



**INVINCIBLE COLLIERY  
ANNUAL REVIEW 2025**

1 JANUARY 2025 TO 31 DECEMBER 2025

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# Annual Review Title Block

Name of operation:	Invincible Colliery
Name of operator:	Shoalhaven Coal Pty Limited
Development consent:	Invincible Coal Mine Extension Project Approval 07_0127 (MOD 6)
Name of holder of development consent:	Shoalhaven Coal Company Pty Limited
Mining leases:	ML1638, ML1635, ML 1844, ML 1860, CCL702.
Name of holder of mining leases:	Shoalhaven Coal Pty Limited
Water licence:	Water Access Licence (WAL) 36485 (10AL118763)
Name of holder of water licence:	Shoalhaven Coal Pty Limited
RMP start date:	28 November 2022
RMP end date:	N/A
Annual Review start date:	1 January 2025
Annual Review end date:	31 December 2025
<p><b>I, Kim Nguyen, certify that this audit report is a true and accurate record of the compliance status of Invincible Colliery for the period 1 January 2025 to 31 December 2025, and that I am authorised to make this statement on behalf of Shoalhaven Coal.</b></p> <p>Note.</p> <p><i>a) The Annual Review is an 'environmental audit' for the purposes of section 122B(2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000.</i></p> <p><i>b) The Crimes Act 1900 contains other offences relating to false and misleading information: section 192G (Intention to defraud by false or misleading statement—maximum penalty 5 years imprisonment); sections 307A, 307B and 307C (False or misleading applications/information/documents—maximum penalty 2 years imprisonment or \$22,000, or both).</i></p>	
Name of authorised reporting officer:	Kim Nguyen
Title of authorised reporting officer:	Chief Executive Officer/Director
Signature of authorised reporting officer:	
Date:	31/03/2026

# 1 Statement of Compliance

This Annual Review provides a summary of the Invincible Colliery operations performance over the period 1 January to 31 December 2025 (referred to hereafter as the reporting period).

During the reporting period, Invincible Colliery operated in accordance with Project Approval 07\_0127 – Mods 5 and 6 (Project Approval) Southern Extension Project, as approved by the Planning and Assessment Commission (PAC) on 2 February 2018 and the delegate of the Minister for Planning and Public Spaces on 11 November 2025 respectively. Mining operations were undertaken by Shoalhaven Coal Pty Limited (Shoalhaven Coal) during the reporting period, focusing on the Southern Extension.

A total of 12 outstanding actions from the 2024 Independent Environmental Audit (IEA) remained outstanding as at 31 December 2025. An updated action plan is included at **Appendix 3**. The compliance status for the reporting period is summarised in **Table 1-1**. Seven (7) non-compliances occurred during the reporting period. The non-compliances recorded during the report period have been ranked according to the risk matrix included in **Table 1-2** and a brief description of each is provided in **Table 1-3**.

**Table 1-1 Statement of Compliance**

Relevant Approval	All conditions complied with?
Project Approval (PA) 07_1027 (Mod 5)	No – Refer to <b>Table 1.3</b>
Environment Protection Licence (EPL) 1095	No – Refer to <b>Table 1.3</b>
WAL 36485 (10BL602586)	Yes
Mining Lease (ML) 1635, ML 1638, ML 1844, ML 1859, ML 1860	Yes

**Table 1-2 Compliance Status Key**

Risk Level	Colour Code	Description
High	Non-compliant	Non-compliance with potential for significant environmental consequences, regardless of the likelihood of occurrence
Medium	Non-compliant	Non-compliance with: <ul style="list-style-type: none"> <li>Potential for serious environmental consequences, but is unlikely to occur; or</li> <li>Potential for moderate environmental consequences, but is likely to occur</li> </ul>
Low	Non-compliant	Non-compliance with: <ul style="list-style-type: none"> <li>Potential for moderate environmental consequences, but is unlikely to occur; or</li> <li>Potential for low environmental consequences, but is likely to occur</li> </ul>
Administrative Non-compliance	Non-compliant	Only to be applied where the non-compliance does not result in any risk of environmental harm (e.g. submitting a report to government later than required under approval conditions)

Source: Annual Review Guideline (NSW Government, 2015).

**Table 1-3 Non-Compliance Recorded during the Reporting Period**

Relevant Approval	Condition No.	Condition Description/Non-Compliance	Compliance Status	Comment	Where Addressed in Annual Review
PA 07_0127 (MOD 5)	Schedule 3 Condition 16	Exceedance of air quality 24 hr assessment criteria for particular matter (PM <sub>10</sub> ) on 28 April, 2025.	Low Non-compliant	A sample taken from HV02 (PM <sub>10</sub> unit) on 28 April 2025 recorded a PM <sub>10</sub> reading of 62.00 µg/m <sup>3</sup> for the 24 hr period. The results were received by site 21 July 2025. An investigation into the elevated result did not identify a specific emission source. The result was an isolated incident, all other PM <sub>10</sub> results for April and May 2025 were compliant with assessment criteria. The exceedance result was determined to be an anomaly, potentially from an error in filter handling.	Section 6.3
PA 07_0127 (MOD 5)	Schedule 3 Condition 16	Exceedance of air quality 24 hr assessment criteria for particular matter (PM <sub>10</sub> ) on 21 August, 2025.	Low Non-compliant	A sample taken from HV02 (PM <sub>10</sub> unit) on 21 August 2025 recorded a PM <sub>10</sub> reading of 180.00 µg/m <sup>3</sup> for the 24 hr period. The results were received by site 24 November 2025. An investigation into the elevated result did not identify a specific emission source. The result was an isolated incident, all other PM <sub>10</sub> results for August 2025 were compliant with assessment criteria and the TSP result was also 180 µg /m <sup>3</sup> suggesting that a testing error on the samples had occurred.	Section 6.3
PA 07_0127 (MOD 5) EPL 1095	Schedule 3 Condition 20 Condition M2.2	Air Quality Monitoring – HVAS PM10 & TSP not monitored	Low Non-compliant	From 22 <sup>nd</sup> February to 30 <sup>th</sup> March 2025 PM10 and TSP were not monitored due to the High Volume Sampler failure. Subsequent catch-up runs occurred during April 2025 to ensure site met the required 60 air sample runs for the year 2025. A replacement air sampler was installed to ensure minimisation of future air quality sampling non-compliances.	Section 6.3

<p><b>PA 07_0127 (MOD 5) EPL 1095</b></p>	<p>Schedule 3 Condition 20 Condition M2.2</p>	<p>Air Quality Monitoring – HVAS PM10 &amp; TSP not monitored</p>	<p>Low Non-compliant</p>	<p>From 28<sup>th</sup> June to 3<sup>rd</sup> August 2025 PM10 and TSP were not monitored due to generator failure. Subsequent catch-up runs occurred from August through to October to ensure site met the required 60 air sample runs for the year 2025. A replacement generator was installed to ensure minimisation of future air quality sampling non-compliances.</p>	<p><b>Section 6.3</b></p>
<p><b>PA 07_0127 (MOD 5 and 6) EPL 1095</b></p>	<p>Schedule 3 Condition 20 Condition M2.2</p>	<p>Air Quality Monitoring – HVAS PM10 &amp; TSP not monitored every six days</p>	<p>Low Non-compliant</p>	<p>In 10 further instances during 2025, TSP and PM10 were monitored outside of the sampling frequency requirement as per EPL 1095 of every six days. Each frequency non-compliance occurred due to one of the following reasons</p> <ul style="list-style-type: none"> <li>- Generator fail</li> <li>- Filter handling error</li> <li>- Run time error</li> <li>- Staffing shortage over weekend periods to manually run samplers</li> </ul>	<p><b>Section 6.3</b></p>
<p><b>PA 07_0127 (MOD 6)</b></p>	<p>Schedule 3 Condition 25 (Table 7)</p>	<p>Water Management Performance Measures – Sediment Dams</p>	<p>Low Non-compliant</p>	<p>Sediment dams 2, 3, 5 and 6 not designed, installed and maintained generally in accordance with the series <i>Managing Urban Stormwater: Soils and Construction – Volume 1 and Volume 2E Mines and Quarries</i>.</p>	<p><b>Section 6.3</b></p>
<p><b>PA 07_0127 (MOD 6) EPL 1095</b></p>	<p>Schedule 3 Condition 25 (Table 7) O1.1</p>	<p>Chemical and hydrocarbon storage</p>	<p>Low Non-compliant</p>	<p>Chemical and hydrocarbon products not stored in bunded areas in accordance with the relevant Australian Standards.</p>	<p><b>Section 6.3</b></p>

## 2 Introduction

Shoalhaven Coal Pty Ltd owns the Invincible Colliery, an open cut coal mine located approximately 25 kilometres (km) north-west of Lithgow in New South Wales (NSW) (refer to **Appendix 1, Figure 1**). Invincible Colliery is Operated by Castlereagh Coal a wholly owned subsidiary of Shoalhaven Coal Pty Ltd.

Operations at Invincible Colliery were suspended and placed in care and maintenance in April 2013 as known coal reserves within the approved mining area were exhausted and a project modification by former owners Coalpac Pty Ltd to allow further mining was rejected. As a result, administrators were appointed in October 2013, and Coalpac Pty Ltd was placed into voluntary liquidation in November 2014. Invincible Colliery and the nearby Cullen Valley Mine were subsequently purchased by Shoalhaven Coal Pty Ltd (a subsidiary of the Manildra Group) in 2015 to secure the supply of nut coal for Manildra's Shoalhaven Starches Plant located at Bomaderry on the NSW South Coast.

Subsequently Shoalhaven Coal sought a modification to the Invincible Colliery Project Approval in accordance with Section 75W of the *Environmental Planning and Assessment Act 1979*. The modification proposed an extension to open cut mining operations to the south of the existing approved mining domain into the area known as the Southern Extension. Following public exhibition between 27 September and 8 November 2016, the modification was approved by the NSW Planning and Assessment Commission (PAC) on 5 February 2018, refer to **Section 4.1**.

In November 2021 Shoalhaven Coal Pty Ltd was sold via a 100% share transaction to an all-Australian locally based ownership team who continued to operate the Colliery under a care and maintenance arrangement until July 2023 when mining commencing in the Southern Extension. A modification to the Invincible Colliery Project Approval was sought in January 2025 under section 4.55(2) of the *Environmental Planning and Assessment Act 1979*. The modification proposed an extension to the mine life to 31 December, 2030, flexibility for coal to be transported to other domestic customers in addition to Shoalhaven Starches plant and to the Mount Piper Power Station, and the increase of the approved full time equivalent workforce from 35 to 50 personnel. Following public exhibition between 7 March and 21 March 2025, the modification was approved by the delegate of the Minister for Planning and Public Spaces on 11 November 2025, refer to **Section 3.1**.

Invincible Colliery is located in an area of historical mining operations associated with western coalfields of NSW, including the former mining operations at Cullen Valley Mine, Baal Bone Colliery, Pine Dale and Ivanhoe Colliery. The Invincible site has had a long history of mining operations commencing in 1901. Open cut mining has been carried out at Invincible Colliery at various times since the 1940s through to 2013 when operations were placed in care and maintenance followed by recommencement of mining in 2023. The existing operations are shown in **Figure 2, Appendix 1**.

### 2.1 Mine Contacts

The Manager Mining Engineering is responsible to the regulatory authorities for all aspects of environmental compliance at the site supported by the Environmental Superintendent and Community Liaison Officer. Contact details are summarised in

**Table 2-1.**

**Table 2-1 Key Personnel Responsible for Environmental Management**

<b>Name</b>	<b>Role</b>	<b>Company</b>	<b>Contact details</b>
<b>Kim Nguyen</b>	Chief Executive Officer	Shoalhaven Coal Pty Ltd, trading as Castlereagh Coal	Invincible Colliery Castlereagh Highway Cullen Bullen, NSW 2790 M 0414 335 529
<b>Tim Haig</b>	General Manager	Shoalhaven Coal Pty Ltd, trading as Castlereagh Coal	Invincible Colliery Castlereagh Highway Cullen Bullen, NSW 2790 M 0400 653 241
<b>Taresa Hateley</b>	Environmental Superintendent	Shoalhaven Coal Pty Ltd, trading as Castlereagh Coal	Invincible Colliery Castlereagh Highway Cullen Bullen, NSW 2790 M   0493 577 337

## 2.2 Annual Review Requirements

During the reporting period, Invincible Colliery operated in accordance with the Project Approval.

