



Annual Review

Ashton Coal Project

1 January 2025 – 31 December 2025

ASHTON COAL

PTY LTD

ABN: 22 078 556 500

Annual Review

for the

Ashton Coal Project

1 January 2025 – 31 December 2025

Prepared for:

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Ref No. 737/31c

March 2026

TITLE BLOCK

Name of Operation	Ashton Coal Project
Name of Operator	Ashton Coal Operations Pty Limited
Development consent / project approval #	309-11-2001-i
Name of holder of development consent / project approval	Ashton Coal Operations Pty Limited
Mining Lease #	Multiple - see Section 3
Name of holder of mining lease	White Mining (NSW) Pty Limited
Water licence #	Multiple - see Section 3
Name of holder of water licence	Ashton Coal Mines Limited
RMP start date	01/08/2022
RMP end date	Not applicable
Annual Review start date	01/01/2025
Annual Review end date	31/12/2025
I, Michael Bartlett, certify that, to the best of my knowledge, this report is a true and accurate record of the compliance status of the Ashton Coal Project for the period 1 January 2025 to 31 December 2025 and that I am authorised to make this statement of behalf of Ashton Coal Operations Pty Limited. <i>Note.</i> 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> 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); Section 307A, 307B and 307C (false or misleading application/information/documents – maximum penalty 2 years imprisonment or \$22,000, or both).</i>	
Name of authorised reporting officer	Michael Bartlett
Title of authorised reporting officer	Operations Manager
Signature of authorised reporting officer	
Date	31 March 2026

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1. STATEMENT OF COMPLIANCE

The compliance status of relevant approvals was reviewed for the reporting period and is summarised in **Table 1.1**. It was determined that there were no non-compliances during the reporting period.

Table 1.1
Statement of Compliance

Were all conditions of the relevant approval(s) complied with?	Yes / No
Development Consent 309-11-2001-i	Yes
Mining Leases 1529, 1533, 1623 (ACP Area)	Yes
Mining Leases 1834, 1835, 1836, 1837, 1861 (ACOL-operated RUM)	Yes
Water Access Licences 1358, 15583, 8404, 997, 1120, 1121, 6346, 23912, 984, 19510, 36702, 36703, 29566, 41501, 41552, 41553, 41529	Yes

2. INTRODUCTION

2.1 OVERVIEW OF OPERATIONS

The Ashton Coal Project (ACP) is located approximately 14km northwest of Singleton, New South Wales (see **Figure 2.1**). The ACP includes the decommissioned North-east Open Cut (NEOC), an underground coal mine, a Coal Handling and Preparation Plant (CHPP) and a rail siding. The ACP was granted Development Consent DA 309-11-2001-i in October 2002 by the (then) Minister for Planning. DA 309-11-2001-i has been modified a total of 11 times, with the most recent modification (MOD11) being granted on 6 July 2022. The most recent modification provided for part of the approved Ravensworth Underground Mine (RUM) coal resources to be extracted and processed as part of the ACP and other associated changes to facilitate this. This additional area is referred to as the ACOL-operated RUM.

A brief summary of the operations at the ACP are provided as follows.

North-east Open Cut

The NEOC was mined between January 2004 and September 2011 at which point open cut coal extraction ceased and, with approval, placement of coarse reject within the NEOC void commenced. The NEOC will continue to provide for coarse reject storage prior to the ultimate final landform rehabilitation, and may be used for coal fines emplacement, if needed.

Ashton Underground Coal Mine

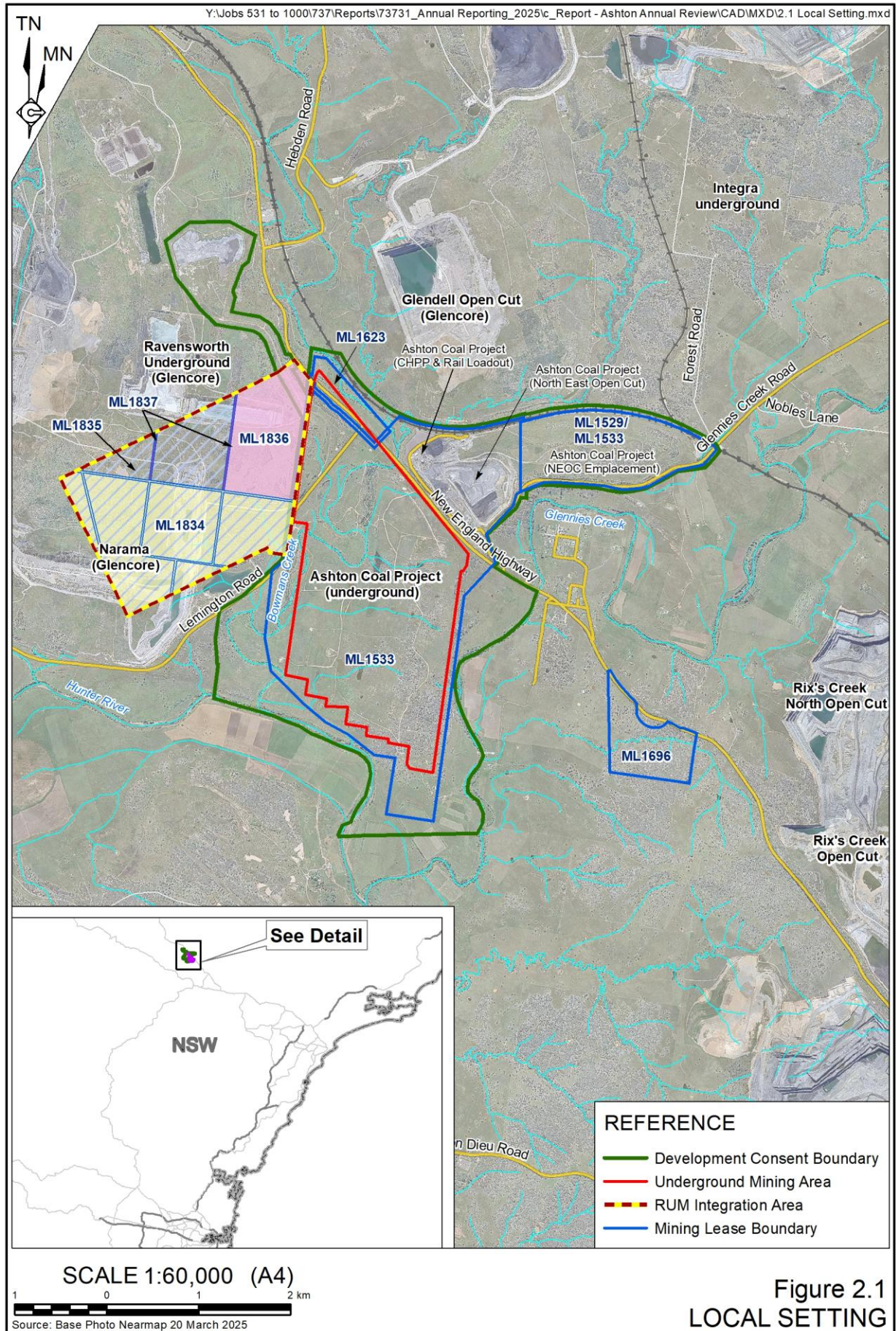
The Ashton underground operations commenced in December 2005 with the first longwall coal extracted within the Pikes Gully Seam in March 2007. Construction of the Bowmans Creek Diversion was completed in November 2012 allowing extraction of coal from beneath those excised sections of Bowmans Creek. Coal extraction operations within the underground operations remain ongoing with an approved maximum production of 5.45Mtpa.

Coal Handling and Preparation Plant

The CHPP was commissioned in April 2004 and expanded during 2006/2007, increasing its capacity from 400t/hr to 1,000t/hr. The CHPP continues to process coal from the Ashton underground operations for export through the Port of Newcastle, NSW.

ACOL-operated RUM

Operational activities commenced within the ACOL-operated RUM during 2024.



2.2 SCOPE AND FORMAT

This Annual Review for the Ashton Coal Project has been compiled by R.W. Corkery & Co. Pty Limited on behalf of Ashton Coal Operations Pty Limited (ACOL). ACOL became part of Yancoal Australia Limited in July 2009.

This is the 11th Annual Review submitted for the ACP, following eleven Annual Environmental Management Reports, and is applicable for the period 1 January 2025 to 31 December 2025 (“the reporting period”). The information presented within this Annual Review has been compiled based on information and advice provided by ACOL.

This Annual Review has been prepared in accordance with the requirements of *Schedule 5 Condition 10* of DA No. 309-11-2001-i (MOD11). This Annual Review generally follows the format and content requirements identified in the (then) Department of Planning and Environment’s (DPE) *Annual Review Guideline* dated October 2015.

2.3 KEY PERSONNEL CONTACT DETAILS

The Operations Manager, Mr Michael Bartlett is the primary mine contact (Tel: 02 6570 9104) and is responsible for the environmental management of the mine and ensuring compliance with all relevant legislative obligations. Mr Phillip Brown (Tel: 0439 909 952) is the nominated Environment & Community Relations Superintendent and is also responsible for the environmental management of the mine. The contact details for the mine office are as follows.

Postal Address:	Ashton Coal Operations Pty Limited PO Box 699 SINGLETON NSW 2330	Tel: 02 6576 1111
Email:	Ashton.Environment&Community@yancoal.com.au	
Physical Address:	Ashton Coal Operations Glennies Creek Road CAMBERWELL NSW 2330	

A 24-hour Environmental Hotline (Tel: 1800 657 639) is maintained by ACOL. Details of calls taken on this number are forwarded to the Environment & Community Relations Superintendent for further actioning, if required.

3. APPROVALS

ACOL has operated the ACP under the key approvals listed in **Table 3.1**.

Table 3.1
Ashton Coal Project – Consents, Leases and Licences

Page 1 of 2

Consent/Lease/Licence	Issue Date	Expiry Date	Details / Comments
Development Approvals			
Development Consent DA 309-11-2001-i	11 October 2002	31 December 2035 ¹	Granted by the (then) Minister for Planning and last modified on 6 July 2022 (MOD11).
Development Consent DA 104-96	20 November 1996	31 December 2032	Granted by the (then) Minister for Urban Affairs and Planning for the adjoining Ravensworth Underground Mine (RUM). Last modified on 6 July 2022 (MOD10) to address the integration of the ACOL-operated RUM. Activities associated with the non-ACOL operated RUM are reported separately.
Mining Authorities²			
Mining Lease ML 1529	10 September 2003	11 November 2030	Granted by the (then) Minister for Mineral Resources. Incorporates 128.7ha of surface area. Renewed on 12 July 2022.
Mining Lease ML 1533	26 February 2003	25 February 2045	Granted by the (then) Minister for Mineral Resources. Incorporates 883.4ha of surface area. A renewal application was lodged 21 February 2023 and approved 26 February 2024.
Mining Lease ML 1623	30 October 2008	30 October 2029	Granted by (then) Minister for Mineral Resources. Incorporates 26.17ha of surface area.
Mining Lease ML 1834	22 December 2022	3 June 2033	Partial transfer of 231.7ha including surface and depth restrictions.
Mining Lease ML 1835	22 December 2022	31 December 2044	Partial transfer of 404.6ha including surface and depth restrictions.
Mining Lease ML 1836	22 December 2022	31 December 2044	Partial transfer of 102.7ha including surface and depth restrictions.
Mining Lease ML 1837	22 December 2022	1 October 2043	Partial transfer of 3.304ha including surface and depth restrictions.
Mining Lease ML 1861	14 September 2023	14 September 2044	Granted by the Minister for Mineral Resources. Incorporates 52.59ha of surface area to a depth of 100m.
Exploration Licence 4918	18 December 1995	18 December 2027	Last renewed 12 March 2025.
Exploration Licence 5860	22 May 2001	22 May 2026	Last renewed 27 May 2021.
Other Licences			
Environment Protection Licence No. 11879	2 September 2003	Not applicable	Issued by the (then) Department of Environment and Climate Change (EPA). Current licence version dated 20 August 2025.
Water Access Licence (WAL) 1358	Continuing		Hunter Regulated River Water Source. Supplementary water. Share component: 4ML.
WAL 15583	Continuing		Hunter Regulated River Water Source. General security. Share component: 354ML.

Table 3.1 (Cont'd)
Ashton Coal Project – Consents, Leases and Licences

Page 2 of 2

Consent/Lease/Licence	Issue Date	Expiry Date	Details / Comments
Other Licences (Cont'd)			
WAL 8404	Continuing		Hunter Regulated River Water Source. High security. Share component: 80ML.
WAL 997	Continuing		Hunter Regulated River Water Source. High security. Share component: 11ML.
WAL 1120	Continuing		Hunter Regulated River Water Source. High security. Share component: 3ML.
WAL 1121	Continuing		Hunter Regulated River Water Source. General security. Share component: 335ML.
WAL 6346	Continuing		Hunter Regulated River Water Source. Supplementary water. Share component: 15.5ML.
WAL 23912	Continuing		Jerrys Water Source. Share component: 14ML.
WAL 984	Continuing		Hunter Regulated River Water Source. General security. Share component: 9ML.
WAL 19510	Continuing		Hunter Regulated River Water Source. High security. Share component: 130ML.
WAL 36702	Continuing		Jerrys Water Source. Share component: 116ML.
WAL 36703	Continuing		Jerrys Water Source. Share component: 150ML.
WAL 29566	Continuing		Jerrys Water Source Aquifer Share component: 358ML.
WAL 41501	Continuing		Sydney Basin-North Coast Groundwater Source. Share component: 100ML.
WAL 41552	Continuing		Sydney Basin-North Coast Groundwater Source. Share component: 511ML.
WAL 41553	Continuing		Sydney Basin-North Coast Groundwater Source. Share component: 81ML.
WAL 41529	Continuing		Sydney Basin-North Coast Groundwater Source. Share component: 400ML.
Note 1: Underground mining operations approved to 31 December 2035.			
Note 2: See Figure 2.1 .			

This Annual Review has been prepared to fulfil the annual reporting requirements of DA 309-11-2001-i and the various Water Access Licences listed in **Table 3.1**. A separate Annual Return has continued to be submitted to the NSW EPA in accordance with the requirements of Environment Protection Licence 11879. Reporting requirements under the approved Extraction Plans for LW201-204 and LW205-208, and 2009 Conservation Agreement (for Southern Woodlands Conservation Area) are also included in the scope of this report.

In November 2021 a modification application was lodged with (then) DPIE to modify DA 309-11-2001-i and DA 104-96 to provide for access to and mining of existing approved, but unmined, coal from the adjoining Ravensworth Underground Mine (DA 104-96) via connection with the existing Ashton underground workings. As part of the modification, an extension to the period for mining operations was sought to 31 December 2035. The application was approved on 6 July 2022. Following receipt of approval, applications were lodged for the partial transfer of the relevant Mining Leases for the ACOI-operated RUM. These were approved and registered on 22 December 2022.

4. OPERATIONS SUMMARY

4.1 MINING OPERATIONS

Open cut coal mining activities ceased in September 2011 and open cut rehabilitation works were completed between 2011 and 2012 with the exception of the Open Cut Void which is used as a reject and tailings emplacement.

Approval for underground mining operations includes the extraction of coal from the Pikes Gully (PG), Middle Liddell (ML), Upper Liddell (ULD), Upper Lower Liddell (ULLD) and Lower Barrett (LB) coal seams. Underground mining relies upon the longwall extraction method following continuous miner development of main headings and twin heading gate-roads.

During the reporting period coal was mined Longwall (LW) 208 within the ULLD, and continued development of the PG seam in LW 403 and LW 404 was undertaken in preparation for the integration with the ACOL-operated RUM (see **Figure 4.1**). **Table 4.1** presents a summary of the production statistics for the previous, current and next reporting periods.

In summary, a total of 1,068,935t of Run of Mine (ROM) coal was mined from underground operations during the reporting period and a total of approximately 439,052t of product coal was transported to the Port of Newcastle by rail.

Table 4.1
Production Summary

Material	Approved limit (specify source)	Previous reporting period (actual)	This reporting period (actual)	Next reporting period (forecast)
Topsoil Stripped	None specified	0	0	0
Waste Rock / Overburden (m ³)	None specified	0	0	0
ROM Coal / Ore (t) ²	5,450,000 ¹	2,555,430	1,068,935	2,638,001
Coarse Reject (t)	None specified	1,036,800	416,140	1,041,634
Fine Reject (Tailings) (t)	None specified	267,681	128,733	322,259
Saleable Product (t)	None specified	1,277,141	515,531	1,207,322
Note 1: For underground operations as specified by DA 309-11-2001-i, Schedule 2, Condition 6(a).				
Note 2: ROM coal does not equate to the sum of rejects and saleable product due to slight variance in the timing between extraction, stockpiling, processing and transport of coal off site.				

4.2 GAS MANAGEMENT

No gas drainage boreholes were constructed during the reporting period.

Greenhouse gas emissions were reported as required by the National Greenhouse Gas and Energy Reporting (NGER) requirements (see Section 6.5). Details on measures implemented during the reporting period to further reduce gas emissions is also presented in Section 6.5.

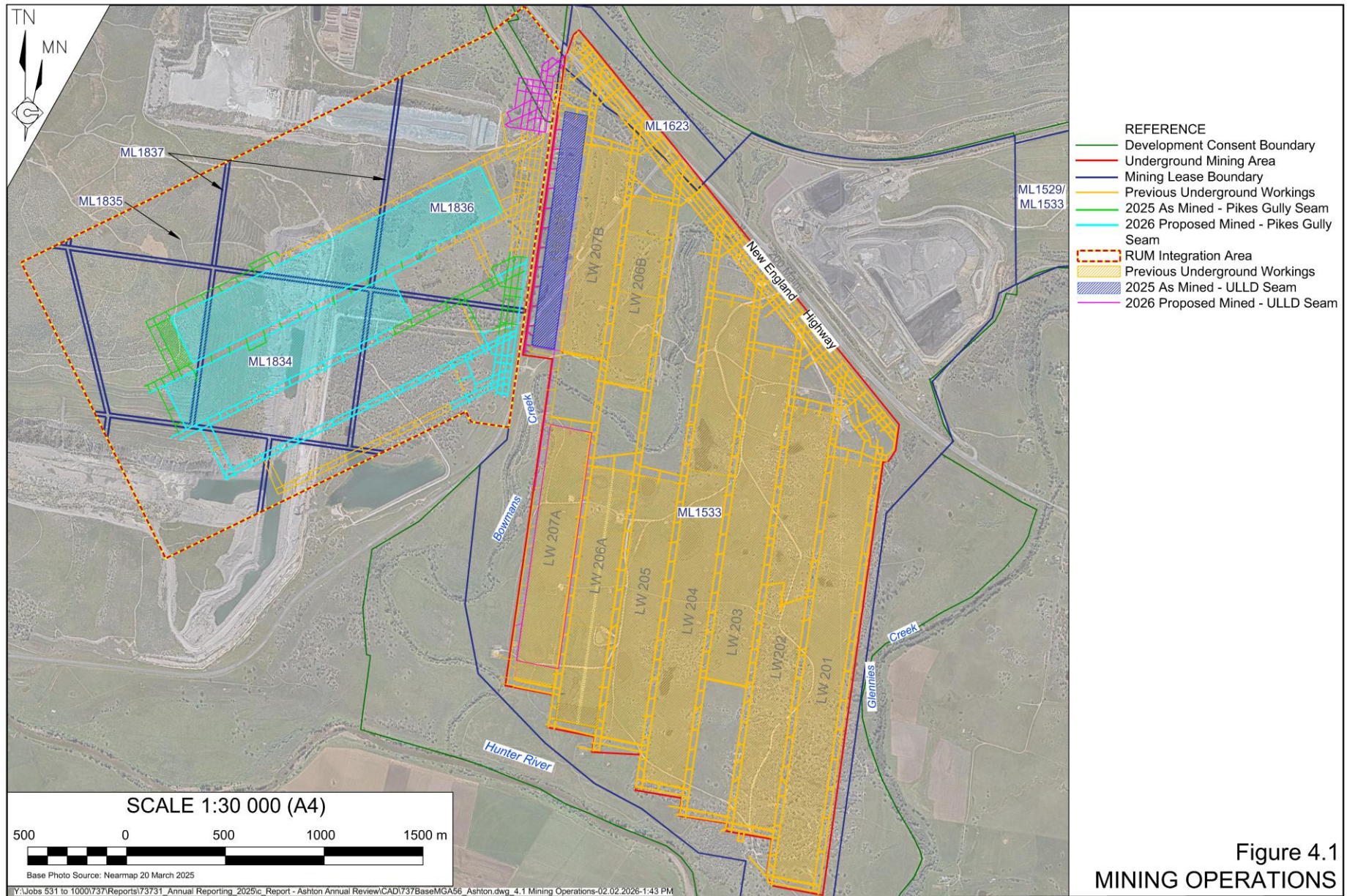


Figure 4.1
MINING OPERATIONS

4.3 OTHER OPERATIONS DURING THE REPORTING PERIOD

Ground Disturbing Works

A total of three internal Ground Disturbance Permits (GDPs) were applicable during the reporting period (see Table 4.2).

Table 4.2
Ground Disturbance Permits – 2025

Ground Disturbance Permit No.	Purpose	Rehabilitation Status
248	Permanent fence at Admin overflow carpark.	Works completed 03/11/2025, disturbance area of 10m ² . No rehabilitation required.
249	Gas Drainage Plant extension.	Works commenced.
252	Repairs to access track.	Works completed, disturbance area of 5,000m ² .

Environmental Monitoring and Community Liaison

Environmental monitoring activities continued throughout the reporting period including air quality, surface water, groundwater, flora and fauna, noise and subsidence monitoring. Results of this monitoring is summarised in Sections 6 and 7.

The Community Consultative Committee continued to meet during the reporting period. Details of these meetings and other community liaison activities are summarised in Section 9.

Update of Management Plans

Following approval of the Ravensworth Underground Mine Longwalls 403 to 406, as part of the Extraction Plan, a review process was commenced for the various management plans required by the development consent. Updated versions of the Water Management Plan, Land Management Plan, Biodiversity Management Plan, Heritage Management Plan, Built Features Management Plan, Public Safety Management Plan, Coal Resource Recovery Plan, and Subsidence Monitoring Plan were approved by the Department of Planning, Housing and Infrastructure (DPHI) in July 2025.

4.4 NEXT REPORTING PERIOD

The activities proposed for 2026 will principally involve a continuation of activities undertaken during the previous twelve months, including a continuation of operations within the ACOL-operated RUM and Longwalls 403 to 406. The following provides a summary of the planned activities.

Exploration

It is not anticipated that further exploration will be undertaken during the next reporting period.

Mining

During the next reporting period, mining will focus upon continued longwall mining within ACOL_RUM Panel LW403 and LW404 within the Pikes Gully Seam. Development works are also planned to be undertaken within ACOL_RUM Panels LW405 and 406 (see **Figure 4.1**). It is estimated that in the order of 2,638,001t of ROM coal will be extracted during the next reporting period.

Rehabilitation

Rehabilitation activities planned for the 2026 reporting period include the remediation of subsidence impacts and completion of rehabilitation for remaining ground disturbances outlined in **Table 4.2** where able. Ongoing remedial treatment of previously repaired subsidence surface cracking and maintenance of existing disturbance, principally erosion and sediment control, will also be undertaken as necessary.

Monitoring

Environmental, meteorological, and subsidence monitoring will continue to be undertaken during the next reporting period in accordance with the approved management plans.

Community Consultation and Liaison

The Community Consultative Committee will continue to be convened during the next reporting period. It is expected that meetings will be held once every four months unless otherwise agreed with the committee. The 24hr environmental hotline will be maintained and a register retained of any complaints received.

Environmental Management Plans

Environmental management plans will continue to be reviewed at least annually and updates sought if required.

5. ACTIONS REQUIRED FROM PREVIOUS ANNUAL REVIEW

The 2024 Annual Review was submitted to the Resources Regulator and the DPHI on 31 March 2025. DPHI responded 17 July 2025 confirming that the Annual Review was considered to generally satisfy the conditions of the approval with no specific actions required for subsequent Annual Reviews.

Table 5.1 summarises actions required from previous Annual Reviews / actions proposed by ACOL, their status and where these are further discussed in this report.

Table 5.1
Status of Key Actions

Action Required From Previous Annual Review	Requested / Proposed by	Status	Section of this Report
Strategic grazing management will be reintroduced to effectively manage weed biomass and fuel loads once effective subsidence has been complete.	ACOL – Ongoing	Given the weed control works undertaken along Bowmans Creek, strategic grazing was not required during the reporting period. Under ongoing review.	Section 6.6
Within the Bowmans Creek Riparian corridor, consideration of investigations to identify crucial erosion areas and where rehabilitation and restoration works are required.	ACOL – Ongoing	During the reporting period, investigations were undertaken as part of the Bowmans Creek vegetation monitoring by DnA Environmental. Under ongoing review.	Section 6.6
Habitat enhancement plantings, particularly within the narrow casuarina woodland areas, will also be considered. Plantings will include a high proportion of shrubs, native grasses, and reeds to aid with erosion control.	ACOL – Ongoing	No work undertaken during the reporting period. Under ongoing review.	Section 6.6
During future reporting periods it is planned to seal off LW202-204 X Block roadway to further reduce the fugitive emission from the mine/	ACOL – Early 2026	Construction of the seals for LW202-204 X Block Roadway commenced during the reporting period. It is anticipated this will be complete early 2026.	Section 6.5

6. ENVIRONMENTAL PERFORMANCE

6.1 SUMMARY OF ENVIRONMENTAL PERFORMANCE

A summary of environmental performance for the principal environmental aspects is provided in **Table 6.1**. Further detail regarding specific environmental aspects is also provided in the following subsections.

