0.24	<114	<0.24	<114	<0.24	<114	<0.24	<114	0.64	89.5	0.41	84.9					0.00%	0	0.0%	0	7	Nil
AN389	Avon North	Wednesday, 6 March 2024	12:43:05	<0.24	<114	<0.24	<114	<0.24	<114	<0.24	<114	0.41	91.4	0.26	86.7					0.00%	0	0.0%	0	8	Nil
AN390	Avon North	Wednesday, 20 March 2024	12:52:12	<0.24	<114	<0.24	<114	<0.24	<114	<0.24	<114	1.54	91.4	1.01	87.0					0.00%	0	0.0%	0	9	Nil
AN391	Avon North	Wednesday, 27 March 2024	13:07:00	<0.24	<114	<0.24	<114	<0.24	<114	<0.24	<114	<0.24	<114	<0.24	<114					0.00%	0	0.0%	0	10	Nil
AN392	Avon North	Tuesday, 9 April 2024	12:38:13	<0.24	<114	<0.24	<114	<0.24	<114	<0.24	<114	1.78	99.0	1.18	94.7					0.00%	0	0.0%	0	11	Nil
AN393	Avon North	Wednesday, 17 April 2024	12:35:56	<0.24	<114	<0.24	<114	<0.24	<114	<0.24	<114	2.88	94.3	1.88	89.8					0.00%	0	0.0%	0	12	Nil
AN395	Avon North	Tuesday, 23 April 2024	13:25:15	<0.24	<114	<0.24	<114	<0.24	<114	<0.24	<114	0.55	93.0	0.36	88.5					0.00%	0	0.0%	0	13	Nil
AN396	Avon North	Thursday, 2 May 2024	12:27:30	<0.24	<114	<0.24	<114	0.32	94.2	<0.24	<114	0.75	95.5	0.50	91.2					0.00%	0	0.0%	0	14	Nil

Note 1 Site exceedance, monitored blasts & cumulative exceedances reference blasts between 1/1/24 and most recent blast.

Note 2 Blast exceedance of 115dBL or 5mm/s.

Note 3 Blast exceedance of 120dBL or 10mm/s

**Note: Blast compliance,*

** No more than 5% of total blasts for annual monitoring period to exceed an overpressure of 115dB(L) or ground vibration of 5mm/s.*

** No blast is to exceed an overpressure of 120dB(L) or ground vibration of 10mm/s.*

** SEP Environmental Impact*

Statement (SCPL, 2012) concluded that vibration velocity at the Aboriginal heritage site CTS-1 is predicted to be less than a nominated archaeological/geological vibration damage criteria of 80 mm/s (SLR Consulting, 2012).

Powerline Monitor removed when mining in the Stratford East Pit ceased in June 2022. Therefore no extrapolated CTS-1 result recorded.

Powerline Monitor removed when mining in the Stratford East Pit ceased in June 2022. Therefore no extrapolated CTS-1 result recorded.

APPENDIX 6:

Noise Monitoring

Table 1: Noise Performance Assessment – Operations – 10 & 11 January 2024

Location	Estimated SMC LAeq(15minute) Noise Level dBA			Noise Criteria LAeq(15minute) dBA			Compliance		
	Day	Eve	Night	Day	Eve	Night	Day	Eve	Night
Atkins	I/A ¹	I/A ¹	I/A ¹	35	35	35	Yes	Yes	Yes
Clarke ^{2,4}	25	38	25	37	37	37	N/A ⁴	N/A ⁴	N/A ⁴
Wadland ^{2,4}	I/A ¹	25	25	37	37	37	N/A ⁴	N/A ⁴	N/A ⁴
Bagnall ³	13	26	25	37	37	37	Yes	Yes	Yes
Hall	I/A ¹	I/A ¹	24	35	35	35	Yes	Yes	Yes
Lowrey	I/A ¹	I/A ¹	<25	35	35	35	Yes	Yes	Yes
Pryce Jones	I/A ¹	I/A ¹	<25	43	43	43	Yes	Yes	Yes
Van der Drift	29	30	26	37	36	35	Yes	Yes	Yes
Greenwood	I/A ¹	I/A ¹	I/A ¹	35	35	35	Yes	Yes	Yes

Note 1: I/A = Inaudible.

Note 2: Owned by Stratford Coal Pty Ltd. Criteria adopted from Bagnall.

Note 3: Modelled result.

Note 4: Criteria adopted as a guide only.

Note 5: Criteria not applicable due to non-compliant weather conditions.

Table 2: Noise Performance Assessment – Operations – 22, 23 & 26 February 2024

Location	Estimated SMC LAeq(15minute) Noise Level dBA			Noise Criteria LAeq(15minute) dBA			Compliance		
	Day	Eve	Night	Day	Eve	Night	Day	Eve	Night
Atkins	27	28	I/A ¹	35	35	35	Yes	Yes	I/A ¹
Clarke ^{2,4}	33	26	32	37	37	37	Yes	Yes	Yes
Wadland ^{2,4}	26	I/A ¹	I/A ¹	37	37	37	Yes	I/A ¹	I/A ¹
Bagnall	23	14	22	37	37	37	Yes	N/A ⁵	N/A ⁵
Hall	I/A ¹	I/A ¹	23	35	35	35	I/A ¹	I/A ¹	Yes
Lowrey	I/A ¹	26	21	35	35	35	I/A ¹	Yes	Yes
Pryce Jones	I/A ¹	25	26	43	43	43	I/A ¹	Yes	Yes
Van der Drift	I/A ¹	32	26	37	36	35	I/A ¹	Yes	Yes
Greenwood	I/A ¹	I/A ¹	25	35	35	35	I/A ¹	I/A ¹	Yes

Note 1: I/A = Inaudible.

Note 2: Owned by Stratford Coal Pty Ltd. Criteria adopted from Bagnall.

Note 3: Modelled result.

Note 4: Criteria adopted as a guide only.

Note 5: Criteria not applicable due to non-compliant weather conditions.

Table 3: Noise Performance Assessment – Operations – 7 & 8 March 2024

Location	Estimated SMC Noise Level LAeq(15minute) dBA			Noise Criteria LAeq(15minute) dBA			Compliance		
	Day	Eve	Night	Day	Eve	Night	Day	Eve	Night
Atkins	22	33	33	35	35	35	Yes	Yes	Yes
Clarke ^{2,4}	I/A ¹	27	26	37	37	37	Yes	Yes	Yes
Wadland ^{2,4}	I/A ¹	20	<18	37	37	37	Yes	Yes	Yes
Bagnall	-	17	17	37	37	37	Yes	Yes	Yes
Hall	I/A ¹	I/A ¹	24	35	35	35	Yes	Yes	Yes
Lowrey	I/A ¹	21	35	35	35	35	Yes	Yes	Yes
Pryce Jones	I/A ¹	I/A ¹	24	43	43	43	Yes	Yes	Yes
Van der Drift	I/A ¹	33	33	37	36	35	Yes	Yes	Yes
Greenwood	30	I/A ¹	I/A ¹	35	35	35	Yes	Yes	Yes

Note 1: I/A = Inaudible.

Note 2: Owned by Stratford Coal Pty Ltd. Criteria adopted from Bagnall.

Note 3: Modelled result.

Note 4: Criteria adopted as a guide only.

Note 5: Criteria not applicable due to non-compliant weather conditions.

Table 4: Noise Performance Assessment – Operations – 23 & 34 April 2024

Location	Estimated SMC Noise Level LAeq(15minute) dBA			Noise Criteria LAeq(15minute) dBA			Compliance		
	Day	Eve	Night	Day	Eve	Night	Day	Eve	Night
Atkins	31	I/A ¹	33	35	35	35	Yes ⁵	Yes	Yes
Clarke ^{2,4}	31	33	39	37	37	37	Yes	N/A ^{4,5}	N/A ^{4,5}
Wadland ^{2,4}	25	19	31	37	37	37	Yes	N/A ^{4,5}	N/A ^{4,5}
Bagnall	21	25	31	37	37	37	Yes	Yes ⁵	Yes ⁵
Hall	I/A ¹	I/A ¹	I/A ¹	35	35	35	Yes	Yes	Yes
Lowrey	18	25	18	35	35	35	Yes ⁵	Yes	Yes
Pryce Jones	I/A ¹	I/A ¹	<25	43	43	43	Yes	Yes	Yes
Van der Drift	25	31	<25	37	36	35	Yes	Yes	Yes
Greenwood	<25	21	16	35	35	35	Yes	Yes	Yes

Note 1: I/A = Inaudible.

Note 2: Owned by Stratford Coal Pty Ltd. Criteria adopted from Bagnall.

Note 3: Modelled result.

Note 4: Criteria adopted as a guide only.

Note 5: Criteria not applicable due to non-compliant weather conditions.

Table 5: Noise Performance Assessment – Operations – 15 & 16 May 2024

Location	Estimated SMC Noise Level LAeq(15minute) dBA			Noise Criteria LAeq(15minute) dBA			Compliance		
	Day	Eve	Night	Day	Eve	Night	Day	Eve	Night
Atkins	32	I/A ¹	40	35	35	35	Yes	N/A ⁵	N/A ⁵
Clarke ^{2,4}	34	35	41	37	37	37	Yes	N/A ^{4,5}	N/A ^{4,5}
Wadland ^{2,4}	27	34	35	37	37	37	Yes	N/A ^{4,5}	N/A ^{4,5}
Bagnall	23	31	33	37	37	37	Yes	N/A ⁵	N/A ⁵
Hall	32	22	20	35	35	35	Yes	Yes	N/A ⁵
Lowrey	I/A ¹	34	28	35	35	35	Yes	Yes	N/A ⁵
Pryce Jones	I/A ¹	30	28	43	43	43	Yes	N/A ⁵	Yes
Van der Drift	34	38	34	37	36	35	Yes	N/A ⁵	N/A ⁵
Greenwood	I/A ¹	<20	21	35	35	35	Yes	Yes	Yes

Note 1: I/A = Inaudible.

Note 2: Owned by Stratford Coal Pty Ltd. Criteria adopted from Bagnall.

Note 3: Modelled result.

Note 4: Criteria adopted as a guide only.

Note 5: Criteria not applicable due to non-compliant weather conditions.

Table 6: Noise Performance Assessment – Operations – 13, 20 & 21 June 2024

Location	Estimated SMC Noise Level LAeq(15minute) dBA			Noise Criteria LAeq(15minute) dBA			Compliance		
	Day	Eve	Night	Day	Eve	Night	Day	Eve	Night
Atkins	37	42	40	35	35	35	N/A ⁵	N/A ⁵	N/A ⁵
Clarke ^{2,4}	34	33	34	37	37	37	Yes	Yes	Yes
Wadland ^{2,4}	I/A ¹	29	33	37	37	37	Yes	Yes	Yes
Bagnall ³	22	26	30	37	37	37	Yes ⁵	Yes ⁵	Yes
Hall	I/A ¹	I/A ¹	28	35	35	35	Yes	Yes	Yes
Lowrey	25	26	34	35	35	35	Yes	Yes	Yes
Pryce Jones	I/A ¹	30	30	43	43	43	Yes	N/A ⁵	N/A ⁵
Van der Drift	<30	43	43	37	36	35	N/A ⁵	N/A ⁵	N/A ⁵
Greenwood	I/A ¹	22	18	35	35	35	Yes	Yes	Yes

Note 1: I/A = Inaudible.

Note 2: Owned by Stratford Coal Pty Ltd. Criteria adopted from Bagnall.

Note 3: Modelled result.

Note 4: Criteria adopted as a guide only.

Note 5: Criteria not applicable due to non-compliant weather conditions.

Table 7: Noise Performance Assessment – Operations – 17 & 18 July 2024

Location	Estimated SMC Noise Level LAeq(15minute) dBA			Noise Criteria LAeq(15minute) dBA			Compliance		
	Day	Eve	Night	Day	Eve	Night	Day	Eve	Night
Atkins	I/A ¹	28	36	35	35	35	Yes	Yes ⁵	N/A ⁵
Clarke ^{2,4}	34	34	35	37	37	37	N/A ⁴	N/A ^{4,5}	N/A ^{4,5}
Wadland ^{2,4}	31	32	36	37	37	37	N/A ⁴	N/A ^{4,5}	N/A ^{4,5}
Bagnall ³	28	28	33	37	37	37	Yes	Yes ⁵	Yes ⁵
Hall	I/A ¹	I/A ¹	I/A ¹	35	35	35	Yes	Yes	Yes
Lowrey	I/A ¹	I/A ¹	I/A ¹	35	35	35	Yes	Yes	Yes
Pryce Jones	I/A ¹	I/A ¹	I/A ¹	43	43	43	Yes	Yes ⁵	Yes ⁵
Van der Drift	<30	25	I/A ¹	37	36	35	Yes	Yes	Yes ⁵
Greenwood	I/A ¹	I/A ¹	I/A ¹	35	35	35	Yes	Yes	Yes

Note 1: I/A = Inaudible.

Note 2: Owned by Stratford Coal Pty Ltd. Criteria adopted from Bagnall.

Note 3: Modelled result.