Condition 4 of Schedule 5 of the Project Approval requires an Annual Review (AR) to be prepared and submitted to the DPHI. This report has been prepared in accordance with *NSW Government Annual Review Guidelines* (NSW Government, 2015) and details the operational and environmental management activities of Invincible Colliery during the reporting period. Project Approval requirements along with an explanation of where each requirement is addressed within this document are provided in **Table 2-2**.

**Table 2-2 Project Approval 07\_0127 (MOD 6) Conditions for the Annual Review**

Conditions		Addressed in
<b>Schedule 3 – Specific Environmental Conditions</b>		
<b>Monitoring of Coal Transport</b>		
40.	The Applicant must: a) Keep accurate records of the: <ul style="list-style-type: none"> <li>Amount of coal transported from the project in each calendar year (on a monthly basis)</li> <li>Number of coal truck movements generated by the project to the Mt Piper Power Station and the Shoalhaven Starches Plant and other domestic customers (on a daily basis)</li> </ul> b) include these records in the Annual Review.	<b>Section 4.0</b>
<b>Schedule 3 – Specific Environmental Conditions</b>		
<b>Waste Minimisation</b>		
45.	(e) monitor and report on effectiveness of the waste minimisation and management measures in the Annual Review.	<b>Section 6.10</b>
<b>Schedule 5 – Environmental Management, Monitoring, Auditing and Reporting</b>		
<b>Annual Reporting</b>		
4.	By the end of March each year, or other timing as may be agreed by the Planning Secretary, the Applicant must review the environmental performance of the project to the satisfaction of the Planning Secretary. This review must:	<b>This document</b>
	(a) describe the project (including any rehabilitation) that was carried out in the past financial year, and the project that is proposed to be carried out over the next year;	<b>Sections 4.0, 6.0 and 8.0</b>
	(b) include a comprehensive review of the monitoring results and complaints records of the project over the past financial year, which includes a comparison of these results against the: <ul style="list-style-type: none"> <li>relevant statutory requirements, limits or performance measures/criteria</li> <li>requirements of any plan or program required under this approval</li> <li>monitoring results of previous years</li> <li>relevant predictions in the EA;</li> </ul>	<b>Sections 6.0 and 9.2</b>
	(c) identify any non-compliance over the past financial year, and describe what actions were (or are being) taken to ensure compliance.	<b>Sections 1.0 and 11.0</b>
	(d) identify any trends in the monitoring data over the life of the project;	<b>Sections 6.0</b>
	(e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and	<b>Section 6.1</b>
	(f) describe what measures will be implemented over the current financial year to improve the environmental performance of the project.	<b>Section 6.0</b>

*Note: For the purposes of the Annual Review, Condition 4(a), 4(b), 4(c) and 4(f) have been interpreted to be the calendar year which is consistent with previous Annual Reviews prepared for Invincible Colliery and aligns with a required submission date of 31 March.*

### 3 Approvals

The operations at Invincible Colliery are subject to a range of standards and performance measures. Environmental approvals, licences and leases currently held by Invincible Colliery are listed in **Table 3-1**.

#### 3.1 Development Consent History

The Invincible Project Approval granted on 4 December 2008 which permits mining for eight years from the date of grant of the approval (i.e. to 4 December 2016). This 2008 Project Approval has subsequent modifications approved in 2009 and 2010.

During 2016, Shoalhaven Coal submitted an application to DPE to modify the Invincible Project Approval to extend the life of mining operations at Invincible Colliery and obtain approval to extend the open cut mining operations to an area immediately south of the existing operations (i.e. the Southern Extension Project). The Invincible Southern Extension Project area is located within the Ben Bullen State Forest to the east of the Castlereagh Highway (refer to **Figure 2, Appendix 1**). The Invincible Southern Extension Project (Mod 5) was approved by the PAC on 2 February 2018. The current modification of the Project Approval (Mod 6) of the Southern Extension Project was approved by the delegate of the Minister for Planning and Public Spaces on 11 November 2025.

The Invincible Southern Extension Project (Mods 5 and 6) include:

- extending the period in which mining can continue until 31 December 2030.
- extending the open cut mining area to mine down to, and including, the Lithgow Seam to the south of the existing mine in the Southern Extension Area.
- maximum mining and production rates of up to 1.2 Mtpa.
- product coal transport arrangements (with coal to be transported from the site by road truck to either the Shoalhaven Starches Plant or Mt Piper Power Station).
- use of existing open cut voids and former underground workings for temporary water storage.
- continued use of existing Invincible Colliery infrastructure (including maintenance work, and minor upgrades and operation of the existing Invincible Coal Preparation Plant (Invincible CPP), and
- rehabilitation of the Southern Extension Area and existing disturbance areas at Invincible Colliery by reshaping mining areas to remove voids and revegetating the reshaped landform with locally endemic woodland and forest communities.
- flexibility for coal to be transported to other domestic customers in addition to Shoalhaven Starches plant and to the Mount Piper Power Station.
- the increase of the approved full time equivalent workforce from 35 to 50 personnel.

#### 3.2 Status of Leases, Licences and Approvals

Invincible operates in accordance with the approvals listed in **Table 3-1**.

**Table 3-1 Current Approvals, Licences and Leases**

<b>Approval</b>	<b>Date Granted</b>	<b>Expiry Date</b>	<b>Details</b>
<b>Project Approval (PA) 07_0127 (MOD 6)</b>	11 Nov 2025	31 December 2030	The MOD 6 Project Approval applied through part of the reporting period.
<b>Project Approval (PA) 07_0127 (MOD 5)</b>	2 Feb 2018	31 December 2025	The MOD 5 Project Approval applied through part of the reporting period.
<b>Environment Protection Licence (EPL) 1095</b>	28 Feb (anniversary date)	Renewed annually	Held by Shoalhaven Coal over the Invincible premises.
<b>Mining Lease (ML) 1635</b>	10 Sep 2009	10 Sep 2030	Extends to the surface and covers the existing open cut mining areas at Invincible.
<b>ML 1638</b>	6 Nov 2009	6 Nov 2030	Extends to the surface and covers the existing open cut mining areas at Invincible. ML 1638 extends into the northern end of the Southern Extension Area.
<b>ML 1844</b>	21 Feb 2023	21 Feb 2044	Surface to 15.24m
<b>ML 1860</b>	7 September 2023	7 September 2044	Ancillary Mining Activities.
<b>Consolidated Coal Lease (CCL) 702</b>	26 Nov 1990	24 November 2031	Variable depth.
<b>WAL 35978 (10BL602584) "Washery Bore"</b>	24 Dec 2012	23 Dec 2027	Authorises the extraction of 26 units from the NSW Murray-Darling Porous Rock Groundwater Sources Water Sharing Plan.

### **3.2.1 Environmental Management Plans**

Environmental Management Plans (EMPs) have been prepared and approved for Invincible Colliery in accordance with the conditions of PA 07\_0127. The versions currently approved by DPHI are available on the Castlereagh Coal website (<https://ccoal.com.au>).

- Environmental Management Strategy. Approved November 2022.
- Air Quality Management Plan. Approved November 2022.
- Aboriginal Cultural Heritage Management Plan. Approved January 2023.
- Biodiversity Management Plan. Approved July 2023.
- Noise Management Plan. Approved October 2022.
- Pollution Incident Response Management Plan. Updated September 2025.
- Rehabilitation Strategy. Approved December 2022.
- Rehabilitation Management Plan. Approved December 2022.
- Transport Management Plan. Approved September 2022.
- Water Management Plan. Approved November 2022.

### 3.2.2 Amendments to Approvals/Licences during the Reporting Period

Table 3-2 lists approvals and amendments that were granted during the reporting period.

Table 3-2 Amendments to Approvals/Licence

Licence/Approval	Amendment Type	Date of amendment
Project Approval (PA) 07_0127	Modification 6	11 November 2025
EPL 1095	Inclusion of a Pollution Reduction Program	18 September 2025
EPL 1095	Administrative changes	11 December 2025

## 4 Operations Summary

A summary of the operations undertaken at Invincible Colliery during the reporting period are included in the following sections.

### 4.1 Mining Operations

As discussed in Section 3.1, on 5 February 2018 the Invincible Colliery Southern Extension Project was approved by the PAC. This approval allows the mining down to, and including, the Lithgow Seam to the south of the existing mine in the Southern Extension Area (Figure 2, Appendix 1). Mining commenced in the Southern Area in July 2023 and continued throughout 2024 and 2025. A modification to the Project Approval (Mod 6) was approved by the delegate of the Minister for Planning and Public Spaces on 11 November 2025. Production figures for the reporting period are detailed in Table 4-1.

Table 4-1 Production Summary

Material	Approved limit	Previous reporting period (actual 2024)	This reporting period (actual 2025)	Next reporting period (forecast 2026)
Waste rock/ overburden (Mbcm)	Not specified	1.512	1.644	2.103
Coal works/Coal mining (Mt)	0 – 2Mtpa handled (EPL) 0.5 - 2Mtpa produced (EPL) 1.2Mtpa extraction (PA)	0.234	0.231	0.3
Coarse reject	Not specified	0	0	0
Fine reject (tailings)	Not specified	0	0	0
Saleable Coal (Mt)	Not specified	0.249	0.258	0.3

### 4.2 Vehicle Movements

In accordance with Condition 40 of Schedule 3 of the Project Approval, records regarding the amount of coal transported from the mine site and annual number of coal truck movements for 2025 is required to be included within this report. A total of 258,010.27 tonnes of coal was transported by 7,865 coal truck movements from Invincible during the reporting period.

## **5 Actions Required from Previous Annual Review**

Following submission of the 2024 Annual Review, DPHI advised in correspondence dated 6 May 2025, that the Annual Review was considered to generally satisfy the requirement of the Approval in relation to Annual Reviews. It was also noted reported non-compliances with the Consent as outlined in the Annual Review but indicated no further information was required. Additionally, DPHI requested that the strategies, plans and programs required under the consent be reviewed and revised, if necessary, then submitted for the Planning Secretary's approval.

DPHI further requested that the Annual Review be made publicly available on the company website. A copy of the 2024 Annual Review is available on the Castlereagh Coal website.

## 6 Environmental Performance

The following sections provide a summary of environmental monitoring and management undertaken during the reporting period. Invincible Colliery undertakes a range of environmental monitoring. Environmental monitoring locations for the site are shown on **Figure 3, Appendix 1**. Environmental monitoring data and a copy of the current Invincible Colliery management plans are published on the Castlereagh Coal website (<http://ccoal.com.au>) in accordance with the requirement of the Project Approval. An overview of environmental performance at Invincible Colliery is provided in the following sections. A summary of the environmental performance during the reporting period is presented in **Table 6-1**.

### 6.1 Summary of Performance against EA Predictions

The Invincible Colliery has been subject to three Environmental Assessments (EA) and several modifications in the last 14 years of operations. The Invincible Expansion Project involving expanded operations to the north and south of the original mining area was assessed by the EA dated April 2008 (R.W. Corkery & Co. Pty Limited, 2008). An EA was also prepared for the Invincible Colliery Southern Extension Project (Umwelt, 2016) which assessed the expansion of operations immediately to the south of the existing operations.

Environmental monitoring undertaken included noise, air quality, surface water and groundwater quality, and biodiversity. Below is a summary of predictions from the EA (2016) completed for the site. **Table 6-1** provides a summary of Invincible Colliery environmental performance against the EA predictions for the reporting period. It is noted that modelling undertaken for the EA assumed mining operations were being undertaken. As noted previously, Invincible Colliery was in care and maintenance until 13 July 2023 after which mining operations recommenced.

#### 6.1.1 Air Quality Predictions against the EA

The EA (Umwelt, 2016) predicted maximum 24-hour PM<sub>10</sub> concentrations from background levels plus mine emissions to be 27 µg/m<sup>3</sup>, which is well below the 50 µg/m<sup>3</sup> 24-hour goal. Predicted annual average PM<sub>10</sub> concentrations were 20 µg/m<sup>3</sup> (background plus mine emissions) and this is well below the annual average goal of 30 µg/m<sup>3</sup>. Maximum 24-hour average PM<sub>2.5</sub> concentrations, due to the Southern Extension Project, are predicted not to exceed the NEPM criteria of 25 µg/m<sup>3</sup> at any private residence surrounding Invincible. Similarly, annual average PM<sub>2.5</sub> concentrations are predicted to be below the NEPM criteria of 8 µg/m<sup>3</sup> at all private residences surrounding the Southern Extension Project.

There are no private residences that are predicted to experience annual average TSP or dust deposition levels above the air quality assessment criteria, either from the Southern Extension Project alone or from the cumulative impacts of the Southern Extension Project and all other sources. The predicted extent of TSP and Dust Deposition is located within the extent of the modelled PM<sub>10</sub>, 24 hr emissions from the Southern Extension Project.