Table 6.1
Environmental Performance

Page 1 of 2

Aspect	Approval criteria / EIS prediction	Performance during the reporting period	Trend/key management implications	Implemented/proposed management actions
Noise	No exceedance of applicable noise criteria.	One community noise complaint was received for the mine during the reporting period. No exceedances of noise criteria were recorded.	The community complaint was investigated and the outcome of this in conjunction with the attended noise monitoring results implies management measures are currently adequate.	No additional management actions required. Continue proactive management approach.
Blasting	No exceedance of applicable blast criteria.	No surface blasting during reporting period.	Not applicable – no surface blasting	As no surface blasting planned for the next reporting period, no specific actions are required.
Air Quality	No exceedances of the applicable air quality criteria.	Six exceedances of the 24 hour PM ₁₀ criteria recorded. No community air quality complaints.	Incidences of exceedances were investigated. The outcomes of these investigations along with the continuous monitoring data imply management measures are currently adequate.	Bird deterrent rings with prongs will be installed to reduce occurrence of contaminated monitoring results.
Biodiversity	No significant impacts upon flora, fauna species, populations, communities or habitat.	No adverse impacts upon flora, fauna species, populations, communities or habitat attributable to the ACP were recorded. Notwithstanding, actions to improve biodiversity management are planned.	Current mining design and safeguards are currently adequate. However, further proactive land management actions can be taken to improve biodiversity outcomes.	Within Bowmans Creek Riparian Area, proposed habitat enhancement and controlled grazing to be investigated. Ongoing pest and weed control. Revised monitoring locations have been implemented in response to progression of mining.
Heritage	Management in accordance with approved Aboriginal Heritage Management Plan, including salvage.	Archaeological investigations and salvages undertaken in accordance with management plan, Aboriginal Heritage Impact Permits, and in consultation with Aboriginal Community. No complaints.	The Heritage Management Plan was updated during the reporting period. Continued implantation of the approved management plan and procedures for ground disturbance permits.	No additional management action currently required.

Table 6.1 (Cont'd)
Environmental Performance

Page 2 of 2

Aspect	Approval criteria / EIS prediction	Performance during the reporting period	Trend/key management implications	Implemented/proposed management actions
Subsidence	Subsidence management in accordance with approved Subsidence Management Plan / Extraction Plan.	Subsidence impacts generally within predicted levels in accordance with the Extraction Plan. Minor rehabilitation and maintenance works completed to address impacts.	Implies management measures and action responses are currently adequate and predictions sufficiently accurate.	Continued monitoring and review of results. Continue remediation as required in accordance with approved Extraction Plans.

6.2 METEOROLOGICAL MONITORING

Meteorological data is used by ACOL to interpret environmental impacts and to understand air quality and noise management outcomes. The ACP has two meteorological monitoring stations, namely Monitoring Site 1 (M1 - predominantly used to monitor for noise and air quality impacts in adverse weather conditions and determine temperature inversion stability class) and the M2 Repeater Station (the main monitoring site) (see **Figure 6.1**).

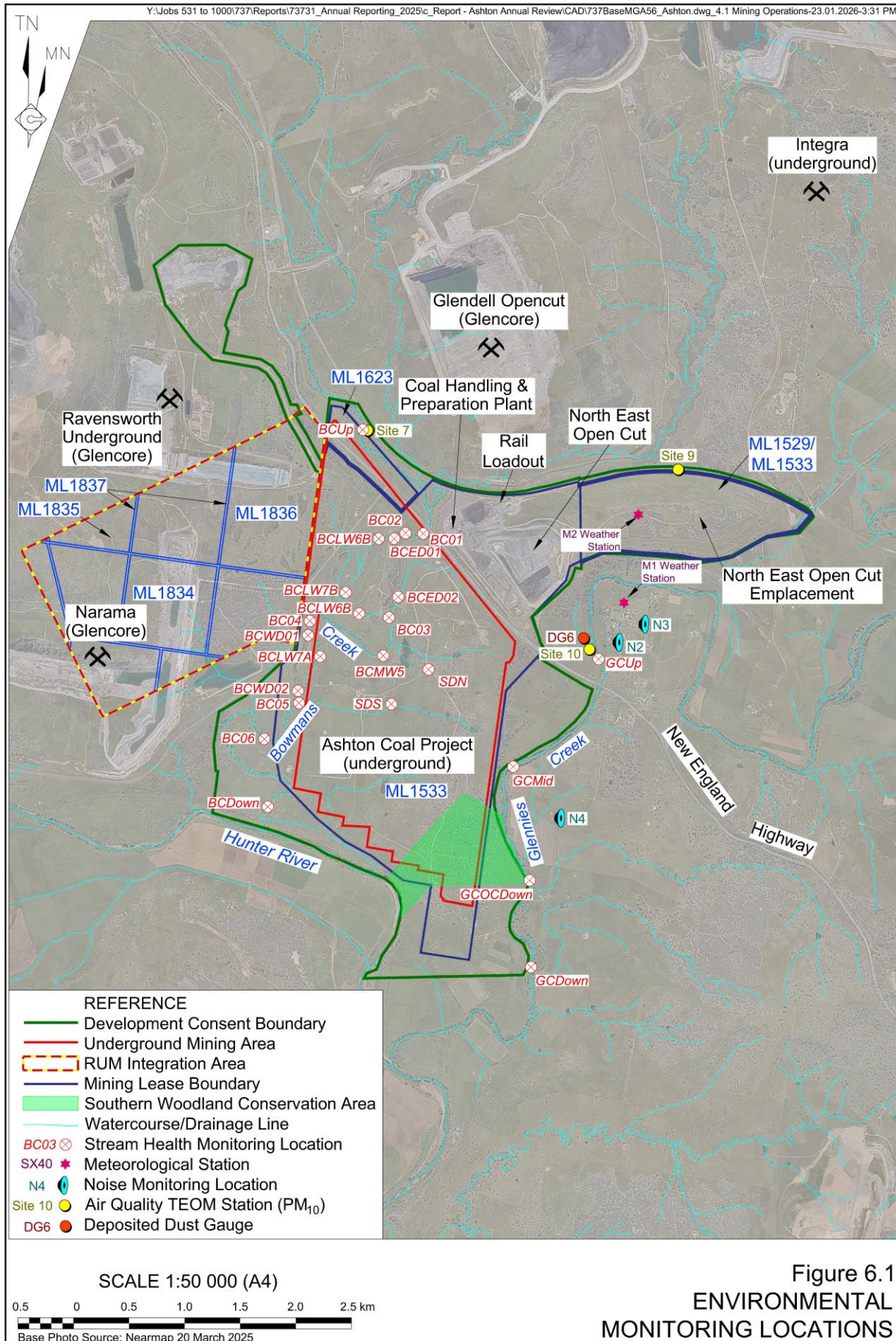
A summary of rainfall data since the commencement of operations is presented in **Table 6.2** whilst monthly wind roses for the reporting period are presented in **Figures 6.2** and **6.3**.

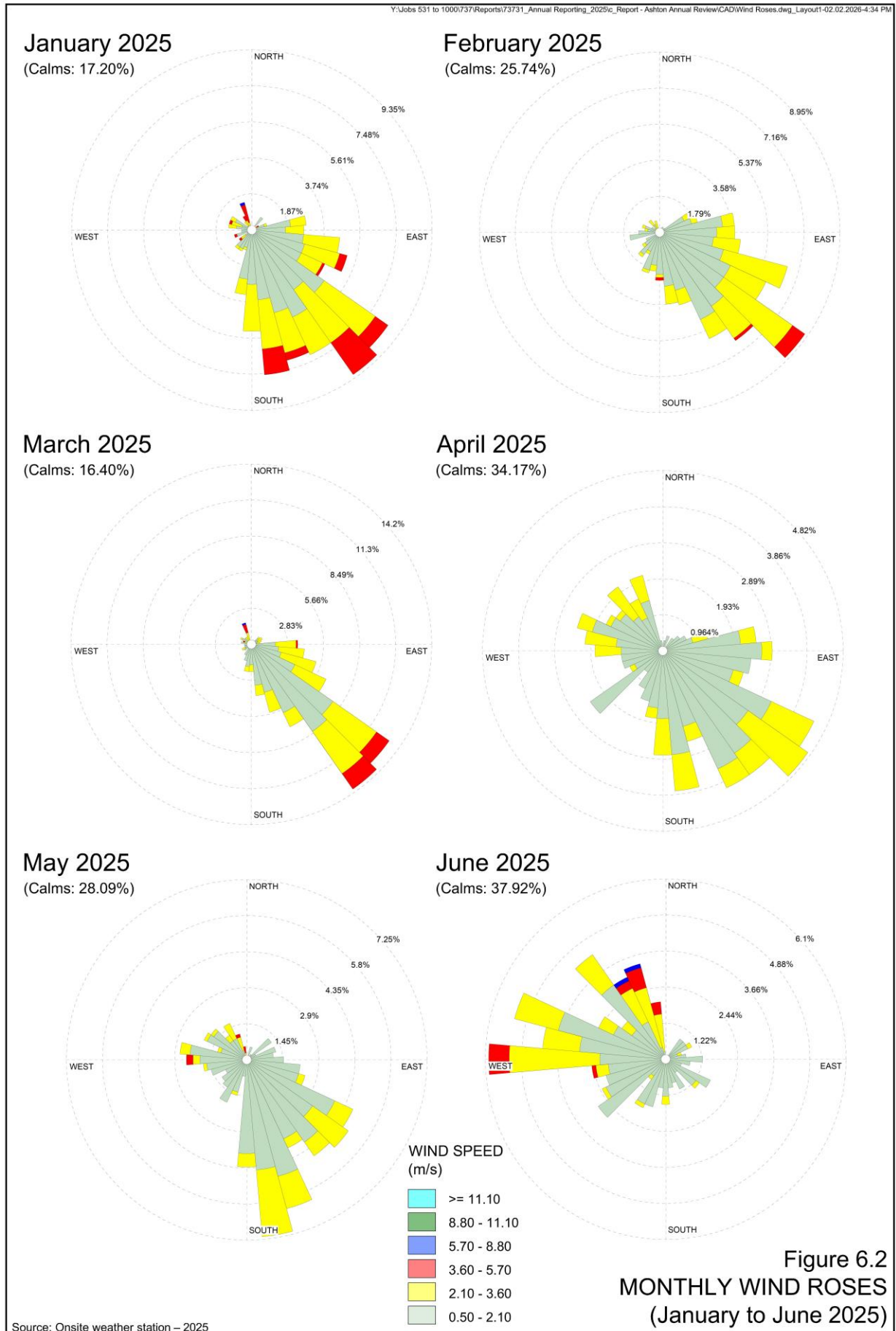
Table 6.2
Monthly Rainfall Records

	Average Monthly Rainfall (mm)												
Period	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
2004	81.2	145.6	47.8	23.0	22.6	2.1	1.5	7.0	36.2	61.8	42.8	81.6	546.2
2005	56.6	116.8	79.2	8.5	43.4	87.0	12.0	7.0	41.4	107.6	86.0	15.2	660.7
2006	57.2	47.3	37.6	25.4	1.8	30.8	37.4	13.4	116.8	2.8	62.0	39.0	471.5
2007	30.0	32.6	83.0	27.8	30.4	270.5	14.8	73.7	9.0	15.4	124.2	58.2	769.6
2008	52.6	134.6	44.4	103.2	1.6	72.6	19.4	63.2	73.8	60.0	51.6	50.0	727.0
2009	3.6	161.6	84.8	47.6	42.8	27.4	20.9	0.4	27.6	47.0	28.4	67.6	559.7
2010	51.0	66.6	69.8	24.8	70.2	40.2	64.8	24.5	24.6	58.6	92.2	33.6	620.9
2011	25.0	35.6	90.2	54.0	78.6	132.4	17.4	43.8	79.4	101.6	155.2	43.4	856.6
2012	45.8	142.6	76.6	28.8	12.2	55.8	35.2	7.2	4.8	3.2	27.4	53.4	493.0
2013	131.6	100.0	100.4	21.2	33.6	57.8	10.8	5.0	27.4	4.8	175.2	22.6	690.4
2014	6.8	136.6	119.2	76.4	10.6	21.0	42.6	58.2	33.8	21.2	16.2	157.4	700.0
2015	142.8	17.4	15.6	269.6	73.2	27.0	18.4	59.6	15.0	31.0	119.4	113.0	902.0
2016	218.2	9.6	13.6	11.0	20.2	113.6	47.2	35.2	75.8	46.4	50.2	112.6	753.6
2017	27.8	31.2	176.8	52.4	28.0	40.4	1.6	9.4	9.0	76.0	20.8	45.0	518.4
2018	13.8	76.6	83.2	16.0	10.0	45.6	2.8	30.4	25.6	57.8	91.8	81.0	534.6
2019	66.4	31.6	153.2	9.4	19.4	20.6	9.0	29.8	40.2	1.6	22.0	0.0	403.2
2020	62.0	169	108.2	71.2	30.0	43.8	121.4	39.2	53.6	126.2	29.6	142.2	996.4
2021	78.4	149.8	272.4	27.6	25.4	66.0	24.6	34.0	38.0	79.0	296.0	114.6	1205.8
2022	66.6	112.8	393.6	38.7	38.8	11.2	250.8	76.6	90.2	144.4	85.2	32.2	1341.1
2023	68.2	110.2	97.2	53.4	7.0	10.8	10.4	29.4	0.2	28.6	23.8	56.6	495.8
2024	73.0	109.2	38.0	141.1	132.6	117.0	52.0	47.0	61.4	51.2	51.4	26.0	899.9
2025	79.4	39.2	126.0	80.8	239.4	20.2	39.8	146	46	37.8	32.8	24.8	912.2
Average	65.4	89.8	105.0	55.1	44.2	59.7	38.9	38.2	42.3	52.9	76.6	62.3	729.9
Note:	Results relevant to this reporting period are in bold .												

Note: Results relevant to this reporting period are in **bold**.

Total rainfall during the 2025 calendar year was 912.2mm, 182.3mm above the average annual rainfall of 729.9mm.





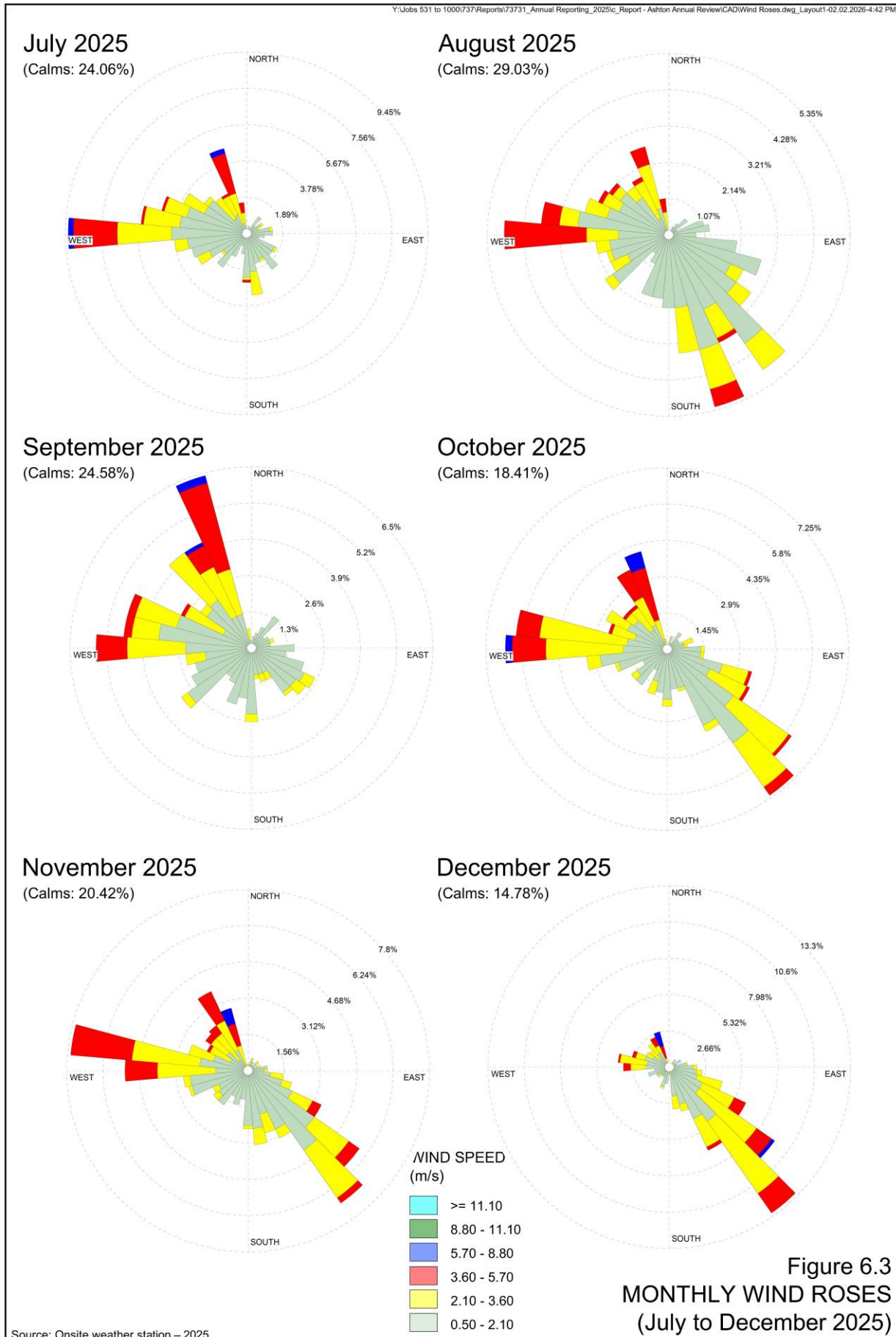


Figure 6.3
MONTHLY WIND ROSES
(July to December 2025)

6.3 NOISE

Environmental Management

Relevant noise impact assessment criteria, noise emission controls and compliance procedures are detailed in the Noise Management Plan for the ACP. The principal noise controls implemented at the ACP site during the reporting period included the maintenance of mobile plant, CHPP and ventilation fans, limiting hours of mobile noise generation (e.g. drilling), permanent noise mitigation controls at the CHPP, and pit top facilities located below the natural surface level.

Environmental Performance

Noise monitoring for the ACP consists of the following.

- Continuous noise monitoring – one continuous real time monitoring station located within Camberwell Village (see **Figure 6.1**) which informs proactive management of noise generating activities at the site. Monitoring results are not used for regulatory purposes.
- Unannounced¹ attended noise monitoring – monthly night-time monitoring conducted at three attended noise monitoring locations (N2, N3 and N4) (see **Figure 6.1**).
- Secondary attended noise monitoring – undertaken within 75 minutes of an attended noise monitoring measurement if results indicate that ACP-related noise exceeds the relevant noise criteria under standard weather conditions (i.e. wind speeds up to 3m/s at 10m above ground level and/or a temperature inversion of up to 3°C).

Monthly noise monitoring results for each of the three attended noise monitoring locations are presented in **Table 6.3** and a copy of the attended noise monitoring compliance report prepared by EMM is presented as **Appendix 1**.

The results of attended noise monitoring during the reporting period indicate that ACP operations were inaudible at all three monitoring locations during the January, March, May, July, August, September, October, November and December monitoring. Operations were also inaudible at locations N3 and N4 during the February monitoring, N2 and N3 during April monitoring, and N4 during June monitoring. Noise during these monitoring events were attributable to non-ACP related road and rail traffic, wildlife, livestock and by other mines in the vicinity.

During monitoring events in which operations at ACP were audible, noise remained below the applicable criteria, including night-time sleep disturbance criteria ($L_{A(1 \text{ min})}$), at all locations. When audible, the ACP operations were also determined to be compliant with cumulative noise criteria. These results are consistent with noise monitoring results for previous years, with ACP operations remaining largely inaudible at the designated noise monitoring locations.

One noise complaint was received during the reporting period on 22 October 2025. An investigation into this complaint concluded that the noise from operations remained below approved limits.

¹ ACOL are not informed of the monitoring until it is completed.

Table 6.3
Summary of Attended Noise Monitoring Results – 2025

Month	Criteria (dB)				Location			Exceedance
	Period	Day	Evening	Night	N2 (dB) ¹	N3 (dB) ¹	N4 (dB) ¹	
January	LAeq (15 min)	38	38	36	IA	IA	IA	Nil
	LA1 (1 min)	-	-	46	IA	IA	IA	Nil
February	LAeq (15 min)	38	38	36	<20	IA	IA	Nil
	LA1 (1 min)	-	-	46	<20	IA	IA	Nil
March	LAeq (15 min)	38	38	36	IA	IA	IA	Nil
	LA1 (1 min)	-	-	46	IA	IA	IA	Nil
April	LAeq (15 min)	38	38	36	IA	IA	<20	Nil
	LA1 (1 min)	-	-	46	IA	IA	<20	Nil
May	LAeq (15 min)	38	38	36	IA	IA	IA	Nil
	LA1 (1 min)	-	-	46	IA	IA	IA	Nil
June ²	LAeq (15 min)	38	38	36	<25	28	IA	Nil
	LA1 (1 min)	-	-	46	30	36	IA	Nil
July	LAeq (15 min)	38	38	36	IA	IA	IA	Nil
	LA1 (1 min)	-	-	46	IA	IA	IA	Nil
August	LAeq (15 min)	38	38	36	IA	IA	IA	Nil
	LA1 (1 min)	-	-	46	IA	IA	IA	Nil
September	LAeq (15 min)	38	38	36	IA	IA	IA	Nil
	LA1 (1 min)	-	-	46	IA	IA	IA	Nil
October	LAeq (15 min)	38	38	36	IA	IA	IA	Nil
	LA1 (1 min)	-	-	46	IA	IA	IA	Nil
November	LAeq (15 min)	38	38	36	IA	IA	IA	Nil
	LA1 (1 min)	-	-	46	IA	IA	IA	Nil
December	LAeq (15 min)	38	38	36	IA	IA	IA	Nil
	LA1 (1 min)	-	-	46	IA	IA	IA	Nil
IA = Inaudible. NM=Not measurable Note 1: Estimated or measured noise attributed to ACP. Note 2: Criteria not applicable due to non-standard weather conditions (i.e. wind speeds over 3m/s at 10m above ground level and/or a temperature inversion greater than 3°C.								
Source: EMM Consulting – 2025								

Reportable Incidents

No reportable incidents were recorded during the reporting period.

Further Improvements

Other than ongoing plant maintenance, monthly attended noise monitoring, and proactive management using continuous noise monitoring data, no additional management measures are planned during the next reporting period.

6.4 BLASTING

No surface blasts were undertaken during the reporting period.

6.5 AIR QUALITY

Environmental Management

Relevant air quality impact assessment criteria, air quality management measures and compliance procedures are detailed in the Air Quality and Greenhouse Gas Management Plan (AQGGMP) for the ACP. The principal air quality management measures applicable to the reporting period included:

- large earth berms and tree screens between the operations and the village (previously constructed and trees established);
- clear delineation and maintenance of roads and use of water carts to keep trafficked areas in a damp condition;
- keeping stockpiles damp by the use of fixed or mobile water sprays under dry and windy conditions; and
- proper maintenance of all diesel equipment used on site and fitting equipment with appropriate pollution control devices.

Greenhouse gas management during the reporting period included the flaring of gas from gas drainage bores, where feasible, to reduce greenhouse gas emissions. Additionally, energy efficient equipment is specified for all new or upgraded fixed and mobile plant as required.

Environmental Performance

Air quality monitoring at the ACP site consists of the following.

- Depositional dust monitoring – one sample collected every 30 days (± 2 days) from one depositional dust gauge (see **Figure 6.1**).
- Particulate matter 10 micrometres or less (PM_{10}) – a real-time tapered element oscillating microbalance (TEOM), Site 10 located at Camberwell. Two additional TEOM samplers (Sites 7 and 9) are used for operational management purposes and are not reflective of impacts on sensitive receivers (see **Figure 6.1**).

The results of air quality monitoring are provided as follows.

Deposited Dust

Deposited dust monitoring results for Sampling Point D6 during the reporting period are presented in **Table 6.4** with long-term data presented in **Figure 6.4**.

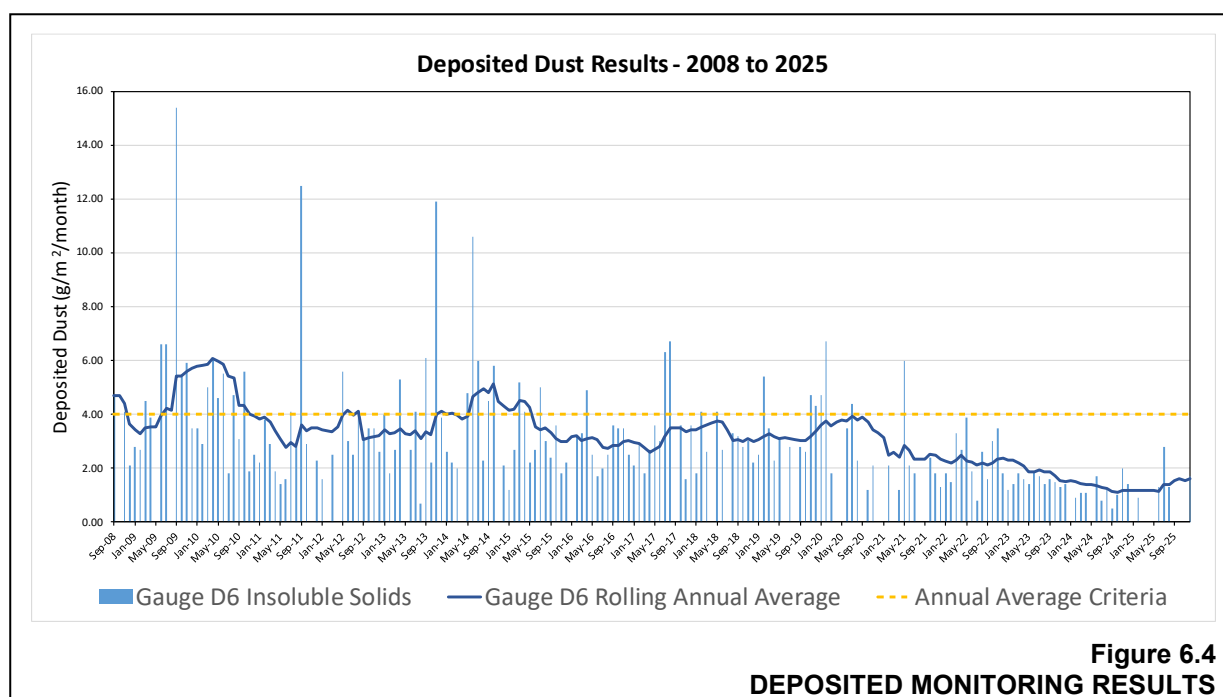
The highest insoluble solids measurements recorded during the reporting period was $7.7\text{g/m}^2/\text{month}$ in January 2025. It should be noted that this measurement, along with the measurements recorded in March, April, May, September, October and November, coincided with an incident of contamination (principally insects and bird droppings) on the depositional dust gauge and these results have been excluded from the analysis.