Note 4: Criteria adopted as a guide only.

Note 5: Criteria not applicable due to non-compliant weather conditions.

Table 8: Noise Performance Assessment – Operations – 1 & 2 August 2024

Location	Estimated SMC Noise Level LAeq(15minute) dBA			Noise Criteria LAeq(15minute) dBA			Compliance		
	Day	Eve	Night	Day	Eve	Night	Day	Eve	Night
Atkins ⁶	I/A ¹	39	43	35	35	35	Yes	No ⁶	No ⁶
Clarke ^{2,4}	28	34	27	37	37	37	N/A ⁴	N/A ⁴	N/A ⁴
Wadland ^{2,4}	26	24	24	37	37	37	N/A ⁴	N/A ⁴	N/A ⁴
Bagnall ³	24	22	20	37	37	37	Yes	Yes	Yes
Hall	I/A ¹	I/A ¹	I/A ¹	35	35	35	Yes ⁵	Yes	Yes
Lowrey	25	I/A ¹	19	35	35	35	Yes	Yes	Yes
Pryce Jones	I/A ¹	I/A ¹	I/A ¹	43	43	43	Yes ⁵	Yes	Yes
Van der Drift	I/A ¹	27	24	37	36	35	Yes	Yes	Yes
Greenwood	I/A ¹	I/A ¹	I/A ¹	35	35	35	Yes ⁵	Yes	Yes

Note 1: I/A = Inaudible.

Note 2: Owned by Stratford Coal Pty Ltd. Criteria adopted from Bagnall.

Note 3: Modelled result.

Note 4: Criteria adopted as a guide only.

Note 5: Criteria not applicable due to non-compliant weather conditions.

Note 6: Monitoring conducted at alternate location, closer to Project Site.

Table 9: Noise Performance Assessment – Operations – 12 & 13 September 2024

Location	Estimated SMC Noise Level LAeq(15minute) dBA			Noise Criteria LAeq(15minute) dBA			Compliance		
	Day	Eve	Night	Day	Eve	Night	Day	Eve	Night
Atkins ^{2,4}	37	I/A ¹	28	35	35	35	No ⁴	Yes ^{4,5}	Yes ^{4,5}
Clarke ^{2,4}	30	I/A ¹	31	37	37	37	Yes ⁴	Yes ^{4,5}	Yes ^{4,5}
Wadland ^{2,4}	I/A ¹	I/A ¹	29	37	37	37	Yes ^{4,5}	Yes ⁴	Yes ⁴
Bagnall ³	19	I/A ¹	27	37	37	37	Yes ⁵	Yes ⁵	Yes ⁵
Hall	I/A ¹	I/A ¹	I/A ¹	35	35	35	Yes ⁵	Yes ⁵	Yes ⁵
Lowrey	27	I/A ¹	32	35	35	35	Yes	Yes ⁵	Yes ⁵
Pryce Jones	I/A ¹	I/A ¹	I/A ¹	43	43	43	Yes ⁵	Yes ⁵	Yes ⁵
Van der Drift	I/A ¹	28	I/A ¹	37	36	35	Yes ⁵	Yes	Yes
Greenwood	I/A ¹	I/A ¹	I/A ¹	35	35	35	Yes ⁵	Yes ⁵	Yes ⁵

Note 1: I/A = Inaudible.

Note 2: Owned by Stratford Coal Pty Ltd.

Note 3: Modelled result.

Note 4: Criteria adopted as a guide only.

Note 5: Criteria not applicable due to non-compliant weather conditions.

Table 10: Noise Performance Assessment – Operations – 23, 24 & 25 October 2024

Location	Estimated SMC Noise Level LAeq(15minute) (dBA)			Noise Criteria LAeq(15minute) (dBA)			Compliance		
	Day	Eve	Night	Day	Eve	Night	Day	Eve	Night
Atkins ^{2,4}	36	40	35	35	35	35	Yes ^{4,5}	No ^{4,5}	Yes ⁴
Clarke ^{2,4}	30	39	38	37	37	37	Yes ^{4,5}	No ^{4,5}	Yes ⁴
Wadland ^{2,4}	28	30	30	37	37	37	Yes ^{4,5}	Yes ⁴	Yes ⁴
Bagnall ³	27	30	28	37	37	37	Yes ⁵	Yes ⁵	Yes
Hall	I/A ¹	<30	25	35	35	35	Yes ⁵	Yes	Yes
Lowrey	I/A ¹	I/A ¹	18	35	35	35	Yes ⁵	Yes	Yes
Pryce Jones	I/A ¹	<35	24	43	43	43	Yes ⁵	Yes	Yes ⁵
Van der Drift	I/A ¹	36	34	37	36	35	Yes ⁵	Yes ⁵	Yes
Greenwood	I/A ¹	27	21	35	35	35	Yes ⁵	Yes	Yes ⁵

Note 1: I/A = Inaudible.

Note 2: Owned by Stratford Coal Pty Ltd.

Note 3: Modelled result.

Note 4: Criteria adopted as a guide only.

Note 5: Criteria not applicable due to non-compliant weather conditions.

Table 11: Noise Performance Assessment – Operations – 20, 21 & 22 November 2024

Location	Estimated SMC Noise Level LAeq(15minute) (dBA)			Noise Criteria LAeq(15minute) (dBA)			Compliance		
	Day	Eve	Night	Day	Eve	Night	Day	Eve	Night
Atkins ^{2,4}	32	40	40	35	35	35	Yes ^{4,5}	Yes ^{4,5}	Yes ^{4,5}
Clarke ^{2,4}	35	28	26	37	37	37	Yes ^{4,5}	Yes ^{4,5}	Yes ^{4,5}
Wadland ^{2,4}	<25	<20	21	37	37	37	Yes ⁴	Yes ^{4,5}	Yes ^{4,5}
Bagnall ³	23	19	18	37	37	37	Yes ^{3,5}	Yes ^{3,5}	Yes ^{3,5}
Hall	I/A ¹	31	24	35	35	35	Yes ⁵	Yes	Yes
Lowrey	<30	32	36	35	35	35	Yes ⁵	Yes	Yes ⁵
Pryce Jones	I/A ¹	34	33	43	43	43	Yes	Yes	Yes ⁵
Van der Drift	I/A ¹	36	38	37	36	35	Yes	Yes	Yes ⁵
Greenwood	I/A ¹	I/A ¹	25	35	35	35	Yes	Yes ⁵	Yes ⁵

Note 1: I/A = Inaudible.

Note 2: Owned by Stratford Coal Pty Ltd.

Note 3: Modelled result.

Note 4: Criteria adopted as a guide only.

Note 5: Criteria not applicable due to non-compliant weather conditions.

Table 12: Noise Performance Assessment – Operations – 19 & 20 December 2024

Location	Estimated SMC Noise Level LAeq(15minute) (dBA)			Noise Criteria LAeq(15minute) (dBA)			Compliance		
	Day	Eve	Night	Day	Eve	Night	Day	Eve	Night
Atkins ^{2,4}	37	28	I/A ¹	35	35	35	Yes ^{4,5}	Yes ⁴	Yes ^{4,5}
Clarke ^{2,4}	35	35	37	37	37	37	Yes ^{4,5}	Yes ^{4,5}	Yes ⁴
Wadland ^{2,4}	I/A ¹	30	26	37	37	37	Yes ^{4,5}	Yes ^{4,5}	Yes ^{4,5}
Bagnall ³	22	27	28	37	37	37	Yes ^{3,5}	Yes ^{3,5}	Yes ^{3,5}
Hall	I/A ¹	I/A ¹	I/A ¹	35	35	35	Yes	Yes	Yes ⁵
Lowrey	I/A ¹	26	I/A ¹	35	35	35	Yes ⁵	Yes ⁵	Yes ⁵
Pryce Jones	I/A ¹	I/A ¹	I/A ¹	43	43	43	Yes ⁵	Yes ⁵	Yes ⁵
Van der Drift	30	36	I/A ¹	37	36	35	Yes ⁵	Yes ⁵	Yes ⁵
Greenwood	I/A ¹	I/A ¹	I/A ¹	35	35	35	Yes ⁵	Yes ⁵	Yes ⁵

Note 1: I/A = Inaudible.

Note 2: Owned by Stratford Coal Pty Ltd.

Note 3: Modelled result.

Note 4: Criteria adopted as a guide only.

Note 5: Criteria not applicable due to non-compliant weather conditions.

Table 13: Noise Performance Assessment – Rail Noise Monitoring – January 2024

Monitoring Location	Date and Time	LA _{max} (dBA)	
		Horn Included	Horn Excluded
TN1	11/01/2024 09:52 am	77	77
TN2	11/01/2024 10:00 am	77	77

Table 14: Noise Performance Assessment – Rail Noise Monitoring – June 2024

Monitoring Location	Date and Time	LA _{max} dBA	
		Horn Included	Horn Excluded
TN1	13/06/2024 13:03	80	76
TN2	13/06/2024 08:44	84	75
TN2	13/06/2024 13:19	93	74

Table 15: Noise Performance Assessment – Rail Noise Monitoring – July 2024

Monitoring Location	Date and Time	LA _{max} dBA	
		Horn Included	Horn Excluded
TN1	18/07/2024 16:17	97	78
TN2	18/07/2024 16:26	77	77

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

APPENDIX 7:

Complaints List & CCC

Annual Report



Stratford Complaint Summary

Period: 12 Months to December 2024

Total No. of Complaints: 4 (4 noise, 0 air quality, 0 Blast Overpressure, 0 lighting, 0 Other)

Total No. of Complainants: 4

Date/Time of Complaint	Complainant Location	Method of Complaint	Nature of Complaint	Investigation/Outcome
22/05/2024 14:00	Approx. 3.8km north of source	Complaints line	Noise	<ul style="list-style-type: none"> Complainant called the Stratford Coal Hotline at 2:00 PM on the 22/05/2024. The Community Liaison Advisor (CLA) returned the call at 3:57 PM on 22/05/2024. Complainant stated that there has been consistent loud humming noise over the last few days and they couldn't sleep due to the noise at night, and it continued into the day. CLA explained the recent change in operations at site and machinery now working at higher elevations. Weather conditions: Light wind conditions from the south at the time of the complaint. Inversion present from 5:30 PM 19/5/2024 to 9:45 AM on the 20/5/2024. Comments from Mining Superintendent: EX06 has been working in the Roseville West Pit area, double benching. Dozers in 1st gear after 10pm. limiting noise with hornless systems in trucks and reverse quackers. Update 29/5/2024: Higher bunding is being left in areas, where possible, to help with noise mitigation measures. CLA contacted complainant to confirm times/dates of the noise complaint. Complainant stated they were fairly certain that the noise was on Sunday night/ Monday morning, but could have been Monday night/ Tuesday morning. CLA informed complainant there was a strong inversion present from 5:30 PM on Sunday 19/5/2024 till around 9:45 AM on Monday 20/5/2024. Complainant was informed of the hours of operation at SMC and that no operations were undertaken on the Sunday night. Complainant was pleased with the update and said it may well have been one of the surrounding farmers on the Sunday night.
25/06/2024 12:00	Approx. 2.5km west of source	In person	Noise	<ul style="list-style-type: none"> Complainant contacted SMC Environment & Community Superintendent (ECS) at 11:55AM 25/6/2024. The Complainant stated the excavator noise coming the general direction of the mine was a lot louder than it had been previously and was very intrusive. The complainant highlighted that the noise was bad on the evening of 20/6/2024 and the morning of 24/6/2024. ECS explained the recent changes to the operations on site and explained the current and short term work plan involving Roseville West and BRN rehandle works. The complainant continued that the noise was continuous loud noises that sounded like rocks being picked up by the excavator bucket followed by a loud noise that sounded like rocks hitting the floor of a haul truck body. The complainant also noted that the recent changes to the operational areas would explain the changes in noise levels received at their residence. ECS stated that the SMC will continue to manage noise on site and mitigate potential noise levels when possible. ECS also stated that complaints are most effective at the time of the noise impact as changes and mitigations can be made to the operation.
14/08/2024 16:30	Unknown	Via EPA	Noise	<ul style="list-style-type: none"> EPA A/ Unit Head, Jarrod Grimson contacted SMC Environment & Community Superintendent (ECS) via phone at 04:30PM 14/8/2024. Mr Grimson explained that the EPA had received a complaint from an anonymous complainant regarding noise generation at SMC via the EPA Environment Report Line. Mr Grimson detailed the complaint as a 'screeching and whirling' noise coming from the operation from 9:00pm on 13/8/2024 until 9:00am 14/8/2024, the complainants location was described as 'to the North of the operation'. ECS explained that the operation had not received any complaints or comments from the community regarding the reported noise impact and committed to investigating the complaint. ECS informed Mr Grimson of the sites 24/7 complaints line and the ability for complainants to remain anonymous, however anonymous complaints are difficult to adequately address due to the lack of location detail. ECS also highlighted the SMC real time noise management system and predictive tools to manage noise on site. Mr Grimson stated that the EPA would be in touch via email to request further information from SMC. Mining Superintendent and on shift OCE investigated potential noise sources of 'screeching and whirling'. Noise mitigation measures were implemented by the Mining Superintendent and OCE where practical.
29/11/2024 12:30hrs	2.4km South of potential noise source	Direct to ECS mobile	Noise	<ul style="list-style-type: none"> Complainant called the complaints line at 12:08PM. SMC Environment & Community Superintendent (ECS) returned their call at 12:30PM. Complainant stated that over the past few weeks there has been a constant low frequency hum coming from the operation at a much higher level than previously experienced, the complainant added that the noise was not consistent with earthmoving machines. The complainant stated that there was a strong vibrational factor to the noise and was much worse last night than the previous two weeks. ECS noted that based on the description of the noise it appeared that the noise source would likely be a pump or generator and committed to investigating. OCE and Mining Supt, agreed that the noise source is likely the Legra pump and agreed to modify operational times over the weekend to shut the pump off after 5:30PM, installation of physical noise bunds surrounding the pump were constructed on 2/12/24 to allow 24 hour pumping.