During the reporting period, the TSP, PM<sub>2.5</sub>, PM<sub>10</sub> and dust deposition concentrations recorded were below regulatory criteria at all receivers except on two occasions where sampling and testing errors resulted in exceedances of 24 hour PM<sub>10</sub> readings (refer to **Table 1-3**). The details regarding the air quality monitoring results can be found in **Section 6.3**.

#### 6.1.2 Water Quality Predictions against the EA

Clean surface water is diverted away from active disturbance areas and runoff from disturbed areas is collected and stored for operational uses such as dust suppression. The EA (Umwelt, 2016) predicted that the project was unlikely to have a significant impact on local or regional surface water quantity or quality. The EA (Umwelt, 2016) did not predict any additional water quality impacts for the modification proposals.

No water discharge events occurred at the premises during the reporting period. Further details on the surface water quality monitoring results are provided in **Section 6.4**.

#### **6.1.3 *Groundwater Predictions against the EA***

As noted in **Section 6.5** , there have been no impacts detected on groundwater levels and water quality at Invincible Colliery.

#### **6.1.4 *Noise Predictions against the EA***

The EA (Umwelt, 2016) modelling results indicated that the cumulative noise impacts assessment criteria will not be exceeded based on the Project and the relevant surrounding industrial noise sources.

As detailed in **Section 6.6** , noise monitoring has shown that noise emissions have been inaudible at all locations during the reporting period.

**Table 6-1 Summary of Environmental Performance during the Reporting Period**

<b>Aspect</b>	<b>Approval Criteria/ EIS Prediction</b>	<b>Performance during the reporting period</b>	<b>Trend/key management implications</b>	<b>Implemented/proposed management actions</b>
<b>Air Quality (Refer to Section 6.3 )</b>	Refer <b>Section 6.3.2</b> Refer <b>Section 6.1.1</b>	Annual average deposited dust, PM <sub>10</sub> and TSP levels were below the respective performance criteria. An exceedance of the PM <sub>10</sub> 24hr average was recorded as a non-compliance. Refer to <b>Table 1.3</b> for further detail.	Refer to <b>Section 6.3.4</b> Recorded air quality levels are generally consistent with previous years.	No further action required.
<b>Surface Water Quality (Refer to Section 6.4)</b>	Refer <b>Section 6.4.2 /</b> Refer <b>Section 6.1.2</b>	Compliant	Refer to <b>Section 6.4.4</b> Water quality is generally consistent with previous years.	Surface water management is currently under review in the development of the Surface and Groundwater Investigation. An updated WMP will reflect outcomes of the Investigation.
<b>Groundwater (Refer to Section 6.5)</b>	Refer <b>Section 6.5.2</b> Refer <b>Section 6.1.3</b>	Compliant	Groundwater quality monitoring results are further discussed in <b>Section 6.5.4</b>	Groundwater management is currently under review in the development of the Surface and Groundwater Investigation. An updated WMP will reflect outcomes of the Investigation.
<b>Noise (Refer to Section 6.6)</b>	Refer to <b>Section 6.6.2 /</b> Refer to <b>Section 6.1.4</b>	Compliant	Refer to <b>Section 6.6.4</b> Noise emissions were inaudible at all private residences during the reporting period, which is consistent with previous years.	No further action required.
<b>Biodiversity (Refer to Section 6.7)</b>	Refer to <b>Section 6.7.2</b> Refer to <b>Section 8.4</b>	Compliant	Refer to <b>Section 6.7.3</b>	Biodiversity monitoring program will continue in accordance with regulatory requirements.

## **6.2 Meteorological Monitoring**

The Invincible Colliery weather station (IMET1) is located within the Lot 113 biodiversity offset area as shown in **Appendix 1, Figure 2**. A summary of monthly meteorological monitoring is provided in **Table 6-2**.

### **6.2.1 Rainfall**

Invincible Colliery received 542.2 mm of rainfall over 141 rain days during the reporting period. The highest rainfall occurred during January (71.8 mm), while the lowest rainfall was recorded during October (14.8mm). A summary of monthly rainfall data is provided in **Table 6-2**.

### **6.2.2 Temperature**

Air temperature is measured at 2 and 10 metres above ground level at Invincible Colliery. The maximum temperature recorded during the reporting period was in December (34.8 @ 2 m) and the lowest temperature occurred in June (-4.93 @ 2 m). Maximum and minimum monthly temperatures are summarised in **Table 6-2**.

### **6.2.3 Humidity**

The minimum humidity of 11.6 % was recorded in January. The minimum and maximum monthly humidity data is provided in **Table 6-2**.

## **6.3 Air Quality**

### **6.3.1 Environmental Management Measures**

Air quality monitoring is undertaken in accordance with the Invincible Colliery Air Quality Management Plan (AQMP 2022). The air quality monitoring network consists of six dust deposition gauges and two High Volume Air Samplers (HVAS) which measures particulate matter <10 µm (PM<sub>10</sub>) and total suspended particulates (TSP) (refer to **Figure 3, Appendix 1**).

Air quality impacts at Invincible Colliery are managed in a manner that minimises generation of airborne and visual dust.

### **6.3.2 Performance Criteria**

Shoalhaven Coal is required to ensure that dust and particulate emissions do not cause exceedances of the criteria specified by the Project Approval. The air quality impact assessment criteria specified in the Project Approval are provided in **Table 6-3**.

**Table 6-2 Invincible Colliery Weather Data**

Month	Rainfall	Cumulative	No. of rain	Air temp @ 2m (°C)		Air temp @ 10m (°C)		Humidity (%)	
	(mm)	Rainfall (mm)	days/month	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
January 2025	71.8	71.8	15	6.29	34.7	6.76	34.04	20.9	96.0
February 2025	68.8	140.6	10	3.74	32.03	4.26	31.34	26.1	98.2
March 2025	33.2	173.8	12	7.86	32.95	8.95	32.08	19.2	99.4
April 2025	37.0	210.8	7	1.61	24.77	2.13	24.66	19.1	99.8
May 2025	60.4	271.2	17	0.48	20.36	1.09	19.89	25.1	99.8
June 2025	21.4	292.6	11	-4.93	17.53	-4.11	17.14	13.8	99.8
July 2025	49.2	341.8	18	-4.62	15.47	-4.22	14.59	20.5	99.8
August 2025	64.6	406.4	19	-3.68	19.2	-3.15	18.77	36.7	99.0
September 2025	43.8	450.2	7	-2.26	24.36	-1.69	23.87	19.4	99.8
October 2025	14.8	465.0	7	2.18	30.69	2.77	30.06	18.8	98.5
November 2025	38.8	503.8	10	1.88	30.78	2.67	29.88	15.6	99.1
December 2025	37.4	541.2	8	2.6	34.8	3.1	33.94	11.6	98.3
<b>Total</b>	541.2	-	<b>141</b>	-	-	-	-	-	-

**Table 6-3 Air Quality Performance Criteria**

Pollutant	Averaging Period	Criterion (Mod 5)	Criterion (Mod 6)
Total suspended matter (TSP) matter	Annual average	90 µg/m <sup>3</sup>	90 µg/m <sup>3</sup>
Particulate matter <10µm (PM <sub>10</sub> )	Annual average	30 µg/m <sup>3</sup>	25 µg/m <sup>3</sup>
	24 hour average	50 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>
Particulate matter <2.5µm (PM <sub>2.5</sub> )	Annual average	-	8 µg/m <sup>3</sup>
	24 hour average	-	25 µg/m <sup>3</sup>
Deposited dust	Annual average (maximum total)	4 g/m <sup>2</sup> /month	4 g/m <sup>2</sup> /month
	Annual average (maximum increase)	2 g/m <sup>2</sup> /month	2 g/m <sup>2</sup> /month

**6.3.3 Environmental Outcomes**

**6.3.3.1 Dust Deposition**

Deposited dust is monitored every 30 ±2 days at six representative locations around the mine site (dust deposition gauges IDD1 to IDD6). The annual average criterion for deposited dust (4 g/m<sup>2</sup>/month) was not exceeded at any of the dust deposition gauges during the reporting period. The 2025 annual average dust levels for all locations were less than 2 g/m<sup>2</sup>/month and therefore complied with air quality performance criteria. The monthly deposited dust monitoring results and annual averages for 2025 are shown in **Table 6-4** and are compared with historical results in **Appendix 2**.

**Table 6-4 Deposited Dust Monitoring Results**

Date	Total Insoluble Solids (g/m <sup>2</sup> /month)					
	IDD1	IDD2	IDD3	IDD4	IDD5	IDD6
January 2025	1.6	1.6	0.9	1.8	0.9	2.1
February 2025	0.4	0.4	0.3	4.2	0.3	0.1
March 2025	0.9	0.9	0.7	0.4	3.8	0.8
April 2025	0.7	0.7	0.3	0.2	0.2	1.2
May 2025	0.6	0.6	0.7	0.5	0.3	0.5
June 2025	0.5	1.3	1.6	0.7	0.2	2.5
July 2025	0.5	1.2	0.7	0.8	0.9	0.6
August 2025	0.2	0.2	2.6	0.3	0.5	0.4
September 2025	0.8	0.8	5.7	3.9	1.6	1.2
October 2025	0.7	1.4	1.0	1.0	1.0	2.1
November 2025	0.8	1.1	0.8	0.6	0.2	1.0
December 2025	1.1	1.5	1.6	1.9	1.6	3.2
Annual Average 2025	0.7	1.0	1.4	1.4	1.0	1.3

**6.3.3.2 Particulate Matter**

Monitoring of PM<sub>2.5</sub>, PM<sub>10</sub> and TSP was conducted during 2025 from the High Volume Sampler (HVAS) (refer HV02 in **Figure 3, Appendix 1**). The annual average criteria for PM<sub>2.5</sub> (Mod6, 8 µg/m<sup>3</sup>), PM<sub>10</sub> (Mod5, 30 µg/m<sup>3</sup>, Mod6, 25 µg/m<sup>3</sup>) and TSP (90 µg/m<sup>3</sup>) were not exceeded during the reporting period. However, the 24 hr average criteria for PM<sub>10</sub> (50 µg/m<sup>3</sup>) was exceeded on two (2) occasions during the reporting period Refer to

Table 1-3 for non-compliance details.

The annual average PM<sub>10</sub> monitoring results for the reporting period is shown in Table 6-5. Some HVA data is unavailable for the reporting period. Refer to Table 1-3 for non-compliance details.

**Table 6-5 Particulate Matter (PM<sub>2.5</sub>, PM<sub>10</sub>) and Total Suspended Particulates (TSP) Annual Average Results**

Averaging period	PM <sub>2.5</sub> (µg/m <sup>3</sup> )	PM <sub>10</sub> (µg/m <sup>3</sup> )	TSP (µg/m <sup>3</sup> )
Annual Average 2025	7	14	24
Annual Average Criterion	8	25	90

### 6.3.4 Trends in Data

#### 6.3.4.1 Dust Deposition

Table 6-6 presents the annual average deposited dust levels over the previous five years. The 2025 annual average deposited dust levels are within the range of results recorded in the previous five years at all sites. The 2025 annual average dust deposition levels for all sites are well below the performance criteria (4 g/m<sup>2</sup>/month).

**Table 6-6 Annual Averages for Dust Deposition 2021 – 2025**

Reporting period	Total Insoluble Solids (g/m <sup>2</sup> /month)					
	IDD1	IDD2	IDD3	IDD4	IDD5	IDD6
Criteria	4	4	4	4	4	4
2021	0.3	0.4	0.5	0.5	0.2	--
2022	0.4	0.7	0.4	0.3	0.3	--
2023	0.8	0.7	0.9	0.7	0.7	0.9
2024	0.9	1.4	0.9	0.8	0.8	1.2
<b>2025</b>	<b>0.7</b>	<b>1.0</b>	<b>1.4</b>	<b>1.4</b>	<b>1.3</b>	<b>1.3</b>

--IDD6 added to program in 2023

The 2025 annual average deposited dust levels at all monitoring locations are low and consistent with the historical range of results obtained over the previous five years.

#### 6.3.4.2 Particulate Matter

Table 6-7 presents the PM<sub>10</sub> annual average over the previous five years. The 2025 annual averages for both PM<sub>10</sub> and TSP recorded at Invincible Colliery are within the range of results over the previous five years (Table 6-7). PM<sub>2.5</sub> was added to the monitoring program in 2025 with the Modification 6 approval. A graphical display of 2025 particulate matter results and monthly rolling averages are provided in Appendix 2.