Table 6.4
Deposited Dust Monitoring Results – Sampling Point D6 – 2025

Month	Sampling Period		Dust Deposition Rate (g/m ² /month)			Comments
	Start Date	End Date	Insoluble	Rolling Annual Average	Ash	
January	2/01/2025	3/02/2025	7.7	1.2	3.4*	Contaminated with insects, bird droppings
February	3/02/2025	3/03/2025	0.9	1.2	0.6	-
March	3/03/2025	1/04/2025	3.0	1.2	1.0*	Contaminated with insects, bird droppings, vegetation
April	1/04/2025	1/05/2025	2.8	1.2	1.8*	Contaminated with insects
May	1/05/2025	2/06/2025	7.3	1.2	6.7*	Contaminated with insects, vegetation
June	2/06/2025	1/07/2025	1.3	1.1	1.0	-
July	1/07/2025	1/08/2025	2.8	1.4	2.1	-
August	1/08/2025	1/09/2025	1.3	1.4	0.9	-
September	1/09/2025	2/10/2025	6.1	1.5	4.0*	Contaminated with insects, bird droppings
October	2/10/2025	3/11/2025	3.0	1.6	1.7*	Contaminated with insects, vegetation
November	3/11/2025	1/12/2025	4.9	1.5	1.8*	Contaminated with insects, bird droppings
December	1/12/2025	2/01/2026	1.7	1.6	1.2	-
Minimum			0.9	1.1	0.6	-
Maximum			2.8	1.6	2.1	-

*Contaminated samples not utilised in calculation of rolling annual average or in the minimum / maximum values

Source: Ashton Coal Operations Pty Limited.



The rolling annual average deposited dust levels recorded throughout the reporting period ranged from 1.1g/m²/month to 1.6g/m²/month, i.e. remaining below the criteria of 4g/m²/month, and indicating good air quality with respect to dust deposition.

Long term deposited dust monitoring results indicate that the rolling annual average has remained below criteria since 2015 following two significant exceedances due to regional dust storms.

Suspended Particulates – PM₁₀ and TSP

Table 6.5 provides a summary of the PM₁₀ monitoring results for the reporting period and **Figures 6.5 to 6.7** present the PM₁₀ data for the reporting period and the long-term monitoring data for each ACP TEOM. The highest recorded 24-hour average PM₁₀ concentration during the reporting period ranged between 66.6µg/m³ and 82.1µg/m³, with the highest value measured on 6 October 2025 at monitoring Site 7. Notably, the Upper Hunter Air Quality Monitoring Network (UHAQMN) station at Camberwell also recorded an elevated result of 65.3µg/m³ on 6 October 2025.

Table 6.5
Summary of PM₁₀ Monitoring Results – 2025

Monitoring Site	Minimum 24-hr µg/m³	Maximum 24-hr µg/m³	Short-Term Criteria µg/m³	Annual Average 2025 µg/m³	Annual Average Criteria µg/m³
Site 7^	5.7	66.6	50	19.3	30
Site 9^	4.7	82.1		19.4	
Site 10^	4.6	74.6		18.6	
UHAQMN*	5.1	80.8		20.9	
* Provided as reference (includes all days)					
^ Ashton results exclude extraordinary events as defined in DA 309-11-2001-i					
Source: Ashton Coal Operations Pty Limited.					

As Site 10 is representative of PM₁₀ at sensitive receivers, all PM₁₀ results above 50µg/m³ at Site 10 are investigated to determine if the criteria (which is based upon the ACP contribution) has been exceeded and further incident reporting to DPHI is required. The investigation includes a review of prevailing wind conditions, the activities occurring on site and the potential contribution from upwind sources to determine the likelihood of the ACP contributing to elevated levels above the criteria. The investigation also includes a detailed review of site operations to ensure that adequate dust controls were being implemented on site including use of water trucks, water sprays on the product stockpile gantries, rotary breaker and ROM coal stockpile discharge points.

During the reporting period, there were six days when the 24-hour PM₁₀ results were above 50µg/m³ at Site 10 (refer to **Table 6.6**). Investigations confirmed that, in each instance, ACP was not a substantial contributor to PM₁₀ levels in Camberwell Village, calculated contributions remained below the incremental contribution criteria, and all reasonable and feasible avoidance measures were being employed. No further actions were required.

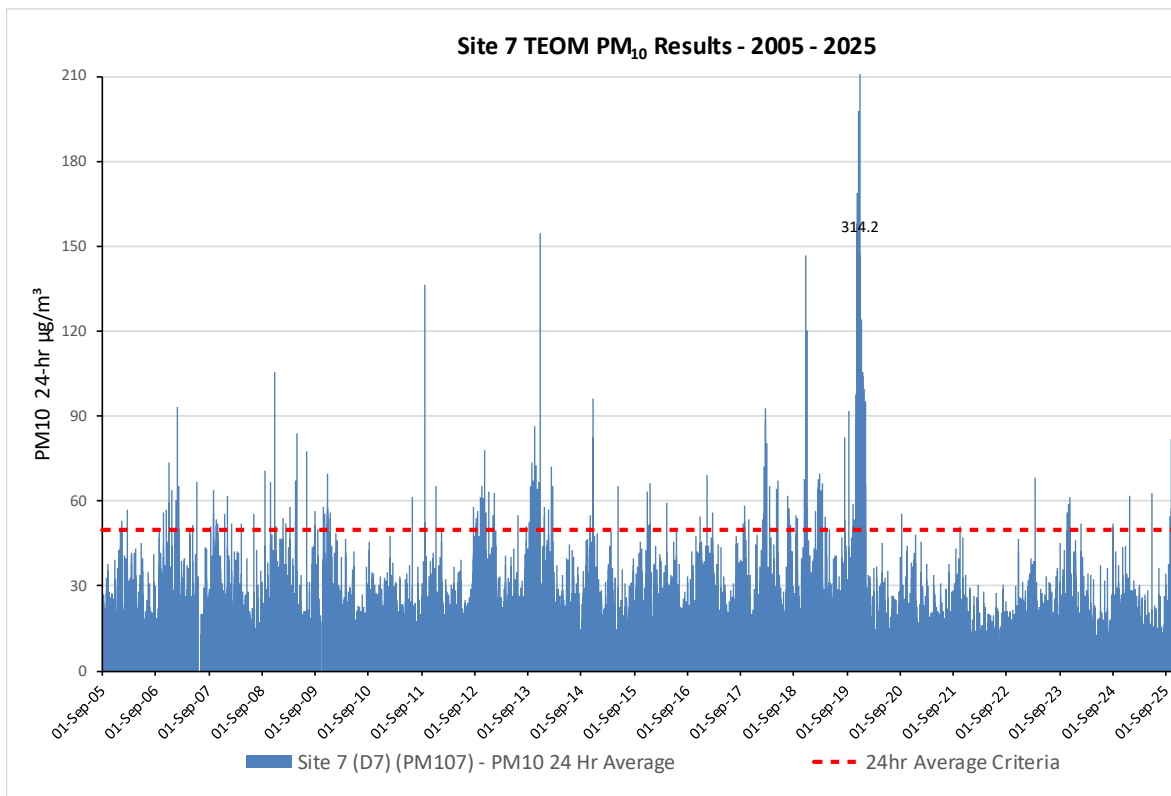
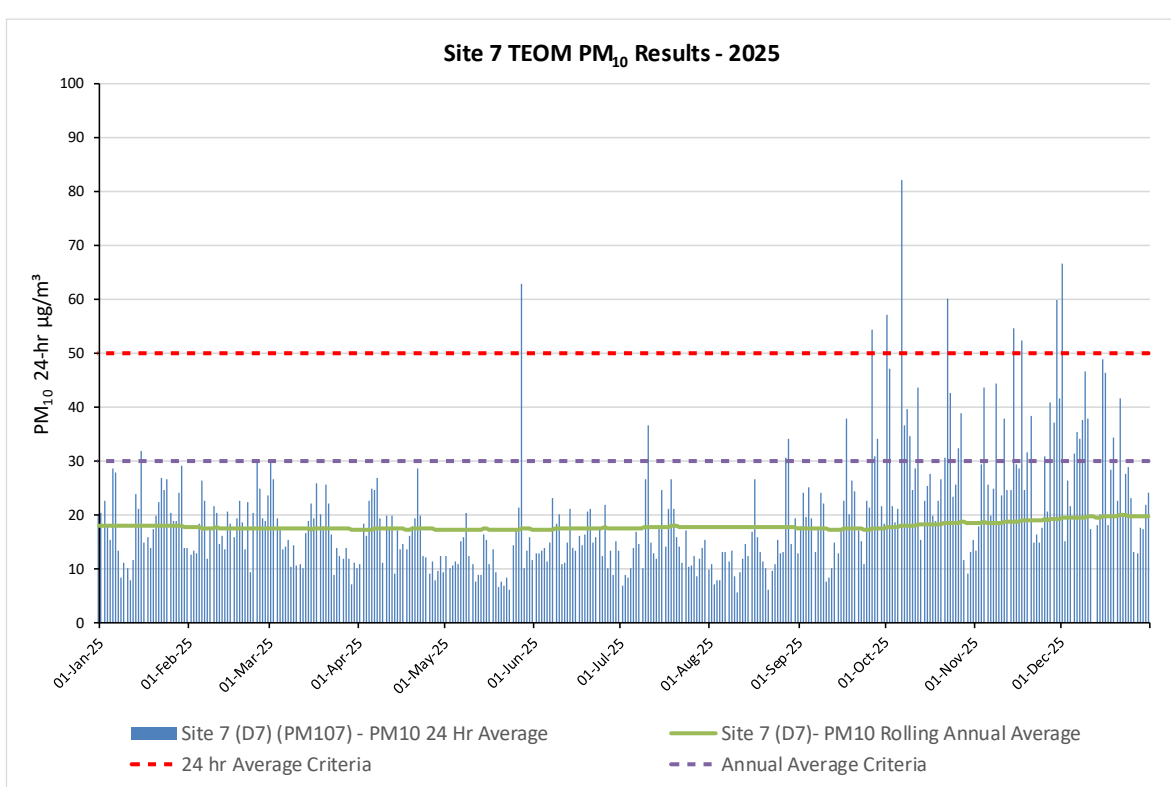


Figure 6.5
PM₁₀ MONITORING RESULTS – SITE 7

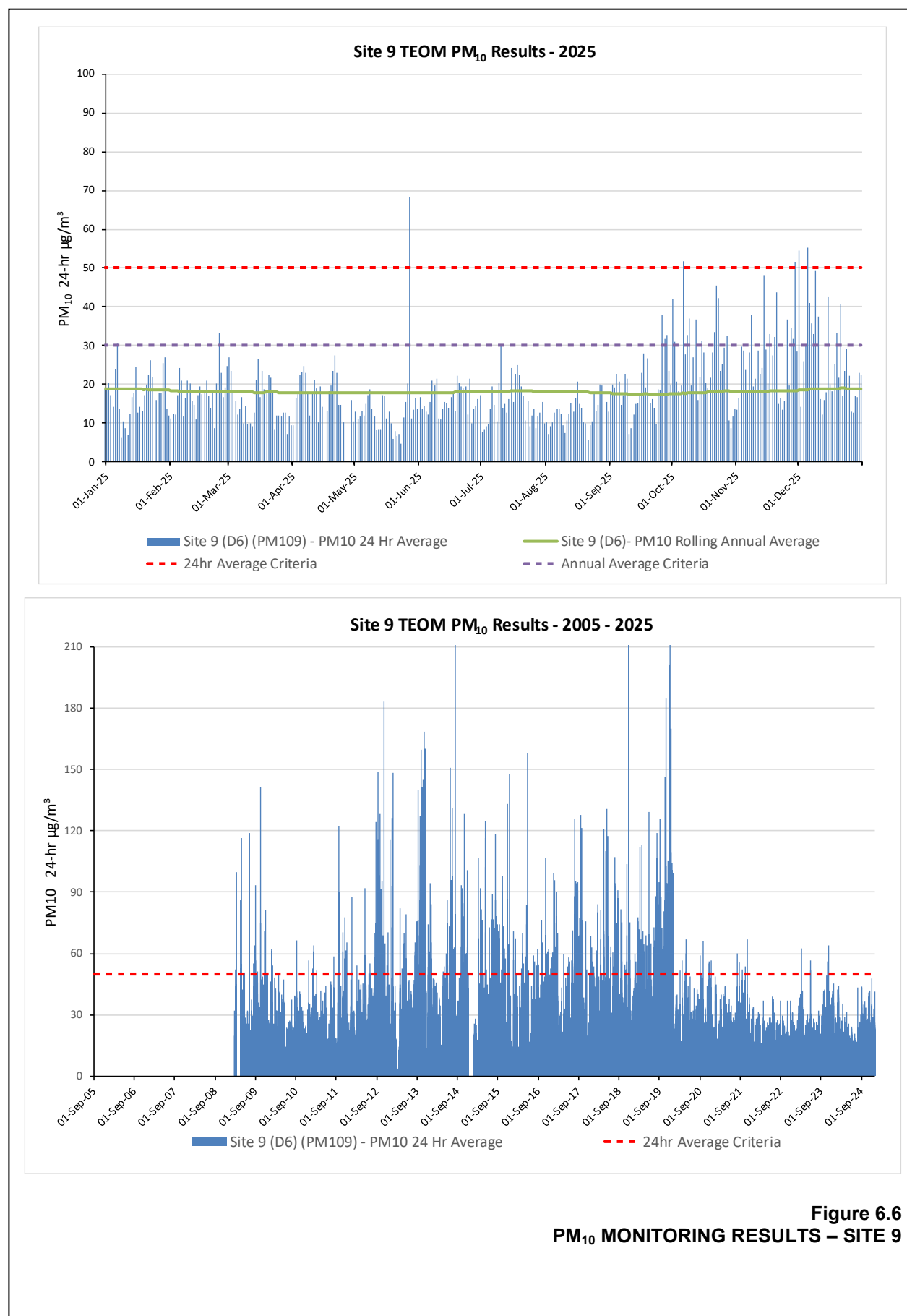


Figure 6.6
PM₁₀ MONITORING RESULTS – SITE 9

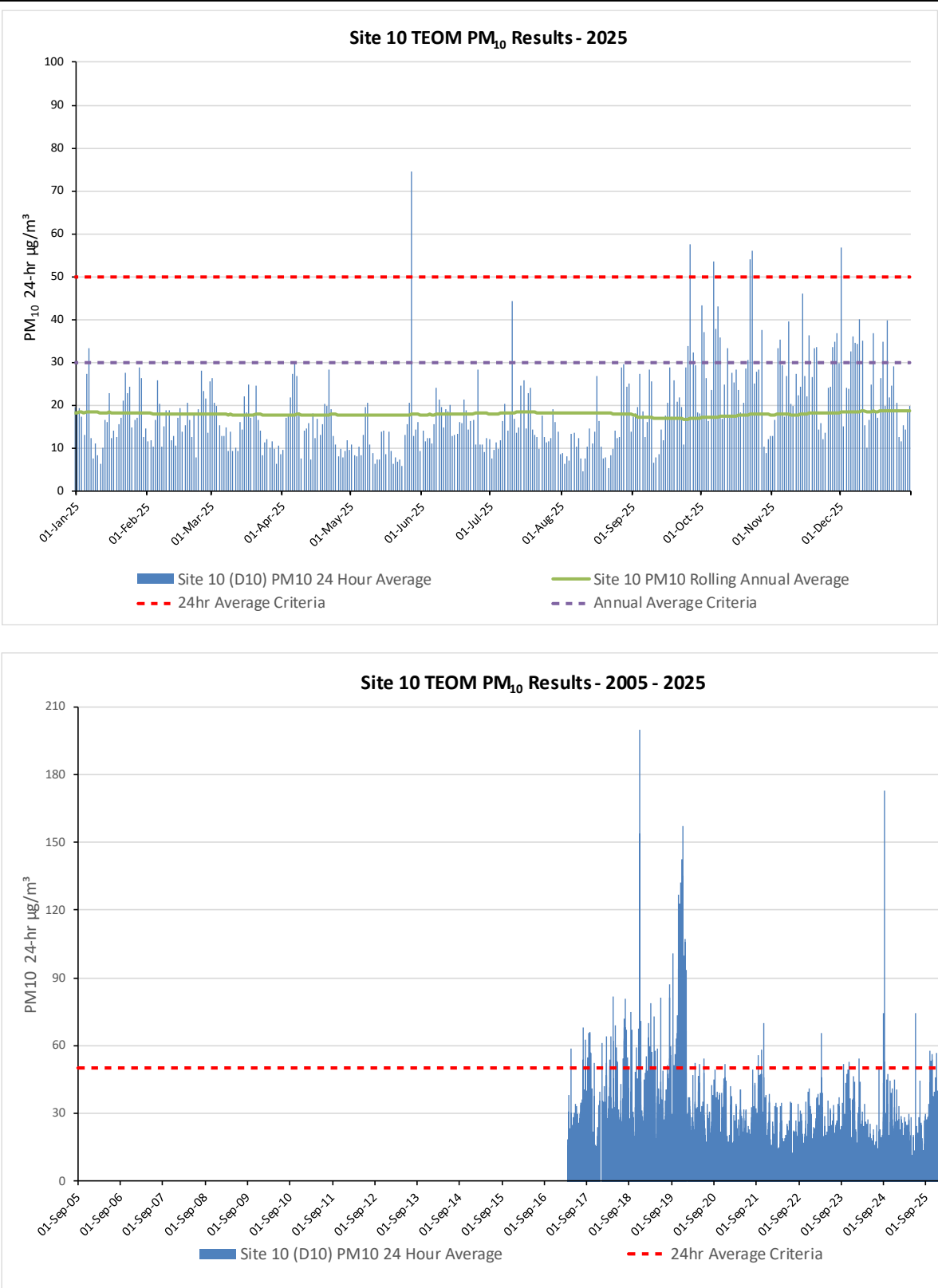


Figure 6.7
PM₁₀ MONITORING RESULTS – SITE 10

Table 6.6
24-hour PM₁₀ Exceedance Investigation Outcomes – 2025

Date	Site 10 (Camberwell Village)		UHAQMN (Camberwell Village)	Comments
	Total PM ₁₀ (µg/m ³) (24hr average)	Potential ACP PM ₁₀ (µg/m ³) (24hr average)	Total PM ₁₀ (µg/m ³) (24hr average)	
27/05/2025	74.6	9.1	80.8	ACOL not a substantial PM ₁₀ contributor
26/09/2025	57.5	6.2	50.5	ACOL not a substantial PM ₁₀ contributor
06/10/2025	53.5	0.6	43.6	ACOL not a substantial PM ₁₀ contributor
22/10/2025	54.0	0.2	60.0	ACOL not a substantial PM ₁₀ contributor
23/10/2025	56.1	1.4	49.2	ACOL not a substantial PM ₁₀ contributor
01/12/2025	56.7	0.4	50.5	ACOL not a substantial PM ₁₀ contributor
Source: Ashton Coal Operations Pty Limited and https://www.airquality.nsw.gov.au/air-quality-data-services/data-download-facility				

The rolling annual average PM₁₀ concentrations for each monitoring location ranged between 16.8µg/m³ and 20.0µg/m³ during the reporting period and was therefore below the annual average criteria value of 30µg/m³. The annual average PM₁₀ during the reporting period for all ACP monitoring sites was also generally consistent with or lower than that recorded at the DCCEE operated Upper Hunter Air Quality Monitoring Station at Camberwell, which recorded an annual average PM₁₀ of 20.9µg/m³.

As TSP is proportionally calculated from the annual average PM₁₀ result at Site 10, the annual TSP remained below the annual average criteria of 90µg/m³.

Greenhouse Gas

Emissions During the Reporting Period

Greenhouse gas emissions associated with the ACP were reported on behalf of ACOL by Yancoal Australia Limited under the National Greenhouse and Energy Reporting Scheme (NGER) for the 2024-2025 reporting period. Scope 1 greenhouse gas emissions include both direct greenhouse gas production as a result of ACP operations as well as fugitive emissions associated with underground mine ventilation, gas drainage, gas flaring and post-mining gas. Scope 2 emissions include indirect greenhouse gas emissions primarily associated with emissions generated during the production of electricity used on site.

Table 6.7 presents an overview of ACP Scope 1 and Scope 2 greenhouse gas emissions for the reporting period and the previous five reporting periods. In summary, Scope 1 emissions associated with the ACP totalled 682,780tCO_{2-e} (tonnes CO₂ equivalent) compared to 350,750tCO_{2-e} for the previous 2023-2024 reporting period. Scope 2 emissions associated with the ACP during the 2024-2025 reporting period totalled 28,649tCO_{2-e} compared to 28,840tCO_{2-e} during the previous 2023-2024 reporting period.

Table 6.7
ACP Greenhouse Gas Emissions – 2019/2020 to 2024/2025

Greenhouse Gas Emission Type	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Scope 1 (tCO _{2-e})	196,641	411,570	596,235	381,866	350,750	682,780
Scope 2 (tCO _{2-e})	32,982	39,761	35,442	31,654	28,840	28,649
Total (tCO _{2-e})	229,623	451,331	631,677	413,520	379,590	711,429

Source: Yancoal Australia Limited – National Greenhouse and Energy Reporting Scheme Results 2024/2025.

Performance, Energy Efficiency and Emission Reductions

Significant variability in year to year ACP greenhouse gas emissions are primarily a reflection of changes in gas management methods as well as differences in gas levels between longwalls and seams mined during each reporting period. During the 2024/2025 reporting period, a concentrated effort was made to prioritise sealing in areas of completed mining, to further reduce GHG emissions. Specific measures commenced during the reporting period were as follows.

- Remediation works on the Final Seals of TG1, MG1 and MG2.
- Construction of the Seals for LW202-204 Cross Block Roadway.

These emission reduction measures further build upon the reduction measures completed during previous reporting years and discussed in the respective Annual Reviews.

Comparison of Predicted Emissions

Due to the significant changes in assessment and reporting requirements for GHGs, and the numerous modifications to approved operations that have occurred over the life of the Mine, a direct comparison of predicted vs. reported emissions is not considered practicable or informative. **Table 6.8** presents a summary of the key modelling results from all air quality and greenhouse gas assessments undertaken over the life of the Mine.

Table 6.8
Predicted Average Annual Emissions

Source	Emission Source	Averaging Period (years)	Greenhouse Gas Emission by Type (CO _{2-e})			
			Scope 1	Scope 2	Total Scope 1 and 2	Scope 3
Holmes (2001)	Entire Project	20	27,600t (diesel) 4,455t (explosives) Fugitive emissions not calculated	37,000t	69,055t	4.28Mt
PAE Holmes (2009)	SEOC Only	7	50,160t (diesel) 1,730t (explosives) 132,428t (fugitive)	9,140t	193,5487t	4.83Mt
PAE Holmes (2011)	Gas Drainage Project – Stage 1	Not Specified	1,128 (diesel) 328,173 (gas venting)	-	329,301t	86t
PAE Holmes (2012)	Gas Drainage Project – Stage 2	Not Specified	270,480t to 708,259t (pending proportion flared)	-	270,480t to 708,259t	-

Reportable Incidents

One internal incident report was recorded on 7 June 2025 where visible dust was observed on the tailings dam. At the time of the incident, no operational activities were being carried out. An investigation into the incident determined that the dust was caused by significant wind conditions in the region and not related to mining operations. It was confirmed this was not a reportable incident and no further actions were required.

Further Improvements

During the next reporting periods it is planned to seal off LW202-204 X Block roadway to further reduce the fugitive emissions from the mine.

Bird deterrent rings with prongs will also be installed to reduce occurrence of contaminated monitoring results.

6.6 BIODIVERSITY

Environmental Management

Biodiversity at the ACP site is managed under the Ashton Coal 2020 Biodiversity Management Plan (BMP) together with the 2012 Plan of Management Voluntary Conservation Area for the Southern Woodland Conservation Area (SWCA). Key biodiversity management measures include: establishment of the SWCA; targeted rehabilitation to improve habitat linkages across the landscape; planting of River Red Gum saplings, placement of nesting boxes; stock exclusion from selected areas; weed and feral pest control; and ongoing monitoring.

Biodiversity Offsets

Schedule 3 Condition 27 of Development Consent DA 309-11-2001-i requires the establishment of the following biodiversity offsets.

- Southern Conservation Area (existing vegetation and vegetation to be established) – minimum size 190ha.
- Bowman Creek Riparian Area (riparian and woodland vegetation) – minimum size 60ha.
- North East Open Cut Rehabilitation Area (woodland vegetation to be established) – minimum size 100ha.

As part of the biodiversity offset strategy, a Voluntary Conservation Agreement covering the Southern Woodland Conservation area was established between ACOL and the Minister for the Environment under the *National Parks and Wildlife Act 1974* on 16 September 2010. This conservation agreement provides for in perpetuity conservation of 65.45ha.

As outlined within the approved Biodiversity Management Plan, the conservation area is augmented by approximately 125ha of revegetation corridors and 66ha of Bowmans Creek Riparian corridor. Whilst not subject to specific instrument of long-term protection, management of these areas is consistent with the conservation measures implemented for the Voluntary Conservation Agreement. In total these areas equate to ~256ha, i.e. exceeding the minimum 250ha requirement for the Southern Conservation Area and Bowman Creek Riparian Area.

The North East Open Cut has been completed with ~140ha of rehabilitated area currently consisting of ~68ha of rehabilitated exotic pasture and ~71ha of native trees and shrubs. Areas of exotic pasture are planned to be progressively converted to woodland habitat with approximately 15ha of exotic pasture areas planned to be converted into areas of eucalypt woodland habitat over the next 5 years. These rehabilitation areas are not subject to a specific instrument of long-term protection, however, rehabilitation monitoring is undertaken in accordance with the requirements of the approved Biodiversity Management Plan.

A summary of biodiversity monitoring completed for these areas is provided as follows whilst Section 8.1 provides further discussion on rehabilitation activities and associated monitoring of rehabilitation.

Environmental Performance

Multiple terrestrial and aquatic flora and fauna monitoring programs are completed each year to determine the condition of ecological communities and habitats and compare these findings against relevant management plan performance indicators and closure objectives.

The monitoring programs include terrestrial and aquatic monitoring, weed and vertebrate pest monitoring and associated management measures where required. The monitoring program covers important biodiversity areas including the Bowmans Creek riparian corridor, the River Red Gum communities and the SWCA. This monitoring complements the rehabilitation monitoring of Bowmans Creek Diversion and North East Open Cut (NEOC), and the mining impacted “Farmland” above the underground mine, which is discussed further in Section 8. The following provides a summary of the key outcomes of the monitoring undertaken during the reporting period.

Where relevant, monitoring has been compared to completion / performance criteria developed for the ACP site and outlined within the BMP.