Stratford Community Consultative Committee (CCC) – 2024 Annual Report

CCC project name:	Stratford Coal Mining Complex	Reporting period:	January 1 to December 31 2024
Independent chairperson:	Margaret MacDonald-Hill	Proponent contact:	Tom Kirkwood, Environment and Community Superintendent

1. Executive summary / introduction

The Stratford Community Consultative Committee began in 1995 as part of the consent of the Stratford Coal Mine Development. Following the approval of the Stratford Extension Project in 2015, the committee's role was expanded to cover the Stratford Mining Complex operations of 1,500 hectares situated east of The Bucketts Way between the villages of Stratford and Craven, within the MidCoast Council Local Government Area.

As mining ceased at Stratford in June 2024, decommissioning of the site is well underway, with the focus on mine closure activities. As such, MidCoast Council has subsequently resolved to replace elected Councillors with staff representatives.

The committee is now comprised of:

- Five local community representatives;
- Two MidCoast staff representatives;
- Two Stratford Coal representatives with attendance from other personnel as required;
- One independent Chairperson.

2. CCC activities over last 12 months:

- The committee continued to meet four times during the reporting period in February, May, August and November, although this is likely to change in 2025 as operational activities come to an end.
- Topics discussed were progress of environmental management towards closure, including land and water management and rehabilitation activities, decommissioning of the rail loop, community complaints, company reports and employment figures, community sponsorship and the proposal for the Stratford Renewable Energy Hub (SREH). Although the SREH is not within the scope of this committee, nevertheless members are extremely interested in the project and the layout of solar panels over agricultural land.

As in previous years, planning for mine closure was the main topic of interest throughout the year and the need for broader community engagement with informative newsletters on progress, updated websites, future land use and employment opportunities and potential transition to a renewable energy hub.

- The committee had two guest speakers from MidCoast Council at the February meeting who presented on the Council's Koala Project and Beyond the Shed. The Koala Project briefed the committee on koala mapping, conservation of habitat and efforts to improve the safety and health of the koala population and building upon the knowledge to enhance

the long term benefits of all wildlife. Beyond the Shed is one of several Council initiatives to encourage local landholders to better manage their properties and the catchment through Landcare programs and funding. One of the programs included a sustainable farming practice with a major demonstration project on improving poultry farming in the Karuah Catchment. Both presentations and Council's goals were highly commended by the committee members.

- Attendance at meetings is consistently high. Apologies rare despite the long tenure of this group.
- Meetings are held on site and the May meeting included a tour of the communications tower on top of rehabilitated pasture land, the Old Main Pit (OMP) emplacement/ rehabilitation area, the Stratford East and Avon North Pits. A site tour was planned for the November meeting but weather conditions prevented this from occurring. To overcome the unpredictability of inclement weather around meetings schedules, Stratford Coal offered to accommodate future tours on alternate date options to suit the members.
- The committee meetings are informative and responsive to the members' needs. Items of interest are included in presentations at the behest of members. This committee marks its thirtieth year of existence. All parties, community, council and company have contributed to its success and longevity, based upon mutual understanding, trust and respect in an amicable forum. Community members, as long term residents, are well known within the community and provide an effective method to voice any concerns. Unlike recent years with nil complaints, four community complaints relating to noise were received during 2024. This was most likely caused by the change in operations with different machinery used towards mine closure. The committee discussed with Stratford staff how this could be mitigated and appropriate measures were implemented.
- At the November meeting the committee confirmed the currency of the previously adopted Terms of Reference.

3. Key issues

Issue	Actions taken	Next steps
Mine Closure Planning	<p>Ongoing consultation with CCC and broader community on mine closure planning via websites and newsletters.</p> <p>Appointment of specialist staff to assist with ongoing community liaison.</p> <p>Investigation of future land use and employment opportunities.</p>	<p>Ongoing liaison will support preparation of detailed mine closure planning and guide future consultation with all key stakeholders.</p> <p>Future proposals and information will be discussed with the CCC as it evolves.</p>

Rehabilitation Progress	Agenda item to each meeting. Updates included on webpage and newsletter.	Updates at quarterly meetings and as required.
Site tours	To accommodate weather conditions on meeting days, alternate date options be offered – November 2024.	Site tours offered as option at each meeting, weather permitting. Alternate dates offered as necessary.
Main pit water quality	To be included in each meeting presentation.	Included in November 2024 presentation and to be included thereafter.
MidCoast Council Annual Financial Report on Community Enhancement Funding	Comprehensive Report provided by Council to CCC. (Resolution of Council to allocate 50% of contributions received from Stratford to the Education Fund and 25% of annual contributions for next two years to upgrade facilities within the Stratford area in consultation with committee.	Ongoing annual action.

4. Focus for next 12 months:

- Continued comprehensive reporting on all company operations, including monitoring and environmental performance, any community complaints/responses.
- Progress on rehabilitation.
- Progress on mine closure planning and emerging options.

Name of chairperson:	Margaret MacDonald-Hill
Date:	February 17 2025.

APPENDIX 8:

Export Train Summary

Table 1: Stratford Mining Complex Export Train Summary 2024

Note: Departure from Stratford rail loop

2024	
Departure Date	Departure Time
Tuesday, 2 January 2024	10:45am
Wednesday, 3 January 2024	07:51am
Thursday, 4 January 2024	07:40am
Monday, 8 January 2024	10:48am
Tuesday, 9 January 2024	07:30am
Wednesday, 10 January 2024	06:37am
Thursday, 11 January 2024	07:48am
Monday, 15 January 2024	13:45pm
Tuesday, 16 January 2024	08:00am
Wednesday, 17 January 2024	07:22am
Thursday, 18 January 2024	07:33am
Monday, 22 January 2024	09:20am
Thursday, 25 January 2024	09:50am
Wednesday, 31 January 2024	16:47pm
Thursday, 1 February 2024	12:14am
Monday, 5 February 2024	12:15am
Monday, 12 February 2024	14:15am
Tuesday, 13 February 2024	14:44am
Wednesday, 14 February 2024	06:55am
Tuesday, 20 February 2024	15:50pm
Thursday, 22 February 2024	11:02am
Tuesday, 27 February 2024	15:19am
Wednesday, 28 February 2024	07:20am
Thursday, 7 March 2024	14:50am
Friday, 8 March 2024	07:23am
Tuesday, 12 March 2024	07:20am
Thursday, 14 March 2024	12:29am
Monday, 18 March 2024	08:54am
Tuesday, 19 March 2024	07:06am
Wednesday, 20 March 2024	11:40am
Thursday, 21 March 2024	07:37am
Monday, 25 March 2024	09:43am
Monday, 8 April 2024	11:00am
Monday, 15 April 2024	12:12am
Friday, 24 May 2024	11:18am
Monday, 27 May 2024	10:14am
Tuesday, 28 May 2024	09:52am
Wednesday, 12 June 2024	10:45am
Thursday, 13 June 2024	10:47am

Departure Date	Departure Time
Monday, 17 June 2024	11:57am
Tuesday, 18 June 2024	12:22am
Thursday, 20 June 2024	13:41pm
Monday, 24 June 2024	10:36am
Tuesday, 25 June 2024	09:03am
Wednesday, 26 June 2024	09:00am
Friday, 12 July 2024	17:10 pm
Tuesday, 16 July 2024	13:21pm
Thursday, 18 July 2024	13:43pm
Friday, 19 July 2024	11:33am
Tuesday, 23 July 2024	13:40pm

Last train departure at Stratford was on 23 July 2024. Infrastructure is currently being decommissioned.

APPENDIX 9:

Annual Biodiversity Report 2024



Stratford Mining Complex

Annual Biodiversity Report 2024

FOR THE YEAR ENDING 31 DECEMBER 2024

CONTENTS

1	Introduction	3
1.1	Scope.....	3
2	Status of BMP Performance Criteria.....	3
3	Vegetation Clearance Protocol.....	5
3.1	Vegetation Clearance Report.....	5
3.2	Salvaged and Reused Material for Habitat Enhancement.....	5
4	Managing Access, Fencing, Gates and Signage	6
5	Revegetation Management.....	7
5.1	Seed Collection and Propagation.....	7
5.2	Revegetation and Regeneration	7
6	Weed Control and Monitoring	10
7	Feral Animal Control and Monitoring.....	11
8	Bushfire PREVENTION and Risk Management.....	12
9	Nest Box Programme.....	12
10	Squirrel Glider Management Plan	14
10.1	Definition of the Squirrel Glider Colonies.....	14
10.2	Squirrel Glider Home Ranges	15
10.3	Tree Hollow Census.....	16
11	Biodiversity Offset Monitoring and Reporting	16
11.1	Habitat and Vegetation Condition Monitoring.....	17
11.2	Fauna Monitoring	17
12	Long Term Security and Conservation Bond	19
12.1	Long-term Security.....	19
12.2	Conservation Bond.....	19
13	Commonwealth EPBC Approval Compliance Reports	19
14	Appendices	21

LIST OF APPENDICES

Appendix A:	Stratford Mining Complex – Biodiversity Management Plan 2023
Appendix B:	Wedgetail Project Consulting - 2023 Stratford Biodiversity Offsets Planting Program Report
Appendix C:	Proposed Revegetation Schedule for the SMC Biodiversity Areas 2023-2026
Appendix D:	Wedgetail Project Consulting - Stratford Mining Complex 2024 Biodiversity Offsets Strategy Flora Monitoring Report
Appendix E:	AMBS Ecology & Heritage – Feral Animal Study of the Stratford Mining Complex 2023
Appendix F:	AMBS Ecology & Heritage – Nest Box Programme for the Stratford Offset and Biodiversity Enhancement Areas, Annual Report for 2024 – December 2024
Appendix G:	AMBS Ecology & Heritage - SMC Fauna Surveys of the Biodiversity Offset and Biodiversity Enhancement and Rehabilitation Areas 2022 – February 2023
Appendix H:	Stratford Mining Complex – Offset Weed Action Plan 2024

1 INTRODUCTION

The Stratford Mining Complex (**SMC**), located in the northern part of the Gloucester Basin NSW, is approximately 10 kilometres (km) south of Gloucester and is owned and operated by Stratford Coal Pty Ltd (**SCPL**), a fully owned subsidiary of Yancoal Australia Limited (**YAL**).