**Table 6-7 Annual Averages for Particulate Matter 2021 – 2025**

Annual Average	PM <sub>10</sub> (µg/m <sup>3</sup> )	TSP (µg/m <sup>3</sup> )
2021	5.4	13.6
2022	4.7	11.9
2023	9.3	17.8
2024	8.9	17.2
2025	13.7	24.0

### 6.3.5 Proposed Improvements

Monitoring of air quality will continue to be conducted during 2026 in accordance with the Air Quality Management Plan (AQMP).

## 6.4 Surface Water

### 6.4.1 Environmental Management Measures

The surface water management system at Invincible Colliery utilises a series of settlement ponds and storage dams within the site. These ponds and dams are managed in accordance with the Water Management Plan (WMP, 2022) and are further described in **Section 7.0**. Water has not been discharged during the reporting period from main colliery dam via LD002. A surface water investigation is currently underway which will inform an updated WMP in 2026.

### 6.4.2 Performance Criteria

Shoalhaven Coal is required to manage water discharged from the site so that it does not exceed the pollutant concentration limits specified by the Project Approval and EPL. The concentration limits specified in the EPL are provided in **Table 6-8** with the surface water monitoring results discussed in **Section 6.4.3**.

**Table 6-8 Water Quality Concentration Limits**

Pollutant	Concentration limit
Cobalt (dissolved)	0.0014 mg/L
Copper (dissolved)	0.0014 mg/L
Electrical conductivity	650 µS/cm
Manganese (dissolved)	1.9 mg/L
Nickel (dissolved)	0.011 mg/L
Oil and Grease	10 mg/L
pH	6.5 – 8.5
Iron (total)	0.3 mg/L
Total suspended solids (TSS)	30 mg/L
Zinc (total)	0.008 mg/L

### 6.4.3 Environmental Outcomes

Surface water monitoring for water quality is conducted daily during discharge events at the licenced discharge

point (LD002) in accordance with the WMP (2022). Monthly due diligence monitoring is also conducted within the Main Dam (LD002), Environmental Dam (SW02) and Silt Dam (SW03). It is noted that SW03 is located adjacent Sediment Dam 3 (SD3) (**Appendix 1, Figure 3**) and is not required to be sampled under the current WMP, however as it is a source of passive discharge, sampling is completed as due diligence. Water quality is also monitored on a monthly basis for due diligence purposes at two locations, Cullen Creek U/S and Cullen Creek D/S, which are located upstream and downstream, respectively, of Invincible Colliery.

The water quality monitoring results from LD002 are included in **Table 6-9**. No discharge events occurred throughout the reporting period. Samples were collected at Main Dam for due diligence purposes when no discharge was occurring at LD002. Background water quality sampling has also been undertaken at the Environmental Dam (SW02), Silt Dam (SW03), Cullen Creek U/S and Cullen Creek D/S. The results of which are included in **Appendix 2**.

A comparison of the background water quality (annual average) results during the reporting period is included in **Section 6.4.4**.

**Table 6-9 LD002 Water Quality Monitoring Results**

Sampling date	pH	TSS mg/L	Oil and grease mg/L	Cobalt dissolved mg/L	Copper dissolved mg/L	EC $\mu$ S/cm	Manganese dissolved mg/L	Nickel dissolved mg/L	Iron total mg/L	Zinc total mg/L
<b>LD002 (licensed discharge point)</b>										
<b>Criteria for discharge</b>	<b>6.5 – 8.5</b>	<b>30</b>	<b>10</b>	<b>0.0014</b>	<b>0.0014</b>	<b>650</b>	<b>1.9</b>	<b>0.011</b>	<b>0.3</b>	<b>0.008</b>
09/01/2025*	7.6	20	<5	0.017	<0.001	934	3.6	0.15	0.25	0.2
06/02/2025*	6.5	12	<5	0.009	<0.001	1,000	2.5	0.12	0.23	0.14
06/03/2025*	6.9	7	<5	0.005	<0.001	1,100	1.9	0.084	0.39	0.082
03/04/2025*	6.3	40	<5	0.034	0.005	990	1.4	0.066	0.36	0.06
01/05/2025*	6.8	11	<5	0.009	0.001	1,100	1.4	0.054	0.81	0.067
02/06/2025*	6.3	42	<5	0.021	<0.001	1,000	2.2	0.073	0.24	0.15
03/07/2025*	6.4	33	<5	0.023	0.007	1,100	2.5	0.075	0.32	0.14
18/08/2025*	6.6	10	<5	0.018	<0.001	1,100	2.6	0.073	0.26	0.13
01/09/2025*	6.4	120	<5	0.016	<0.001	930	2.0	0.064	0.13	0.12
02/10/2025*	6.4	7	<5	0.016	<0.001	920	2.0	0.07	0.23	0.11
04/11/2025*	6.5	6	<5	0.009	<0.001	1,000	1.9	0.053	0.16	0.072
04/12/2025*	6.2	5	<5	0.021	<0.001	1,000	2.4	0.099	0.24	0.02

\*Monthly sampling is undertaken at Main Dam for due diligence purposes when no discharge is occurring

#### **6.4.4 Trends in Data**

During the reporting period, no discharge occurred from LD002.

##### **6.4.4.1 Background Water Quality Monitoring Results – Dams**

Annual average of the background water quality in the on-site dams during 2025 together with monitoring results from previous years is presented in **Table 6-10** LD002 due diligence water quality results of available data for pH, oil and grease, TSS, EC, dissolved metals and total metals is displayed graphically in **Appendix 2**.

The 2025 annual average pH recorded at LD002 (Main Dam) (6.6) is generally consistent with historical averages. The 2025 annual average pH recorded at the Environmental Dam (3.5) was similar to 2024 (3.3). The 2025 annual average pH recorded at the Silt Dam (SW03) (6.9) was consistent with previous averages.

The oil and grease results at the Main, Environmental and Sediment Dams for 2025 were below detection limits as seen in previous reporting years.

TSS annual average results at the Main, Environmental and Silt Dam for 2025 ranged between 14.3 and 26.1 mg/L. The 2025 results for the Main Dam, Environmental Dam and Silt Dam were within the historical range of results.

##### **6.4.4.1.1 Environmental Dam pH Investigation**

The EPA attended site on 18 August 2023 in response to a complaint received regarding excess water flow from the Main Dam. The inspection primarily focused on the discharge from Main Dam in addition to a series of dams including Environmental Dam. The pH of the Environmental Dam was tested resulting in a measured pH of 3.8 and raised written concerns about uncontrolled discharge and contaminated water. The EPA issued a draft variation to the EPL 1095 requiring Invincible Colliery to undertake a low pH water investigation and identify appropriate management options to minimise any water contamination. Castlereagh Coal engaged consultants Australasian Groundwater and Environment Consultants (AGEC) to undertake an investigation.

Further investigation in 2024 included additional samples of the Environmental Dam and the completion of an investigative report by AGEC (February 2024) for the likely cause of the low pH water. The investigative report concluded the following:

*“The source of contamination is not likely to be groundwater originating from the underground workings or regional groundwater regime because a comparison of water quality data highlights significant differences in pH and EC values between groundwater bores and the Environmental Dam. Additionally, several studies have shown that the regional groundwater flow direction in the underground workings is to the northeast, away from the embankment.*

*The EPA postulated that the source of contamination could be groundwater seepage from the tailings pile and dams above the embankment west of the Environmental Dam. There is no readily available way to investigate this without additional sampling from water within or near the tailings dam, and possibly groundwater data near the Environmental Dam and Leachate Dam. The composition of the embankment is unclear but is not likely natural material and may contain waste rock from historic mining.*

*Based on the limited data, local groundwater in the vicinity of the tailings dams east of the embankment is the likely source of low-pH water entering the Environmental Dam.”*

The AGEC report was submitted to the EPA in accordance with the licence requirements. It was the view of the EPA that the AGEC report “does not fully meet the objectives of the Pollution Studies and Reduction Program (PSRP)” and a modified PSRP was provided to Castlereagh Coal for review. Castlereagh Coal reviewed the PSRP and provided the EPA with comment for their consideration in May 2024. The EPL was varied in September 2025 with the requirement to complete phase 1 actions recommended by AGEC, including undertaking an investigation into the embankment and seepage and to provide the EPA with a report that summarises the findings of the investigation.

**Table 6-10 Comparison of Average Water Quality in On-Site Dams 2021-2025**

Annual Average Period	Location	pH	TSS mg/L	Oil and Grease m/L	Cobalt dissolved mg/L	Copper dissolved mg/L	EC µS/cm	Manganese dissolved mg/L	Nickel dissolved mg/L	Iron total mg/L	Zinc total mg/L
<b>Discharge Criteria</b>		6.5 – 8.5	30	10	0.0014	0.0014	650	1.9	0.011	0.3	0.008
<b>2021</b>	Main Dam	6.94	6	<5	No data	No data	No data	No data	No data	No data	No data
	Environmental Dam	3.00	12	<5	No data	No data	No data	No data	No data	No data	No data
	Silt Dam	7.07	38	<5	No data	No data	No data	No data	No data	No data	No data
<b>2022</b>	Main Dam	7.5	9	<5	<0.001	<0.001	382	0.2	0.002	0.4	0.012
	Environmental Dam	3.1	7	<5	No data	No data	1,469	No data	No data	No data	No data
	Silt Dam	7.4	11	<5	No data	No data	327	No data	No data	No data	No data
<b>2023</b>	Main Dam	7.8	6	<5	<0.001	<0.001	793	0.2	0.013	0.2	0.024
	Environmental Dam	3.0	18	<5	No data	No data	1,498	No data	No data	14.3	No data
	Silt Dam	7.6	13	<5	<0.001	<0.001	738	0.8	0.004	1.0	0.011
<b>2024</b>	Main Dam	6.5	11.8	<5	0.0369	0.0359	1,031	3.3	0.298	0.4	0.545
	Environmental Dam	3.3	14.1	<5	No data	No data	1,268	No data	No data	14.0	No data
	Silt Dam	7.5	14.8	<5	<0.001	<0.001	1,028	0.6	0.004	0.4	0.006
<b>2025</b>	Main Dam	6.6	26.1	<5	0.002	<0.001	1,015	2.2	0.08	0.3	0.14
	Environmental Dam	3.5	16.3	<5	No data	No data	1,145	No data	No data	10.7	No data
	Silt Dam	6.9	14.3	<5	<0.001	0.003	1,021	0.37	0.34	0.3	0.014

**6.4.4.2 Background Water Quality Monitoring Results – Creeks**

The 2025 annual average water quality at Cullen Creek U/S (BSW01) which is upstream of Invincible Colliery and Cullen Creek D/S (previously BSW02) (refer to **Appendix 1, Figure 3**) which is downstream of Invincible Colliery results, together with the annual average results for the previous four years for Cullen Creek U/S and BSW02 are presented in **Table 6-11**. Cullen Creek D/S was added to the sampling program in 2023 to replace BSW02, in line with the Invincible Colliery WMP (2022).

The 2025 annual average pH recorded at the upstream location of Cullen Creek U/S (6.5) was consistent with past averages. The 2024 annual average pH recorded at the new Cullen Creek D/S site was 6.6 which was slightly below past averages.

The annual average oil and grease concentrations at Cullen Creek U/S have been low or below laboratory detection limits during every year sampled. Oil and grease at Cullen Creek D/S was below detection limits on all sampled occasions in 2025.

The 2025 annual average TSS concentration recorded at Cullen Creek U/S (34 mg/L) were comparable to 2021 and 2022 results but slightly higher than 2023 and 2024 results. The average TSS at Cullen Creek D/S during 2024 was 11 mg/L which was lower than 2024 results but higher than other past averages.