Flora and Fauna Monitoring

Bi-annual fauna monitoring was undertaken during the reporting period by Umwelt Environmental and Social Consultants in June/July 2025 and November 2025. Fauna monitoring at the ACP site has been undertaken within the Southern Woodlands Conservation Area (SWCA) since 2005 and was expanded in 2010 to include the northern woodland area and the proposed (at that time) South East Open Cut (SEOC) area. The program was again expanded in 2018 to include monitoring of rehabilitated areas within the NEOC and Bowmans Creek Diversion. The survey for bi-annual fauna monitoring includes ten survey transect sites, of which four sites consist of remnant vegetation (‘control’ sites), four sites are located over previously undermined areas (‘impact’ sites), and two sites are within rehabilitated areas.

A total of 120 fauna species were recorded as a result of the bi-annual fauna monitoring program, including 40 mammals, 64 birds, three amphibians and nine reptiles. Fourteen threatened species were recorded during the 2025 fauna monitoring surveys, two greater than the previous reporting period (12). The threatened species recorded include the following.

- Grey-crowned babbler (*Pomatostomus temporalis temporalis*)
- Latham’s snipe (*Gallinago hardwickii*)
- Brush-tailed phascogale (*Phascogale tapoatafa*)
- Eastern coastal free-tailed bat (*Micronomus norfolkensis*)

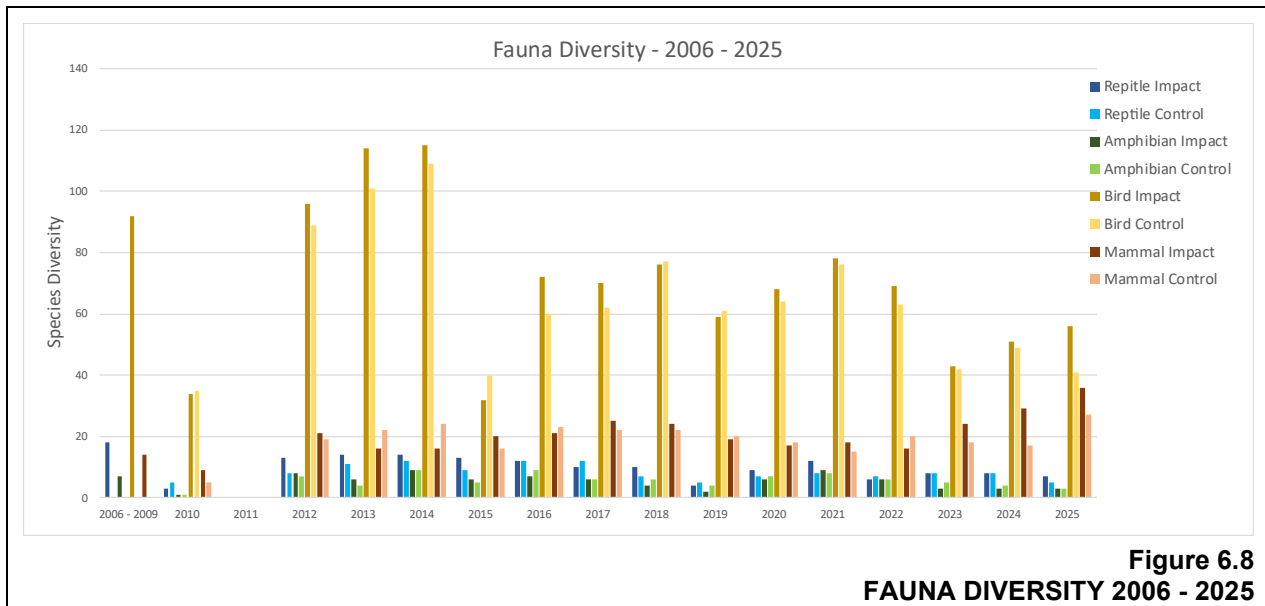
- Little bentwinged-bat (*Miniopterus australis*)
- Eastern bentwinged-bat (*Miniopterus orianae oceanensis*)
- Southern myotis (*Myotis Macropus*)
- Eastern cave bat (*Vespadelus troughtoni*)
- Yellow-bellied sheath-tail-bat (*Saccolaimus flaviventris*)
- Greater broad-nosed bat (*Scoteanax rueppellii*)
- Spotted harrier (*Circus assimilis*)
- White-bellied sea-eagle (*Haliaeetus leucogaster*)
- Masked Owl (*Tyto novaehollandiae*)
- Speckled warbler (*Pyrrholaemus sagittatus*)

All of the above species are listed as vulnerable under the NSW *Biodiversity Conservation Act 2016*, with the exception of Latham's snipe which is listed as vulnerable under the Commonwealth *Environmental Protection Biodiversity Conservation Act 1999*. All species have previously been identified as occurring at the ACP site. A total of 32 threatened species have been recorded at the ACP site since monitoring commenced in 2006.

During the 2025 reporting period, the following 10 introduced species were recorded during the fauna monitoring surveys.

- European rabbit (*Oryctolagus cuniculus*)
- Brown hare (*Lepus capensis*)
- European fox (*Vulpes vulpes*)
- Black rat (*Rattus rattus*)
- House mouse (*Mus Musculus*)
- Pig (*Sus scrofa*)
- Feral cat (*Felis catus*)
- Common myna (*Sturnus tristis*)
- Red deer (*Cervus elaphus*)
- Goat (*Capra hircus*)

Analysis of the fauna monitoring results indicated that species diversity was similar between the control (76 species) and impact (102 species) monitoring sites. Long-term species diversity is shown on **Figure 6.8**. Species richness for mammals and birds was higher than the previous reporting period, while amphibian and reptile richness was lower. Comparisons among species groups indicated that fluctuations in species richness is generally comparable between impact and control types for all fauna types. These trends are generally consistent with previous monitoring and are most likely explained by local environmental and ecological factors outside of the influence of mining activity.



Nest box inspections indicated that 29 of the 39 nest boxes installed in the SWCA remain in a moderate to good condition and are sufficient to support roosting and nesting of arboreal species. The brush-tailed phascogale and common brush tailed possum were observed to occupy eight boxes across the monitoring period.

The results of the bi-annual fauna monitoring program indicate that threatened fauna species and their habitats have not been adversely impacted by mining activities. Observed inter-year and inter-seasonal variation is consistent with expected results for dynamic ecological systems responding to regional-level climate patterns. Furthermore, the results of the fauna monitoring program indicate compliance with the relevant performance criteria outlined in the BMP and no further actions are required to address BMP compliance.

Aquatic Ecology – Bowmans Creek and Glennies Creek

Biannual monitoring of aquatic ecology was undertaken by Marine Pollution Research Pty Ltd in autumn (12 to 15 May 2025) and spring (8 to 11 December 2025).

Monitoring during this reporting period builds on both the results of initial surveys conducted in 2001 to support the original development application as well as the results of biannual monitoring undertaken since 2006. These results also include the 13th year of monitoring for the Bowmans Creek Diversion which was completed in 2012.

Established sites are included in monitoring programs based on the progression of mining, and additional sites may be added or removed, if required. No new or temporary sites were established during the reporting period.

Monitoring locations currently include a total of 26 sites where monitoring may occur, as follows.

- 18 sites within Bowmans Creek, of which 14 are currently utilised as part of the monitoring program.
- Two sites within the Bowmans Creek Diversion channels, with one site per each of the two diversion channels.

- Two sites within Glennies Creek.
- Four sites within waterbodies established within subsidence depressions, which for reporting purposes are included with Bowmans Creek.

Habitat Condition

Aquatic habitat conditions during the 2025 sampling period showed trends reflective of variable climatic conditions characterised by multiple rainfall events followed by dry periods.

Aquatic habitat conditions for each active monitoring site, measured using the Riparian Channel Environment habitat scoring system (RCE index), are presented in **Table 6.9**.

Table 6.9
Monitoring Site RCE Index Score – 2015 to 2025

Year	Period	Site RCE Index Score (% Condition) ¹																			
		BCUp	BC1	BCLW7B	BCLW6B ²	BCED1 ³	BCED2 ³	BC3	BC4	BCLW7A ²	BCWD1	BCWD2 ³	BC5	BC6	BCDown	SDLW3N	SDLW4S	SDLW5S	SDLW5N	GCUp	GCMid
2015	Autumn	78.8	76.9		71.2	78.8		77.9		76.0		79.8		74.0	73.1					74.0	73.1
	Spring	77.9	75.0		69.2	75.0		77.9		73.1		76.9		74.0	71.2					74.0	74.0
2016	Autumn	77.9	75.0		69.2	75.0		77.9		73.1		76.9		74.0	71.2					74.0	74.0
	Spring	77.9	75.0		69.2	75.0		77.9		73.1		76.9		74.0	70.2					74.0	74.0
2017	Autumn	76.9	74.0		68.3	74.0		77.9		73.1		75.0		74.0	70.2					72.1	71.2
	Spring	74.0	74.0		69.2	74.0		77.9		73.1		75.0		72.1	70.2					73.1	73.1
2018	Autumn	76.0	76.9		71.2	Dry		77.9		75.0		Dry		72.1	70.2					73.1	73.1
	Spring	76.0	76.9		Dry	Dry		Dry		75.0		Dry		Dry	70.2					71.2	71.2
2019	Autumn	Dry	73.1		Dry	Dry		Dry		Dry		Dry		Dry	49.0					71.2	71.2
	Spring	Dry	76.0		Dry	Dry		Dry		Dry		Dry		Dry	52.9					71.2	71.2
2020	Autumn	76.9	74.0		74	77.9	78.8	76.9		74.0		Dry		76.9	52.9					73.1	73.1
	Spring	76.9	75.0		73.1	80.8	79.8	77.9		74.0		80.8		76.0	52.9					73.1	73.1
2021	Autumn	76.9	76.0		73.1	81.7	78.8	76.0		72.1		80.8		76.0	53.8					73.1	73.1
	Spring	75.0	76.0		73.1	79.8	78.8	76.0		72.1		80.8		74.0	53.8					73.1	73.1
2022	Autumn	77.9	74.0		73.1	81.7	79.8	75.0		74.0		81.7		73.1	57.7					73.1	73.1
	Spring	77.9	74.0	74.0	72.1	79.8	78.9	72.1		74.0	78.8	81.7	72.1	73.1	57.7	42.3	32.7			73.1	73.1
2023	Autumn	77.9	73.1	Dry	Dry	81.7	81.7	Dry	76.0	72.1	80.8	Dry	74.0	73.1	67.3	41.3	32.7	34.6	29.8	73.1	73.1
	Spring	76.9	74.0	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	73.1	66.3	42.3	32.7	34.6	29.8	73.1	73.1
2024	Autumn	76.9	75.0	Dry	Dry	81.7	81.7	74.0	76.0	Dry	83.7	84.6	76.0	76.0	63.5	42.3	33.7	34.6	32.7	73.1	73.1
	Spring	76.0	75.0	Dry	74.0	80.8	80.8	76.0	76.0	Dry	81.7	Dry	75.0	75.0	66.3	42.3	32.7	34.6	32.7	73.1	73.1
2025	Autumn	74.0	74.0	Dry	72.1	80.8	80.8	75.0	72.1		81.7	78.8		73.1	67.3	42.3	32.7	34.6	32.7	73.1	73.1
	Spring	72.1	73.1	Dry	68.3	77.9	79.8	72.1	72.1		78.8	Dry		73.1	67.3	42.3	33.7	35.6	33.7	73.1	73.1
Minimum		72.1	73.1	74.0	68.3	74.0	72.1	72.1	76.0	72.1	42.3	33.7	35.6	32.7	34.6	32.7	32.7	34.6	29.8	68.3	71.2
Maximum		78.8	76.9	74.0	74.0	81.7	81.7	77.9	78.8	76.0	83.7	84.6	76.0	76.9	73.1	73.1	73.1	73.1	74.0	74.0	77.9
Mean		77.1	75.2		71.6	78.0	79.9	76.8	76.0	73.4	81.3	78.9	74.3	74.3	64.1	42.1	32.9	34.6	31.3	72.9	72.9

Note 1: Monitoring sites are presented in order from upstream (left) to downstream (right). See Figure 6.1.

Note 2: Excised Creek monitoring sites.

Note 3: Diversion channel creek sites.

Source: Modified after Table 3 of Marine Pollution Research Pty Ltd (2026).

For those sites which were sampled, all sites were found to be in ‘good’ condition (i.e. >70%) with the exception of BCDown (67.3% in both autumn and spring). Notwithstanding this, BCDown showed a minor increase in RCE scores compared to the 2024 reporting period. RCE scores at the remaining sites were generally comparable to or slightly lower than the 2024 results. Both the autumn and spring sampling results for the reporting period were also generally consistent with or lower than the long term means at all monitoring sites. This is attributed to the multiple wet weather events and periods of high flow followed by increasingly dry conditions during the reporting period. These conditions influenced several RCE categories, including aquatic vegetation (filamentous algae and macrophytes), stream bottom (sediment composition), stream detritus (variation in detritus composition) and retention devices in stream (rocks and logs).

Habitat condition scores recorded at Glennies Creek monitoring sites (GCUUp and GCMid) are consistent with those recorded for the previous reporting period. Habitat conditions at these sites are generally dependent upon water levels, with upstream dam water releases providing relatively stable flow rates during the reporting period.

Stream Health – Aquatic Fauna

Table 6.10 and **Table 6.11** present the long term macroinvertebrate diversity and SIGNAL Index scores respectively for monitoring locations within Bowmans Creek (including the subsidence pond locations) and Glennies Creek. In accordance with sampling triggers outlined in the BMP, diversity values and SIGNAL scores are ranked as either ‘Low’, ‘In’ or ‘High’ if they fall below, within or above one standard deviation from the long term mean.

Macroinvertebrate diversities recorded for Bowmans Creek during the reporting period was ranked as ‘In’ or ‘High’. During the autumn sampling, ten sites were ranked as ‘High’ with the remaining sites ranked as ‘In’, indicating recovery from the 2025 spring survey. The total number of macroinvertebrates recorded was consistent with or higher than the previous years for both autumn and spring. Three sites in autumn and four sites in spring recording their highest, or equal highest, diversity result to date.

For Glennies Creek, macroinvertebrate diversity was ranked as ‘In’ for both sites sampled during the autumn and spring monitoring event.

Table 6.10
Stream Health Monitoring – Macroinvertebrate Diversity

Year	Period	Macroinvertebrate Diversity (No.)																												
		Bowmans Creek Sites^																				Summary		Glennies Creek Sites^					Summary	
		BC Up	BC1	BCLW7 B	BCLW6 B	BCED0	BCED1	BCED2	BC3	BC4	BC4.5	BCLW7 A	BCWD1	BCWD2	BC5	BC6	BC Down	SDLW3 N	SDLW4 S	SDLW5 S	SDLW5 N	Total	Mean Site	GC Up	GCOC Up	GC Mid	GCOC Down	GC Down	Total	Mean
2007	Autumn	12	-		-		-	-	-		-	21	-	-	-	-	9	-	-	-	-	25	14.0	26	-	17	-	14	34	19.0
	Spring	21	-		-		-	-	-		-	17	-	-	-	-	17	-	-	-	-	30	17.0	22	26	22	23	20	42	22.6
2008	Autumn	20	-		-		-	-	-		-	21	-	-	-	-	16	-	-	-	-	32	18.8	26	24	24	24	23	42	24.2
	Spring	24	12	18	18		-	-	-		-	21	-	-	-	-	16	-	-	-	-	37	18.8	21	20	21	22	20	34	20.8
2009	Autumn	23	12	24	24		-	-	-		-	21	-	-	-	-	22	-	-	-	-	44	19.8	22	24	23	27	24	41	24.0
	Spring	-	15	12	12		-	-	23		-	29	-	-	-	-	25	-	-	-	-	46	21.2	21	-	20	-	23	33	21.0
2010	Autumn	-	12	14	14		-	-	12		-	26	-	-	-	-	22	-	-	-	-	40	17.5	18	-	25	-	22	36	22.0
	Spring	18	-	19	19		-	-	-	24	-	-	-	-	-	22	12	-	-	-	-	39	19.2	9	-	30	22	-	34	20.3
2011	Autumn	20	-	19	19		-	-	-	21	-	-	-	-	-	18	21	-	-	-	-	33	20.0	-	-	27	23	-	34	25.0
	Spring	22	-	21	21		-	-	-	20	-	-	-	-	-	17	19	-	-	-	-	37	19.8	20	-	27	22	-	35	23.0
2012	Autumn	26	-	19	19		-	-	-	25	-	-	-	-	-	24	17	-	-	-	-	39	22.2	14	-	17	18	-	26	16.3
	Spring	35	22	17	17		-	-	-	24	-	35	-	-	-	31	23	-	-	-	-	52	26.7	26	-	28	24	-	41	26.0
2013	Autumn	27	23	23	23		-	-	26		-	33	-	-	-	24	24	-	-	-	-	52	25.7	17	-	21	-	-	22	19.0
	Spring	35	18	-	27		24	-	26		-	29	-	21	-	25	30	-	-	-	-	53	26.1	24	-	29	-	-	32	26.4
2014	Autumn	31	24	-	15		26	-	29		-	27	-	25	-	25	23	-	-	-	-	52	25.0	26	-	23	-	-	31	24.5
	Spring	32	20	-	25		27	-	22		-	21	-	21	-	31	24	-	-	-	-	52	24.8	22	-	22	-	-	30	22.0
2015	Autumn	23	21	-	13		27	-	23		-	24	-	21	-	20	19	-	-	-	-	47	21.2	20	-	21	-	-	28	20.5
	Spring	21	18	-	10		21	-	20		-	20	-	18	-	20	16	-	-	-	-	38	18.2	18	-	18	-	-	23	18.0
2016	Autumn	21	20	-	13		23	-	22		-	20	-	24	-	27	24	-	-	-	-	49	21.6	20	-	22	-	-	27	21.0
	Spring	21	16	-	20		22	-	23		-	20	-	24	-	20	22	-	-	-	-	41	20.9	19	-	18	-	-	26	18.5
2017	Autumn	23	20	-	18		19	-	22		-	19	-	22	-	21	20	-	-	-	-	36	20.4	17	-	20	-	-	25	18.5
	Spring	20	20	-	18		16	-	26		-	17	-	21	-	23	24	-	-	-	-	42	20.6	19	-	15	-	-	22	17.5
2018	Autumn	22	17	-	14		Dry	-	15		19	16	-	Dry	-	19	15	-	-	-	-	39	17.1	21	-	20	-	-	28	20.5
	Spring	21	18	-	Dry		Dry	-	Dry		20	24	-	Dry	-	14	19	-	-	-	-	40	19.3	17	-	19	-	-	22	18.0
2019	Autumn	Dry	14	-	Dry		Dry	-	Dry		18	Dry	-	Dry	-	14	21	-	-	-	-	30	16.8	18	-	16	-	-	26	17.0
	Spring	Dry	13	-	Dry		Dry	-	Dry		-	Dry	-	Dry	-	Dry	9	-	-	-	-	18	11.0	20	-	19	-	-	25	19.5
2020	Autumn	15	20	-	16		21	22	20		-	7	-	Dry	-	15	9	-	-	-	-	28	16.2	22	-	25	-	-	31	23.5
	Spring	25	23	-	20		22	21	21		-	21	-	21	-	20	20	-	-	-	-	39	21.5	26	-	32	-	-	36	29.0
2021	Autumn	18	23	-	18		20	18	19		-	10	-	19	-	21	13	-	-	-	-	40	18.1	23		20			35	21.5
	Spring	24	19	-	18		26	29	20		-	15	-	23	-	20	19	-	-	-	-	44	20.5	20		29			32	24.5
2022	Autumn	19	22	-	17		23	21	25		-	21	-	22	-	17	12	-	-	-	-	52	19.9	23		20			28	21.5
	Spring	22	23	25	15		18	19	27			24	21	17	20	26	14	28	21	-	-	47	20.8	27		27			34	27.0
2023	Autumn	29	23	Dry	Dry		25	18	Dry	-		30	19	Dry	14	26	27	22	18	19	17	53	22.2	23		30			34	21.5
	Spring	32	26	Dry	Dry	28	Dry	Dry	Dry	Dry	25	Dry	Dry	Dry	Dry	19	31	20	18	19	13	55	23.1	24		25			33	24.5
2024	Autumn	17	18	Dry	Dry		20	16	14	16		Dry	19	8	10	8	22	16	17	14	13	40	15.3	21		22			29	21.5
	Spring	27	20	Dry	24		26	25	28	28		Dry	25	Dry	22	26	22	22	16	15	15	46	24.8	27		29			34	28.0
2025	Autumn	26	25		21		24	31	31	26			21	27		22	19	19	14	20	14	49	24.8	20		26			29	23.0
	Spring	35	23		19		35	27	19	33			26			22	27	17	21	14	17	55	26.6	22		24			31	23.0
LTM ¹		23.6	19.1	19.2	17.9		22.7	22.7	20.4	22.5		21.8	21.7	21.7	17.7	21.7	19.3	21.6	18.0	16.8	14.5	41.3	20.5	21.1	23.5	22.9	22.9	20.9	21.1	23.5
SD LTM ²		5.4	4.0	4.0	4.5		3.3	3.3	2.4	4.2		6.3	3.1	3.1	3.2	4.6	5.6	4.3	1.9	2.6	1.9	8.9	3.6	3.9	2.5	4.5	2.4	3.4	3.8	2.5
Status ³	Autumn	In	High		In		In	High	High	In			In	High		In	In	In	Low	High	In	In	High	In		In			In	In
	Spring	High	In		In		High	High	In	High			High			In	High	Low	High	Low	High	High	High	In		In			In	In

^ See Figure 6.1.

Note 1: Long Term Mean of results preceding the two seasonal results recorded for the current reporting period.

Note 2: Standard deviation of results preceding the two seasonal results recorded for the current reporting period from the Long Term Mean.

Note 3: Status of each site compared to the Long Term Mean (LTM), where 'Low' = results below one standard deviation from the LTM, 'In' = results within one standard deviation from the LTM, and 'High' = results higher than one standard deviation above the LTM.

Note 4: Value not calculated due to low sample number.

Source: Modified after Tables 4, 5, 7 and 8 of Marine Pollution Research Pty Ltd (2026).