1.1 Scope

In accordance with the Stratford Extension Project (**SEP**) Development Consent SSD-4966, the proponent (SCPL) is required in accordance with *Schedule 2, Condition 39* to prepare and implement a Biodiversity Management Plan (**BMP**). This Plan must include:

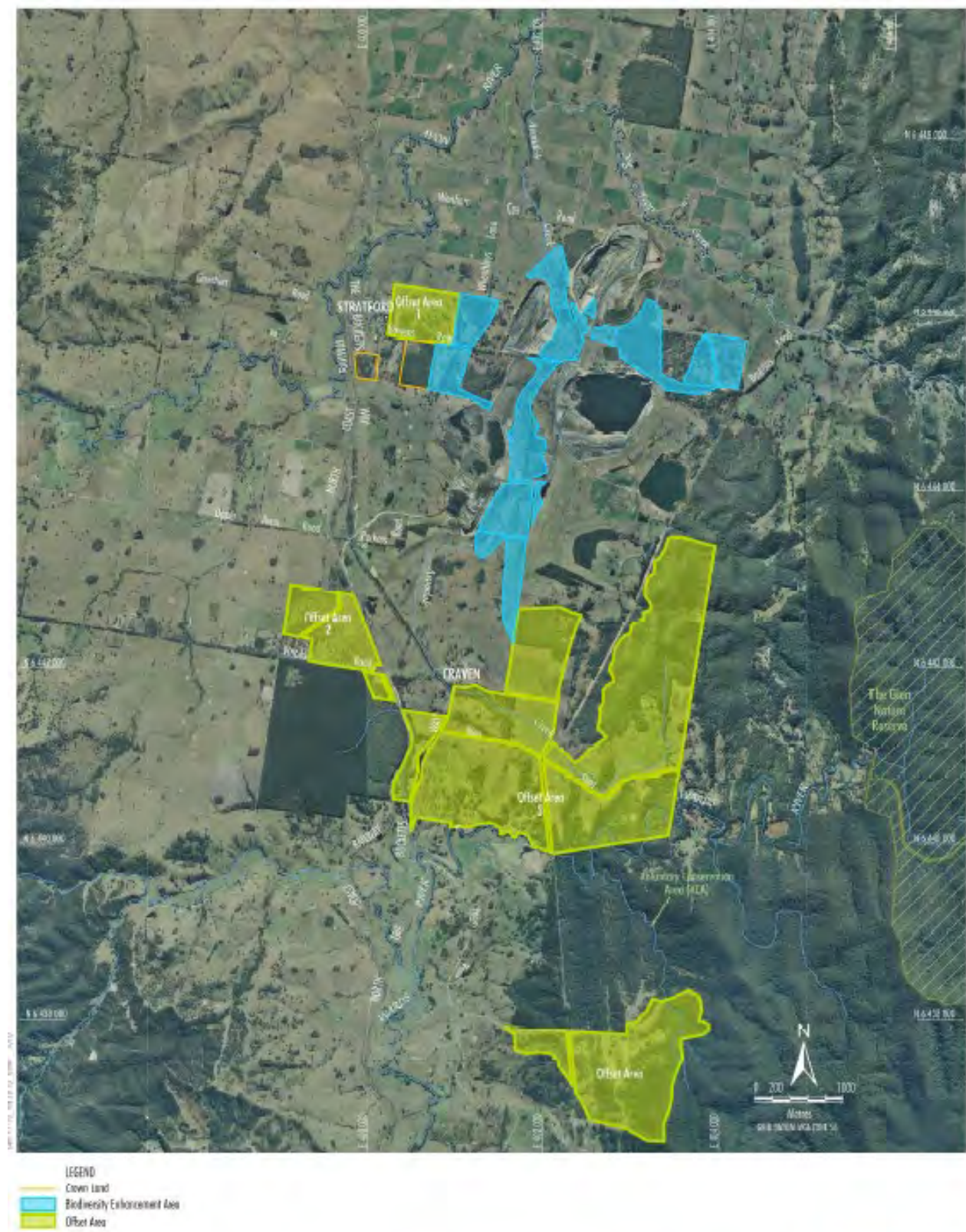
“a program to monitor and report on the effectiveness of the measures in the Biodiversity Management Plan, and progress against the detailed performance and completion criteria”.

The BMP was approved by the then Department of Planning and Environment (DPE) (now the Department of Planning, Housing and Infrastructure (DPHI)) on 24 February 2023. This is the seventh Annual Biodiversity Report prepared for the SEP. This SMC Annual Biodiversity Report provides a review of the effectiveness of measures in the BMP for the annual year ending 31 December 2024 in accordance with Section 8.2.1 of the BMP. The scope of the report includes the Mining Lease areas, the Biodiversity Offset Areas and the Biodiversity Enhancement Area as indicated on **Plan A**.

This report (and associated Appendices) is included as an Appendix of the SMC Annual Review which is available on the Stratford Coal website www.stratfordcoal.com.au.

2 STATUS OF BMP PERFORMANCE CRITERIA

Performance criteria as prescribed in the BMP is presented in **Tables 1 to 9**. The performance criteria have been developed to meet the specific objectives for the areas described in Section 1.2 of the BMP. All performance criteria are linked to the management specifications listed in the BMP Section 4 and Section 5, and monitoring/reporting specifications in the BMP Section 7. The status of BMP performance criteria is provided in the subsequent sections of this report.



STRATFORDCOAL
Part of the Yancoal Australia Group

STRATFORD EXTENSION PROJECT

Biodiversity Offset Areas,
Biodiversity Enhancement Area

Plan A – BMP Figure 3

3 VEGETATION CLEARANCE PROTOCOL

3.1 Vegetation Clearance Report

Vegetation clearance is undertaken in accordance with the BMP Section 4.1 Vegetation Clearance Protocol. Prior to any clearance operations being undertaken a Clearing Plan is prepared, and pre-clearance surveys are undertaken.

During the 2024 reporting period, the exploration drilling program that commenced in 2023 continued. There was no clearing of native vegetation as part of this program, all drillholes were placed on previously cleared farmland directly next to or on existing light vehicle tracks.

Information obtained during the preparation of the Clearing Plans and the vegetation clearance activities (i.e. habitat features, hollows cleared and fauna observed) is used to determine the requirements for nest box replacement in the Biodiversity Offset and Enhancement Areas (refer to **Section 9**). Within the next reporting period SMC will implement a new Clearing Plan methodology called a Ground Disturbance Permit (GDP).

A summary of the habitat features and tree hollows cleared since the commencement of the SEP is included below:

- 2018 – six (6) habitat features including zero (0) tree hollows
- 2019 – forty-two (42) habitat features including nine (9) glider suitable tree hollows and five (5) other hollows
- 2020 H1 – thirty-three (33) habitat features including nineteen (19) glider suitable tree hollows and eleven (11) other hollows
- 2020 H2 – eighteen (18) habitat features including seven (7) glider suitable tree hollows and eleven (11) other hollows
- 2021 – four (4) habitat features all of which were suitable for gliders
- 2022 – Nil
- 2023 – Nil
- 2024 – Nil

**Note tree hollows are included in the total habitat features reported above.*

3.2 Salvaged and Reused Material for Habitat Enhancement

Section 4.1.4 of the BMP requires salvaged material from vegetation clearance activities to be used for habitat enhancement within the rehabilitation, Biodiversity Offset Areas and Biodiversity Enhancement Areas. Habitat features such as trunks, logs, large rocks, branches, stumps and roots are salvaged and relocated where practicable.

The areas cleared for the exploration drilling in 2023 and 2024, as described in **Section 3.1**, were immediately adjacent to roads and had been previously cleared by a previous landholder. Minor removal of regrowth saplings, slashing and weed removal were required. No habitat material was suitable for salvage.

4 MANAGING ACCESS, FENCING, GATES AND SIGNAGE

Managing access, fencing, gates and signage is undertaken in accordance with the BMP Section 5.1 and 5.2.

Table 1: Fencing, Gate and Signage Performance and Completion Criteria

Management Action	Performance Criteria			Completion Criteria
	Year 1 (January – December 2018)	Year 2 (January – December 2019)	Year 3 (January – December 2020)	
Review of fencing requirements for offset areas.	Review of fencing complete including development of mapping showing fence and gate types, redundant fences and fences to be retained.	-	-	-
Gate and fence installations	50% of gates and fences installed	Installation of gates and fences complete	-	Gate and fence installations complete. Livestock excluded.
Redundant fence removal	50% of redundant fencing removed	Redundant fences removed	-	No redundant fencing
Installation of signage	-	Installation of signage complete	-	Signage installed

Table 2: Access Track Performance and Completion Criteria

Management Action	Performance Criteria			Completion Criteria
	Year 1 (January – December 2018)	Year 2 (January – December 2019)	Year 3 (January – December 2020)	
Operational review and mapping to facilitate site access for offset management activities.	Operational review developed. Mapping complete	-	-	Operational review and mapping completed
Access track enhancement and maintenance	Enhancement of access tracks undertaken as identified in operational review.	Maintenance of access tracks annually	Maintenance of access tracks annually	-

Legend	Not commenced	In progress	Completed
---------------	---------------	-------------	-----------

The implementation of the BMP management measures continued in 2024. The BMP requires works to be undertaken to exclude livestock and control access to the Biodiversity Offset Areas and Biodiversity Enhancement Areas.

Following the initial 2018 review of the existing fencing, gates and access tracks, contractors were engaged to implement the removal of redundant fencing and install new fencing where required. Contractors were also engaged to maintain access tracks required for the ongoing management of the Biodiversity Areas.

During the reporting period mapping of fencing and access tracks has been completed to assist with ongoing management of the Biodiversity Areas. During the reporting period the removal of redundant fencing has continued as well as maintenance and/or replacement of existing fencing has been undertaken as required. Access tracks and previously erected signage have continued to be maintained.

The installation of signage was completed in 2018. All key points of access to the Biodiversity Areas were identified and had signage erected. During the reporting period the need for further signage and locks on gates has been identified to restrict access to the Biodiversity Areas. An audit of signage was completed in 2024, no repairs or signage replacements were identified.

5 REVEGETATION MANAGEMENT

5.1 Seed Collection and Propagation

Seed collection and propagation is undertaken in accordance with the BMP Section 4.1.5 and 5.3.

Table 3: Seed Collection and Propagation Performance and Completion Criteria

Management Action	Performance Criteria			Completion Criteria
	Year 1 (January – December 2018)	Year 2 (January – December 2019)	Year 3 (January – December 2020)	
Develop seed collection species list	Species list developed over time.			-
Seed collection	Seed collection commenced	Seed collection to continue	Seed collection to continue	-
Seed propagation	-	Seed propagation commenced	Seed propagation to continue	-

Revegetation in the BMP Revegetation Areas (BMP Management Zone A) will continue via seed and tube-stock. Local endemic (adapted) species are preferentially used where a seed supply is available, however consideration will be given to the use of a high quality seed sourced further from the site as required. An indicative list of flora species proposed to be used in the Revegetation Area (BMP Management Zone A) is provided in the BMP (**Appendix A**).

In preparation for revegetation works each year, SCPL has prepared a scope and schedule for the revegetation works to be implemented (further discussed in **Section 5.2**). The total volume of seed required was calculated based on the floral listings for the target communities in the BMP appendices.

Gloucester Worimi First Peoples Aboriginal Corporation, Hunter Indigenous Plants and Kleinfelder have been engaged to assist in the propagation of native plant species with tube-stock grown under controlled nursery conditions and delivered to site as required for revegetation works in the next reporting period.

5.2 Revegetation and Regeneration

Revegetation management is undertaken in accordance with the BMP Section 5.3 Revegetation Programme. The aim of revegetation is to establish a range of habitat niches including native canopy, and understorey. The Revegetation Area (Management Zone A) in the Biodiversity Areas will be revegetated to substantially increase the area of native vegetation in the area and maximise habitat diversity and a range of successional stages.

Table 4: Revegetation and Regeneration Performance and Completion Criteria

Management Action	Performance Criteria			Completion Criteria
	Year 1 (January – December 2018)	Year 2 (January – December 2019)	Year 3 (January – December 2020)	
Site Planning	Site inspection complete and advice received.	-	-	-
Map Revegetation Areas (Management Zone A) and identify target vegetation communities to establish	Mapping complete and target vegetation communities identified	-	-	-
Develop a species list for each target vegetation community	Species list developed	-	-	-
Develop application rates for seeds as well as planting densities for tube stock	Application rates developed	-	-	-

Management Action	Performance Criteria			Completion Criteria
	Year 1 (January – December 2018)	Year 2 (January – December 2019)	Year 3 (January – December 2020)	
Implement revegetation schedule	Develop revegetation schedule	Implement revegetation schedule	Implement revegetation schedule	-
Revegetation Area (Management Zone A)	Commence revegetation works within the Revegetation Area (Management Zone A) (Figures 12a to 12c)	Continue revegetation works within the Revegetation Area (Management Zone A) (Figures 12a to 12c)	Continue revegetation works within the Revegetation Area (Management Zone A) (Figures 12a to 12c)	Vegetation established and provides suitable habitat for use by native fauna species.
Squirrel Glider Vegetation Pathways (Management Zone A1)	Commence planting of <u>flora species which provide habitat for the Squirrel Glider</u> within designated revegetation zones (Figures 12a to 12c)	Continue plantings of <u>flora species which provide habitat for the Squirrel Glider</u>	Continue plantings of <u>flora species which provide habitat for the Squirrel Glider</u>	Squirrel Glider vegetation pathways planted within the indicative area shown on Figures 12a to 12c, and provide connective habitat for the Squirrel Glider.
<i>Allocasuarina</i> spp. Plantings (Management Zone A2)	-	Commence planting of <i>Allocasuarina</i> spp. within designated revegetation zones (Figures 12a to 12c)	Complete <i>Allocasuarina</i> spp. plantings within Offset Area 3	<i>Allocasuarina</i> spp. plantings within the indicative area shown on Figures 12a to 12c, and provide foraging habitat for the Glossy Black-cockatoo
Coastal Floodplain Forest Revegetation (Management Zone A3)	-	-	Re-establishment of flora species characteristic of the Cabbage Gum open forest vegetation community	Improvement in condition of the riparian habitat along Avondale Creek within the indicative area shown on Figures 12a to 12c, as evidenced by monitoring data
Existing Remnant Vegetation (Management Zone B)	Inspection to be undertaken to monitor regeneration.	Inspection to be undertaken to monitor regeneration.	Inspection to be undertaken to monitor regeneration.	-
Power Line Corridor (Management Zone C)*	-N/A	-	-	-

Site Planning & Schedule

During the second half of 2022, a three-year scope and schedule was prepared for the revegetation works to be implemented 2023 – 2026. The proposed revegetation schedule for the Biodiversity Areas in 2024 is included in **Appendix C**. Kleinfelder have been engaged to assist with both site planning and implementation of the revegetation works. The site planning included:

- Mapping of the priority revegetation areas and vegetation communities to be completed in 2023 – 2025; and
- Calculation of seed and tube-stock requirements based on the indicative lists of flora species in the BMP Appendices.