**Table 6-11 Upstream and Downstream Creek Water Quality 2021 – 2025**

Annual Average	Location	pH	Oil & grease mg/L	TSS mg/L	Cobalt dissolved mg/L	Copper dissolved mg/L	EC µS/cm	Manganese dissolved mg/L	Nickel dissolved mg/L	Iron total mg/L	Zinc total mg/L
2021	Cullen Ck U/S	6.54	<0.005	30	No data	No data	No data	No data	No data	No data	No data
	BSW02	6.98	<0.005	8	No data	No data	No data	No data	No data	No data	No data
2022	Cullen Ck U/S	6.54	<0.005	30	0.007	<0.001	644	0.74	0.013	2.0	0.031
	BSW02	6.98	<0.005	8	0.006	<0.001	862	1.24	0.019	0.1	0.026
2023	Cullen Ck U/S	6.8	<0.005	12	0.006	<0.001	770	0.82	0.012	3.4	0.031
	Cullen Ck D/S	7.3	<0.005	5	0.004	<0.001	1,039	1.0	0.009	0.3	0.015
2024	Cullen Ck U/S	6.8	<0.005	21	<0.005	<0.001	309	0.41	0.011	2.5	0.037
	Cullen Ck D/S	6.9	<0.005	20*	0.035	0.005	1,431	5.17	0.05	2.6	0.12
2025	Cullen Ck U/S	6.5	<0.005	34	0.005	0.001	316	0.49	0.012	4.2	0.043
	Cullen Ck D/S	6.4**	<0.005	11	0.039**	0.002	1,460	4.35**	0.078**	1.0**	0.082

\*Anomalous results for October 2024 removed from averaging data

\*\*Anomalous results for April 2025 removed from averaging data

#### 6.4.5 Proposed Improvements

In reviewing site surface water quality results for the Invincible Colliery, it was identified that some results from Cullen Creek D/S exceed the trigger values outlined in the EPL. A surface water investigation report was ready for submission to the EPA for review as at 31 December 2025. The outcomes of the investigation report will advise on management measures to ensure appropriate monitoring and mitigation measures are in place to protect Cullen Creek from any impacts that may occur from the Invincible Colliery activities.

Monitoring of water quality at Invincible Colliery will continue to be conducted during 2026.

#### 6.5 Groundwater

Unlike most mining operations, the target coal seams at Invincible are already in a depressurised state. As such, monitoring of groundwater depressurisation is not a key concern of the monitoring program. Instead, the key groundwater issue for the Southern Extension Project is the management of water accumulated in the former Ivanhoe #2 workings. In particular, monitoring will be undertaken to ascertain the following:

- Volume and quality of water taken from the Ivanhoe #2 workings (via bore hole BHTH12 and exposed Ivanhoe workings water);
- Volume and quality of water in the Invincible underground workings (via bore hole LD001 and exposed Invincible workings water); and
- Volumes of water pumped into the Invincible underground workings.
- Quality of water in the barrier coal between Invincible underground workings and Ivanhoe #2 underground workings (via bore hole BH2)

**Table 6-12** presents a summary of the existing Invincible Colliery monitoring bores.

At present, water levels in the Invincible workings are monitored through LD001, which is a considerable distance north-east of the Southern Extension Area, as well as from the North Void. Water levels in the Ivanhoe #2 workings were monitored through BHTH12 until the bore became dry and are currently monitored from

the exposed water storage in the Southern Extension area. Water levels in the barrier between the two workings is measured through BH2.

During the reporting period groundwater quality monitoring was undertaken monthly at the Invincible Workings in the Northern Void, Ivanhoe #2 Workings in the Southern Extension following exposure in November 2025, LD001 and BH2. BHTH12 in the Ivanhoe #2 workings was dry during 2025. It is noted that LD001 was inaccessible in March 2025 and from May to June 2025 and therefore no results are available during this time. A discussion of the monitoring results is provided in the following sub-sections.

**Table 6-12 Existing Invincible Colliery Groundwater Monitoring Bores**

Bore ID	Hole Depth (m bgl)	Screen (m bgl)	Target
LD001	104	100 - 104	Lithgow Coal Seam (Invincible Colliery flooded underground workings)
BHTH12	36	31 -34	Lithgow Coal Seam (Ivanhoe No.2 Colliery flooded workings)
BH2	39.5	29.9 – 32.9	Lithgow Coal Seam (Coal barrier between Ivanhoe No.2 Colliery and Invincible Colliery underground workings)

### 6.5.1 Environmental Management Measures

The Invincible mining operation is located on the western escarpment of the Sydney Basin and groundwater intercepted in the monitoring bores is typically greater than 70 m below the surface. Water management will continue to be undertaken in accordance with the approved WMP (refer to **Section 6.1**). A groundwater investigation is currently underway which will inform an updated WMP in 2026.

### 6.5.2 Performance Criteria

There is no pollutant concentration limits for groundwater specified in EPL. There is also no trigger levels detailed in the currently approved Invincible Colliery WMP (2022).

### 6.5.3 Trends in Data

The long-term trends for LD001 in standing water level, electrical conductivity, hardness, sulphate, nitrate and metals are discussed below. Long term graphs and tables for these groundwater parameters can be found in **Appendix 2**. Sampling commenced at BHTH12, BH2 and the Northern Void in early 2022. Results from February 2022 up to the current reporting period are discussed below with data tables presented in **Appendix 2**.

#### 6.5.3.1 Standing Water Level

Results for 2025 show slight fluctuations in standing water levels within the the Ivanhoe workings from month to month with the average remaining steady at 899.75 at BH2 as shown graphically in **Appendix 2**. BHTH12 was dry for all testing events during 2025. Standing water levels at LD001 (Invincible workings) fluctuated between 898.64m in January 2025 to a low of 895.1m in August. A September correlation between LD001, North-east Void and North Void standing water levels showed a difference of 897.7, 897.7 and 897.5m respectively. Note that North Void and North-east Void levels were not taken at monthly intervals.

#### 6.5.3.2 pH

Between 2011 and 2022 the pH level ranges between 4.90 and 7.67 at LD001. The 2025 average pH measurement of 6.5 is consistent with the previous reporting period (refer to **Appendix 2**). Average pH measurements at BH2 and BHTH12 (6.1 & 6.2 respectively) have been consistent since monitoring commenced, noting that BHTH12 bore was dry during 2025 and no measurements were taken over the

reporting period. North Void has had pH results in the neutral range consistently since monitoring began in 2022 (refer to **Appendix 2**). Ivanhoe #2 workings in the Southern Extension area averaged a pH of 4.1 between November and December 2025, being the time since exposure of the water storage body.

#### **6.5.3.3 EC**

The 2025 average EC result of 289  $\mu\text{S}/\text{cm}$  at LD001 was lower than the previous reporting period. An anomalous value (1,300  $\mu\text{S}/\text{cm}$ ) was recorded during the December monthly sample (refer to **Appendix 2**). The average EC levels at BH2 were consistent with previous results (refer to **Appendix 2**).

#### **6.5.3.4 Hardness**

The 2025 hardness results were consistent with past range of results (refer to **Appendix 2**). Hardness results at BH2 has been consistent since analyses began in 2022, noting that BHTH12 was dry during 2025 and no samples were taken (refer to **Appendix 2**).

#### **6.5.3.5 Sulphate**

The 2025 average sulphate levels of 10 mg/L is consistent with the historical average. Average sulphate concentrations at BH2 during 2025 (278mg/L) were significantly lower since analyses began in 2022, noting that BHTH12 was dry during 2025 and no samples were taken (refer to **Appendix 2**).

#### **6.5.3.6 Nitrate**

Results in 2025 were stable and values were consistent with previous 2024 readings (refer to **Appendix 2**). Nitrate has only been monitored at BH2 since March 2023, so comparison trends are relatively variable for 2025 (refer to **Appendix 2**).

#### **6.5.3.7 Metals**

Dissolved metals have been monitored at LD001 for 2025 all parameters mostly returned results which were below the limit of detection except for Cobalt, Iron and Manganese. Levels for all dissolved metals at LD001 were within the range of previous results.

### **6.5.4 Proposed Improvements**

Shoalhaven will continue groundwater monitoring on a monthly basis during 2026. Improvements on groundwater monitoring is expected following submission and approval of the updated Water Management Plan during Quarter 2 of 2026.

## **6.6 Noise**

### **6.6.1 Environmental Management Measures**

A Noise Management Plan (NMP, 2022) has been prepared in accordance with the Project Approval outlining the required frequency of monitoring during mining operations. During the reporting period quarterly attended noise monitoring was conducted at three locations (N01, N02 and N03) (refer to **Figure 3, Appendix 1**).

### 6.6.2 Performance Criteria

Noise impact assessment criteria for monitoring are specified in the EPL and Project Approval as outlined in **Table 6-13**.

**Table 6-13 Noise Impact Assessment Criteria**

Location	Day time limit L <sub>Aeq</sub> (15 minute)	Evening limit L <sub>Aeq</sub> (15 minute)	Night time limit L <sub>Aeq</sub> (15 minute)	Location L <sub>A1</sub> (1 minute)
393 (Billabong)	40	40	35	45
394 (Hillview)	43	43	35	45
All other privately owned land	35	35	35	45

*Note: The Billabong and Hillview properties were purchased by Manildra Group in 2019*

### 6.6.3 Environmental Outcomes

There were no exceedances of the noise performance the reporting period as shown in **Table 6-14**. On all monitoring occasions, the noise from Invincible Colliery was imperceptible.

**Table 6-14 2025 Quarterly Attended Noise Monitoring Results**

Location	Criterion (dB)	Quarter 1 (L <sub>Aeq</sub> 15min)	Quarter 2 (L <sub>Aeq</sub> 15min)	Quarter 3 (L <sub>Aeq</sub> 15min)	Quarter 4 (L <sub>Aeq</sub> 15min)
Cullen Bullen Central (N01)	35	IP	IP	IP	IP
Cullen Bullen West (N02)	35	IP	IP	IP	IP
Cullen Bullen South (N03)	35	IP	IP	IP	IP

*IP – noise from the mine was imperceptible*

### 6.6.4 Trends in Data

The results of noise performance monitoring for the period 2011 – 2025 are summarised in **Appendix 2**. Results for quarterly noise monitoring during 2013 to 2025 has shown the site contribution to be generally imperceptible at all monitoring locations.

### **6.6.5 Proposed Improvements**

There were no noise complaints or non-compliances with noise criteria during the reporting period. Noise monitoring will continue to be undertaken quarterly during 2026.

## **6.7 Biodiversity**

### **6.7.1 Environmental Management Measures**

Biodiversity monitoring commenced at Invincible Colliery in 2011. The 2025 Biodiversity Monitoring of the Rehabilitation and Biodiversity Offset Areas was undertaken in accordance with the approved Biodiversity Management Plan (BMP) (Castlereagh Coal, 2023).

An administrative non-compliance with regard to the Biodiversity Conservation Bond was recorded during the 2024 reporting period. At the time of this report the DPHI have principally approved the acceptance of the Hillcroft area as a biodiversity offset area for the project. However, to allow a Biodiversity Stewardship Agreement to be registered against Hillcroft and therefore a Biodiversity Conservation Bond and associated management plan, The DPHI and Crown Lands are currently working on the following:

- (i) agreement to financial considerations,
- (ii) lease condition alterations indemnifying the Minister,
- (iii) reserve purpose alterations, and
- (iv) confirmation that Perpetual Special Lease 1943 – Lithgow extinguishes Native Title

It is expected these will be finalised by mid-2026 with progress to be reported in the next Annual Review.

### **6.7.2 Biodiversity Monitoring**

In 2025 biodiversity monitoring was undertaken for the Invincible Colliery Biodiversity Offset Area (BOA) and Rehabilitation Areas (refer to **Section 8.4** for the Rehabilitation Areas biodiversity monitoring results) (refer to **Appendix 1, Figure 4** for monitoring locations). The Biodiversity Monitoring Program is based on the monitoring requirements documented in the Biodiversity Management Plan (BMP).

#### **6.7.2.1 Invincible Biodiversity Offset Area**

Biodiversity values of the IC BOA were assessed based on the condition of habitat and success in the management of flora and fauna (threatened species in particular) within three parcels of land where the following five vegetation communities occur that have been described previously as:

- Cox's Permian Red Stringy Bark – Brittle Gum Woodlands
- Tableland Gully Scribbly Gum – Narrow-leafed Shrubby Open Forest
- Tableland Gully Snow Gum – Ribbon Gum Grassy Forest
- Tableland Gully Mountain Gum – Broad-leafed Peppermint Grassy Forest
- Exotic Dominated Grassland

The flora and fauna survey methodology undertaken in the IC BOA is consistent with that presented in the approved BMP.