Table 6.11
Stream Health Monitoring – SIGNAL Scores

Signal Score																														
Year	Period	Bowmans Creek Sites^																		Summary		Glennies Creek Sites^					Summary			
		BCUp	BC1	BCLW7B	BCLW6B	BCED0	BCED1	BCED2	BC3	BCE4	BC4.5	BCLW7A	BCWD1	BCWD2	BC5	BC6	BC Down	SDLW3N	SDLW4S	SDLW5S	SDLW5N	Creek Score	Mean Site	GC Up	GCOC Up	GC Mid	GCOC Down	GC Down	Creek Score	Mean Site
2007	Autumn	2.17	-	-	-	-	-	-	-	-	2.93	3.24	-	-	-	-	3.33	-	-	-	-	2.95	2.92	3.71	-	3.81	-	3.58	3.71	3.70
	Spring	3.57	-	-	-	-	-	-	-	-	4.31	3.35	-	-	-	-	3.59	-	-	-	-	3.64	3.69	4.19	3.92	3.71	3.48	3.65	3.80	3.79
2008	Autumn	3.84	-	-	-	-	-	-	-	-	4.17	3.81	-	-	-	-	4.25	-	-	-	-	4.00	4.02	4.16	3.82	3.71	4.13	3.62	3.90	3.89
	Spring	4.13	3.92	3.89	3.89	-	-	-	-	-	4.00	3.71	-	-	-	-	3.88	-	-	-	-	3.93	3.92	3.85	3.84	4.00	3.62	3.40	3.74	3.74
2009	Autumn	3.87	3.64	3.50	3.50	-	-	-	-	-	3.76	4.00	-	-	-	-	3.70	-	-	-	-	3.75	3.74	3.68	4.00	4.10	3.96	4.05	3.95	3.96
	Spring	-	3.29	3.82	3.82	-	-	-	3.15	-	-	3.70	-	-	-	-	3.74	-	-	-	-	3.55	3.54	3.63	-	3.56	-	3.90	3.71	3.70
2010	Autumn	-	3.36	2.83	2.83	-	-	-	4.09	-	-	3.63	-	-	3.65	-	3.90	-	-	-	-	3.61	3.58	4.00	-	4.25	-	3.68	3.98	3.98
	Spring	3.33	-	3.84	3.84	-	-	-	-	3.50	-	-	-	-	-	3.52	3.67	-	-	-	-	3.58	3.59	3.22	-	3.61	3.55	-	3.53	3.46
2011	Autumn	3.60	-	3.47	3.47	-	-	-	-	3.62	-	-	-	-	-	3.44	3.60	-	-	-	-	3.58	3.57	-	-	3.81	3.74	-	3.78	3.78
	Spring	3.86	-	3.35	3.35	-	-	-	-	4.05	-	-	-	-	-	4.06	3.68	-	-	-	-	3.79	3.80	4.10	-	3.80	4.05	-	3.97	3.98
2012	Autumn	3.85	-	3.33	3.33	-	-	-	-	3.45	-	-	-	-	-	3.57	3.44	-	-	-	-	3.55	3.53	3.71	-	3.53	3.50	-	3.57	3.58
	Spring	3.77	3.68	4.00	4.00	-	-	-	-	4.18	-	3.85	-	-	-	3.62	3.75	-	-	-	-	3.82	3.83	3.92	-	3.79	4.50	-	4.05	4.07
2013	Autumn	3.77	3.73	3.45	3.45	-	-	-	3.73	-	-	3.61	-	-	-	3.83	3.76	-	-	-	-	3.70	3.70	3.88	-	4.14	-	-	4.03	4.01
	Spring	3.76	4.00	-	3.62	-	3.45	-	4.04	-	-	3.74	-	3.42	-	3.95	4.11	-	-	-	-	3.79	3.79	4.17	-	4.00	-	-	4.08	4.09
2014	Autumn	3.53	3.21	-	3.54	-	3.96	-	3.37	-	-	3.88	-	3.35	-	3.67	3.59	-	-	-	-	3.57	3.57	3.91	-	4.38	-	-	4.14	4.15
	Spring	4.00	3.47	-	3.63	-	4.48	-	3.70	-	-	3.53	-	3.65	-	3.63	3.86	-	-	-	-	3.67	3.66	4.15	-	4.33	-	-	4.24	4.24
2015	Autumn	3.83	3.65	-	3.10	-	3.44	-	3.70	-	-	3.23	-	3.70	-	3.53	3.72	-	-	-	-	3.57	3.54	3.50	-	4.19	-	-	3.85	3.85
	Spring	3.57	3.39	-	3.00	-	3.67	-	3.95	-	-	3.30	-	3.88	-	3.90	4.00	-	-	-	-	3.66	3.63	3.81	-	4.29	-	-	3.97	3.97
2016	Autumn	3.75	4.05	-	3.77	-	3.45	-	3.50	-	-	3.17	-	3.63	-	3.40	3.82	-	-	-	-	3.61	3.61	3.22	-	3.71	-	-	3.44	3.47
	Spring	3.52	3.13	-	3.26	-	3.70	-	3.38	-	-	3.00	-	3.73	-	3.47	3.50	-	-	-	-	3.36	3.41	3.65	-	3.35	-	-	3.65	3.50
2017	Autumn	3.35	3.78	-	2.94	-	3.88	-	4.05	-	-	3.11	-	3.38	-	3.42	3.68	-	-	-	-	3.42	3.51	3.94	-	3.53	-	-	3.56	3.73
	Spring	3.61	3.84	-	3.59	-	3.44	-	3.38	-	-	3.38	-	3.52	-	3.55	3.45	-	-	-	-	3.42	3.53	3.55	-	3.63	-	-	3.54	3.59
2018	Autumn	3.71	3.27	-	2.62	-	Dry	-	2.92	-	-	2.69	-	Dry	-	3.28	3.20	-	-	-	-	3.18	3.13	3.42	-	3.88	-	-	3.64	3.65
	Spring	3.05	3.18	-	Dry	-	Dry	-	Dry	-	-	3.71	-	Dry	-	3.45	3.00	-	-	-	-	3.30	3.30	4.14	-	3.75	-	-	3.93	3.95
2019	Autumn	Dry	3.43	-	Dry	-	Dry	-	Dry	-	-	Dry	-	Dry	-	3.08	3.05	-	-	-	-	3.18	3.19	3.94	-	3.86	-	-	3.90	3.90
	Spring	Dry	4.09	-	Dry	-	Dry	-	Dry	-	-	Dry	-	Dry	-	Dry	2.75	-	-	-	-	3.42	3.42	4.12	-	3.61	-	-	3.86	3.87
2020	Autumn	3.15	3.38	-	3.23	-	3.22	3.11	3.06	-	-	2.00	-	Dry	-	3.17	2.50	-	-	-	-	3.07	2.98	3.65	-	4.00	-	-	3.84	3.83
	Spring	3.73	3.76	-	3.17	-	3.75	3.37	3.35	-	-	3.25	-	3.89	-	3.39	3.32	-	-	-	-	3.50	3.49	4.17	-	3.94	-	-	4.04	4.05
2021	Autumn	4.18	3.73	-	3.53	-	3.63	4.18	4.00	-	-	3.50	-	4.32	-	4.33	3.91	-	-	-	-	4.08	3.90	3.90	-	3.95	-	-	3.93	3.90
	Spring	3.59	3.58	-	3.38	-	3.42	3.59	3.75	-	-	3.62	-	3.91	-	3.90	3.63	-	-	-	-	3.62	3.61	4.05	-	3.92	-	-	3.99	3.99
2022	Autumn	3.63	3.68	-	3.56	-	4.09	4.05	3.88	-	-	3.61	-	3.65	-	3.47	3.67	2.83	2.85	-	-	3.73	3.71	3.70	-	4.05	-	-	3.82	3.87
	Spring	4.23	4.26	3.40	3.20	-	4.78	3.95	4.30	-	-	3.68	4.05	4.71	4.30	4.00	4.07	-	-	-	-	4.07	4.07	3.54	-	3.70	-	-	3.62	3.62
2023	Autumn	3.78	3.68	Dry	Dry	-	4	3.94	Dry	3.83		3.45	3.74	Dry	3.46	3.65	3.92	3.44	3.07	3.2	3.07	3.75	3.74	4.00	-	4.11	-	-	4.08	4.07
	Spring	3.90	3.50	Dry	Dry	3.19	Dry	Dry	Dry	Dry	3.19	Dry	Dry	Dry	Dry	3.88	3.66	3.00	3.33	3.27	3.44	3.57	5.57	3.50	-	4.04	-	-	3.79	3.77
2024	Autumn	3.60	Dry	Dry	Dry	-	3.00	2.92	2.55	3.23	-	Dry	3.00	3.00	2.50	3.33	3.26	2.77	2.77	2.40	3.33	3.08	3.05	3.38	-	3.73	-	-	3.56	3.55
	Spring	3.65	Dry	Dry	3.50	-	3.58	3.52	3.33	3.46	-	Dry	3.38	Dry	3.48	3.39	3.62	3.21	3.27	3.46	3.07	3.48	3.48	4.08	-	4.07	-	-	4.08	4.08
2025	Autumn	4.23	3.72		3.22		3.74	3.63	3.83	3.56			3.76	3.69		3.45	3.82	3.07	3.00	3.25	3.09	3.71	3.70	4.15	-	4.20	-	-	4.18	4.18
	Spring	3.85	3.82		3.33		3.71	3.46	3.42	3.59			3.56			3.47	3.62	3.25	3.21	3.43	2.93	3.62	3.60	3.64	-	4.05	-	-	3.84	3.84
LTM¹		3.66	3.61	3.54	3.33		3.71	3.71	3.63	3.73			3.73	3.77	3.80	3.61	3.61	3.68	3.02	3.08	3.23	3.6	3.6	3.82	3.90	3.89	3.83	3.70	3.85	3.84
SD LTM²		0.38	0.29	0.33	0.30		0.37	0.37	0.38	0.30			0.30	0.37	0.44	0.29	0.29	0.38	0.26	0.47	0.19	0.3	0.3	0.28	0.08	0.25	0.36	0.21	0.20	0.21
Status³	Autumn	High	In		In		In	In	In	In			In	In		In	In	In	In	In	In	In	In	High		High			High	High
	Spring	In	In		In		In	In	In	In			In			In	In	In	In	In	Low	In	In	In		In			In	In

¹See Figure 6.1

Note 1: Long Term Mean of results preceding the two seasonal results recorded for the current reporting period.

Note 2: Standard deviation of results preceding the two seasonal results recorded for the current reporting period from the Long Term Mean.

Note 3: Status of each site compared to the Long Term Mean (LTM), where 'Low' = results below one standard deviation from the LTM, 'In' = results within one standard deviation from the LTM, and 'High' = results higher than one standard deviation above the LTM.

Note 4: Value not calculated due to low sample number.

Source: Modified after Tables 6, 7 and 9 of Marine Pollution Research Pty Ltd (2026).

Site SIGNAL scores recorded for Bowmans Creek were 'In' for all sites sampled during both autumn and spring (excluding Dry sites), with the exception of BCUp in autumn which recorded 'High' and SDLW5N in spring which recorded 'Low'. For Glennies Creek, all macroinvertebrate diversities and SIGNAL scores were 'High' during autumn and 'In' during spring. The general consistency or improvement in SIGNAL scores compared to the previous reporting periods likely reflect a gradual recolonisation by more sensitive taxa due to sustained water levels, with complete recolonisation likely to take time due to the need for adult stages of these taxa to recolonise upstream areas by aerial means.

In addition to aquatic macroinvertebrates, five native fish species and two pest species were recorded within Bowmans Creek during the reporting period, as follows.

Native Species

- Flathead gudgeons (*Phylipnodon grandiceps*)
- Firetail gudgeons (*Hypseleotris galii*)
- Australian smelt (*Retropinna semmoni*)
- Eel-tailed catfish (*Tandanus tandanus*)
- Long-finned eels (*Anguilla reinhardtii*)

Pest Species

- Plague minnow (*Gambusia holbrooki*)
- Carp (*Cyprinus carpio*)

A Long-necked turtle (*Chelodina longicollis*) was also observed at site BCED2 in spring. Tadpoles were also observed within Bowmans Creek during autumn.

Vegetation - Bowmans Creek Riparian Zone

Monitoring of the Bowman Creek riparian vegetation was undertaken during the reporting period between 5 May to 14 May 2025 by DnA Environmental. Monitoring of riparian vegetation is undertaken at the ACP site to assess the condition of vegetation associated with Bowmans Creek, the status of vegetation and rehabilitated areas within the Bowmans Creek Diversion channels, and the condition of local protected River Red Gum (*Eucalyptus camaldulensis*) populations.

A total of 17 riparian vegetation sites were monitored during the reporting period, including five Casuarina monitoring sites, four Casuarina rehabilitation sites, four Eucalypt woodland rehabilitation sites, three Casuarina reference sites and one remnant Red River Gum woodland site. Monitoring of reference sites which are representative of natural vegetation communities is undertaken in order to inform appropriate completion criteria and ecological targets for rehabilitated areas within the ACP site.

Table 6.12 presents an overview of the performance of each monitoring site against the relevant completion criteria. In summary, rehabilitated casuarina and eucalypt woodland sites have generally formed functional and stable ecosystems comparable to conditions recorded in reference sites not subject to mining-related impacts.

The stability of the Casuarina reference sites is showing signs of recovery following a declining trend since 2019, as a direct result of the extreme flood events over the past few years. Drier conditions throughout 2023 and 2024 have resulted in the re-establishment of groundcover.

Despite flooding events during 2025, Casuarina monitoring sites stability remained high with indices ranging from 69.8 to 74.3 and all sites comparable or higher than the stability of the reference sites.

Stability within the woodland sites compared to Casuarina sites is generally more stable in the long term, and less impacted from extreme weather events such as flooding. However, during 2025 the combination of ongoing dry conditions and light grazing by cattle caused a decline in the stability of the woodland reference sites with stability indices ranging from 68.0 to 71.0, comparable with the indices reported for the Casuarina sites. Stability of woodland monitoring sites also experienced marginal decline compared with the previous year, with stability ranging from 66.0 to 72.5 in 2024 to 65.3 to 73.0 in 2025, with R3 lower than the reference sites.

High ecosystem function at creek diversion sites (C) suggest that diversion sites are performing as good or better than most natural creek (Q) and all reference (CC) monitoring sites. For Eucalypt woodland, reference sites RWood04 and RWood02 were the most ecologically functional with ecosystem function scores of 179 and 177 respectively. The ecosystem function at the four Eucalypt woodland rehabilitation sites and remnant River Red Gum woodland site was higher or equivalent to reference sites RWood01, ecosystem function ranging from 163 to 173.

Other performance targets which have not yet been achieved are primarily dependent upon community maturity, with performance indicators including litter cover, canopy cover, trunk diameter and provision of wildlife habitat expected to develop over time.

Monitoring also indicated that there has been an increase in health condition of the population in all age cohorts for River Red Gum, with 62% of the population being assessed as being in healthy condition. The percentage of the population assessed as being in poor health declined from 11% in 2024 to 8% in 2025, with continuous low to moderate insect damage found across the population. Saplings were overrepresented as having medium to poor health compared to old growth, mature, and young trees, again due to increased insect damage resulting in decreased foliage cover or sapling mortality.

River Red Gum population size has increased overall since 2017 from 102 to 155 individual specimens being identified. This year, 25% of the population were identified as bearing reproductive structures during the reporting period, an increase from 2024, with 19% specimens being observed as bearing reproductive material.

Approximately 61% of the population consists of saplings, consistent with the previous reporting period during which saplings made up approximately 66% of the population. Overall recent regeneration events remain limited.

Table 6.12
Bowmans Creek Riparian Zone – Completion Criteria Status

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Rehabilitation Phase	Completion Criteria	Performance Indicator	Unit of Measure	Casuarina Monitoring Site										Mixed Eucalypt Monitoring Site				
				C1	C2	C3	C4	Q3	Q4	Q7	Q9	Q10	R1	R3	R5	R6	RRG01	
Phase 3: Landform establishment and stability	Landform suitable for final landuse and generally compatible with surrounding topography and final landform design	Slope	< Degrees (18°)	2	2	18	15	3	15	15	14	3	3	1	18	2	22	
	Areas of active erosion are limited	No. Rills/Gullies	No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Phase 4: Growth medium development	Soil properties are suitable for the establishment and maintenance of selected vegetation species	pH	pH (5.6-7.3)	6.7	6.3	6.5	6.7	7.3	7.1	7.1	6.9	7.1	6.4	6.5	7.1	6.3	7.4	
		Organic Matter	% (>4.5)	5.1	7.2	4.2	5.8	3.8	4.9	5.1	5.0	5.2	3.5	3.9	5.3	6.0	5.4	
		Phosphorous	mg/ kg (50)	17.0	23.0	27.0	32.0	16.0	11.0	30.0	13.0	17.0	19.0	44.0	26.0	13.0	37.0	
Phase 5: Ecosystem & Land Use Establishment	Landform is stable and performing as it was designed to do	LFA Stability	%	75.1	75.6	65.7	69.3	66.3	75.4	71.1	77.5	73.8	68	65.3	73	70	72.2	
		LFA Landscape organisation	%	100	100	93	98	100	100	100	100	100	100	90	100	100	85	
	Vegetation contains a diversity of species comparable to that of the local remnant vegetation	Diversity of shrubs and juvenile trees	% population	50	71	100	100	100	0	0	0	100	100	100	100	100	100	
		Total species richness	No./ area	29	23	51	28	45	38	13	42	41	34	51	49	50	37	
		Native species richness	>No./ area	3	5	13	6	9	6	3	9	11	10	20	20	23	10	
		Exotic species richness	<No./ area	26	18	38	22	36	32	10	33	30	24	31	29	27	27	
	Vegetation contains a density of species comparable to that of the local remnant vegetation	Density of shrubs and juvenile trees	No./ area	1	9	6	13	1	0	0	0	0	0	0	0	0	1	
	The vegetation is comprised by a range of growth forms comparable to that of the local remnant vegetation	Trees	No./ area	2	2	4	1	1	1	1	3	1	3	3	3	6	3	
		Shrubs	No./ area	0	1	3	0	0	0	0	0	1	2	1	0	1	1	
		Herbs	No./ area	19	13	30	19	33	27	8	24	29	14	22	28	22	23	
		Grasses	No./ area	3	1	8	4	6	6	2	10	5	9	14	7	13	5	
Phase 6: Ecosystem & Land Use Development	Landform is ecologically functional and performing as it was designed to do	LFA Infiltration	%	54.8	58.8	51	52.6	54.4	50.5	52.8	55	44.3	53.4	50.2	49.9	50.6	47.5	
		LFA Nutrient recycling	%	52.8	59.2	49.1	46.4	47.7	48.3	48.1	55.3	44	51.5	47.9	48.3	48.7	45.6	
	Ground layer contains protective ground cover and habitat structure comparable with the local remnant vegetation	Perennial plant cover (< 0.5m)	%	48.5	35	19.5	59.5	20.5	69	67	62.5	33	13	12.5	32	24	69.5	
		Total Ground Cover	%	97.5	89.5	95	96	89	99	99	99	100	99	97	98.5	100	100	
	The vegetation is maturing and/or natural recruitment is occurring at rates similar to those of the local remnant vegetation	Shrubs and juvenile trees 0 - 0.5m in height	No./ area	0	1	0	0	0	0	0	0	0	6	0	0	0	0	
		Shrubs and juvenile trees >2m in height	No./ area	1	10	19	12	1	0	0	0	0	9	1	4	30	1	
	The vegetation is developing in structure and complexity comparable to that of the local remnant vegetation	Foliage cover 0.5 - 2 m	% cover	8.2	6	7	7.5	3	14	22.5	7.5	0	3.2	0	5.5	2	4.5	
		Foliage cover >6m	% cover	28	29	26	35	11	33	29	0	7	28	24	0	9	37	
	Vegetation contains a diversity of maturing tree and shrubs species comparable to that of the local remnant vegetation	Tree diversity	species/ area	1	2	4	1	1	1	1	1	1	3	3	3	6	3	

Table 6.12 (Cont'd)
Bowmans Creek Riparian Zone – Completion Criteria Status

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Rehabilitation Phase	Completion Criteria	Performance Indicator	Unit of Measure	Casuarina Monitoring Site									Mixed Eucalypt Monitoring Site				
				C1	C2	C3	C4	Q3	Q4	Q7	Q9	Q10	R1	R3	R5	R6	RRG01
Phase 6: Ecosystem & Land Use Development (Cont'd)	Vegetation contains a density of maturing tree and shrubs species comparable to that of the local remnant vegetation	Tree density	No./ area	31	86	48	79	5	6	9	2	2	14	25	6	30	6
	The vegetation is in a condition comparable to that of the local remnant vegetation.	Healthy trees	% population	50	33	29	35.4	100	67	42	100	33	71	64	50	33	38
		Medium health	% population	47	60	53	43	0	33	33	0	0	29	32	50	53	38
		Advanced dieback	% population	0	2	11.8	4	0	0	0	0	0	0	4	0	13	0
		Dead Trees	% population	3	4	6	18	0	0	25	0	67	0	0	0	0	25
		Flowers/fruit: Trees	% population	31	2	14	2	0	33	8	100	0	14	4	0	0	25
NA = Not Applicable																	
Green = Meets or exceeds completion criteria.																	
Blue = Soil performance indicator target falls within industry guidelines but may not be similar to local soils.																	
Light Orange = Eucalypt Woodland sites meet or exceed comparable ecological performance targets derived from Casuarina reference sites.																	
Source: DnA Environmental (2025).																	

Erosion and decreased soil stability associated with previous cattle presence in riparian areas has been the most significant threat to the health of riparian areas associated with Bowmans Creek. In particular, during drought conditions in 2017 and 2019, increased levels of grazing in riparian areas combined with increased vulnerability of soils and creek banks to erosion threatened rehabilitated areas as well as established remnant vegetation. Subsequently most ACOL farmland areas, including the creek were destocked in 2020 and, with improved seasonal conditions, significant understory growth of grass (and weeds) has occurred. Notwithstanding, some of the old growth trees remain susceptible to degradation as their roots remain exposed and some are on very steep sided banks and may become unstable and fall.

Removal of grazing has led to high abundance of weed species. Effects from targeted weed species controls were noted through observation of dead individuals, however, overall weed abundance remained high and some weeds, such as balloon vine (*Cardiospermum halicacabum*), have increased in abundance significantly and become impenetrable in sections along Bowmans Creek.

Exotic species richness was higher than that of native species at all sites, and the understory for all sites was dominated by exotic species. Fifteen priority and declared weed species were recorded across the Bowmans Creek monitoring sites during the reporting period and will require continued control.

Vegetation - Southern Woodland Conservation Area

A Voluntary Conservation Agreement covering the SWCA was established between ACOL and the Minister for the Environment under the *National Parks and Wildlife Act 1974* on 16 September 2010. The SWCA covers an area of 65.66ha above the existing underground mine (see **Figure 6.1**) and contains remnant Hunter Valley vegetation communities, threatened fauna species and archaeological sites of high significance.

Monitoring of the SWCA was undertaken during the reporting period by DnA Environmental between 5 May and 14 May 2025. Monitoring methods included the use of the Biometric Assessment Method in areas of subsidence repair, NSW Biodiversity Conservation Division monitoring forms and photo points for three established sites (SVCA01, SVCA02 and SVCA03), transects in areas of subsidence repair and additional photo monitoring points. Three eucalypt woodland reference sites were also used to inform benchmark ecological community values and determine appropriate ecological performance targets and completion criteria.

Table 6.13 presents an overview of the performance of each monitoring site within the SWCA against the relevant completion criteria. In summary, all sites met almost all of the specified completion criteria. LFA stability was generally consistent with reference sites with the exception of SVCA05 which failed to meet the relevant criteria. Low values were recorded for SCVA03 for vegetation diversity, density, and ecosystem composition. LFA infiltration and LFA Nutrient Cycling were within range for SVCA02, SVCA03 and SVCA04.

Subsidence crack treatment works involving clearing, excavation and backfilling were undertaken at sites SVCA05 and SVCA06 in 2018. During the 2025 monitoring, there was observed subsidence cracking at SVCA04. Despite this, LFA stability and landscape organisation at sites SVCA04, SVCA02 and SVCA01 had functionality higher than the woodland reference site RWood01. SVCA06 and SVCA05 displayed improvement from previous years, with SVCA06 meeting the minimum observed values for LFA stability, and both sites becoming more aligned with the results of the other monitoring locations for most criteria. It is noted that

SCVA05 failed to meet LFA stability criteria, largely due to recent earthworks which took place in 2022 and 2023 relating to subsidence repair. It is anticipated that these sites will develop towards the completion criteria as they mature.

Further incidences of subsidence cracking and/or development of localised depressions within previously rehabilitated areas highlight the importance of re-inspection and potential for additional rehabilitation. Soil analyses indicate that the soils were typically within local or desirable levels although Iron levels were significantly high in all SVCA sites. Sulfur levels at SVCA02 were moderately high during the 2025 monitoring.

Fourteen priority and declared weed species were recorded across the SVCA monitoring sites, including many priority weed species identified as occurring within one or more woodland reference sites. Exotic perennial grasses considered to be environmental weeds were also recorded in patches throughout the SVCA, ACOL farmland and roadside areas.

Vegetation - Farmland Underground Mining Area

Monitoring of the agricultural grazing lands, including both pasture and woodland, located above the underground mining area was undertaken by DnA Environmental between 5 and 14 May 2025.

Three eucalypt woodland and three native grassland reference sites were used to develop benchmark ecological values and inform ecological performance targets and completion criteria for woodland and grassland areas within the underground mining affected areas.

Table 6.14 presents an overview of the performance of each monitoring site against the relevant completion criteria. In summary, the highest ecosystem function was recorded at sites UGPast05 and SVCA03, with scores of 183.8 and 180.1 respectively. UGWood1 and UGWood2 recorded scores of 160.5 and 161.9 respectively while SVCA04 recorded a score of 138.

For grasslands, the most ecologically functional sites were UGPast05, UGPast01, and UGPast03 with a total sum of LFA indices of 197, 194 and 191 respectively. UGPast05 and UGPast04 were the least ecologically functional sites, with total sum LFA indices of 169 and 168 respectively. The historical data indicated that the ecological capacity of three pasture sites affected by underground mining had improved since 2007.

In woodlands affected by underground mining, changes in native plant cover were relatively minor. Exotic species had a higher diversity at all underground monitoring sites except for UGPast03 and UGPast05. Perennial groundcover was less than criteria at woodland sites UGWood01 and Woodland02 and underground monitoring sites UGPast02 and UGPast06.

Soil characteristics in the underground woodland and grasslands sites were similar to the reference sites and/or desirable agricultural guidelines in all cases. All underground woodland and grasslands sites had acceptable sodium levels and were non sodic. The results of the soil analyses also indicate that the soils in the farmland and SVCA areas tended to have significantly to excessively high concentrations of iron including all reference sites, suggesting iron naturally occurs in high levels in the local area. Sulfur levels were also elevated in numerous sites, also suggesting that sulfur naturally occurs at slightly elevated concentrations in the area.