Revegetation Implementation

The last round of tubestock planting was finished in May 2023 and completed the Autumn 2022 revegetation program which was heavily disrupted by the higher-than-average rainfall experienced in late 2021 and throughout most of 2022. A total of 14,950 plants were installed across the planting areas. These consisted of 6,940 canopy stems made up of 12 species and 8,010 midstorey and shrub species made up of 17 species across two vegetation communities.

The next round of tubestock planting is scheduled to commence in April 2025. Details of the 2025 revegetation works will be included in the next Annual Biodiversity Report.

Monitoring

Vegetation Monitoring commenced in 2019 to assess the effectiveness of revegetation in the Revegetation Area (Management Zone A) and to assess the natural regeneration in the Existing Remnant Vegetation Area (Management Zone B). The data gathered in 2019 serves as a baseline to assess the success of the revegetation efforts.

Vegetation monitoring was undertaken again in February 2024. The full report is included in **Appendix D** (*Stratford Mining Complex 2024 Biodiversity Offsets Strategy Flora Monitoring Report, Wedgetail Project Consulting 2024*). Habitat and vegetation monitoring is discussed further in **Section 11**. Habitat and vegetation condition monitoring will continue to be undertaken annually to quantitatively measure the change in habitat and vegetation condition over time and to inform any ongoing maintenance requirements.

6 WEED CONTROL AND MONITORING

Weed control is undertaken in accordance with the BMP Section 4.4 and Section 5.6. The weed control program aims to manage weeds to minimise their impact on native flora and fauna.

Table 5: Weed Management Performance and Completion Criteria

Management Action	Performance Criteria			Completion Criteria
	Year 1 (January – December 2018)	Year 2 (January – December 2019)	Year 3 (January – December 2020)	
Monitoring of weed location and density	Mapping of weed extent and density produced	-	-	-
Bi-annual weed inspections and recording	Inspections and records completed	Inspections and records completed	Inspections and records completed	-
Weed control/treatment program	Strategic weed control as required, recording on areas worked and implementation of recommendations			Priority weed infestations appropriately controlled and minimised as evidenced through monitoring data

The general procedure for controlling weed involves:

- Monitoring to identify locations and densities of Priority Weeds;
- Identification of suitable control measures;
- Implementation of the selected control measure by a suitable qualified person; and
- Follow-up inspections to evaluate effectiveness of weed control.

Weed spraying activities are generally undertaken between the months of September and April each year. Physical management measures such as mechanical removal, slashing and/or back-burning can be undertaken at other times of the year as required.

Two contracting companies are engaged at the SMC to undertake weed management activities on an ongoing basis. Weed management during Summer 2023/24 and was continued through Autumn. During Winter 2024, a manual weed control program was implemented in the Stratford woodland rehabilitation area. Summer 2024/25 weed spraying programme commenced again during October 2024 and will continue through Autumn 2024. The weed control activities in 2024 continued to target areas of known weed infestation. The key species targeted included Blackberry, Lantana, Privet, Wild Tobacco, Giant Parramatta Grass and control of the Cadagi Tree.

Weeds mapping has been undertaken during the reporting period to assist in setting future management priorities and developing on-ground actions for weed control (refer to **Appendix H**). From the mapping exercise, review of the Department of Primary Industries (DPI) WeedWise Register the action plan was developed to target Priority Weeds within the offset areas.

Weeds monitoring to evaluate the effectiveness of control measures is undertaken in conjunction with the annual vegetation monitoring and is documented in **Appendix D** (*Stratford Mining Complex 2024 Biodiversity Offset Strategy Flora Monitoring Report, Wedgetail Project Consulting 2024*).

7 FERAL ANIMAL CONTROL AND MONITORING

Feral animal control is undertaken in accordance with the BMP Section 4.5 and Section 5.7. The objective of the feral animal control program is to manage feral animals to minimise their impact on native flora and fauna in the Biodiversity Offset and Biodiversity Enhancement Areas and/or their impact on agricultural production in other surrounding areas.

Table 6: Feral Animal Management Performance and Completion Criteria

Management Action	Performance Criteria			Completion Criteria
	Year 1 (January – December 2018)	Year 2 (January – December 2019)	Year 3 (January – December 2020)	
Abundance of feral animal species established	Initial study undertaken in the Biodiversity Offset Area and Biodiversity Enhancement Area.	-	-	-
Feral animal control and monitoring	-	Inspections and records completed	-	-
Feral animal control program	Feral animal control as required.			Feral animal numbers within offset areas minimised as evidenced through monitoring data

AMBS was commissioned to undertake the initial invasive animal survey in 2017, in accordance with Section 5.7 of the BMP. The objective of the study was to determine the range and abundance of invasive animals that occur or are likely to occur within the Stratford Mining Lease and Biodiversity Areas and provide recommendations for invasive animal control.

MDP Vertebrate Pest Management has been engaged by SCPL since 2016 to implement wild dog and fox control programs across property owned by SCPL including both the Stratford and Duralie Mining Leases and the Stratford and Duralie Biodiversity Offset Areas.

During 2024 no feral animal control programs were undertaken. The last control program at the SMC was conducted between 28 August and 26 September 2023 and focused on wild dog, fox and cat control. The program was productive and successful with a total of 3 wild dogs, 2 foxes and 2 feral cats trapped over the 30 day program. The next feral animal control program is scheduled for Autumn 2025.

In accordance with the BMP Section 5.7 follow-up feral animal monitoring surveys would be undertaken every two years. A feral animal survey of the Biodiversity Offset Area and Biodiversity Enhancement Area was undertaken in 2023 to monitor the success of control programs and determine priorities for ongoing control measures. The *2023 Feral Animal Study of the Stratford Mining Complex* (AMBS, 2024) is included as **Appendix E**.

8 BUSHFIRE PREVENTION AND RISK MANAGEMENT

Bushfire management is undertaken in accordance with the BMP Section 4.7 and Section 5.9. The objective of bushfire management in the Biodiversity Areas is to prevent impacts from unplanned bushfire and to use fire to promote biodiversity.

Table 7: Bushfire Management Performance and Completion Criteria

Management Action	Performance Criteria			Completion Criteria
	Year 1 (January – December 2018)	Year 2 (January – December 2019)	Year 3 (January – December 2020)	
Mapping of Fire Breaks and Trails	Mapping complete	-	-	-
Monitoring of Fuel Loads	Inspections and records completed	Inspections and records completed	Inspections and records completed	-
Controlled Burning	-	Implement (if required)	Implement (if required)	Controlled burns implemented (where required)

Monitoring of fuel loads to evaluate bushfire risk and guide bushfire hazard reduction activities is undertaken in conjunction with the annual vegetation monitoring and was conducted in February 2024. Further detail is included in **Section 11** and **Appendix D**.

Bushfire risk has continued to be mitigated through the maintenance and installation of new access tracks and fire breaks within the Biodiversity Offset Areas. Additionally, fuel loads have been reduced during 2024 by slashing where required in the Mining Leases and Biodiversity Areas. During 2024, no hazard reduction burning has been undertaken. Following the revegetation works, the aim is to exclude fire from the offset areas for at least 5 years to allow for tubestock and seedlings to establish.

Section 4.7 of the BMP states SCPL will:

- Ensure that the development is suitably equipped to respond to any fires on site; and
- Assist the Rural Fire Service (RFS), emergency services and National Parks and Wildlife Service as much as possible if there is a fire in the surrounding area.

9 NEST BOX PROGRAMME

Nest box management is undertaken in accordance with the BMP Section 5.10. Nest boxes will be installed to provide habitat opportunities in the short to medium-term for a number of arboreal fauna species including the Squirrel Glider.

Table 8: Nest Box Program Performance and Completion Criteria

Management Action	Performance Criteria			Completion Criteria
	Year 1 (2018)	Year 2 (2019)	Year 3 (2020)	
Nest Boxes – Installation	Nest boxes installed for clearing activities	Installation continued as clearing progresses	Installation continued as clearing progresses	Nest boxes installed as required.
Nest Boxes – Monitoring and Reporting	Quarterly inspections undertaken – undertaken in Year 2	Annual inspection and records completed	Annual inspection and records completed	-
Nest Boxes – Maintenance	-	Maintenance or replacement as required	Maintenance or replacement as required	Nest boxes functioning as designed

Implementation & Installation

The nest box programme described in the BMP Section 5.10, consists of two main components to replace any tree hollows cleared prior to mining activities as described in **Section 3** of this report:

- Suitable nest boxes for the Squirrel Glider will be installed at a ratio of least 3:1 for each tree hollow cleared suitable for the Squirrel Glider. Squirrel Glider nest boxes will have a small entrance hole (45-50 millimetres diameter) to exclude larger possums and birds.
- For tree hollows that provide habitat to arboreal fauna species (other than the Squirrel Glider), nest boxes will be installed at a minimum ratio of 1:1 (i.e. one nest box of appropriate size to replace one hollow of similar size and properties). These nest boxes will be provided for birds, bats and arboreal mammals.

Nest boxes will be installed within the Biodiversity Offset Area and Biodiversity Enhancement Area in Existing Remnant Vegetation (Management Zone B) as well as the Revegetation Area (Management Zone A).

As described in **Section 3.1**, a summary of the habitat features and tree hollows cleared since the commencement of the Stratford Extension Project is included below.

- 2018 – six (6) habitat features including zero (0) tree hollows
- 2019 – forty-two (42) habitat features including nine (9) glider suitable tree hollows and five (5) other hollows
- 2020 H1 – thirty-three (33) habitat features including nineteen (19) glider suitable tree hollows and eleven (11) other hollows
- 2020 H2 – eighteen (18) habitat features including seven (7) glider suitable tree hollows and eleven (11) other hollows
- 2021 – four (4) habitat features all of which were identified to be glider suitable tree hollows
- 2022 – Nil
- 2023 – Nil
- 2024 – Nil

The current nest box program has a total of 202 boxes and involves:

- Five (5) nest boxes targeting Squirrel Glider (*Petaurus norfolcensis*), installed December 2018
- Twenty-Five (25) nest boxes targeting Squirrel Glider (*Petaurus norfolcensis*), installed May 2019
- Fifty-four (54) nest boxes targeting Squirrel Glider (*Petaurus norfolcensis*) and Sixteen (16) nest boxes targeting a variety of hollow-dependent fauna, installed April 2020
- Eighty-four (84) nest boxes targeting Squirrel Glider (*Petaurus norfolcensis*) and eighteen (18) nest boxes targeting a variety of hollow-dependent fauna, installed February and March 2021

Monitoring

In accordance with Section 5.10 of the BMP, nest boxes will be monitored by suitably qualified personnel with quarterly inspections during the first year followed by annual inspections in Spring. Monitoring reports provide details of the nest box identification number, the tree species on which the box is installed, evidence of use and whether fauna was present. Details on each of the fauna species present within nest boxes is collected (sex, weight, length, breeding status and if it had been a new capture or recapture). Nest box monitoring was undertaken during 9 September, 11 September, 8 to 11 October, and 13 to 14 November 2024. The *2024 Stratford Annual Nest Box Programme for the Stratford Offset and Biodiversity Enhancement Areas Annual Report* is included as **Appendix F**.

A total of 10 vertebrate species were recorded within nest boxes or showed signs of occupation during the current reporting period, including the Squirrel Glider, Sugar Glider, Feathertail Glider, Brush-tailed Phascogale, Brown Antechinus, Black Rat, Common Brushtail Possum, unidentified microbat species, White-throated Treecreeper, and Lace Monitor.

Overall, a total of 200 out of 202 nest boxes, or approximately 99%, have been occupied or shown signs of occupancy since their installation. This includes 100% of the nest boxes installed in 2019, 99% of the nest boxes installed in 2020, and 99% of the nest boxes installed in 2021. Occupancy of nest boxes has generally increased over time.

The next round of annual nest box monitoring will be scheduled for between September – December 2025. Within the next reporting period SCPL will review the monitoring frequency of nest boxes based on the trend of high occupancy rates.

10 SQUIRREL GLIDER MANAGEMENT PLAN

In accordance with *Schedule 3, Condition 38(a)* of the Development Consent SSD-4966 the management of Squirrel Glider populations is undertaken in accordance with the Squirrel Glider Management Plan (SQMP). The SQMP was approved by the DPE on 19 October 2018 and includes specific management measures in addition to those in the BMP. The SGMP has been prepared to facilitate the management of squirrel glider populations at the SMC, Biodiversity Enhancement Areas and Biodiversity Offset Areas.

Squirrel Glider management programs which have been commenced include:

- Definition of the Squirrel Glider colonies (SQMP Section 4.1)
- Identification of the Squirrel Glider colony home ranges (SQMP 4.2)
- Tree hollow census within the home ranges (SQMP Section 7.1)
- Nest box program (SQMP Section 7.2), in conjunction with BMP nest box program in Section 9
- Squirrel Glider vegetation pathways (SQMP Section 8.1), in conjunction with BMP revegetation in Section 5
- Squirrel Glider population monitoring (SQMP Section 10.1), in conjunction with BMP fauna monitoring in Section 11.2.