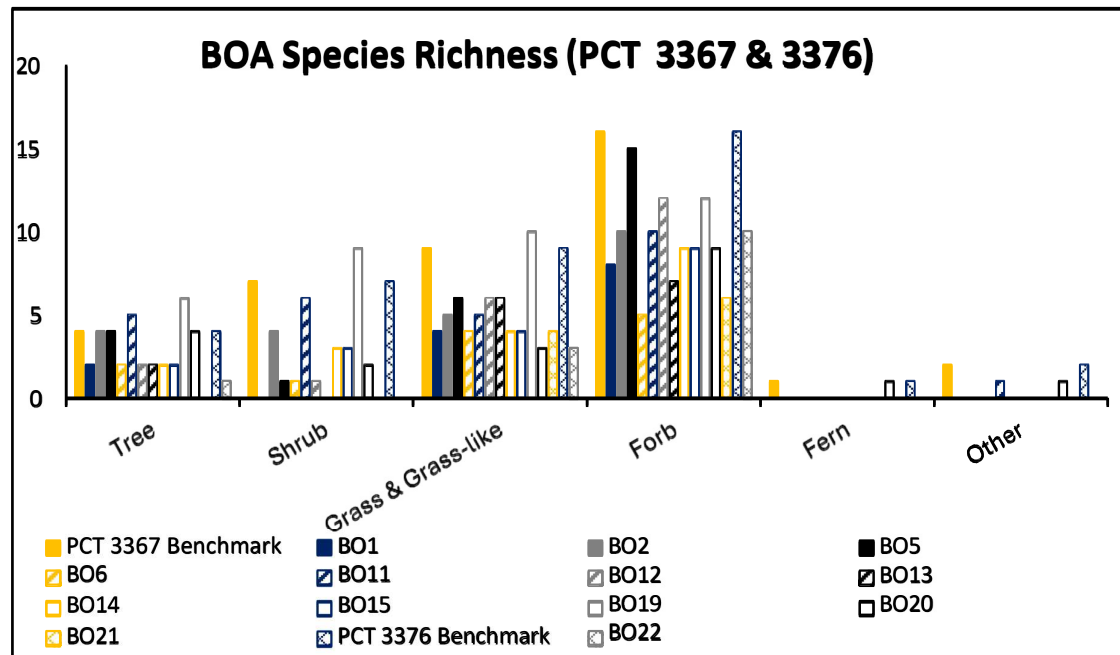
### 6.7.2.1.1 Flora Monitoring

In the IC BOA there are 23 monitoring plots that are surveyed to satisfy the requirements of the BMP. Eleven of these plots were previously established and have been monitored since 2017. The additional 12 plots were established in 2023. The 23 monitoring plots were situated in indicative locations shown in the BMP; however final locations were determined based on site conditions and to complement the locations of previous monitoring points.

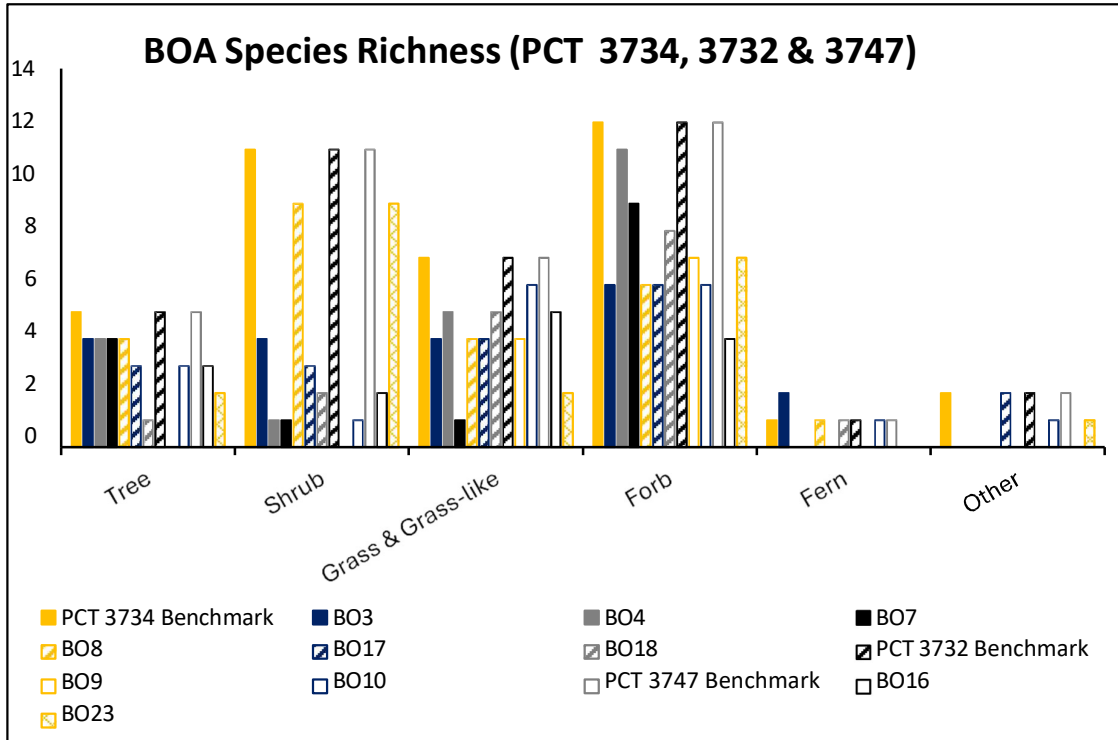
The habitat function of the BOA monitoring site was generally below that of the PCT benchmarks. Four sites recorded values that exceeded the benchmark for large woody debris with seven sites recording no large woody debris. Large trees was below the benchmark for all sites, which is attributed to the grassland habitat and historical clearing. Litter cover was above benchmark values at seven BOA monitoring plots, all of which were within PCT 3367. Two High Threat Weed Species were recorded throughout the BOA, St John’s Wort and Briar Rose, generally at low cover, with the highest cover recorded at BO10 with 5% PFC.

Species richness and percentage foliage cover for each BOA monitoring plot, as measured using BAM, were compared to their respective PCT benchmarks. These comparisons are presented in **Graph 1 - Graph 4**. An additional summary of comparisons between each plot and their respective benchmarks are provided in **Table 6-15**.

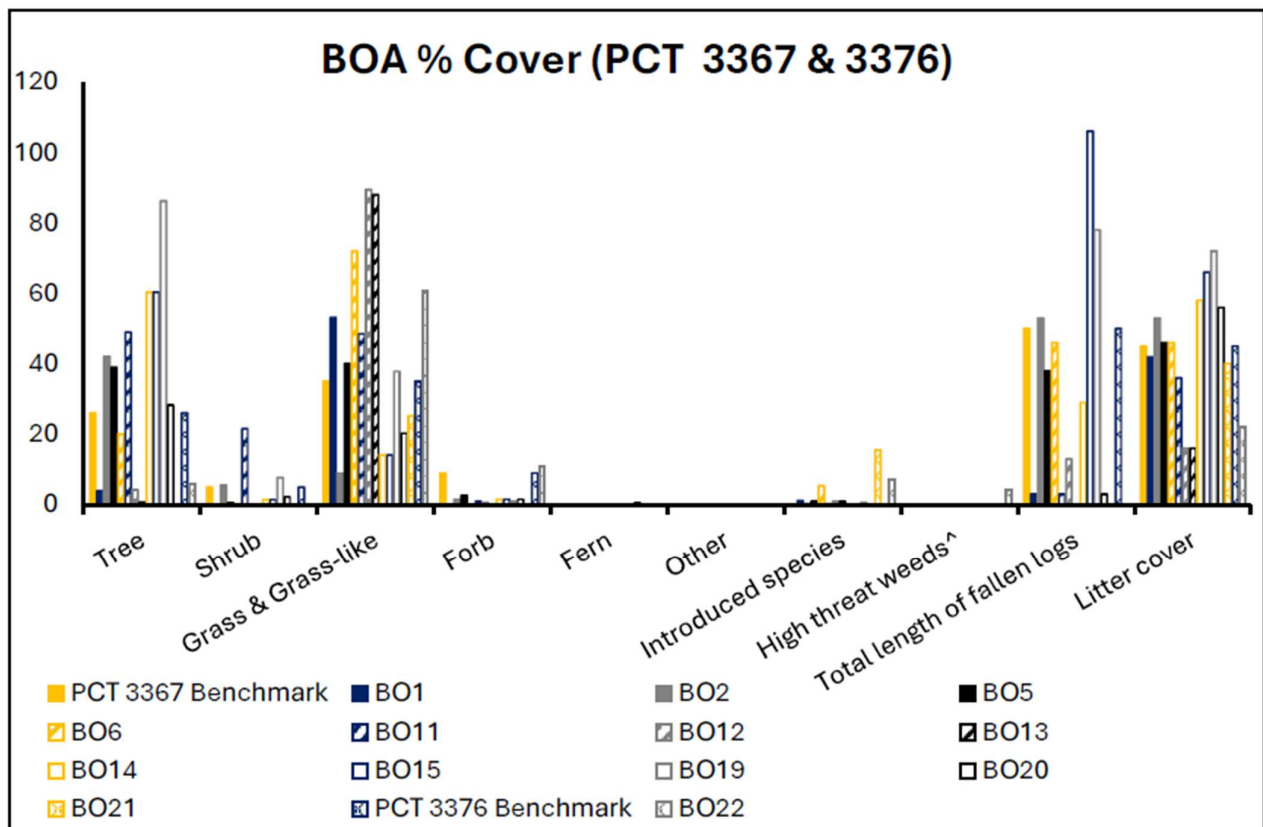
During the survey undertaken in September 2025, 98 *Bursaria spinosa* plants were identified in the translocation area. The majority of plants were seeding and none were flowering during the survey. The community was observed to be generally in good health, with some plants showing signs of stress. A total of 20 plants were observed to not have survived translocation, most of these were adult plants that had been pruned before transplantation.



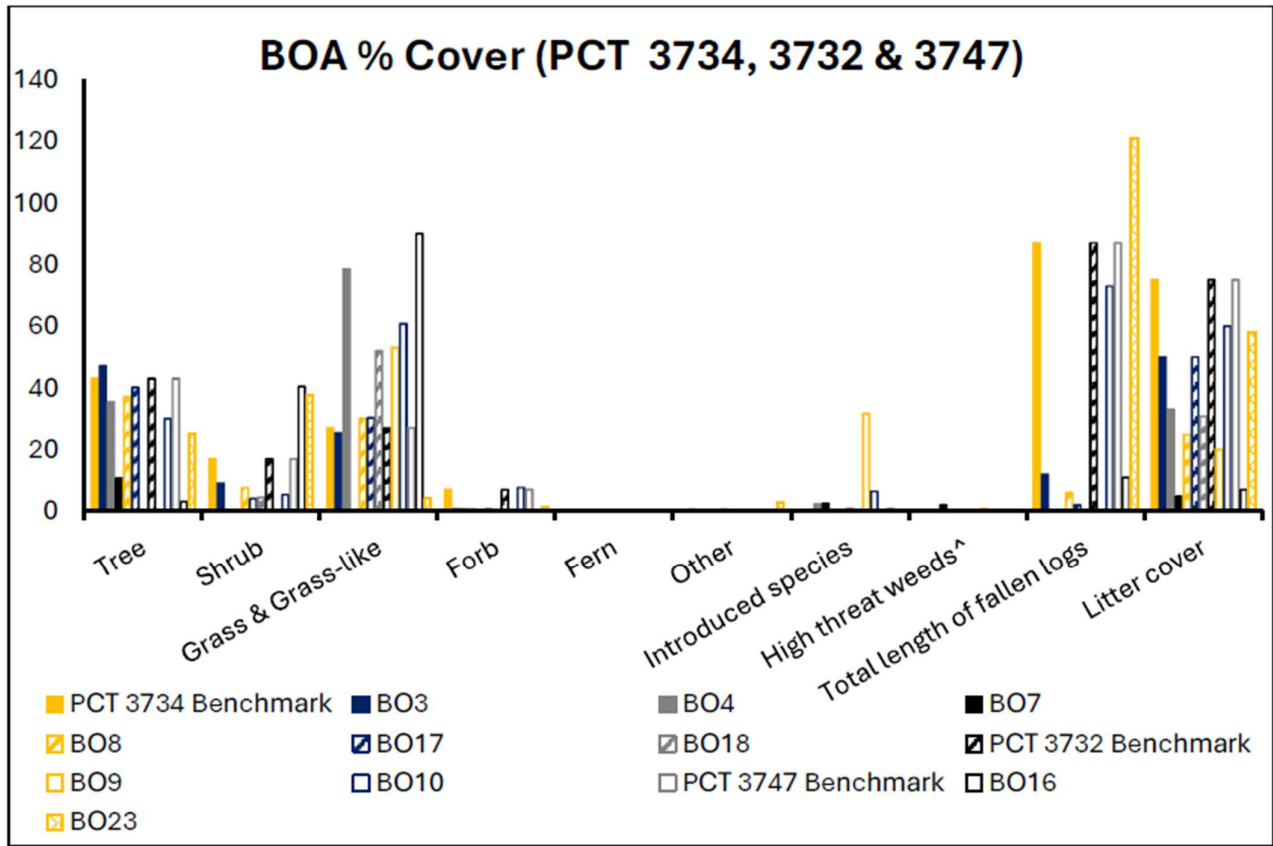
Graph 1: BOA Monitoring plot Species Richness (PCT 3367 & 3376)