Table 6.13
Southern Woodland Conservation Area – Completion Criteria Status 2025

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Rehabilitation Phase	Aspect or Ecosystem Component	Completion Criteria	Performance Indicators	Primary Performance Indicators	Unit of Measure	Woodland Ecosystem Range 2025		SVCA01	SVCA02	SVCA03	SVCA04	SVCA05	SVCA06
						Lower	Upper						
Phase 3: Landform establishment and stability	Landform slope, gradient	Landform suitable for final landuse and generally compatible with surrounding topography and final landform design	Slope	Landform is generally compatible within the context of the local topography and final landform design.	< Degrees (18°)	5	25	10	7	3	8	8	7
	Subsidence cracking	No visible subsidence cracking	No. Subsidence Cracks	Woodland impacted by mine subsidence are restored and comparable to the reference sites	No.	0	0	0	0	0	1	0	0
			Sum of subsidence cracks width	Provides an assessment of the extent of subsidence cracking and demonstrates that repair works have been satisfactory	m	0	0	0	0	0	0.4	0	0
Phase 4: Growth medium development	Soil chemical, physical properties and amelioration	Soil properties are suitable for the establishment and maintenance of selected vegetation species	pH	pH is typical of the surrounding landscape or falls within desirable ranges provided by the agricultural industry	pH (5.6-7.3)	5.6	6.3	5.9	6.0	6.0	6.1	6.1	6.8
			Organic Matter	Organic Matter levels are typical of the surrounding landscape, increasing or fall within desirable ranges provided by the agricultural industry	% (>4.5)	5.1	10.3	7.6	9.2	5.3	4.8	8.2	4.7
			Phosphorous	Available Phosphorus is typical of the surrounding landscape or fall within desirable ranges provided by the agricultural industry	mg/kg (50)	6.8	13.0	6.8	7.7	12.0	5.5	11.0	8.5
Phase 5: Ecosystem & Land Use Establishment	Landscape Function Analysis (LFA): Landform stability and organisation	Landform is stable and performing as it was designed to do	LFA Stability	The LFA stability index is comparable to or trending towards the local remnant vegetation	%	68.0	71.0	70.3	71.8	80.1	73.7	65	69.4
			LFA Landscape organisation	The Landscape Organisation Index provides a measure of the ability of the site to retain resources and is comparable to the local remnant vegetation	%	88	100	95	100	100	100	73	91
	Vegetation diversity	Vegetation contains a diversity of species comparable to that of the local remnant vegetation	Diversity of shrubs and juvenile trees	The diversity of shrubs and juvenile trees with a stem diameter < 5cm is comparable to the local remnant vegetation.	species/area	2	3	5	5	0	NA	NA	NA
				The percentage of shrubs and juvenile trees with a stem diameter < 5cm dbh which are local endemic species and these percentages are comparable to the local remnant vegetation	% population	88	100	98	90	0	NA	NA	NA
			Total species richness	The total number of live plant species is comparable to the local remnant vegetation	No./area	57	65	56	60	49	54	72	63
			Native species richness	The total number of live native plant species is greater than or comparable to the local remnant vegetation	>No./area	39	45	38	42	23	43	44	39
			Exotic species richness	The total number of live exotic plant species is less than or comparable to the local remnant vegetation	<No./area	18	20	18	18	26	11	28	24
	Vegetation density	Vegetation contains a density of species comparable to that of the local remnant vegetation	Density of shrubs and juvenile trees	The total density of shrubs or juvenile trees with a stem diameter < 5cm is comparable to the local remnant vegetation	No./area	22	137	197	104	0	NA	NA	NA
				The density of endemic shrubs or juvenile trees with a stem diameter < 5cm is comparable to that of the local remnant vegetation	No./area	22	121	193	94	0	NA	NA	NA

Table 6.13 (Cont'd)
Southern Woodland Conservation Area – Completion Criteria Status 2025

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Rehabilitation Phase	Aspect or Ecosystem Component	Completion Criteria	Performance Indicators	Primary Performance Indicators	Unit of Measure	Woodland Ecosystem Range 2025		SVCA01	SVCA02	SVCA03	SVCA04	SVCA05	SVCA06
						Lower	Upper						
Phase 5: Ecosystem & Land Use Establishment (Cont'd)	Ecosystem composition	The vegetation is comprised by a range of growth forms comparable to that of the local remnant vegetation	Trees	The number of tree species regardless of age comprising the vegetation community is comparable to the local remnant vegetation	No./area	2	2	3	2	0	3	2	2
			Shrubs	The number of shrub species regardless of age comprising the vegetation community is comparable to the local remnant vegetation	No./area	0	2	3	4	0	4	5	2
			Herbs	The number of herbs or forb species comprising the vegetation community is comparable to the local remnant vegetation	No./area	33	38	30	34	25	26	34	30
			Grasses	The number of grass species comprising the vegetation community is comparable to the local remnant vegetation	No./area	9	15	10	11	13	13	19	19
Phase 6: Ecosystem & Land Use Development	Landscape Function Analysis (LFA): Landform function and ecological performance	Landform is ecologically functional and performing as it was designed to do	LFA Infiltration	LFA infiltration index is comparable to or trending towards the local remnant vegetation	%	45.7	56.3	46.5	55.4	58.2	56	40.8	46.4
			LFA Nutrient recycling	LFA nutrient recycling index is comparable to or trending towards the local remnant vegetation	%	46.8	52.7	46.3	52.2	54.2	52.4	39.2	45.7
	Protective ground cover	Ground layer contains protective ground cover and habitat structure comparable with the local remnant vegetation	Perennial plant cover (< 0.5m)	Percent ground cover provided by live perennial vegetation (<0.5m in height) is comparable to the local remnant vegetation	%	7	35	38	6	68	31	17.8	37.5
			Total Ground Cover	Total groundcover is the sum of protective ground cover components (as described above) and that it is comparable to the local remnant vegetation	%	52	100	99	100	100	98	76	93
	Native ground cover abundance	Native ground cover abundance is comparable to that of the local remnant vegetation	Percent ground cover provided by native vegetation <0.5m tall	The percent ground cover abundance of live perennial vegetation (<0.5m in height) is comparable to the local remnant vegetation	%	7	35	38	6	68	31	17.8	37.5
	Ecosystem growth and natural recruitment	The vegetation is maturing and/or natural recruitment is occurring at rates similar to those of the local remnant vegetation	shrubs and juvenile trees 0 - 0.5m in height	The number of shrubs or juvenile trees <0.5m in height provides an indication of establishment success and/or natural ecosystem recruitment and is comparable to the local remnant vegetation	No./area	7	33	152	54	0	NA	NA	NA
			shrubs and juvenile trees 0.5 - 1m in height	The number of shrubs or juvenile trees 0.5-1m in height provides an indication of establishment success, growth and/or natural ecosystem recruitment and is comparable to the local remnant vegetation	No./area	1	22	36	33	0	NA	NA	NA
			shrubs and juvenile trees 1.5 - 2m in height	The number of shrubs or juvenile trees 1.5-2m in height provides an indication of establishment success, growth and/or natural ecosystem recruitment and is comparable to the local remnant vegetation	No./area	0	24	3	9	0	NA	NA	NA

Table 6.13 (Cont'd)
Southern Woodland Conservation Area – Completion Criteria Status 2025

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Rehabilitation Phase	Aspect or Ecosystem Component	Completion Criteria	Performance Indicators	Primary Performance Indicators	Unit of Measure	Woodland Ecosystem Range 2025		SVCA01	SVCA02	SVCA03	SVCA04	SVCA05	SVCA06
						Lower	Upper						
Phase 6: Ecosystem & Land Use Sustainability (Cont'd)	Ecosystem structure	The vegetation is developing in structure and complexity comparable to that of the local remnant vegetation	Foliage cover 0.5 - 2 m	Projected foliage cover provided by perennial plants in the 0.5 - 2m vertical height stratum indicates the community structure is comparable to the local remnant vegetation	% cover	1	2	0	2	2	1.5	0	2
			Foliage cover 2 - 4m	Projected foliage cover provided by perennial plants in the 2 - 4m vertical height stratum indicates the community structure is comparable to the local remnant vegetation	% cover	0	8	2	2.5	0	3	0	6
			Foliage cover >6m	Projected foliage cover provided by perennial plants >6m vertical height stratum indicates the community structure is comparable to the local remnant vegetation	% cover	6	23	23.5	36	0	20.5	14	3
	Tree diversity	Vegetation contains a diversity of maturing tree and shrubs species comparable to that of the local remnant vegetation	Tree diversity	The diversity of trees or shrubs with a stem diameter >5cm is comparable to the local remnant vegetation	Species/ area	1	2	2	2	0	NA	NA	NA
				The percentage of maturing trees and shrubs with a stem diameter >5cm dbh which are local endemic species and these percentages are comparable to the local remnant vegetation	%	100	100	100	100	0	NA	NA	NA
	Tree density	Vegetation contains a density of maturing tree and shrubs species comparable to that of the local remnant vegetation	Tree density	The density of shrubs or trees with a stem diameter > 5cm is comparable to the local remnant vegetation	No./ area	15	80	25	20	0	NA	NA	NA
	Ecosystem health	The vegetation is in a condition comparable to that of the local remnant vegetation.	Healthy trees	The percentage of the tree population which are in healthy condition and that the percentage is comparable to the local remnant vegetation	% population	16	59	30	43	0	NA	NA	NA
			Flowers/fruit: Trees	The presence of reproductive structures such as buds, flowers or fruit provides evidence that the ecosystem is maturing, capable of recruitment and can provide habitat resources comparable to that of the local remnant vegetation	% population	0	6	0	30	0	NA	NA	NA

Green = Meets or exceeds completion criteria.

Blue = Soil performance indicator target falls within industry guidelines but may not be similar to local soils.

NA = Not Applicable.

Source: DnA Environmental (2025) – Modified after Table 5-9.

Table 6.14
Farmland – Completion Criteria Status 2025

Rehabilitation Phase	Completion criteria	Performance Indicators	Unit of measure	Pasture						Woodland		
				UGPast01	UGPast02	UGPast03	UGPast04	UGPast05	UGPast06	UGWood01	UGWood02	UGWood03
Phase 3: Landform establishment and stability	Landform suitable for final land use and generally compatible with surrounding topography and final landform design	Slope	< Degrees (18°)	2	2	3	5	2	2	2	1	4
	No visible subsidence cracking	No. Subsidence Cracks	No.	0	0	0	1	0	2	0	1	0
		Sum of subsidence cracks width	m	0	0	0	1.20	0	2.20	0	1.3	0
Phase 4: Growth medium development	Soil properties are suitable for the establishment and maintenance of selected vegetation species	pH	pH (5.6-7.3)	6.2	6.2	6.0	6.2	6.6	6.4	5.2	5.7	6.0
		Organic Matter	% (>4.5)	7.0	6.8	5.6	5.2	8.2	4.1	4.9	3.9	5.5
		Phosphorous	mg/kg (50)	54.0	140.0	8.3	8.2	150.0	14.0	6.9	4.5	11.0
Phase 5: Ecosystem & Land Use Establishment	Landform is stable and performing as it was designed to do	LFA Stability	%	79.3	78.4	80	74.4	83.8	73.7	65.5	67.9	71
		LFA Landscape organisation	%	100	100	100	100	100	100	95	94	100
Phase 6: Ecosystem & Land Use Development	Landform is ecologically functional and performing as it was designed to do	LFA Infiltration	%	56.6	55.2	57.8	46	57.8	46.9	45	46.2	43.9
		LFA Nutrient recycling	%	57.6	53.1	53.1	47.7	55.5	48.5	42.9	45.5	44.8
	Ground layer contains protective ground cover and habitat structure comparable with the local remnant vegetation	Perennial plant cover (< 0.5m)	%	81.5	31	73.5	76	62	28.5	5	2.5	24
		Total Ground Cover	%	100	100	100	98	100	98.5	89.5	88	91
	Native ground cover abundance is comparable to that of the local remnant vegetation	Percent plant cover <0.5m	% cover	81.5	31	73.5	76	62	28.5	5	2.5	24
	The vegetation is developing in structure and complexity comparable to that of the local remnant vegetation	Foliage cover 0.5 - 2 m	% cover	5.5	3.5	4	3	0	0	2	11.5	3.5
		Foliage cover 2 - 4m	% cover	0	0	0	0	0	0	9.5	15	3.5
		Foliage cover 4 - 6m	% cover	0	0	0	0	0	0	5	17	5
		Foliage cover >6m	% cover	0	0	0	0	0	0	3	11	1
	Green = Meets or exceeds completion criteria.											
Blue = Soil performance indicator target falls within industry guidelines but may not be similar to local soils.												
NA = Not Applicable.												
Source: DnA Environmental (2025)												

Subsidence impacts over several years near UGWood01 and UGWood02 have resulted in vegetation loss and/or reduction in health, including loss of larger specimens. Significant surface cracking near SVCA04 was also observed. SVCA06 recorded improved levels of ground cover, while SVCA05 continues to have observed subsidence impacts, however slight improvements of ground cover were observed this year. No obvious signs of subsidence were observed in UGWood03, SVCA01 and SVCA02, however, significant ponding was observed downslope of the monitoring areas. No new surface cracking was observed at any pasture site, however, surface cracking previously observed at UGPast04 and UGPast06 remained constant with the previous monitoring period.

Eleven priority and declared weed species were recorded across the underground mining monitoring sites, with the most common species being Galenia (*Galenia pubescens*) and Fireweed (*Senecio madagascariensis*).

Reportable Incidents

No reportable incidents were recorded during the reporting period.

Further Improvements

As a result of the monitoring undertaken during the reporting period the following improvements will continue to be investigated during future reporting periods.

- Strategic grazing management will be reintroduced to effectively manage weed biomass and fuel loads once effective subsidence have been complete.
- Within the Bowmans Creek Riparian corridor, consideration of investigations to identify crucial erosion areas and where rehabilitation and restoration works are required.
- Habitat enhancement plantings, particularly within the narrow casuarina woodland areas, will also be considered. Plantings will include a high proportion of shrubs, native grasses, and reeds to aid with erosion control.

Ongoing weed control will also continue to be undertaken, including manual methods and use of cut and paste herbicide where existing native trees and shrubs are present to minimise collateral mortality associated with broadcast spraying.

6.7 HERITAGE

Management of heritage was undertaken in accordance with the April 2023 Heritage Management Plan. The following heritage inspections and salvage works were undertaken by Stratum Archaeology Pty Ltd during the reporting period in accordance with Aboriginal Heritage Impact Permits and S140 Excavation Permit (historic heritage).

- Inspections/assessments were undertaken for:
 - Historic shepherds hut.
 - Arther Fletcher RUMEx testing area.
 - Overflow carpark fence.
 - LW208 and LW207B subsidence cracking repair works.

- Annual inspection of archaeological sites outlined within the Heritage Management Plan.
- Desktop due diligence reviews of pipeline trenching in previously cleared areas.

Where relevant, all works were undertaken with representatives for ACOL Registered Aboriginal Parties and all recovered artefacts were placed in the ACOL secure temporary artefact storage room at the ACOL administration building.

Ongoing consultation with the Aboriginal community also continued through the ACCF, of which two meetings were held during the reporting period, the first on 2 June and the second on 18 November 2025. During the ACCF meetings, Company personnel and representatives of the Aboriginal community discussed current and future mine activities, upcoming cultural heritage and archaeological fieldwork, and any issues associated with the management of cultural heritage on site.

During the reporting period, the Heritage Management Plan was reviewed and updated as part of the Extraction Plan for LW403-406. Currently no further improvements or changes to heritage management are planned during the next reporting period.

6.8 SUBSIDENCE

Environmental Management

To date, six Extraction Plans have been prepared/approved for the ACP. Environmental assessments, public safety management plans, subsidence assessments and subsidence monitoring plans have been incorporated into Extraction Plans as required. Copies of all relevant Extraction Plans and approvals are available on the ACP website.

Environmental Performance

Underground longwall mining operations commenced in February 2007, with mining of the PG seam (LW1 to LW8) and ULLD seam (LW101 to LW106A) since completed. Second workings within LW206A and LW206B were completed 16 October 2022 and 6 March 2023 respectively. Longwall extraction of LW207A and LW207B, which commenced 30 May 2023 and 3 September 2024 and were completed 20 July 2024 and 13 December 2024 respectively. Longwall extraction of LW208 commenced 02 July 2025.

Subsidence monitoring was undertaken in accordance with the *Ashton Coal Mine Longwalls 205 to 208 Extraction Plan – October 2020* and included both regular surveys following longitudinal and transverse subsidence lines as well as visual inspections of environmental, land and infrastructure features. Subsidence monitoring for each longwall includes survey lines located over the start and end line for each panel as well as various traverse cross lines relevant to the panel, surface or strata features. **Table 6.15** summarises the maximum incremental and cumulative subsidence parameters for each of the monitoring locations relevant during the reporting period.

Table 6.15
Subsidence Monitoring Results

Location	Maximum Subsidence (m)	Maximum Tilt (mm/m)	Subsidence Attributable to Longwall (m)	Results Consistent with Extraction Plan Predictions
LW207B				
LW7 CL2 - PG	2.02	-29.90	0.99	Yes
XL13	2.23	-61.30	1.51	Yes
Lemington Rd	1.38	-13.80	1.38	Yes
Source: Ashton Coal Operations Pty Limited (2025) – bi-monthly subsidence monitoring reports.				

Subsidence monitoring indicated that no exceedance of the incremental and cumulative subsidence predictions occurred at the locations monitored during the reporting period. Furthermore, no significant cracking was observed on Lemington Road during the reporting period. All observed cracking was in accordance with modelling/expectations and was on Ashton owned land and therefore was not a public safety issue. All observed surface cracking was remediated on an as needs basis and access tracks remediated and re-graded to remain serviceable. Pumping of water where ponding of water was observed as a consequence of subsidence in areas which were typically flat prior to mining operations, was conducted as needed to maintain access to services and infrastructure on site.

No impacts were recorded for the Ausgrid 11kV power lines and poles. Impacts were recorded on the 33kV transmission lines, identified during all monitoring events for the LW207B location. The impacts identified were managed according to the relevant management plans.

There were no further recorded or observed subsidence impacts, incidents, service difficulties or community complaints during the reporting period.

Reportable Incidents and Further Improvements

The results of subsidence monitoring indicate that subsidence-related impacts are generally in accordance with predicted impact levels, with no reportable incidents during the reporting period. Monitoring will continue to be undertaken in accordance with the approved Extraction Plans during the next reporting period. No further improvements to subsidence management or monitoring are considered necessary at this stage.

6.9 WASTE MANAGEMENT

Environmental Management and Performance

In accordance with *Schedule 2, Condition 39* of DA 309-11-2001-i, a summary of waste management during the reporting period is provided as follows.

Wastes generated on site during the reporting period included the following.

- Hazardous (Recycled) – sludge, effluent, empty drums, lead acid batteries, oil filters, oily water, waste grease and waste oil.
- Non-Hazardous (Recycled) – paper and cardboard, confidential documents, scrap steel and timber.
- Hazardous (Disposal) – medical and sanitary waste, oily rags, hydraulic hose and chemical anchors.
- Non-Hazardous (Disposal) – diesel particulate filters and mixed solid waste.

As part of ACOL's Environmental Management Strategy and as outlined in the current RMP for the site, appropriate waste segregation and recycling are encouraged through the provision of appropriate on site recycling facilities. Furthermore, as part of the waste collection service, a weekly review is undertaken by a JR Richards supervisor to identify any additional recycling opportunities.

The approximate volume of each waste stream generated during the previous five reporting periods (inclusive) is presented in **Table 6.16** together with the proportion of waste recycled.

The proportion of waste recycled is generally consistent with the previous reporting period, increasing from 47.21% in 2024 to 53.02% in 2025. The total proportion of waste recycled over the past two reporting periods remains high compared to prior years.

Table 6.16
Approximate Waste Volumes 2021 to 2025

Waste Class	Waste Stream	Total Volume (kg) ¹				
		2021	2022	2023	2024	2025
Hazardous (Recycled)	Sludge	13,158	17,646	9,268	114,928	1,680
	Paint	-	-	1,850	3,414	3,656
	Effluent (Off Site)	-	-	500	-	-
	Empty Drums	3,759	3,527	3,590	2,112	1,720
	Lead Acid Batteries	696	1,038	2,660	970	398
	Oil Filters	2,500	2,011	1,056	3,004	2,662
	Oily Water (Off Site)	72,284	96,987	68,627	40,690	6,733
	Waste Coolant	3,506	-	4,800	3,600	8,274
	Waste Grease	346	326	1,320	684	54
	Waste Oil	32,900	43,100	34,064	32,300	55,200
	Nicad Batteries	-	-	-	-	127
	eWaste	-	-	770	-	800
	Sub-total	129,149	164,635	128,505	201,702	81,304
Non-Hazardous (Recycled)	Paper and Cardboard	11,481	9,537	6,815	7,025	8,115
	Confidential Documents	187	165	453	278	724
	Scrap Metal	214,080	271,210	209,236	220,545	580,000
	Timber (Uncontaminated)	13,060	3,340	8,140	16,060	20,580
	Sub-total	238,808	284,252	224,644	243,908	609,419
Hazardous (Disposal)	Medical and Sanitary Waste	270	477	290	383	668
	Hydraulic Hose	794	-	210	596	-
	Chemicals Disposed	-	-	-	-	56,652
	Oily Rags	466	246	222	158	50
	Chemical Anchors	585	1,239	1,654	1,872	2,308
	Sub-total	2,115	1,962	2,376	3,009	59,678
Non-Hazardous (Disposal)	Diesel Particulate Filters	28,857	43,721	38,791	31,642	29,042
	Mixed Solid Waste	466,169	455,211	464,501	457,116	515,889
	Treated Timber	-	-	4,340	6,540	7,400
	Sub-total	495,026	498,932	507,632	495,298	552,331
Total Waste		673,280	718,969	865,098	949,781	1,302,732
Recycled Waste		271,920	295,050	367,957	448,887	690,723
Recycled Waste (%)		40.39%	41.04%	42.53%	47.26%	53.02%
Note 1: Combined waste volume generated by both the ACP open cut and underground mining operations.						
Source: J R Richards & Sons total waste management report – ACP open cut and underground.						

During the reporting period, Ashton Coal implemented the following initiatives to reduce waste generation, promote resource reuse, and raise awareness among site personnel.

1. **Internal Awareness Campaign:** A waste volumes newsletter was distributed across site teams, highlighting current waste generation trends and providing statistics to encourage proactive waste reduction.
2. **Targeted Scrap Metal Recovery:** In September 2025, a focused effort was undertaken to identify and remove redundant scrap metal items from site, enabling recycling and preventing unnecessary storage. The effectiveness of this campaign is evident from the high volume of scrap metal recycled during the reporting period compared to previous reporting periods.
3. **Asset Reuse and Sale:** A previously stored conveyor system was partially sold and repurposed, preventing disposal and supporting circular economy practices.

Reportable Incidents and Further Improvements

There were no reportable incidents relating to waste during the reporting period. Waste volumes will continue to be monitored into the future and opportunities to minimise waste or increase recycling implemented, where appropriate

7. WATER MANAGEMENT

7.1 WATER TAKE AND BALANCE

The ACP has three primary water demands: aboveground dust suppression, underground supply, and supply to the CHPP. **Table 7.1** presents the water take under each of the applicable water licences for the ACP over the 2024/2025 water year (i.e. 1 July 2024 to 30 June 2025). Total water take for the previous five reporting periods (inclusive) is also presented.

Table 7.1
Water Take – 2024/2025 Water Year

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WAL	Reference Number (Security Level)	Water Sharing Plan, Source and Management Zone	Entitlement (ML)	Passive Take / Inflows (ML)	Active Pumping (ML)	Total (ML)
Surface Water						
984	20AL201282 (General Security)	Hunter Regulated Water Sharing Plan, surface water, zone 3A (Glennies Creek)	9	49.58	376.20	425.78
997	20AL201311 (High Security)	Hunter Regulated Water Sharing Plan, surface water, zone 3A (Glennies Creek)	11			
8404	20AL200491 (High Security)	Hunter Regulated Water Sharing Plan, surface water, zone 3A (Glennies Creek)	80			
15583	20AL204249 (General Security)	Hunter Regulated Water Sharing Plan, surface water, zone 3A (Glennies Creek)	354			
Total			454			
1120	20AL201624 (High Security)	Whole Water Source (Hunter Regulated River Water Source)	3	2.59	0	2.59
1121	20AL201625 (General Security)	Hunter Regulated Water Sharing Plan, surface water, zone 1B (Hunter River from Goulburn River Junction to Glennies Ck Junction)	335			
19510	20AL211015 (High Security)	Hunter Regulated Water Sharing Plan, surface water, zone 1B (Hunter River from Goulburn River Junction to Glennies Creek Junction)	130			
Total			468			
23912	20AL211423 (Unregulated)	Hunter Unregulated and Alluvial Water Sources 2009, surface water, Whole Water Source (Jerry's Water Source) (Bowmans Creek)	14	47.95	0	47.95
36702	20AL212975 (Unregulated)	Hunter Unregulated and Alluvial Water Sources 2009, Surface water, Jerry's Management Zone (Jerry's Water Source) (Bowmans Creek)	116			
36703	20AL212976 (Unregulated)d	Hunter Unregulated and Alluvial Water Sources 2009, Surface water, Jerry's Management Zone (Jerry's Water Source) (Bowmans Creek)	150			
Total			280			
29566	20AL212287 (Unregulated)	Hunter Unregulated and Alluvial Water Sources 2009, Aquifer, Jerry's Management Zone (Jerry's Water Source)	358	71.62	0	71.62
1358	20AL203056 (Supplementary)	Hunter Regulated Water Sharing Plan, surface water, zone 3A (Glennies Creek)	4	0	0	0
6346	20AL203106 (Supplementary)	Hunter Regulated Water Sharing Plan, surface water, zone 1B (Hunter River from Goulburn River Junction to Glennies Creek Junction)	15.5	0	0	0

Table 7.1 (Cont'd)
Water Take – 2023/2024 Water Year

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WAL	Reference Number	Water Sharing Plan, Source and Management Zone	Entitlement (ML)	Passive Take / Inflows (ML)	Active Pumping (ML)	Total (ML)
Groundwater						
41501	20AL216171	North Coast Fractured and Porous Rock Groundwater Sources 2016, Sydney Basin-North Coast Groundwater Source	100	778.88	0	778.88
41552	20AL219014		511			
41529	20AL818991		400			
41553	20AL219015		81			
Total			1092			
Total 2024/2025				950.62	376.20	1,326.82
Total 2023/2024				733.86	195.41	929.27
Total 2022/2023				1,259.53	275.45	1,534.98
Total 2021/2022				485.50	318.80	804.30
Total 2020/2021				399.45	470.10	869.55
Source: Ashton Coal Operations Pty Limited.						

Water take is measured and partitioned in accordance with the protocol detailed within the Water Management Plan (WMP), which incorporates a combination of site observations, measurements and predictions of the site water balance model. Water take occurs via two separate methods: incidental (or passive) take, and pumped surface water take. Incidental take occurs through mining-induced fracturing of aquifers which report to the underground workings. This water is removed from the mine by a network of dewatering pumps. Pumped surface water take involves active pumping from Glennies Creek and the Hunter River to provide higher quality water for a variety of uses including potable water, use in equipment and as fire-fighting water at the mine.

Both passive and active water take during the reporting period remained within licenced entitlements associated with individual WALs.

In addition to measuring water take, ACOI separately reports the ACP's water balance annually in accordance with the Mineral Council of Australia's *Water Accounting Framework for the Minerals Industry* (2012). **Table 7.2** provides a summary of the water inputs and outputs as well as the changes in water storage at the ACP during the reporting period.

Table 7.2
Input / Output Water Balance – 2025 Calendar Year

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Input / Output	Component	Sub – Component	Water Volume (ML) ¹
2025 Inputs	Surface Water	Precipitation and Runoff	1,075.1
		Rivers and Creeks	327.5
		External Surface Water Storages	0
	Groundwater	Aquifer Interception	1,565.4
		Bore Fields	0
		Entrainment	50.8
	Third Party Water	Contract / Municipal	0.8
		Waste Water	0
	Total Inputs		

Table 7.2 (Cont'd)
Input / Output Water Balance – 2025 Calendar Year

Page 2 of 2

Input / Output	Component	Sub-Component	Water Volume (ML) ¹
2025 Outputs	Surface Water	Discharge	0.0
		Environmental Flows	0.0
	Groundwater	Seepage	1,457.5
		Reinjection	0.0
	Supply to Third Party		0.0
	Other	Evaporation	128.1
		Entrainment	1,020.2
		Other (e.g. ventilation moisture loss)	158.3
	Total Outputs		2,764.1
Total Inputs minus Total Outputs		255.5	
Note 1: Volumes represent a combination of measured, simulated and estimated volumes with variable levels of confidence (low to high).			
Source: ATC Williams.			