10.1 Definition of the Squirrel Glider Colonies

Kleinfelder was engaged to undertake an initial targeted Squirrel Glider survey to confirm the location of Squirrel Glider colonies within the potential habitat in the vicinity of the SMC Biodiversity Areas, including the previously identified Squirrel Glider colonies and any new colonies which have been established within the areas identified as potential habitat. The surveys will ensure that future monitoring requirements of the SQMP are being implemented at locations of known colony locations.

The initial surveys were undertaken during November to December 2018 and the results are provided in the *Initial Squirrel Glider survey as part of Stratford Coal's Squirrel Glider Management Plan (Kleinfelder, 2018)*. Squirrel Gliders were identified at five locations out of the 37 locations surveyed. These locations provided the basis for ongoing survey efforts.



Plate 1 – Squirrel Glider (*Petaurus norfolcensis*) photographed during initial camera trap surveys

10.2 Squirrel Glider Home Ranges

Objectives outlined in Section 4 of the SGMP require measures to establish the home range size of known squirrel glider colonies near the SMC. This information will be used to guide the ongoing management of squirrel glider populations within the SMC Biodiversity Offset Areas and Biodiversity Enhancement Areas. This information will also define the study area for further programs including the census of suitable tree hollows, food resources surveys and habitat enhancement including nest box installations.

Kleinfelder was commissioned by SCPL to conduct a radio tracking program to determine the Squirrel Glider home ranges of the local population based on the colony locations identified in the initial survey.

Two radio tracking programs were conducted between January to April 2019 and July to September 2019 (during the 2019 reporting period). The 2019 radio tracking programs consisted of trapping of Squirrel Gliders, followed by processing and collaring. Generally, two gliders from each colony area were targeted for radio tracking. Radio tracking of the selected gliders was then conducted, followed by analyse of the data and estimating home ranges for each radio-tracked Squirrel Glider. The findings of the initial survey, radio tracking and home range estimations are provided in previous versions of the SMC Annual Biodiversity Report.



Plate 2 - Radio-transmitting collar fitted to Squirrel Glider



Plate 3 - Squirrel Glider (Sharon) with young

10.3 Tree Hollow Census

Schedule 3, Condition 38(b) of Development Consent SSD-4966 requires a census of suitable tree hollows in home ranges and offset areas suitable for Squirrel Gliders. A tree hollow census was undertaken within the home ranges identified by the radio tracking program (Section 10.2) to identify hollow bearing trees suitable for use as den sites by the Squirrel Glider. The results of the tree hollow census are provided in previous SMC Annual Biodiversity Reports.

11 BIODIVERSITY OFFSET MONITORING AND REPORTING

The Biodiversity Offset monitoring program is prescribed in the BMP Section 7. The program aims to monitor and report on the effectiveness of the BMP management measures and progress against the detailed performance and completion criteria.

Table 9: Monitoring Program – Biodiversity Offset Strategy

Monitoring Program	Relevant BMP Section	Frequency
Visual Monitoring	Section 7.1.1	Annual
Photo Monitoring	Section 7.1.2	Annually (spring)
Habitat and Vegetation Monitoring Program	Section 7.1.3	Annually (spring)
Fauna Monitoring Program	Section 7.1.4	Every three years
Weed Monitoring	Section 5.6	Biannually
Initial Feral Animal Study of the Biodiversity Offset Area and Biodiversity Enhancement Area	Section 5.7	Within 12 months of approval of the BMP
Feral Animal Monitoring	Section 5.7	Every two years (biannually)
Nest Box Monitoring	Section 5.10	Quarterly for 12 months and then biannually

11.1 Habitat and Vegetation Condition Monitoring

Habitat and vegetation condition monitoring is undertaken to quantitatively measure the change in habitat and vegetation condition over time. The visual monitoring and photo monitoring programs are undertaken concurrently with the vegetation monitoring to provide additional information on the change of the Biodiversity Areas over time and inform maintenance requirements.

Vegetation Monitoring commenced in 2019 to assess the effectiveness of revegetation in the Revegetation Area (Management Zone A) and to assess the natural regeneration in the Existing Remnant Vegetation Area (Management Zone B). The data gathered in 2019 serves as a baseline to assess the success of the revegetation efforts and progress against the project specific performance and completion criteria. This survey was undertaken prior to the revegetation works commencing in the Biodiversity Offset areas.

Vegetation monitoring was undertaken again in February 2024. The full report is included in **Appendix D** (*2024 Stratford Mining Complex Biodiversity Offsets Strategy Flora Monitoring Report, Wedgetail Project Consulting 2024*). Habitat and vegetation condition monitoring will continue to be undertaken annually to quantitatively measure the change in habitat and vegetation condition over time and to inform any ongoing maintenance requirements. Survey results from the 2024 monitoring state that the revegetation program is progressing well with all areas where installation has occurred having some success and well over half the areas achieving or exceeding target densities.

11.2 Fauna Monitoring

Monitoring of fauna usage within the Biodiversity Offset Areas, Biodiversity Enhancement Areas and Rehabilitation Areas is conducted every three years to document the fauna species response to improvement in vegetation and habitat in the Biodiversity Areas and assess the performance in providing habitat for a range of vertebrate fauna. The surveys include an assessment of habitat complexity, species richness and abundance.

During 2022 AMBS Ecology & Heritage (AMBS) were engaged to undertake a fauna survey within the SMC Biodiversity Offset Areas Biodiversity Enhancement Areas and Stratford Rehabilitation Areas. The full report is included in **Appendix G** (*SMC Fauna Surveys of the Biodiversity Offset, Biodiversity Enhancement and Rehabilitation Areas 2022, AMBS 2023*). An extracted summary of the survey results is outlined below.

Targeted fauna surveys were undertaken at six sites within the Stratford Offset Areas, two sites within the Stratford Biodiversity Enhancement Area, and two sites within the Stratford Rehabilitation Area, from 7 to 12 November 2022 and 21 to 26 November 2022. At each site survey techniques included pitfall traps, funnel traps, Elliott A traps, harp traps, ultrasonic call recording, spotlighting, diurnal bird surveys and reptile searches. Frog surveys were undertaken at four separate sites. Opportunistic observations of signs of fauna were noted throughout the field survey period, including travel to and during transit between surveys sites.

A total of 166 species of vertebrate were recorded, comprising 15 frogs, 13 reptiles, 100 birds and 38 mammals most of which were native (refer to the species list included as Appendix A of **Appendix G** of this report).

The fauna surveys suggest the Stratford Offset, Biodiversity Enhancement and Rehabilitation Areas provide foraging resources for a range of native vertebrate fauna, including birds, mammals, reptiles and frogs. This includes at least sixteen species listed as threatened or migratory under the *Biodiversity Conservation Act 2016* (BC Act) and/or *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Notable survey results included:

- The Squirrel Glider being recorded in five locations, including three sites located in the Offset Areas, and both sites located in the Biodiversity Enhancement Area;
- The New Holland Mouse recorded in the Biodiversity Enhancement Area again (as per 2020 report); and
- The Southern Myotis captured in a harp trap positioned on the Wards River, which contained water during the current surveys. This site was dry during previous surveys undertaken in 2019.

The fauna surveys confirm that the Stratford Offset, Biodiversity Enhancement and Rehabilitation areas provide foraging and breeding habitat for a range of native vertebrate fauna, including birds, mammals, reptiles, and frogs.

The fauna monitoring is scheduled to be completed again with the next reporting period.



Plate 4 - Brush-tailed Phascogale (*Phascogale tapoatafa*)



Plate 5 – Southern Myotis (*Myotis aelleni*)

12 LONG TERM SECURITY AND CONSERVATION BOND

12.1 Long-term Security

In accordance with *Schedule 3, Condition 36* of Development Consent SSD-4966, SCPL is required to make suitable arrangements for the long-term security of the SEP Biodiversity Offset Area. SCPL has pursued the mechanisms available under Section 88E(3) of the NSW *Conveyancing Act, 1919* (CV Act) namely:

- Registration of a Positive Covenant under Section 88E(3) of the CV Act; and
- Registration of a Restriction on the Use of Land by a Prescribed Authority under Section 88E(3) of the CV Act.

To finalise securing the offset areas, the following actions were conducted:

- Confirmation that the completed instruments are to the satisfaction of the Secretary completed 15 April 2019;
- Execution of the instruments by the prescribed authority (the DPE);
- Execution of the instruments by the three separate registered proprietors of the offset lands (i.e. Yancoal's subsidiary companies, CIM Stratford Pty Ltd; Stratford Coal Pty Ltd and Gloucester Coal Limited);
- Lodgement of the executed instruments with NSW Land Registry Services (LRS) in accordance with LRS's dealing lodgement requirements;
- LRS assessment/review of the instruments to confirm the instruments are acceptable for registration; and
- Registration of the instruments on the titles of the offset lands.

Public Positive Covenants and Restrictions on the Use of Land for the Biodiversity Offsets have been registered on title with NSW Land and Property Information (LPI) in October 2019. Copies of the executed Positive Covenants and notice of registration of the instruments was included in the 2019 SMC Annual Biodiversity Report.

12.2 Conservation Bond

In accordance with *Schedule 3, Condition 40* of Development Consent SSD-4966, SCPL is required to lodge a Conservation Bond with the DPE which covers the cost of implementing the Biodiversity Offset Strategy detailed in the BMP.

The conservation bond calculation was prepared by Kleinfelder and a verification of the costs was undertaken by Rider Levett Bucknall. The conservation bond calculation was submitted in January 2019 and subsequently approved by DPE on 15 January 2019.

The Conservation Bond in the form of a bank guarantee was executed and lodged with DPE on 8 February 2019. During 2023, a Conservation Bond review commenced by SCPL and will be finalised within the next reporting period.

13 COMMONWEALTH EPBC APPROVAL COMPLIANCE REPORTS

In accordance with *Condition 10* of EPBC 2011/6176 for the SEP, by 31 March of each year after the commencement of the action, or as agreed with the Department of the Environment and Energy (DoEE) (now the Department of Climate Change, Energy, the Environment and Water (DCCEEW)), SCPL is required to publish a report addressing compliance with the conditions of EPBC 2011/6176 during the previous calendar year, including implementation of any management documents as specified in the conditions of EPBC 2011/6176.

SCPL commenced the action approved under EPBC 2011/6176 on 4 April 2018. The first annual compliance report was submitted in March 2019. The *Stratford Extension Project (EPBC 2011/6176) Annual Compliance Report 2023*, was submitted to the DCCEEW on 26 March 2024.

Condition 10 also requires reporting on the implementation of the relevant management documents required in accordance with the conditions of EPBC 2011/6176. This SMC Annual Biodiversity Report provides a review of the implementation of the management measures in the BMP for the annual year ending 31 December 2024. This report is intended to be included as an Appendix of the SMC Annual Review.

14 APPENDICES

- Appendix A:** Stratford Mining Complex – Biodiversity Management Plan 2023
- Appendix B:** Wedgetail Project Consulting - 2023 Stratford Biodiversity Offsets Planting Program Report
- Appendix C:** Proposed Revegetation Schedule for the SMC Biodiversity Areas 2023-2026
- Appendix D:** Wedgetail Project Consulting - Stratford Mining Complex 2024 Biodiversity Offsets Strategy Flora Monitoring Report
- Appendix E:** AMBS Ecology & Heritage – Feral Animal Study of the Stratford Mining Complex 2023
- Appendix F:** AMBS Ecology & Heritage – Nest Box Programme for the Stratford Offset and Biodiversity Enhancement Areas, Annual Report for 2024 – December 2024
- Appendix G:** AMBS Ecology & Heritage - SMC Fauna Surveys of the Biodiversity Offset and Biodiversity Enhancement and Rehabilitation Areas 2022 – February 2023
- Appendix H:** Stratford Mining Complex – Offset Weed Action Plan 2024

(Appendices available on request)

APPENDIX 10:

IEA 2023 Response Table

Stratford Mining Complex - Independent Environmental Audit 2023

Response to Audit Findings

Table 1: IEA 2023 Audit Findings - Non-Compliances					
Condition Number (ID)	Compliance Requirement	Independent Audit Finding	Independent Audit Recommendation	Stratford Coal Proposed Action/Action Taken/Response	Proposed Action Due Date
Development Consent SSD-4966 Non-compliance					
Schedule 3, Condition 8	The Applicant shall record and make available on its website: (a) when the real-time monitoring and management system detects any potential exceedance of the noise limits; (b) when exemptions from noise limits due to meteorological conditions apply; (c) the specific reasonable and feasible measures that were taken when either (a) or (b) apply; and (d) facilitate the regular review of this information by the CCC, to the satisfaction of the Secretary.	Non-Compliant - Real-time Noise Management Response Register has not been updated on website, with entries for October, November and December excluded.	Recommended that the website be updated.	SCPL Accepts the Recommendation. SCPL has maintained the Real-time Noise Management Response Register throughout the audit period and has demonstrated the intention to comply with this condition. SCPL acknowledges that at the time of review (12/12/24) the Real-time Noise Management Response Register had not been updated for October and November. Action: Update the Real-time Noise Management Response Register to the Stratford Coal Website	Complete
Schedule 3, Condition 23	The Applicant shall prepare and implement an Air Quality Management Plan for the development to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with the EPA, and submitted to the Secretary for approval prior to 31 December 2015, unless otherwise agreed by the Secretary; (b) describe the measures that would be implemented to ensure compliance with the relevant air quality criteria and operating conditions of this consent; (c) describe the proposed air quality management system; and (d) include an air quality monitoring program that: • uses a combination of real-time monitors and supplementary monitors to evaluate the performance of the development against the air quality criteria in this consent; • adequately supports the proactive and reactive air quality management system; • evaluates and reports on: - the effectiveness of the air quality management system; and - compliance with the air quality operating conditions; and - defines what constitutes an air quality incident and includes a protocol for identifying and notifying the Department and relevant stakeholders of any air quality incidents.	Non-Compliant - Less than required PM10 monitoring undertaken at HVAS unit-Point 13. Monitoring unit failed to operate on a single prescribed day resulting in less than required samples. The monitor has continued to function after this occurrence and therefore no further actions are required.	No further action required	SCPL notes that the HVAS at Point 13 failed to run on a single prescribed date during the reporting period. Failure was attributed to user error. Contracting company conducted HVAS operation refresher training with contractor field staff and data management staff. No further action required	
Schedule 3, Condition 23		Non-Compliant - Craven TEOM in February, March and June resulted in a total PM10 data capture rate of 88.65% and a total PM2.5 data capture rate of 88.62%. Outages occurred due to maintenance, power loss and equipment failures. Yancoal advises that reliability of data capture was enhanced after this incident through the overhaul of monitor to improve reliability, replacement of major TEOM components and cooling system and critical spares held in house to reduce risk exposure to supply chain issues.	No further action required	Craven TEOM Unit suffered multiple outages due to power supply issues, system malfunctions and cooling system failures. SCPL has taken preventative maintenance steps and system upgrades to ensure future compliance. No further action required	
Schedule 3, Condition 27	Unless an EPL authorises otherwise, the Applicant shall comply with Section 120 of the POEO Act.	Non-Compliant - An uncontrolled discharge of mine related water from dams SD12, SD16 and SD17 reported to Avondale Creek on 20 March 2021 due to a heavy rainfall event. Water quality sampling was undertaken at the time of the spill and the incident reported to regulators as required. No follow up report was requested and no further action is required.	No further action required	Reported in accordance with SSD-4966 and PIRMP. Spills occurred on Saturday 20 March 2021 at SMC as a result of a significant rainfall event exceeding design capacity. No further action required	
Schedule 3, Condition 27	Unless an EPL authorises otherwise, the Applicant shall comply with Section 120 of the POEO Act.	Non-Compliant - Breach of the Roseville Link Haul Road culvert crossing over Avondale Creek at the SMC, which occurred on 20 March 2021 during a significant rainfall event. Reported in accordance with SSD- 4966 and PIRMP.	No further action required	Reported in accordance with SSD-4966 and PIRMP. Breach occurred on Saturday 20 March 2021 during a significant rainfall event. No further action required	
Schedule 3, Condition 27	Unless an EPL authorises otherwise, the Applicant shall comply with Section 120 of the POEO Act.	Non-Compliant - Uncontrolled discharge of water from SMC sediment dam SD16 reporting offsite, which occurred on Tuesday 8 March 2022 as a result of a significant rainfall event exceeding design capacity. Submitted incident report to EPA and DPE. No further requirements or report was requested and therefore no further action is required.	No further action required	Reported in accordance with SSD-4966 and PIRMP. Uncontrolled discharge of water from SMC sediment dam SD16 reporting offsite, which occurred on Tuesday 8 March 2022 as a result of a significant rainfall event exceeding design capacity. No further action required	

Schedule 3, Condition 32	<p>The Applicant shall prepare and implement a Water Management Plan for the development to the satisfaction of the Secretary. This plan must:</p> <ul style="list-style-type: none"> (a) be prepared in consultation with the EPA and DPIE Water, by suitably qualified and experienced person/s whose appointment has been approved by the Secretary; (b) be submitted to the Secretary for approval prior to 31 December 2015, unless otherwise agreed by the Secretary; and c) in addition to the standard requirements for management plans (see condition 3 of Schedule 5), include a: <ul style="list-style-type: none"> (i) Site Water Balance, that: <ul style="list-style-type: none"> • includes details of: <ul style="list-style-type: none"> o sources and security of water supply, including details of Water Access Licenses held, and contingency supply for future reporting periods; o water use and management on site; o any off-site water discharges; and o reporting procedures, including the preparation of a site water balance for each calendar year; and • investigates and implements all reasonable and feasible measures to minimise water use on site; (ii) Surface Water Management Plan, that includes: <ul style="list-style-type: none"> • detailed baseline data on water flows and quality in the watercourses that could potentially be affected by the development; • a detailed description of the water management system, including the: <ul style="list-style-type: none"> o clean water diversion systems; o erosion and sediment controls (mine water system); and o mine water management systems, including irrigation areas; • detailed plans, including design objectives and performance criteria for: <ul style="list-style-type: none"> o design and management of final voids; o design and management for the emplacement of coal reject materials and potential acid-forming or sulfate-generating materials; o management of sodic and dispersible soils; o diversion of the key tributary of Avondale Creek; o reinstatement of drainage lines on the rehabilitated areas of the site; and o control of any potential water pollution from the rehabilitated areas of the site • performance criteria for the following, including trigger levels for investigating any associated potentially adverse impacts: <ul style="list-style-type: none"> o mine water management system; o downstream surface water quality; o downstream flooding impacts, and o stream and riparian vegetation health for the Avon River and its tributaries, including Avondale and Dog Trap Creeks; • a program to monitor and report on: <ul style="list-style-type: none"> o effectiveness of the mine water management system; o effectiveness of the stream diversion for the key tributary of Avondale Creek; o surface water flows (with a focus on base flow and low flows) and quality in the watercourses potentially affected by the development; and o downstream flooding impacts; • reporting procedures for the results of the monitoring program; and • a plan to respond to any exceedances of the performance criteria, and repair, mitigate and/or offset any adverse surface water impacts of the development; 	<p>Non-Compliant - 21 Dec 2020: Rainwater runoff in the construction area for the Stratford East temporary clean water drain breached the containment bund discharging to a clean water area. The temporary clean water drain construction was in accordance with the approved clearing permit and the erosion and sediment control plan. No follow up was requested and no further action is required.</p>	No further action required	No further action required	
Schedule 3, Condition 32	<p>design and management of final voids;</p> <p>design and management for the emplacement of coal reject materials and potential acid-forming or sulfate-generating materials;</p> <p>management of sodic and dispersible soils;</p> <p>diversion of the key tributary of Avondale Creek;</p> <p>reinstatement of drainage lines on the rehabilitated areas of the site; and</p> <p>control of any potential water pollution from the rehabilitated areas of the site</p> <p>performance criteria for the following, including trigger levels for investigating any associated potentially adverse impacts:</p> <p>mine water management system;</p> <p>downstream surface water quality;</p> <p>downstream flooding impacts, and</p> <p>stream and riparian vegetation health for the Avon River and its tributaries, including Avondale and Dog Trap Creeks;</p> <p>a program to monitor and report on:</p> <p>effectiveness of the mine water management system;</p> <p>effectiveness of the stream diversion for the key tributary of Avondale Creek;</p> <p>surface water flows (with a focus on base flow and low flows) and quality in the watercourses potentially affected by the development; and</p> <p>downstream flooding impacts;</p> <p>reporting procedures for the results of the monitoring program; and</p> <p>a plan to respond to any exceedances of the performance criteria, and repair, mitigate and/or offset any adverse surface water impacts of the development;</p>	<p>Non-Compliant - 30 Dec 2020: Rainwater runoff in the construction area for the Stratford East temporary clean water drain breached the containment bund discharging to a clean water area. Sump improvement and pumping continued during the night to reduce the water level and allow greater water capture. No follow up was requested and no further action is required.</p>	No further action required	No further action required	

Schedule 5, Condition 11	<p>The Applicant shall:</p> <p>(a) make the following information publicly available on its website:</p> <ul style="list-style-type: none"> • the EIS; • all current statutory approvals for the development; • approved strategies, plans or programs required under the conditions of this consent; • a comprehensive summary of the monitoring results of the development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent; • a complaints register, which is to be updated on a monthly basis; • minutes of CCC meetings; • the last five annual reviews; • any independent environmental audit, and the Applicant's response to the recommendations in any audit; • any other matter required by the Secretary; and <p>(b) keep this information up to date, to the satisfaction of the Secretary.</p>	<p>Non-Compliant -</p> <ul style="list-style-type: none"> • All current statutory approvals are required to be made available on the website. Draft EPL was viewed on website. • The last five annual reviews are required to be available on the website. The last four annual reviews (2019 – 2022) are uploaded on the Stratford website. 	<p>Recommended that the final version of the EPL is uploaded. Recommend ensuring the latest five annual reviews are uploaded onto website.</p>	<p>SCPL accepts the recommendation.</p> <p>Action: Ensure final version of the EPL is uploaded to Stratford Coal website. Action: Upload 2018 Annual Review onto website.</p>	Complete
Environment Protection Licence EPL 5161 Non-Compliance					
O6.12	<p>The licensee must:</p> <p>a. conduct an annual testing program of the mobile equipment on site to ensure that noise attenuation measures remain effective;</p> <p>b. restore the effectiveness of any noise attenuation if it is found to be defective; and</p> <p>c. report on the results of any testing and/or attenuation work within the fourth quarter noise report submitted to the EPA (required by Condition R4.1).</p> <p>Note: The abovementioned measures were identified by the proponent as feasible and reasonable measures to reduce noise levels to meet criteria</p>	<p>Non-Compliant - 2021 Annual noise testing program of mobile equipment not undertaken as per O6.2 Noise Operating Conditions. No adverse effects would be anticipated resulting from the non-compliance. The annual sound power testing program was undertaken during October 2021. Annual sound power testing must be undertaken yearly whilst operations occurring, unless condition varied.</p>	<p>Annual sound power testing must be undertaken yearly whilst operations occurring, unless condition varied.</p>	<p>SCPL accepts this recommendation.</p> <p>SCPL notes that the sound power testing did not occur through the 2021 EPL annual return period but was completed within the 2021 calendar year. Sound Power level testing successfully occurred in the 2022 and 2023 EPL annual return periods.</p> <p>Action: Ensure sound power level testing occurs annually within the EPL annual return period.</p>	Annually reoccurring
M2.2	Air Monitoring Requirements	<p>Non-Compliant - Less than required PM10 monitoring undertaken as per EPL 5161 - M2.2 Air Monitoring Requirements at HVAS unit - Point 13. Monitoring unit failed to operate on a single prescribed day resulting in less than required samples being obtained. No adverse effects occurred from the non-compliance. Contracting company conducted HVAS operation refresher training with contractor field staff and data management staff. No further actions required.</p>	No further action required	<p>SCPL notes that the HVAS at Point 13 failed to run on a single prescribed date during the reporting period. Failure was attributed to user error. Contracting company conducted HVAS operation refresher training with contractor field staff and data management staff.</p> <p>No further action required</p>	
M2.3	Water and/ or Land Monitoring Requirements	<p>Non-Compliant - Oil and grease values could not be found in the EPL data spreadsheet for Points 33, 35, 36, 37, 38, 39, 42 and 43. Recommend updating to include in one location and/or provide alternate location</p>	<p>Recommend updating to include in one location and/or provide alternate location.</p>	<p>SCPL accepts the recommendation.</p> <p>Action: Include oil and grease in all future EPL data spreadsheet and upload to website</p>	Complete
R1.9	<p>The licensee must supply, with each Annual Return, a Blast Monitoring Report which must include the following information relating to each blast carried out within the premises during the reporting period covered by the Annual Return:</p> <p>a) the date and time of the blast;</p> <p>b) the location of the blast on the premises;</p> <p>c) the blast monitoring results at each blast monitoring station; and</p> <p>d) an explanation for any missing blast monitoring results.</p>	<p>Non-Compliant - Blast monitoring is available to the EPA via the website and within annual reports. However, blast reports were not specifically provided with each annual return. Recommend that blast reports are sent with Annual Returns.</p>	<p>Recommend that blast reports are sent with Annual Returns.</p>	<p>SCPL accepts the recommendation.</p> <p>SCPL notes that blasting results are updated and uploaded to the Stratford Coal website monthly.</p> <p>Action: Include blast reports with all future SMC EPL Annual Returns.</p>	Complete