Graph 2: BOA Monitoring plot Species Richness (PCT 3734, 3732 & 3747)



Graph 3 - BOA Monitoring plot Percentage Foliage Cover (PCT 3367 & 3376)



Graph 4 - BOA Monitoring plot Percentage Foliage Cover (PCT 3734, 3732 & 3747)

Table 6-15 Comparison of BOA monitoring plot observations to PCT benchmarks

	Parameter	BO1	BO2	BO3	BO4	BO5	BO6	BO7	BO8	BO9	BO10
Richness	Tree	2	4	4	4	4	2	4	4	0	3
	Shrub	0	4	4	1	1	1	1	9	0	1
	Grass/Grass-like	4	5	4	5	6	4	1	4	4	6
	Forb	8	10	6	11	15	5	9	6	7	6
	Fern	0	0	2	0	0	0	0	1	0	1
	Other	0	0	0	0	0	0	0	0	0	1
Cover	Tree	4	42.1	47.1	35.4	39	20.1	10.8	37.2	0	30
	Shrub	0	5.6	9.1	0.3	0.5	0.3	0.5	7.7	0	5.4
	Grass/Grass-like	53.1	8.9	25.3	78.5	40.1	72	0.5	30	53.1	60.8
	Forb	0.1	1.5	0.7	0.7	2.6	0.1	0.6	0.5	0	7.7
	Fern	0	0	0	0	0	0	0	0	0	0
	Other	0	0	0.6	0	0	0	0	0.1	0	0

Function	Total Length of Fallen Logs	3	53	12	0	38	46	0	6	0	73
	Litter Cover	42	53	50	33	46	46	4.8	24.8	20	60
	No. of Large Trees per 0.1 Hectare	0	0	1	0	1	1	0	0	0	0
	Parameter	BO1	BO2	BO3	BO4	BO5	BO6	BO7	BO8	BO9	BO10
Richness	Tree	2	4	4	4	4	2	4	4	0	3
	Shrub	0	4	4	1	1	1	1	9	0	1
	Grass/Grass-like	4	5	4	5	6	4	1	4	4	6
	Forb	8	10	6	11	15	5	9	6	7	6
	Fern	0	0	2	0	0	0	0	1	0	1
	Other	0	0	0	0	0	0	0	0	0	1
Cover	Tree	4	42.1	47.1	35.4	39	20.1	10.8	37.2	0	30
	Shrub	0	5.6	9.1	0.3	0.5	0.3	0.5	7.7	0	5.4
	Grass/Grass-like	53.1	8.9	25.3	78.5	40.1	72	0.5	30	53.1	60.8
	Forb	0.1	1.5	0.7	0.7	2.6	0.1	0.6	0.5	0	7.7

	<b>Fern</b>	0	0	0	0	0	0	0	0	0	0
	<b>Other</b>	0	0	0.6	0	0	0	0	0.1	0	0
<b>Function</b>	<b>Total Length of Fallen Logs</b>	3	53	12	0	38	46	0	6	0	73
	<b>Litter Cover</b>	42	53	50	33	46	46	4.8	24.8	20	60
	<b>No. of Large Trees per 0.1 Hectare</b>	0	0	1	0	1	1	0	0	0	0

### 6.7.2.1.2 Fauna Monitoring

The 2025 spring monitoring recorded a similar overall species diversity throughout the IC BOA relative to 2024, with a total of 67 species recorded, compared to 66 species recorded during the 2024 monitoring, and 72 species recorded in the 2023 monitoring. Within the IC BOA, 46 bird species recorded during the spring monitoring, 19 mammal species and two frogs, the Spotted Marsh Frog and the Eastern Dwarf Tree Frog.

Two threatened bird species listed as Vulnerable under the BC Act were recorded during the spring 2025 surveys. The Dusky Woodswallow (*Artamus cyanopterus cyanopterus*) was recorded at BO22 and the Powerful Owl (*Ninox strenua*) was recorded at BO9 and BO10.

Sixteen bat species were positively identified at the BOA sites including four threatened bat species. These included:

- Large-Eared Pied Bat (*Chalinolobus dwyeri*), listed as Endangered under the EBPC Act and Endangered under the BC Act
- Eastern Bent-winged Bat (*Miniopterus orianae oceanensis*) listed as Vulnerable under the BC Act
- Eastern False Pipistrelle (*Falsistrellus tasmaniensis*), listed as Vulnerable under the BC Act
- Greater Broad-Nose Bat (*Scoteanax rueppellii*), listed as Vulnerable under the BC Act

Two pest species were recorded in the IC BOAs. European Rabbit (*Oryctolagus cuniculus*) and European Hare (*Lepus europaeus*) were recorded in the BOA in low abundance and no control measures are recommended at this time.

No nest boxes are located in the IC BOA.

### 6.7.2.2 Summary of Observations and Recommendations

An assessment of 2025 monitoring results against the BOA performance and completion criteria is shown below in **Table 6-16**.

**Table 6-16: 2025 Monitoring results compared to the BOA performance and completion criteria**

Action/Items	Performance Criteria	Completion Criteria	2025 Monitoring findings
<b>Natural and Active Regeneration</b>	Biodiversity Offset Areas are managed for biodiversity using natural regeneration in areas with significant native vegetation remaining, and using active regeneration in areas lacking sufficient native vegetation.	The number of native plant species for each growth form group will be at or above benchmark value after 5 years. Structure of each growth form group will increase to at least local reference site benchmark after 10 years	Species richness is generally below the benchmark values for overstorey midstory and ground cover species. Five sites recorded tree species richness above the benchmark values.  Vegetation structure varied throughout the BOA. Eight sites exceeded the benchmark for canopy cover, four for shrub cover, 12 sites for grass cover and two sites exceeded forb cover benchmarks.
<b>Increase in native fauna species</b>	Increased in biodiversity is evidenced in the Biodiversity Offset Areas by an increase in native species abundance and diversity	Native fauna species diversity and abundance is higher than baseline levels after 10 years	The fauna species diversity recorded in 2025 was similar to that recorded in 2024, and less than recorded in 2023.  It is expected that faunal communities will continue to establish and become more diverse, similar to fauna biodiversity in the surrounding un-mined vegetation as the diversity of habitats progressively improves.
<b>Reuse of salvaged habitat features</b>	Habitat features present in the disturbance footprint will be relocated into the rehabilitation areas or Biodiversity Offset Areas under supervision of an ecologist	All habitat features have been relocated in designated areas within one year of removal and details included in the Annual Biodiversity Monitoring Report.	The recovered habitat features are currently stockpiled and awaiting placement in designated areas.

### **6.7.3 Proposed Improvements**

Biodiversity Monitoring and management of the Biodiversity Offset Areas will continue to be conducted during 2026 in accordance with the approved BMP (Castlereagh Coal, 2023).

### **6.8 Blasting**

No mining operations were undertaken and no blasting was conducted during the reporting period.

### **6.9 Waste Management**

During the report period only minimal oil and greases were stored on site. Any maintenance works required on machinery and equipment is undertaken within existing bunded areas.

Waste oils and grease stored at the maintenance workshop are collected by a licensed waste recycling contractor on an as needs basis. All paper and general wastes from administration and workshop areas is disposed of in garbage bins located adjacent to the administration buildings. The bins are collected as required and the contents placed in large waste skip bins positioned adjacent to the heavy vehicle maintenance building to await removal by a licensed industrial waste collector. Industrial waste collection is undertaken as required.

Sewage from the workshop areas is directed to a septic system which is pumped out by a licensed waste collection and disposal contractor on an as-needs basis.

### **6.10 Hazardous Material Management**

Hazardous material kept on site include oils, grease and degreasers contained in storage tanks. Storage tanks are collected by an appropriately licenced contractor.

Storage tanks remaining on site that contain these materials were kept emptied during the care and maintenance period. One of the above ground self-bunded diesel tanks (75,000L Transtank) is operational (i.e. in use). A second Transtank (95,000L) is kept on site but is currently not in use.

Diesel is delivered to site as required. In addition, waste oil and grease are stored adjacent to the workshop in a bunded area which is removed as required by a licensed contractor.

### **6.11 Heritage**

#### **6.11.1 Indigenous Heritage**

Several artefact scatters, open camp sites and an isolated find were located during an archaeological field survey conducted in 2010. Only one of these sites (Invincible OS1 artefact scatter) was determined to have high archaeological significance.

An Aboriginal Cultural Heritage Management Plan (ACHMP) (OzArk, 2022) has been prepared and implemented in accordance with the Project Approval (Mod 4) and in consultation with the then Department of Environment and Climate Change and the Aboriginal community. The artefact scatter site OS1 is located outside the mine disturbance area and has been fenced and signposted in accordance with the AHMP. No disturbance of OS1 occurred during the reporting period.

### 6.11.2 Non-Indigenous Heritage

No items of European heritage are present within the Invincible Colliery site and therefore there are no specific management measures required to be implemented.

### 6.12 Greenhouse Gas Emissions

Invincible Scope 1 and Scope 2 emissions calculated for the 2024/2025 National Greenhouse and Energy Reporting (NGERS) year was 20,447 t CO<sub>2</sub>-e, as compared to 14,603 t CO<sub>2</sub>-e in 2023/2024, as shown in **Table 6-16**.

**Table 6-17 Invincible GHG Emissions 2024 and 2025 Financial Years**

	2023/24	2024/25
Scope 1	14,603	20,366
Scope 2	0	0
<b>Total GHS Emissions (tCO<sub>2</sub>-e)</b>	<b>14,603</b>	<b>20,336</b>

### 6.13 Spontaneous Combustion

There are no known occurrences of spontaneous combustion at Invincible Colliery. Experience to date in mining at the Invincible Colliery has demonstrated that the waste material, stockpiled coal and other relevant materials have a low propensity to spontaneously combust. Any future extraction, processing and stockpiling of coal will continue to be managed to ensure any potential for spontaneous combustion is minimised.

### 6.14 Bushfire

Bushfire prevention is required under the Rural Fires Act 1997. The absence of fire will lead to a build-up of fire fuel and risk of high intensity bushfire. Shoalhaven Coal as the owner and lessee of the land is required to take practicable steps to prevent the occurrence of bushfires on the land and minimise the spread of bushfire. The primary management objective in relation to fire management is to protect lives, long-term biodiversity values and infrastructure assets from the impacts of bushfires. Key control measures will focus on:

- Use of cool burns when deemed necessary (with any required approvals and/or permits from the Rural Fire Service) to reduce fuel build-up to protect biodiversity and conservation values. Cool burns will only be undertaken following prior assessment by and under the direction of a suitably qualified fire management contractor;
- Appropriate investment in fire suppression assets; and
- Communication of bushfire control measures and measures and response procedures for provision to key stakeholders, including employees and contractors, neighbours, and the RFS.

Any fuel hazard reduction burns will be planned in accordance with the Bush Fire Environmental Assessment Code for New South Wales (NSW Rural Fire Service, 2006a) and the guidelines contained in the Threatened Species Hazard Reduction Lists for the Bush Fire Environmental Assessment Code (NSW Rural Fire Service, 2006b).

### 6.15 Mine Subsidence

Mining operations at Invincible Colliery ceased in 2013 and recommenced in July 2023. No subsidence management measures were required to be implemented during the reporting period.

### 6.16 Public Safety

Access to working areas of the open cut are controlled by locked gates. Access to the site by members of the public is via contact at the mine office where visitors or contractors can only be escorted around the site by site personnel. Warning signs have been placed on extremities of operations to make members of the public aware of the presence of the open cut. There were no public safety incidents during the reporting period.

## 7 Water Management

### 7.1 Water Management System

The strategy behind the surface water management plan is to keep the clean and dirty water systems separate by interception and diversion of stormwater runoff from operational and non-operational areas. The water management system at Invincible Colliery has been designed (as far as possible) as a closed loop system. Water that enters the site via rainfall or through the water table is diverted to a series of settlement dams within the site.