7.2 SURFACE WATER

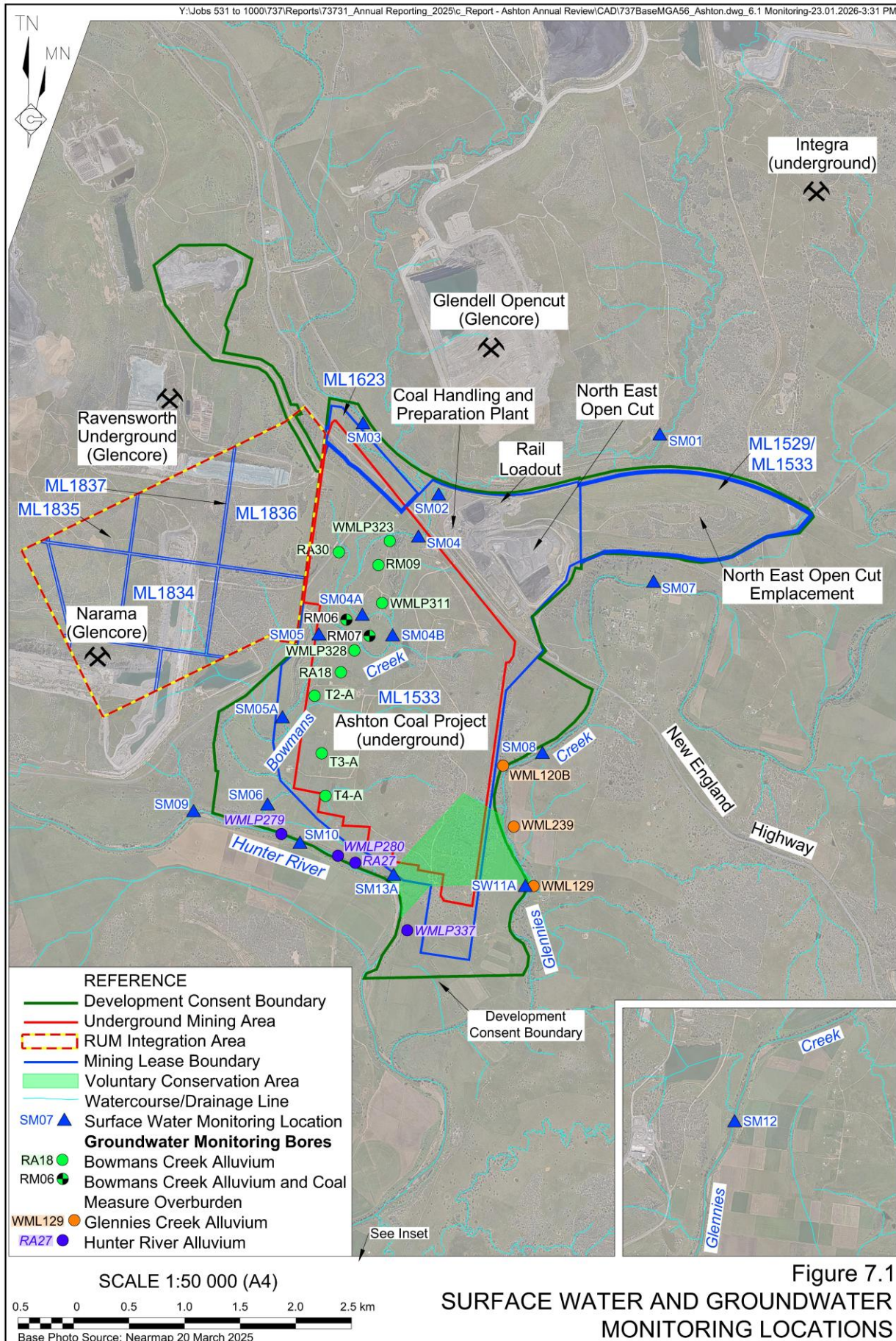
Environmental Management

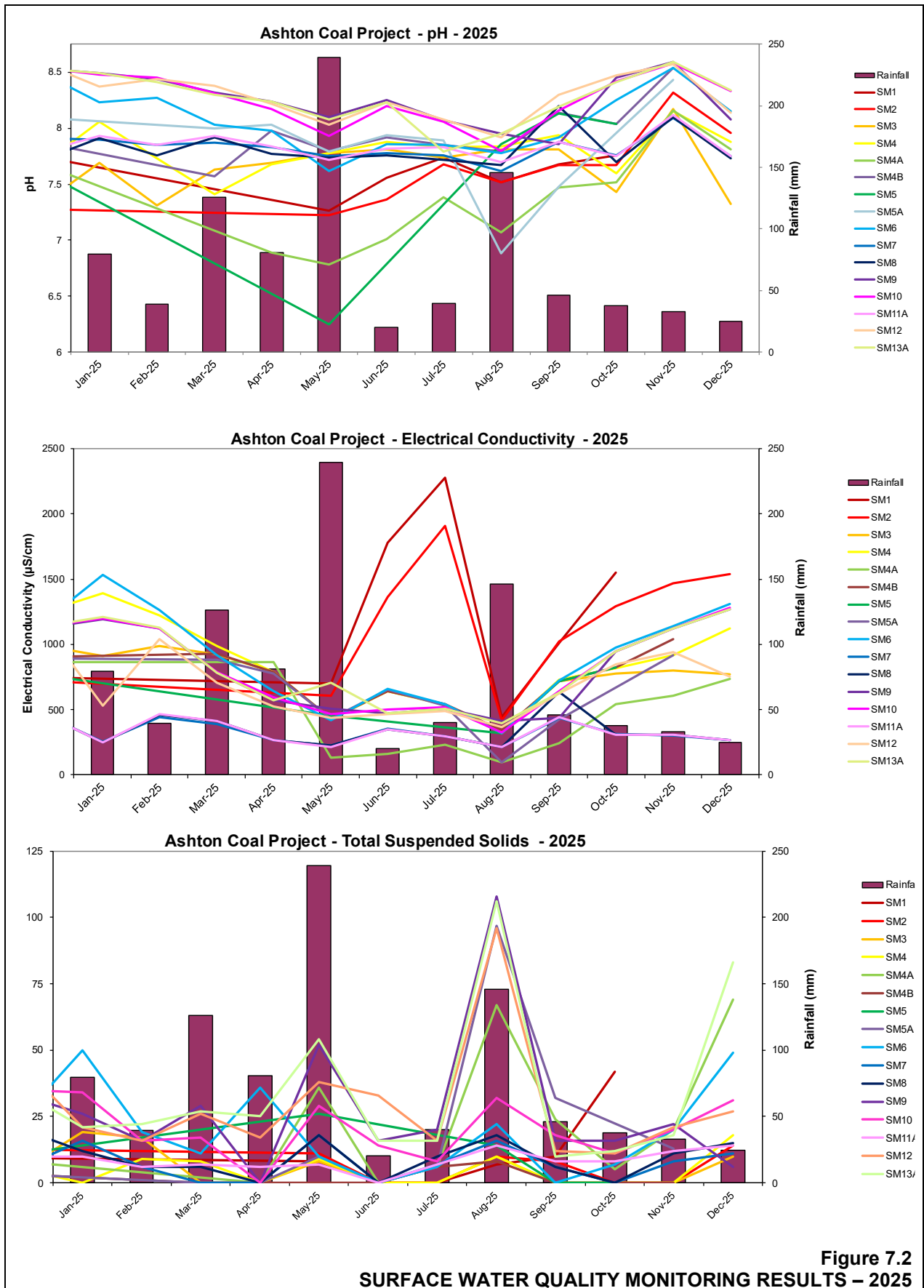
Surface water management at the ACP is conducted in accordance with the approved WMP and associated surface water monitoring program. The ACP site is a zero discharge site. No discharge off site occurred during the reporting period and no compensatory water was required by or provided to private landholders during the reporting period.

Environmental Performance

Water quality for the creeks and river surrounding ACP is monitored monthly by an independent consultant at sixteen (16) approved monitoring sites (see **Figure 7.1**) with sample analysis by a NATA accredited laboratory. Surface water quality (SWQ) monitoring data for the reporting period is summarised in **Table 7.3** and presented graphically in **Figure 7.2**. Data since 2012 is presented in **Figure 7.3**.

SWQ trigger levels specified within the WMP (and reproduced in **Table 7.3**) must be exceeded on three consecutive readings, or differ significantly from the preceding three readings, before an action response is required. **Table 7.4** provides a summary of instances during the reporting period where trigger levels were exceeded on three (or more) occasions.





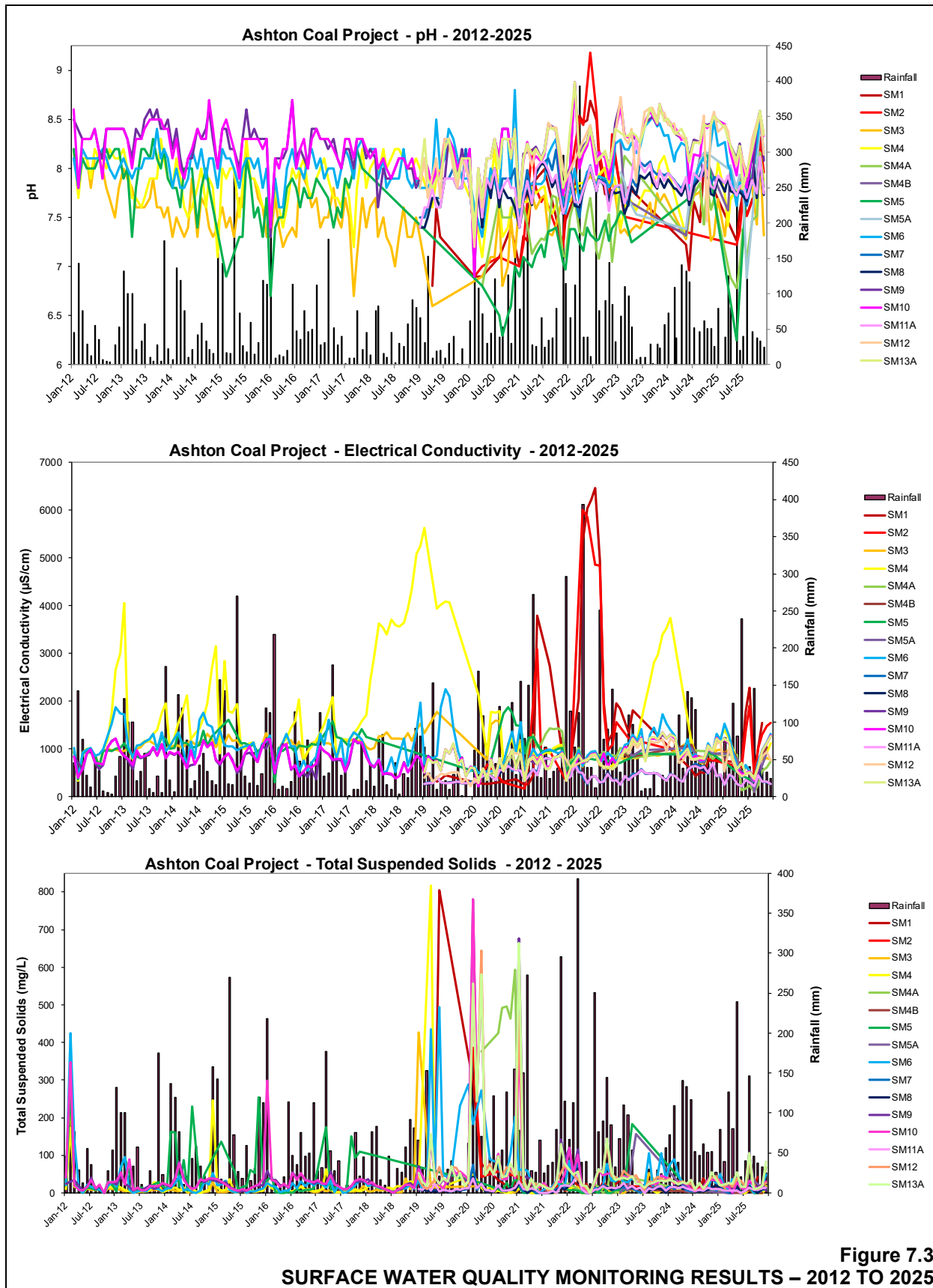


Table 7.3
Surface Water Monitoring Summary – 2025

Sampling Site [^]	pH	pH Trigger Value ¹	EC (µS/cm)	EC Trigger Value ²	TDS (mg/L)	TDS Trigger Value ²	TSS (mg/L)	TSS Trigger Value ²
Bettys Creek								
SM1	7.26 – 7.76 (7.59)	<6.97 - >7.70 [<6.60 - >8.00]	440 – 2,280 (1,293)	>1,198 [>1,811]	418 – 1,410 (904)	>794 [>1,193]	<5 – 42 (13)	>122 [>273]
SM2	7.31 – 7.95 (7.60)	<6.87 - >7.63 [<6.60 - >7.90]	416 – 1,910 (1,202)	>1,144 [>1,803]	400 – 1,150 (794)	>732 [>1,105]	<5 – 14 (8)	>116 [>116]
Bowmans Creek								
SM3	7.31 – 8.17 (7.68)	<7.42 - >7.88 [<7.20 - >8.10]	318 – 986 (715)	>1,440 [>1,620]	253 – 886 (448)	>878 [>965]	<5 – 19 (8)	>20 [>62]
SM4	7.41 – 8.15 (7.82)	<7.71 - >8.09 [<7.4 - >8.4]	321 – 1,390 (824)	>3,656 [>10,790]	260 – 966 (504)	>2,270 [>6,331]	<5 – 18 (7)	>37 [>104]
SM4A	6.78 – 8.16 (7.34)	<7.67 - >8.01 [<7.40 - >8.30]	92 – 862 (400)	>1,140 [>1,796]	162 – 468 (276)	>653 [>1,067]	<5 – 69 (29)	>19 [>44]
SM4B	7.57 – 8.54 (7.98)	NYA	341 – 1,040 (730)	NYA	275 – 635 (451)	NYA	<5 - 8 (5)	NYA
SM5	6.25 – 8.13 (7.57)	<7.66 - >7.97 [<7.50 - > 8.10]	319 – 820 (577)	>1,542 [>1,796]	258 – 524 (405)	>891 [>1,031]	<5 – 26 (13)	>20 [>31]
SM5A	6.88 – 8.43 (7.81)	NYA	97 – 915 (588)	NYA	243 – 529 (379)	NYA	<5 – 97 (22)	NYA
SM6	8.20 – 8.54 (8.04)	<7.84 - >8.23 [<7.60 - >8.40]	315 – 1,530 (869)	>1,108 [>1,831]	264 – 1080 (533)	>642 [>810]	<5 – 50 (20)	>26 [>60]
Glennies Creek								
SM7	7.62 – 8.09 (7.82)	<7.66 - >8.03	211 - 442 (312)	>577	138 – 378 (217)	>342	<5 – 18 (9)	>19
SM8	7.67 – 8.20 (7.83)	<7.62 - >7.96	183 – 457 (308)	>562	146 – 368 (225)	>334	<5 – 18 (10)	>22
SM11A	7.70 - 8.12 (7.84)	<7.74 - >8.02	211 – 463 (314)	>564	144 – 364 (213)	>332	<5 – 14 (9)	>20
Hunter River								
SM9	7.86 – 8.59 (8.24)	<8.00 - >8.32	405 – 1,297 (779)	>942	291 – 917 (485)	>541	<5 – 108 (28)	>34
SM10	7.80 – 8.58 (8.24)	<8.00 - >8.32	325 – 1,280 (791)	>942	265 – 902 (485)	>526	<5 – 34 (20)	>42
SM12	7.92 – 8.57 (8.26)	<7.84 - >8.24	366 – 1,040 (643)	>728	290 – 555 (393)	>415	<5 – 96 (28)	>36
SM13A	7.79 – 8.59 (8.25)	<8.02 - >8.32	393 – 1,270 (811)	>927	308 – 842 (489)	>516	10 – 106 (34)	>41
() = Average³ [] = no / low flow trigger value NS – Not Sampled (Dry) ^ See Figure 7.1 * Single data point NYA – Not Yet Available. Sites SM4B and SM5A have recently been established and insufficient data is available to set appropriate trigger levels. Once sufficient data has been collected, trigger levels will be set and the WMP updated as appropriate. Bold Red Text – Exceedance of Trigger Level for three consecutive samples. Note 1: pH trigger values are less than the 20th and 5th percentile of baseline values (i.e. to December 2011) for each site during flow and no / low flow conditions respectively. Note 2: EC and TSS trigger values are greater than the 80th and 95th percentile of baseline values (i.e. to December 2011) for each site during flow and no / low flow conditions respectively. Note 3: Instances where TSS <5 was recorded a value of 5 was utilised for the purpose of calculating the average. Source: Ashton Coal Operations Pty Limited.								

Table 7.4
Consecutive Surface Water Trigger Level Exceedances

Parameter	Monitoring Location ¹	Period
pH	SM4A	April – November
	SM9	September 2024 ² – February 2025, August – November
	SM10	September 2024 ² – February 2025, October – December
	SM12	July 2024 ² – March, September – October
	SM13A	September 2024 ² – February 2025, October – December
EC	SM2	October – December
	SM6	November 2024 ² – February 2025
	SM9	September 2024 ² – February 2025, October – December
	SM10	September 2024 ² – February 2025, October – December
	SM12	October – December
	SM13A	September 2024 ² – February 2025, October – December
TDS	SM2	October – December
	SM9	September 2024 ² – February 2025, October – December
	SM10	September 2024 ² – February 2025, October – December
	SM12	October – December
	SM13A	September 2024 ² – February 2025, October – December
Note 1: see Figure 7.1 .		
Note 2: Consecutive exceedance commencing previous reporting period.		

In summary, three (or more) consecutive exceedances of pH, EC, or TDS trigger values were recorded across seven monitoring sites during the reporting period. The Hunter River sites (SM9, SM10, SM12 and SM13A) recorded EC and TDS exceedances at all locations during the period September 2024 to February 2025 and October 2025 to December 2025.

In accordance with the Water Management Plan the trigger level exceedances were investigated. Investigations were undertaken as an external assessment by ATC Williams. Investigations conclude the low variability of pH in the Hunter River monitoring sites from upstream of Bowmans Creek (SM9) to downstream of Glennies Creek (SM12A) indicate exceedances of the trigger levels are not likely caused by mining-related effects. The low variability of EC and TDS in the Hunter River upstream of Bowmans Creek (SM9) to the downstream monitoring sites (SM10 and SM13A) and Glennies Creek (SM12A) also indicate exceedances are not likely caused by mining-related effects.

ATC Williams suggest events of higher and lower pH are linked to periods of low and high flows, while the EC and TDS exceedances could be driven by increasing salinity in streamflow as a result of drying conditions, or other activities conducted upstream of the ACP. No data indicates mining-related effects.

Reportable Incidents

As the external assessment of trigger action response levels determined water quality was not affected by the ACP, in accordance with the approved WMP, the exceedance of trigger levels was not reportable. No reportable incidents occurred during the reporting period.

Further Improvements

Exceedances of trigger levels will continue to be investigated in accordance with the approved WMP.

7.3 GROUNDWATER

Environmental Management

Groundwater management at the ACP is conducted in accordance with the approved WMP and associated groundwater monitoring program. A groundwater model based on mine plans and past groundwater monitoring results is employed to predict changes to the local hydrological regime and potential impacts on groundwater associated with ACP activities. In order to determine if groundwater impacts associated with ACP operations remain consistent with those predicted, a groundwater monitoring network has been established (see **Figure 7.1**) targeting the following aquifers.

- Saturated quaternary sediments (alluvium) including:
 - Bowmans Creek Alluvium (BCA);
 - Glennies Creek Alluvium (GCA); and
 - Hunter River Alluvium (HRA).
- Shallow Permian sandstone and minor coal seams, referred to as coal measures overburden (CMOB).
- Permian coal measures of varying thickness targeted by mining (Coal Measure).

As part of the approved WMP, impact assessment criteria and TARPs have been developed to investigate and, if necessary, respond to any monitoring results that are inconsistent with predicted impacts / defined criteria.

Environmental Performance

Groundwater monitoring was undertaken by Australasian Groundwater and Environmental Consultants Pty Ltd (AGE) throughout the reporting period including both water level and water quality. A detailed annual groundwater summary prepared by AGE is presented as **Appendix 2**, with key monitoring observations from the AGE report summarised in the following sections.

Groundwater Levels

Monitoring results for the regulatory BCA bores indicated that groundwater levels remained relatively stable or declining, except for in May and August where heavy rainfall caused a temporary increase. Groundwater levels remained above the established triggers in all bores for the entire duration of the reporting period. Groundwater levels in the other BCA bores were generally stable, increasing from early 2025 to August before declining for the remainder of the reporting period, reflecting rainfall patterns.

Monitoring results for GCA bores indicated that groundwater levels were relatively stable. WMLP343 was unable to be sampled until August 2025 due to sediment buildup in the screen interval. Airlift development is planned to address the sediment buildup. Groundwater levels remained above the established triggers in all bores for the entire duration of the reporting period.

Groundwater Quality

As previously recorded, pH within alluvial bores was slightly acid to slightly alkaline and groundwater within Coal Measure and CMOB bores was generally neutral to slightly alkaline within the following ranges.

- BCA – pH 6.42 to pH 7.90
- GCA – pH 6.48 to pH 8.32
- HRA – pH 6.31 to pH 8.51
- Coal Measure – pH 6.46 to pH 8.64
- CMOB - pH 6.79 to pH 7.95

The pH levels for the BCA, GCA and HRA bores, including WMLP349 and WMLP358, recorded multiple exceedances of groundwater pH trigger values during the reporting period. These exceedances are attributed triggers not being representative of long-term climatic conditions. The pH levels recorded for coal measure and CMOB bores remained stable and with only minimal deviations occurring as result of natural variation.

During the reporting period the electrical conductivity (EC) within all monitored aquifers ranged from fresh to brackish as follows.

- BCA – 213µS/cm to 3,878µS/cm
- GCA – 230µS/cm to 1,049µS/cm
- HRA – 378µS/cm to 3,169µS/cm
- Coal Measure – 104µS/cm to 4,604µS/cm
- CMOB – 437µS/cm to 1,940µS/cm

Groundwater EC levels recorded for BCA, GCA and HRA bores remained relatively stable to slightly declining over the reporting period with the exception of WMLP358 which consistently exceeded the trigger levels throughout the year with four recorded exceedances. The investigation by AGE concluded that the variability in rainfall recharge during the period used to derive the triggers was not representative of average long term rainfall variation at ACOL. AGE recommends revising trigger thresholds to better reflect natural variability. Exceedances were also recorded at HRA bores WMLP279 and WMLP337 in April. Coal measure and CMOB EC levels were variable throughout the reporting period, with most bores showing an overall decrease. WML181 recorded a general increase in EC consistent with the previous reporting period.

Analysis of major ions indicated that the similar CMOB, BCA and HRA water types are distinguishable from the GCA and the Coal Measure water types, due to the differing water source and recharge/discharge mechanism associated with each body. Dissolved metals, select nutrients, turbidity and cyanide concentrations were also compared against ANZECC/ARMCANZ

livestock limits (ANZECC and ARMCANZ, 2000). There were no exceedances of the assessed analytes during the reporting period, including phosphorus, which had recorded an exceedance of the lower limit in the previous reporting period.

Generally, the site has experienced minimal impacts to the BCA, and no mining impacts to the GCA and HRA alluvial aquifers and impacts are within predictions in the coal measures.

Reportable Incidents

No reportable incidents occurred during the reporting period. Whilst the trigger action response within the WMP was enacted for pH and EC results within multiple bores, these were subsequently investigation by AGE. These investigations recommended revised pH and EC triggers be derived for monitoring bores using the latest data collected which better represent seasonal climate variability.

Further Improvements

Monitoring will continue in accordance with the current Water Management Plan (WMP). Review of pH and EC trigger levels will also be undertaken and updates proposed as appropriate.

8. REHABILITATION

8.1 REHABILITATION PERFORMANCE DURING THE REPORTING PERIOD

Figure 8.1 shows the status of rehabilitation and a summary of the areas of rehabilitation is provided in Table 8.1.

Table 8.1
Rehabilitation Summary

Mine Area Type	Previous Reporting Period (Actual)	This Reporting Period (Actual)	Next Reporting Period (Forecast) ³
	2024 (ha)	2025 (ha)	2026 (ha)
Total mine footprint ¹	1,326.4 ⁴	1,326.4 ⁴	1,326.4 ⁴
Total active disturbance ¹	245.0	245.5	245.0
Land being prepared for rehabilitation	0	0	0
Land under active rehabilitation ¹	738.5	739.8	739.8
Completed rehabilitation ²	0	0	0
Note 1: Includes subsidence remediation areas.			
Note 2: Areas which have been formally relinquished or signed off by the relevant agency.			
Note 3: Estimates of additional areas of subsidence remediation have not been included within forecast values.			
Note 4: Includes the ACOL-operated RUM.			

Rehabilitation of other disturbance associated with the various minor surface disturbing activities, as outlined in the Ground Disturbance Permits (see Section 4.3) will be undertaken during future reporting periods.

No permanent buildings were structurally altered, renovated or removed during the reporting period and no rehabilitation trials or research was undertaken during the reporting period. A summary of rehabilitation monitoring and activities is provided as follows.

North-east Open Cut Rehabilitation

Monitoring of NEOC rehabilitation was undertaken between 5 to 14 May 2025 by DnA Environmental. Revised completion and performance criteria were developed during the 2021 reporting period in consideration of relevant rehabilitation guidelines and have subsequently been utilised for performance evaluation.

Monitoring of the NEOC rehabilitation area includes assessment of areas rehabilitated to *mixed woodland habitat* (formerly “Trees Over Grass”) and *exotic pastures*. Rehabilitation of the NEOC overburden emplacement commenced in 2005, with the entire ~140ha of rehabilitation being completed in 2012. There is currently ~68ha of rehabilitated exotic pasture and ~71ha of native trees and shrubs.

During the 2019 reporting period it was decided, following advice from DnA Environmental, that livestock grazing was no longer considered an appropriate post-mining land use option for the NEOC rehabilitation. Instead, a single final land use domain, “*Mixed eucalypt woodland habitat*”, consisting of additional woodland habitat of various densities and a higher diversity of shrubs, will cover the areas formerly referred to as *Pasture* and *Trees-over-Grass*.