Table 2: IEA 2023 Audit Findings - Recommendations					
Condition Number (ID)	Compliance Requirement	Independent Audit Finding	Independent Audit Recommendation	Stratford Coal Proposed Action/Action Taken/Response	Proposed Action Due Date
Development Consent SSD-4966 Recommendations					
Schedule 3, Condition 24	For the life of the development, the Applicant shall ensure that there is a meteorological station in the vicinity of the site that: (a) complies with the requirements in the Approved Methods for Sampling of Air Pollutants in New South Wales guideline and the NSW Industrial Noise Policy; and (b) is capable of continuous real-time measurement of temperature lapse rate data that are able to be transformed accurately and repeatably, and no more favourably, to those that would be obtained by the use of a 60 m tower, to the satisfaction of the EPA.	Recommendation - Yancoal advises that meteorological stations are no longer referenced in Approved Methods for Sampling of Air Pollutants in NSW guideline and have been replaced by noise policy for industry (2017) and AS 3580.14-2011: Methods for sampling and analysis of ambient air, Meteorological monitoring for ambient air quality monitoring applications (which the site operates in accordance with).	Recommend AQMP updated at next review to clarify this to ensure relevant regulators support this approach.	SCPL accepts this recommendation. Action: Update the SMC AQMP to reference specific relevant Noise Policy and Australian Standards.	31-Aug-2025 Management Plans are scheduled to be updated following issue of Detailed Mine Closure Plan
Schedule 3, Condition 27	Unless an EPL authorises otherwise, the Applicant shall comply with Section 120 of the POEO Act.	Recommendation - The relocated dirty water pipeline across the Avondale Creek's risk assessment be reconsidered and mitigation implemented as required.	The relocated dirty water pipeline across the Avondale Creek's risk assessment be reconsidered and mitigation implemented as required. Recommend that disassembled culvert be removed from the area.	SCPL accepts this recommendation. Since the site inspection this redundant water transfer line has been removed. Update for the pipeline and pumping risk assessment is scheduled for update in March 2024. Action: Remove dirty water pipeline from the reconstructed Roseville West culvert (complete 20 December 2024). Action: Remove disassembled culvert from area adjacent.	Complete
Schedule 3, Condition 30	The Applicant shall improve the riparian habitat along Avondale Creek to the satisfaction of the Secretary. These improvements must be made within the area of the proposed Biodiversity Enhancement Area (see Appendix 8) and include the re-establishment of flora species characteristic of the Cabbage Gum open forest vegetation community.	Recommendation - All plots in 2022 monitoring by WPC show a proliferation of exotic grasses, which may require management to ensure native species are not smothered. Of concern reference Q6 has decreased in native species diversity by half since 2019 and increased in exotic species diversity. Weed control works have been recommended for this management zone and are integral to prevent further degradation.	Investigation with relevant specialists on alternative management methods (e.g. grazing, with appropriate approvals and/or updated management plans).	SCPL accepts this recommendation. SCPL notes that weed mapping for the SMC Biodiversity Offset Areas was commissioned in November 2023 and completed in February 2024. Action: Undertake weed mapping for the SMC Biodiversity Offsets. Report to include a weed management target plan and proposed methods of weed management.	Complete
Schedule 3, Condition 33	The Applicant shall implement the biodiversity offset strategy described in the EIS, summarised in Table 9 (below) and shown conceptually in Figure 1 in Appendix 8, to the satisfaction of the Secretary.	Recommendation - Details of each management area and vegetation community are provided within a table, in a similar manner to the Duralie Biodiversity Management Plan 2022 at next review. Cattle grazing to control grasses is not current permitted in offset areas in accordance with the BMP. Consider whether a justified amendment request to state and federal regulators should be made to facilitate cattle	Recommendation - Details of each management area and vegetation community are provided within a table, in a similar manner to the Duralie Biodiversity Management Plan 2022 at next review. Cattle grazing to control grasses is not current permitted in offset areas in accordance with the BMP. Consider whether a justified amendment request to state and federal regulators should be made to facilitate cattle grazing as a weed control	SCPL notes that cattle grazing is not currently suitable for revegetated areas due to the potential risk to juvenile planted trees. SCPL notes that grazing will be more suitable as the vegetation matures. Action: Consider amending the SMC Biodiversity Management Plan to include Cattle Grazing.	31-Aug-2025 Management Plans are scheduled to be updated following issue of Detailed Mine Closure Plan

Schedule 3, Condition 40	<p>By the end of June 2016, unless the Secretary agrees otherwise, the Applicant shall lodge a Conservation Bond with the Department to ensure that the Biodiversity Offset Strategy is implemented in accordance with the performance and completion criteria of the Biodiversity Management Plan.</p> <p>The sum of the bond shall be determined by:</p> <p>(a) calculating the full cost of implementing the Biodiversity Offset Strategy (other than land acquisition costs); and</p> <p>(b) employing a suitably qualified quantity surveyor to verify the calculated costs.</p> <p>If the Offset Strategy is completed generally in accordance with the completion criteria in the Biodiversity Management Plan to the satisfaction of the Secretary, the Secretary will release the bond.</p> <p>If the offset strategy is not completed generally in accordance with the completion criteria in the Biodiversity Management Plan, the Secretary will call in all, or part of, the conservation bond, and arrange for the satisfactory completion of the relevant works.</p> <p>Notes:</p> <ul style="list-style-type: none"> •Alternative funding arrangements for long-term management of the biodiversity offset strategy, such as provision of capital and management funding as agreed by OEH as part of a Biobanking Agreement or transfer to conservation reserve estate can be used to reduce the liability of the conservation and biodiversity bond. •The sum of the bond may be reviewed in conjunction with any revision to the biodiversity offset strategy. 	<p>Recommendation - Recommend to review the bond in parallel with Duralie bond every 3 years and lodge with DPE.</p>	<p>Recommend to review the bond in parallel with Duralie bond every 3 years and lodge with DPE.</p>	<p>SCPL accepts this recommendation.</p> <p>SMC conservation Bond is currently under review, expected completion of the review 31 June 2024.</p> <p>Action: Finalise the SMC Conservation Bond.</p>	<p>31-Jun-2025</p> <p>Review of Conservation Bond is currently being completed.</p>
Schedule 3, Condition 43	<p>The Applicant shall prepare and implement a Heritage Management Plan for the development to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared by suitably qualified and experienced person/s whose appointment has been endorsed by the Secretary;</p> <p>(b) be prepared in consultation with OEH and local Aboriginal stakeholders (in relation to the management of Aboriginal heritage values);</p> <p>(c) be submitted to the Secretary for approval prior to 31 December 2015, unless the Secretary agrees otherwise;</p> <p>d) include the following:</p> <ul style="list-style-type: none"> •a detailed archaeological salvage program for Aboriginal sites/objects within the approved disturbance area, including methodology and procedures/protocols for: <ul style="list-style-type: none"> ostaged salvage, based on anticipated mine planning (sites OS-3, OS-4, OS-5, IF-1, IF-2, IF-3, IF-4 shown on the figure in Appendix 7); osalvage of scarred trees (sites ST-2; ST-4 shown on the figure in Appendix 7); omonitoring of topsoil stripping during construction associated with the Wenham Cox / Bowens Road realignment in the vicinity of Dog Trap Creek; osite assessment and reporting; oprotection, storage, management and long-term protection of salvaged Aboriginal objects; and oaddressing relevant statutory requirements under the National Parks and Wildlife Act 1974; and •a description of the measures that would be implemented for: <ul style="list-style-type: none"> oprotecting, monitoring and managing Aboriginal sites outside the approved disturbance area (including sites OS-1, OS-2, ST-1, ST-3, IF-5, PAD-1, PAD-2, CTS-1 	<p>Recommendation - Viewed Site Induction Script v2 and did not see heritage information.</p>	<p>Recommend updated to include key training to ensure awareness prior to closure works commencing.</p> <p>Update PADs to polygons before closure to ensure extents know and disturbance avoided.</p>	<p>SCPL accepts this recommendation.</p> <p>SCPL acknowledges Yancoal Generic Induction includes cultural heritage training information</p> <p>Action: Update SMC Site specific induction to include site specific information regarding cultural heritage risks.</p> <p>Action: Update PADs to polygons before closure to ensure extents know and disturbance avoided.</p>	<p>Action 1: Complete</p> <p>Action 2: 31-Aug-2025</p> <p>PAD point data to be assessed and converted to polygon data as part of the next Heritage Management Plan Review</p> <p>Management Plans are scheduled to be updated following issue of Detailed Mine Closure Plan</p>

Schedule 3, Condition 52	The Applicant shall: (a) implement all reasonable and feasible measures to minimise the waste (including coal reject) generated by the development; (b) ensure that the waste generated by the development is appropriately stored, handled, and disposed of; and (c) monitor and report on the effectiveness of waste minimisation and management measures in the Annual Review.	Recommendation - Site inspection revealed some residual coal adjacent the rail loader which requires investigation and confirmation that associated runoff remains on site. Manage to prevent further residual coal residing on site from the railway.	Waste management requires additional housekeeping at the pit top.	SCPL inspected the coal adjacent to the train loader. Investigation confirmed that the water run off from the train loader is managed within site dirty water system. Clean up of the minor coal spill was completed December 2023. Action: Clean up small volume of coal next to train loader.	Complete
Schedule 3, Condition 55	The Applicant shall prepare and implement a Rehabilitation Management Plan to the satisfaction of the Resources Regulator. This plan must: (a) be prepared in consultation with the Department, DPIE Water, BCD, and GSC; (b) be submitted to the Resources Regulator for approval at least 3 months prior to the commencement of mining operations in the new mining areas; unless the Resources Regulator agrees otherwise; (c) be prepared in accordance with any relevant DRG guideline; (d) describe how the rehabilitation of the site would be integrated with the implementation of the biodiversity offset strategy; (e) include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, and triggering remedial action (if necessary); (f) describe the measures that would be implemented to ensure compliance with the relevant conditions of this consent, and address all aspects of rehabilitation including mine closure, final landform and final land use; (g) include interim rehabilitation where necessary to minimise the area exposed for dust generation; (h) include a program to monitor, independently audit and report on the effectiveness of the rehabilitation measures and progress against the detailed performance and completion criteria; and (i) build to the maximum extent practicable on the other management plans required under this consent. Note: The Biodiversity Management Plan and Rehabilitation Management Plan require substantial integration to achieve biodiversity objectives for the rehabilitated mine site.	Recommendation - Continue detailed and early closure planning work in consultation with relevant regulators.	Continue detailed and early closure planning work in consultation with relevant regulators.	SCPL accepts this recommendation. Action: Continue detailed and early closure planning work in consultation with relevant regulators.	Ongoing - Current
Environment Protection Licence EPL 5161 Recommendations					
A1.1	This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation. Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.	Recommendation - Licence holder to consider whether a licence variation to reduce the scale of the activities is appropriate.	Licence holder to consider whether a licence variation to reduce the scale of the activities is appropriate.	SCPL accepts this recommendation. Action: Consider whether a licence variation to reduce the scale of the activities Listed in EPL5161 is appropriate. If deemed appropriate commence EPL variation.	31-Aug-2025 Investigation underway
L4.5	For the purposes of determining the noise generated at the premises Class 1 or Class 2 noise monitoring equipment, as defined by AS IEC61672.1-2004 and AS IEC61672.2-2004, or other noise monitoring equipment accepted by the EPA, must be used.	Recommendation - •At next update to NMP include details on the utilisation of Class 1 or Class 2 noise monitoring equipment, as defined by AS IEC61672.1-2004 and AS IEC61672.2-2004, or other noise monitoring equipment accepted by the EPA for determining noise production levels. •Any future noise monitoring reports confirm this detail.	•At next update to NMP include details on the utilisation of Class 1 or Class 2 noise monitoring equipment, as defined by AS IEC61672.1-2004 and AS IEC61672.2-2004, or other noise monitoring equipment accepted by the EPA for determining noise production levels. •Any future noise monitoring reports confirm this detail.	SCPL accepts this recommendation. Action: At next update to SMC NMP include details on the utilisation of Class 1 or Class 2 noise monitoring equipment, as defined by AS IEC61672.1-2004 and AS IEC61672.2-2004, or other noise monitoring equipment accepted by the EPA for determining noise production levels.	31-Aug-2025 Management Plans are scheduled to be updated following issue of Detailed Mine Closure Plan
O5.8	Whenever the level of liquid and other material in any sedimentation basin exceeds the level indicated by the sedimentation basin marker, the licensee must take all practical measures as soon as possible to reduce the level of liquid and other material in the sedimentation basin.	Recommendation - Update Water Management Plan with the relevant requirements of the new EPL5161 conditions as at 15 September 2023.	Update Water Management Plan with the relevant requirements of the new EPL5161 conditions as at 15 September 2023.	SCPL accepts this recommendation. Action: Update Water Management Plan with the relevant requirements of the new EPL5161 conditions as at 15 September 2023.	31-Aug-2025 Management Plans are scheduled to be updated following issue of Detailed Mine Closure Plan

O6.13	Potential Acid Forming (PAF) Waste Rock Waste rock must be assessed to determine if it is Potential Acid Forming (PAF). PAF waste rock must be segregated, handled and disposed so as to mitigate against acid formation and pollution of waters.	Recommendation - Continue to monitor and manage PAF during closure process as key potential issue.	Continue to monitor and manage PAF during closure process as key potential issue.	Action: Continue to monitor and manage PAF during closure process as key potential issue.	Current and ongoing
-------	---	---	---	---	---------------------