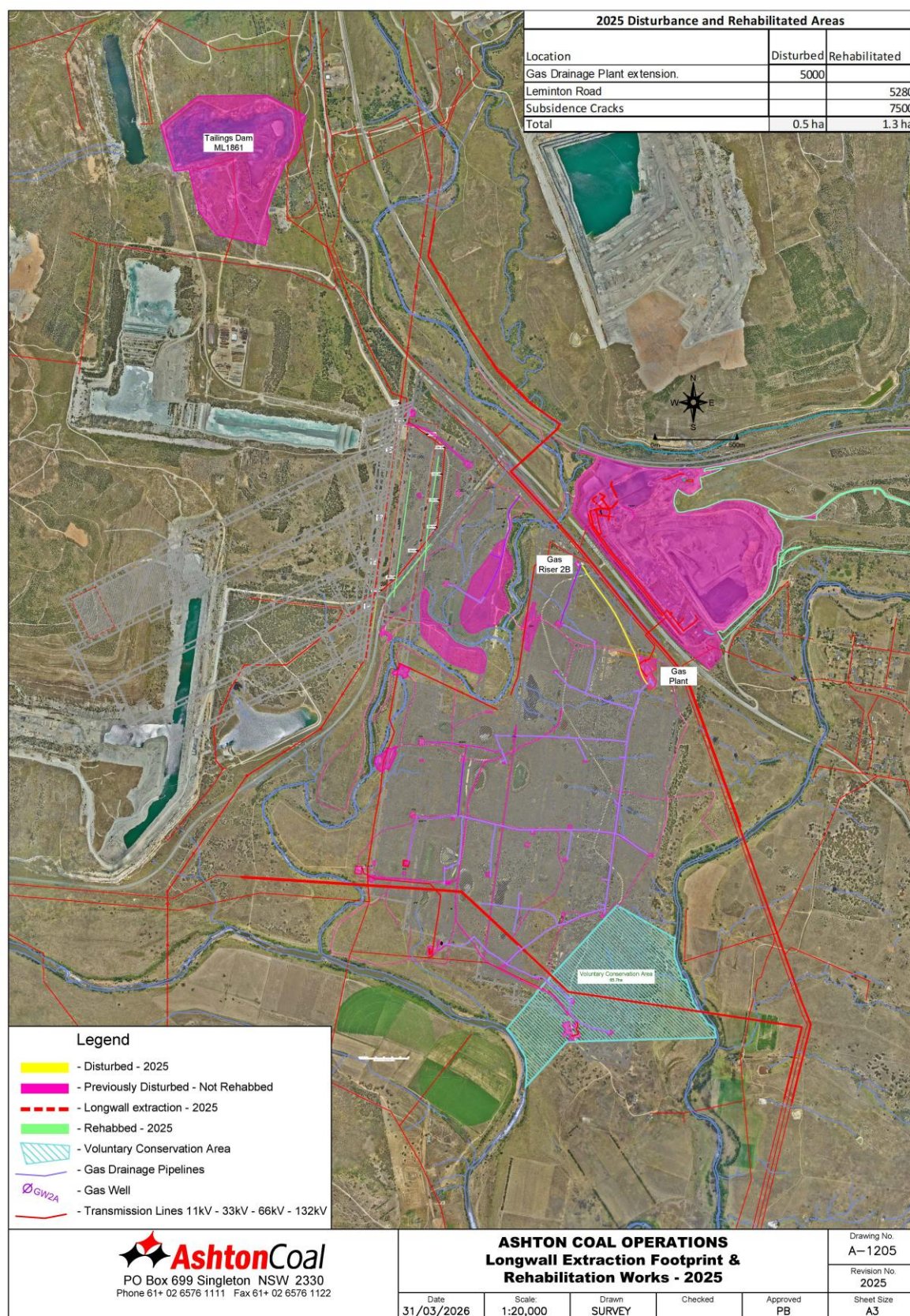


Figure 8.1
REHABILITATION ACTIVITIES – UNDERGROUND AREA (1 JANUARY – 31 DECEMBER 2025)

To reflect significant rehabilitation progress and ecosystem development, monitoring methodology were revised during the 2020 reporting period. In summary, the monitoring methodology was reduced from quadrat based to transect based surveys for all rehabilitation sites on the NEOC in 2020, with these methodologies (quadrat versus transect) being undertaken during autumn in alternating years. During the 2025 reporting period, transect based monitoring was undertaken.

It is intended to convert approximately 15ha of exotic pasture areas into areas of eucalypt woodland habitat over a five-year period (subject to suitable meteorological conditions). This updated rehabilitation strategy has been reflected within the Rehabilitation Management Plan (RMP).

Rehabilitation monitoring continued to assess the performance of both the existing mixed woodland habitat and exotic perennial pastures, with three woodland rehabilitation sites and four exotic pasture rehabilitation sites being monitored in 2025. Rehabilitation performance is compared against the RMP proposed completion criteria using performance indicators obtained from non-mining-disturbed reference sites. Three mixed eucalypt woodland and three native grassland reference sites were established in 2019. The range values of each performance indicator will be measured annually to reflect seasonal conditions and disturbance events.

Rehabilitation performance is assessed against the completion criteria summarised in **Table 8.2**. Completion criteria targets are met if they are within the specified target ranges recorded at corresponding woodland or grassland reference sites, as represented by an appropriately coloured box.

The outcomes of the 2025 monitoring demonstrate that many completion targets have been met, with some exceptions. Ecological performance indicators for the mixed eucalypt woodland habitat and exotic pastures demonstrate these rehabilitated areas have generally developed into highly functional and stable communities, functionally comparable to the local woodlands and native grasslands.

Some parts of the woodland rehabilitation may have low perennial groundcover due to the high densities of trees, while some areas may also be affected by adverse soil chemistry and/or disturbance by macropods, especially when conditions have been dry. Notwithstanding the above, DnA Environmental state that there is little need for management intervention of the existing woodland habitats of the NEOC, particularly in the light of the revised rehabilitation objectives.

Observations in the vicinity of rehabilitation habitat structures (large upside-down tree trunks) show a high abundance of native species known to be dispersed by birds. In particular, *Einadia nutans* (climbing saltbush) and *Enchylaena tomentosa* (ruby saltbush) were in high abundance in the immediate vicinity of the erected trunk, however, weed species (e.g. *Solanum sp.*, *Lycium ferocissimum*) may also be introduced in these areas. DnA Environmental suggest that additional habitat structures such as large trees, logs, rock piles and nest boxes would likely increase available habitat within the NEOC.

Table 8.2
North East Open Cut Rehabilitation Area – Rehabilitation Sites Completion Criteria Status 2025

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Rehabilitation Phase	Completion criteria	Performance Indicators	Unit of measure	Exotic Pasture Sites				Woodland Sites		
				M2008 01	M2008 02	M2009 01	M2010 01	M2008 03	M2012 03	M2012 04
Phase 3: Landform Establishment	Landform suitable for final land use and generally compatible with surrounding topography and final landform design	Slope	Degrees (<18°)	14	14	14	14	4	2	1
	Areas of active erosion are limited	No. Rills/Gullies	No.	0	0	0	0	0	0	0
		Cross-sectional areas of rills	m ²	0	0	0	0	0	0	0
Phase 4: Growth Medium Development	Soil properties are suitable for the establishment and maintenance of selected vegetation species	pH	pH (5.6-7.3)	7.0	6.8	7.8	6.8	7.8	8.8	8.0
		EC	dS/m (<0.150)	0.071	0.111	0.174	0.199	0.123	0.172	0.084
		Organic Matter	% (>4.5)	7.4	9.0	12.4	13.4	6.7	6.4	8.0
		Phosphorous	mg/kg (50)	9.7	490.0	130.0	130.0	72.0	6.7	5.7
		Nitrate	mg/kg (>12.5)	0.8	4.3	8.1	29.6	9.2	1.1	0.4
Phase 5: Ecosystem & Land Use Establishment	Landform is stable and performing as it was designed to do.	LFA Stability	%	70.5	70.1	74.1	76.6	67.2	67.1	67.3
		LFA Landscape organisation	%	97	89	98	100	99	97	100
	Pasture productivity is comparable to analogue sites.	Green Dry Matter Biomass	kg/ha	1800	1500	750	900	NA	NA	NA
Phase 6: Ecosystem & Land Use Development	Landform is ecologically functional and performing as it was designed to do	LFA Infiltration	%	43.7	46	50.6	53.6	49.5	44.9	55.2
		LFA Nutrient recycling	%	44.5	45.3	48.7	50.2	49.2	45.3	56.8
Green = Meets or exceeds completion criteria.										
Blue = Performance indicator target falls within industry guidelines or desirable ranges but may not be similar to reference sites										
NA = Not Applicable.										

Table 8.2 (Cont'd)
North East Open Cut Rehabilitation Area – Rehabilitation Sites Completion Criteria Status 2025

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Rehabilitation Phase	Completion criteria	Performance Indicators	Unit of measure	Exotic Pasture Sites				Woodland Sites		
				M2008 01	M2008 02	M2009 01	M2010 01	M2008 03	M2012 03	M2012 04
Phase 6: Ecosystem & Land Use Development (Cont'd)	Ground layer contains protective ground cover and habitat structure comparable with the local remnant vegetation.	Litter cover	%	47	47.5	23.5	28	78	88.2	91.5
		Annual plants	<%	14	0	5.5	27	1.5	1	0
		Cryptogram cover	%	1.5	0	0	0	0	0	0
		Rock	%	0.5	1	0	0	0.5	2	1.7
		Log	%	0	0	0	0	0	0	0
		Bare ground	<%	2.5	6	1	1	2.5	5	3.3
		Perennial plant cover (< 0.5m)	%	34.5	45.5	70	44	17.5	3.8	3.5
		Total Ground Cover	%	97.5	94.0	99	99	97.5	95	96.7
	Native groundcover abundance is comparable to that of the local remnant vegetation.	Percent plant cover <0.5m.	% cover	34.5	45.5	70	44	17.5	3.8	3.5
	The vegetation is developing in structure and complexity comparable to that of the local remnant vegetation.	Foliage cover 0.5m – 2m	% cover	1	2	2	4	2.5	0.2	2
Foliage cover >6m		% cover	5	0	0	0	12	7	24	
Green = Meets or exceeds completion criteria.										
Blue = Performance indicator target falls within industry guidelines or desirable ranges but may not be similar to reference sites										
NA = Not Applicable.										
Source: DNA (2025)										

DnA Environmental recommended that, whilst areas of exotic perennial pastures previously established on the NEOC are likely to persist, additional sowing of exotic species should be avoided, as these highly competitive species can restrict germination and establishment of native tree and shrub seed and reduce the diversity of desirable grasses and herbs in the longer-term.

Pest and Weed Control

A programmed range of pest and weed control activities were also undertaken across ACP rehabilitation areas, biodiversity conservation areas and buffer land during the reporting period. Pest control activities during the reporting period targeted feral pigs, rabbits and hares, wild dog and foxes.

Two 1080 baiting programs were undertaken during autumn and spring 2025. The baiting program accounted for a total of 8 wild dogs and 41 foxes. A feral pig management program involving cage trapping was implemented throughout 2025 in response to observed feral pigs and feral pig wallows on site. A total of 37 feral pigs were trapped and dispatched during the reporting period.

ACOL maintains an open range shooting program at the ACP site as part of a kangaroo culling program approved and licenced by the NSW National Parks and Wildlife Service; however, no kangaroo culling activities were undertaken during the reporting period.

Active weed control treatment was also completed across land owned by ACOL, targeting African boxthorn (*Lycium ferocissimum*) (88ha), African olive (*Olea europaea* subsp. *cuspidata*) (0.6ha), castor oil (*Ricinus communis*) (75.4ha), green cestrum (*Cestrum parqui*) (41.6ha), mother of millions (*Kalanchoe daigremontiana*) (65ha), pampas grass (*Cortaderia species*) (<0.1ha), prickly pear (*Opuntia stricata*) (52.9ha), St John's wort (*Hypericum perforatum*) (123ha), tiger pear (*Opuntia aurantiaca*) (52/9ha), general woody weeds (75.1ha), and general weeds. **Figure 8.2** displays the areas treated for weeds during the reporting period.



Source: ENRIGHT Land Management (2025) – Map 1

Figure 8.2
WEED TREATMENT AREAS – 2025

8.2 ACTIONS FOR THE NEXT REPORTING PERIOD

Rehabilitation during the next reporting period will principally relate to rehabilitation of disturbance associated with gas drainage network development and other minor infrastructure projects, as needed. Should favourable meteorological conditions persist, the first block of the woodlands rehabilitation conversion program may be undertaken within the NEOC area.

Rehabilitation of subsidence impacts will also be undertaken, as required, including surface crack backfilling, compaction, and vegetation enhancement. Ongoing repairs will be made to any subsidence-damaged infrastructure, including the right of way access road, in accordance with the approved subsidence monitoring and management plans.

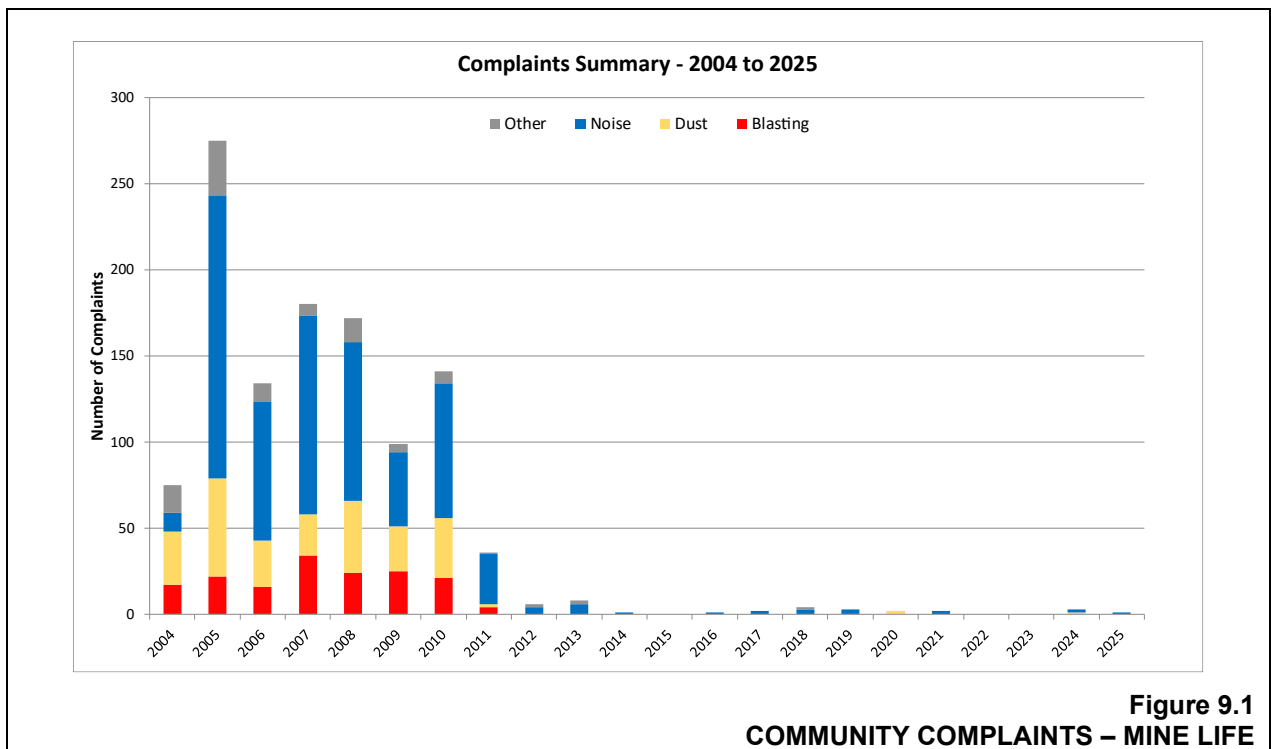
Maintenance works, such as erosion and sediment control, and ongoing control of weeds and feral pests will also be undertaken as required. Additional feral pest control options may also be investigated including those targeting feral cats, hares, rabbits and feral pigs. Other measures to improve biodiversity outcomes, as outlined in Section 6.6 of this Annual Review, will also be investigated and implemented as appropriate.

9. COMMUNITY

9.1 COMMUNITY COMPLAINTS

One complaint was received during the 2025 reporting period relating to noise.

All previous complaints, including the above, have been recorded in the complaints register (available on the Ashton Coal Website) with a summary of all complaints received over the life of the mine presented as **Figure 9.1**. There has been a decreasing trend in complaints, with the greatest reduction occurring following completion of the NEOC. Previously the nature of complaints was predominantly noise, followed by dust and blasting.



9.2 COMMUNITY LIAISON

The principal formal community consultation undertaken is via the Ashton Community Consultative Committee. In accordance with *Condition 7 of Schedule 5* of DA 309-11-2001-i, ACOL has established a Community Consultative Committee for the ACP. During the reporting period, the committee consisted of:

- three representatives of the local community (John McInerney, Debbie Richards, Michael Bestic);
- a representative from Singleton Council (Clr. Godfrey Adamthwaite); and
- at least two representatives from ACOL (Phillip Brown, Michael Bartlett, Karl Norman or Elise Albury.).

The committee was chaired by Mrs Margaret MacDonald-Hill, an independent chairperson appointed as the independent Chair by the Secretary of DPE (now DPHI).

The committee held a total of three meetings during the reporting period (27 February, 24 July and 30 October 2025). The meetings have continued to provide an opportunity for ACOL to keep the community up to date with activities undertaken and programmed at the ACP and for community members to table issues relating to the ACP for ACOL's consideration. It is noted that ACOL provided presentations during each meeting to provide updates on mine development, environmental monitoring and performance, subsidence management, planning, and other relevant matters.

Copies of minutes, presentations and annual CCC Chairperson's reports to DPHI are available on the Yancoal website at <https://www.yancoal.com.au/our-sites/ashton/ashton-documents/>.

ACOL also undertakes engagement through the ACCF. The ACCF is a community engagement process in place to ensure ongoing dialogue between the Aboriginal Community and Ashton Coal. ACCF meetings regularly discuss planned mining operations, potential impacts to Country, upcoming projects and salvage works. Two meetings were held during the reporting period in June and November 2025 and regular meetings will continue during the next reporting period (see Section 6.7 for further information).

9.3 COMMUNITY SUPPORT PROGRAM

ACOL provides support to local community groups, initiatives and sponsorships through the Community Support Program. Following applications made via ACOL's website (<https://www.yancoal.com.au/document/guidelines-community-support-program-2025-2/>), opportunities to generate positive community impacts through either monetary grants or in-kind support are identified with a focus on four categories including: social and community, environment and education, health, and training.

During the reporting period, a total of \$79,560 was allocated directly by ACOL to the following community groups and causes.

- Singleton Australian Christian College – upgrade to the basketball facilities
- Cessnock Goodstart Early Learning Centre – assistance
- Hunter Valley Physical Culture – funding of events
- Singleton Combined Early Childhood Services – art project and exhibition
- Rotary Club of Singleton – support for Singleton art prize
- Singleton Neighbourhood Centre – new uniforms
- Singleton PCYC – upgrade to dining area
- Singleton United Hospital Auxiliary – purchase of new equipment
- University of Newcastle – Engineering and Science Challenge and SMART Science Tour

10. INDEPENDENT AUDIT

In accordance with the requirements of DA 309-11-2001i (MOD11), an independent environmental audit of the ACP was commenced during the 2022 reporting period with a site inspection undertaken on 18 January 2023. The audit covered the period from 31 September 2019 to 18 January 2023. The Independent Environmental Audit report was accepted by the (then) DPE in October 2023 and is available on the Ashton Coal website at www.ashtoncoal.com.au.

An independent environmental audit was conducted during the 2025 reporting period. The report will be uploaded to the Ashton Coal website upon finalisation and acceptance by DPHI.

Table 10.1 provides a summary of the 2022 Independent Audit recommendations and ACOL's response to the audit. Outcomes of the 2025 audit will be reviewed following finalisation of the audit report and further discussed in the Annual Review for the next reporting period.

Table 10.1
2022 Independent Audit – Action Response Plan Status

Page 1 of 4

Condition	Non-Compliance	Corrective Action	ACOL Comments	Proposed Action	Action Date	Status Update
DA 309-11-2001-i						
Schedule 3 Condition 12	Ashton exceeded the 24-hour PM10 three times between 12 September 2021 and 29 October 2021. These exceedances were reported in the 2021 annual review. The most recent modification of the development consent has now formalised that the exceedance of 24-hour PM10 criteria is only applicable if the incremental impact is due to the Ashton Coal Mine Complex on its own. Therefore, no corrective action is required.	No corrective action proposed	Modification 11 to Development Consent DA No. 309-11-2001-I approved on 6th July 2022 changed the Air Quality Criteria to report only if the incremental impact is due to Ashton Mine Complex on its own (Schedule 3 Condition 12).	Nil	Nil	No further action required.
Schedule 5 Condition 1	At the time of the audit, the approved EMS (Version F, dated September 2020) did not identify MOD11 and the updated mining leases currently applicable to the site. Following the approval of MOD11, Ashton Coal wrote to DPE informing them that a review of management plans had been undertaken and that the EMS would be updated to reflect the most recent statutory approvals relevant to the development. The EMS has been submitted to DPE and is pending approval. As no further action can be undertaken to achieve compliance with this condition, no corrective action is proposed.	No corrective action proposed.	No action required. EMS modified due to Modification 11 to Development Consent DA No. 309-11-2001-I and is currently with DPE for consideration.	Nil	Nil	The updated EMS was approved by the (then) DPE on 20.04.2023. No further action required.
Statement of Compliance Modification 6, Condition 7.1	The bed and bank of Bowmans Creek are required to be surveyed every five years. This assessment was due to be undertaken in 2022, however was delayed until 2023.	Ensure that the geomorphological assessment is undertaken in 2023.	The delay in carrying out the survey was due to unavailability of Dr Chris Gippell to undertake the work and COVID restrictions. Soil Conservation Service will now undertake the survey.	Soil Conservation Service to undertake the survey.	30.06.2023	Complete The creek was surveyed by SEAM Spatial December 2023 and Dr Chris Gippell has undertaken the required survey and the report completed.

Table 10.1 (Cont'd)
2022 Independent Audit – Response to Audit

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Condition	Non-Compliance	Corrective Action	ACOL Comments	Proposed Action	Action Date	Status Update
EPL 11879 (Cont'd)						
M2.1	A non-compliance against this condition was recorded in the 2020 and 2021 EPA Annual Return, where sampling frequency for air quality was not continuous. The auditor notes that the EPL has recently been modified to include Condition M2.4. Condition M2.4 defines continuous as 95% of the time for the annual return periods for condition M2.2. Non-compliances reported in previous annual return periods had data capture percentages above 95%, and would therefore be compliant under the current EPL and therefore no corrective action has been recommended.	No corrective action proposed.	The EPL was varied on 3 November 2022 to include Condition M2.4 which defines “continuous” to mean the operation of requirement to achieve a minimum pollutant and/or meteorological data capture rate of 95% for the duration of the Annual Return reporting period. No further action required.	Nil	Nil	No further action required.
M2.2	Condition M2.2 requires PM10 to be monitored continuously. PM10 was not monitored continuously in 2020 and 2021 due to outages and maintenance works. Refer to M2.1 for discussion regarding data capture in relation to the provisions of M2.4.		The EPL was varied on 3 November 2022 to include Condition M2.4 which defines “continuous” to mean the operation of requirement to achieve a minimum pollutant and/or meteorological data capture rate of 95% for the duration of the Annual Return reporting period. No further action required.	Nil	Nil	No further action required.
M2.3	One monthly surface water sample was unable to be collected from SM9 (EPL Point 6) in March 2021, due to boggy conditions preventing safe access to sampling location. As this has not occurred again since the non-compliance was reported, no corrective actions are proposed.	No corrective action proposed.	127mm of rainfall had fallen in the preceding 30 days prior to the sampling date. The sampling sheet has been modified to identify mandatory EPL sampling points to ensure that all required samples are undertaken.	Nil	Nil	No further action required.

Table 10.1 (Cont'd)
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Condition	Non-Compliance	Corrective Action	ACOL Comments	Proposed Action	Action Date	Status Update
EPL 11879 (Cont'd)						
M4.1	Weather monitoring was not undertaken continuously in 2020 and 2021 as per the requirements of this condition. Refer to M2.1 for discussion regarding data capture in relation to the provisions of M2.4.	No corrective action proposed.	The EPL was varied on 3 November 2022 to include Condition M2.4 which defines “continuous” to mean the operation of requirement to achieve a minimum pollutant and/or meteorological data capture rate of 95% for the duration of the Annual Return reporting period. No further action required.	Nil	Nil	No further action required.
M7.1	Data capture was not undertaken at 10-minute intervals during 2021. Refer to M2.1 for discussion regarding data capture in relation to the provisions of M2.4.		The EPL was varied on 3 November 2022 to include Condition M2.4 which defines “continuous” to mean the operation of requirement to achieve a minimum pollutant and/or meteorological data capture rate of 95% for the duration of the Annual Return reporting period. No further action required.	Nil	Nil	No further action required.
R1.5	The Annual Return for the 2019 reporting period was submitted on 31 March 2020, greater than 60 days since the reporting period finished on 31 December 2019. The Annual returns for 2020 and 2021 reporting period were submitted to the EPA within the 60 day timeframe. No corrective actions are proposed.	No corrective action proposed.		Nil	Nil	No further action required.
Standard Conditions Mining Regulation 2016 Schedule 8A Part 2						
16 (2)	The Forward Program is not on the website as per the requirements of this condition, therefore constituting an administrative non-compliance.	Publish the Forward Program on the website.	The Forward Program was submitted to the Resource Regulator on the 25th January 2023. The Forward Program is available on the website.	Nil	Nil	No further action required.

Table 10.1 (Cont'd)
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Condition	Non-Compliance	Corrective Action	ACOL Comments	Proposed Action	Action Date	Status Update
Standard Conditions Mining Regulation 2016 Schedule 8A Part 2 (Cont'd)						
16 (3)	The Forward Program is not on the website as per the requirements of this condition, therefore constituting an administrative non-compliance.		The Forward Program was submitted to the Resource Regulator on the 25th January 2023. The Forward Program is available on the website.	Nil	Nil	No further action required.
DA 309-11-2001-i						
Schedule 3 Condition 40	A bushfire management plan has been prepared for the site, however, was last updated in 2014.	Whilst not a statutory non-compliance, it is recommended that the bushfire management plan is reviewed and updated.	The Bushfire Management plan is an internal document and was in draft form having been reviewed in 2019.	Update Bushfire Management Plan	31.03.2023	Complete The Bushfire Management Plan was further updated in October 2023.
EL 11879						
O5.1	Ashton informed the auditors that minor amendments have been made to the PIRMP. It is recommended that the PIRMP be formally updated through a new revision.	Ensure that the PIRMP is updated as per the outcomes of the PIRMP test. Publish the updated PIRMP to the project website and make available to site staff.		Update PIRMP and publish on the ACOL website	31.03.2023	Complete The PIRMP on the Ashton website is dated 8 January 2024

11. INCIDENTS AND NON-COMPLIANCES DURING THE REPORTING PERIOD

During the reporting period there were no:

- non-compliances with the mining leases or water access licences; or
- official cautions, warning letters, penalty notices or prosecution proceedings.

Two internal incidents were recorded during the reporting period as follows.

- On 7 June 2025 visible dust was observed on the tailings dam. Investigations into the incident determined that the cause was significant wind conditions in the region. No further actions were required and the event was determined not to be a reportable incident.
- On 9 June 2025 and 10 June 2025, a diesel spill was identified from a medium service cart during the pre-start. Investigations into these incidents determined the cause to be a leak coming from the Banlaw fitting. This accessory was replaced and the spill was contained and cleaned appropriately. No further actions were required and the events were determined not to be a reportable incident.

12. ACTIVITIES TO BE COMPLETED IN THE NEXT REPORTING PERIOD

Activities planned to be completed during the next reporting period are outlined in Section 4.4 and planned improvements in environmental management practices in Sections 6 and 7 and summarised in **Table 5.1**.