There are 5 active sediment dams (SD2, SD3, SD4, SD5 and SD6) (refer to **Appendix 1, Figure 3**), one Environmental Dam (SW02), one storage dam (Main Water Dam – LD002), 2 sediment traps above Main Dam, one clean water storage dam (SW03) (refer to **Appendix 1, Figure 3**) located within the Aboriginal Heritage site (OS-1) and 7 inactive fine reject dams currently on site. An additional sediment dam (SD8) was under construction during the 2025 reporting period with a capacity of 38.8 ML and is due for completion in 2026. The Main Water Dam has a total capacity of 117 ML. The remaining dams have the following capacities:

- SD1 – 0.5 ML
- SD2 – 4.8 ML
- SD3 – <0.5 ML
- SD4 – 47.8 ML
- SD5 – 2.3 ML
- SD6 – 1.5 ML

The Environmental Dam which contains acid water is monitored on a regular basis by site personnel. The Environmental Dam is fitted with a pump out unit to ensure the water level remains low. Due to the permeable nature of the waste rock that is back-filled into the completed open cut excavation, and the proximity of the open cut to the abandoned underground workings, the majority of surface water runoff collected in pit sumps, fine reject dams, coal stockpile areas, active mining areas and waste dumps seeps down into the abandoned underground workings. Water from the abandoned underground workings is used for dust suppression. Any excess water, that meets the required water quality criteria, may be released from the Main Dam, LD002 which is a licenced discharge point under the EPL.

## 7.2 Water Take

There has been no water drawn from external sources under licences detailed in **Section 1**. Water is currently sourced from the existing connection to the Fish River Water Supply pipeline. Refer to **Table 7-1** for 2025 water take.

**Table 7-1 Water Take**

Water Licence #	Water sharing plan, source and management zone (as applicable)	Entitlement	Take Previous Period – 2023 (ML)	Take Current Period – 2024 (ML)
WAL 35978 (10BL602584)	NSW Murray-Darling Porous Rock Groundwater Sources Water Sharing Plan	26 units	0	0

## 7.3 Erosion and Sediment Control

### 7.3.1 Environmental Management Measures

Permanent erosion and sediment control (ESC) measures within the Invincible Colliery include containment and diversion of “clean” water around disturbed areas and containment of runoff from these disturbed areas within on-site sediment dams. Temporary measures include contour banks, drainage lines, and rock lined drop structures. Where inspections identify failure of ESC measures, repairs and rectification works are planned for implementation.

### 7.3.2 Environmental Outcomes and Proposed Improvements

An indication of the effectiveness of the sediment and erosion control structures is obtained through regular visual inspections. These inspections focus on permanent erosion and sediment control structures and areas where the ground has been disturbed and soils are exposed. Recently disturbed sites are most vulnerable to erosion and loss of sediment following periods of heavy rainfall.

James Bailey & Associates (JBA) were commissioned by Castlereagh Coal to complete a review of water management and erosion and sediment control (ESC) structures located within areas of rehabilitation established at Invincible Colliery. The review was based on a desktop review of related environmental management plans and recent monitoring documents completed for Invincible Colliery, as well as observations made during subsequent field inspections completed by JBA in December 2022.

The review complements the work undertaken by Umwelt (2022) in response to directives provided to Castlereagh Coal from the NSW section Regulator in relation to ESC management within the Invincible Colliery as discussed in **Section 4.3**.

A summary of the key observations and recommendations from the ESC review are provided below.

*“In general, ESC management principles are being implemented in accordance with site approvals and management documentation, with no significant failures identified. However, it is recommended that Castlereagh Coal implement a*

*risk-based process to complete and document regular ESC inspections at both sites. This procedure should include an outline of key monitoring locations to be assessed by Castlereagh Coal personnel during ESC inspections. These inspections should be undertaken at least quarterly, with additional inspections to be completed following significant rainfall events;*

*Localised erosion issues and deficiencies in drainage and water management structures are present within rehabilitation areas that should be scheduled for maintenance. However, it is noted that constraints exist at both CVM and Invincible that may impact on the ability to access some areas of the rehabilitation and water management systems, primarily due to steep slopes and vegetation communities developing within the rehabilitation. It is recommended that Castlereagh Coal review each area prior to scheduling any physical work to balance these constraints against the need to complete remedial actions;*

*Legacy issues relating to the design of and materials used for the drop structures in rehabilitation areas at both sites. Contour drains reporting to these structures is showing evidence of scouring, with the rock lining of the drop structures also showing evidence of weathering, which reduces their overall effectiveness in supporting rehabilitation development. It is noted that these structures were initially developed as temporary ESC controls for the rehabilitation establishment and development phase. Removal of these structures will be considered during detailed mine closure planning;*

*SD3 at Invincible requires maintenance work to ensure that it is desilted, adequately sized and maintained in accordance with Blue Book (Landcom, 2004) requirements;*

*While vegetation cover is generally present in rehabilitation areas, some areas of limited vegetation cover were identified at both sites. The relatively poor performance of vegetation growth within these areas may impact on the stability of rehabilitation areas in the long term due to a heightened risk of erosion.”*

In 2022, two Section 240 notices were provided to Invincible by the Resources Regulator which required a series of actions to be undertaken around ensuring landform stability was achieved within the rehabilitation areas on Invincible. Outstanding actions under these notices continued to be addressed through the reporting period with a strategy in place to close out all remaining actions by the end of the next reporting period. The Section 240 notice and status as at the end of the reporting period are included in this Review in **Appendix 4**

## 8 Rehabilitation

Rehabilitation is undertaken in accordance with the 2025-2027 Forward Works Program and Rehabilitation Management Plan (RMP). A summary of the rehabilitation objectives, performance indicators and completion criteria relevant to the Invincible rehabilitation domains is provided in the RMP. Plan 1 (Appendix A) in the RMP shows the conceptual final landform features.

### 8.1 Status of Mining and Rehabilitation

Unshaped emplacement areas as well as access tracks and water management structures are inspected by site personnel with maintenance and repairs undertaken as required. The current status of mining and rehabilitation areas within the mine domains established is provided in **Table 8-1**.

**Table 8-1 Invincible Colliery Rehabilitation Status**

Mine Area Type	Previous reporting period (actual) 2024 (ha)	This reporting period (actual) 2025 (ha)	Next reporting period (forecast) 2026 (ha)
Total Mine Footprint – Surface Disturbance	167.14	160.64	184.58
Total Active Disturbance	95.15	98.72	119.35
Rehabilitation – Land Preparation	0	0	0
Ecosystem and Land Use Establishment	0	0	5.97
Ecosystem and Land Use Development	72.07	61.93	59.26
Rehabilitation Completion	0	0	0

### 8.2 Post Rehabilitation Land Uses

The proposed final land use aims to emulate the pre-mining environment and will enhance local and regional ecological linkages across the site and with adjacent areas. The primary objective of site revegetation and regeneration is to create a stable final landform with acceptable post-mining land use and suitability. In the long term, rehabilitation areas will become integrated with adjacent native vegetation communities.

A Rehabilitation Strategy (Castlereagh Coal, 2022a) has been prepared for Invincible Colliery and incorporates the Southern Extension Project area. The Rehabilitation Strategy includes an investigation into the various options for backfilling of the remaining voids onsite, options to avoid the disturbance of vegetation in proximity to the Eastern Void and includes a detailed description of the measures to be implemented and a plan for the implementation of these measures.

Rehabilitation areas will continue to be monitored on an annual basis and will be managed until self-sustaining. Final rehabilitation areas will achieve the rehabilitation completion criteria prior to relinquishment.

### **8.3 Completion Criteria Assessment**

On 20 March 2023 the Resource Regulator (RR) provided feedback and refused the Invincible Colliery Rehabilitation Objectives Statement originally submitted in 2022. Invincible Colliery made revisions addressing the reasons for refusal, and re-submitted the Objectives Statement to the RR in November 2024. The RR was assessing the resubmission as at the end of the reporting period.

**Table 8-3** provides a summary and assessment of compliance of the monitoring results against the relevant biodiversity and rehabilitation performance and completion criteria for Invincible Colliery.

### **8.4 Rehabilitation Activities**

Invincible Colliery had been in care and maintenance until recommencement of mining in July 2023. Rehabilitation management and monitoring is currently undertaken in accordance with the Invincible Colliery Rehabilitation Management Plan.

Rehabilitation activities undertaken during the reporting period included:

- assessment of rehabilitation areas to determine if further works are required / how they have performed following improved rainfall conditions (i.e. monitoring);
- Backfilling of the North Void and North-east Void; and
- Rehabilitation land preparation for the eastern and western highwalls.

In the long term, rehabilitation areas are to become integrated with adjacent native vegetation communities with this process detailed in the revised RMP and BMP which have been submitted to regulatory authorities for comment.

An assessment of rehabilitation performance against completion criteria is included in Table 8-3 below. As noted previously these criteria are being refined and waiting approval from the RR as part of the Rehabilitation Management Plan. It is noted that there are areas which have been disturbed by mining which are yet to be rehabilitated. These disturbed areas do not form part of the general assessment presented in **Table 8-3**.

#### **8.4.1 Invincible Colliery Rehabilitation Area Biodiversity Monitoring**

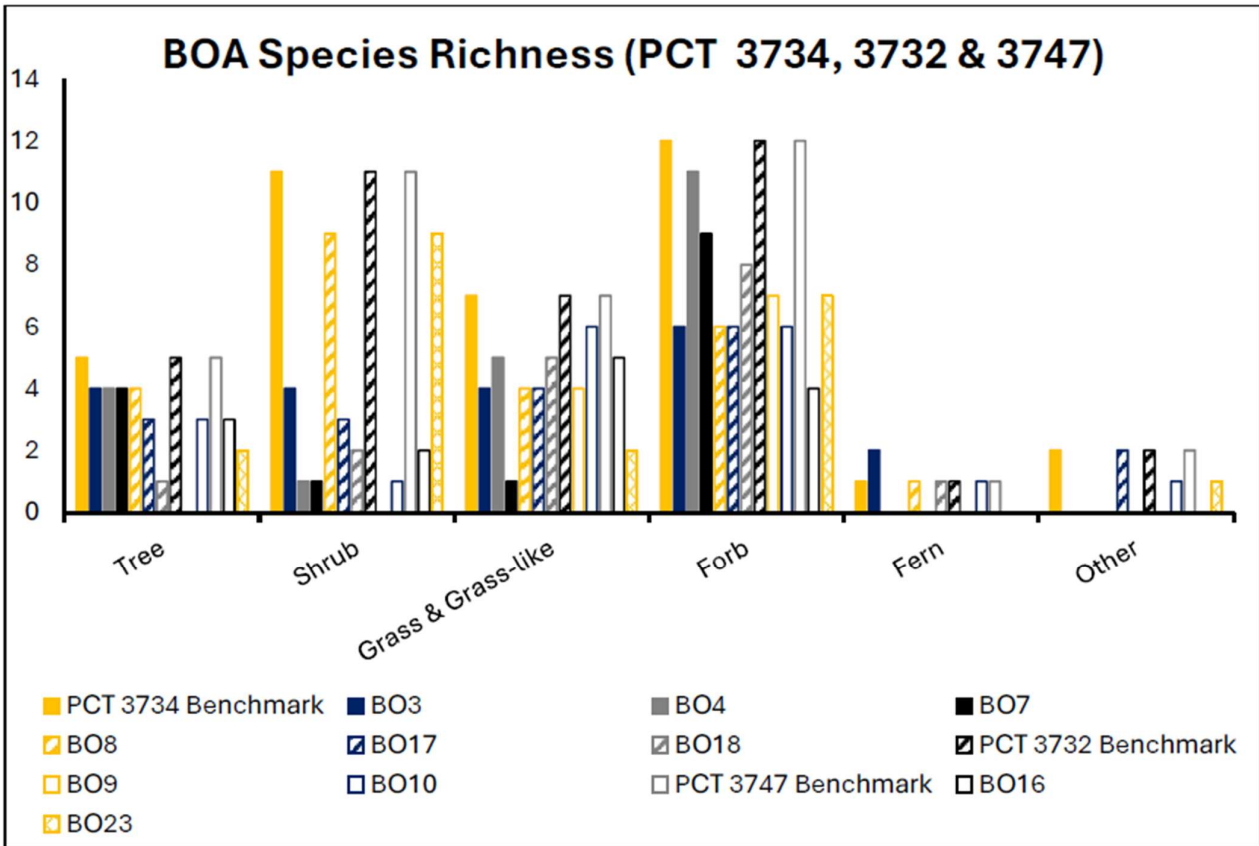
The Invincible Colliery Rehabilitation Area contains six (6) monitoring plots located across four (4) rehabilitation areas defined by the year they were established (see **Table 8-2**).

##### **8.4.1.1 Flora Monitoring Observations**

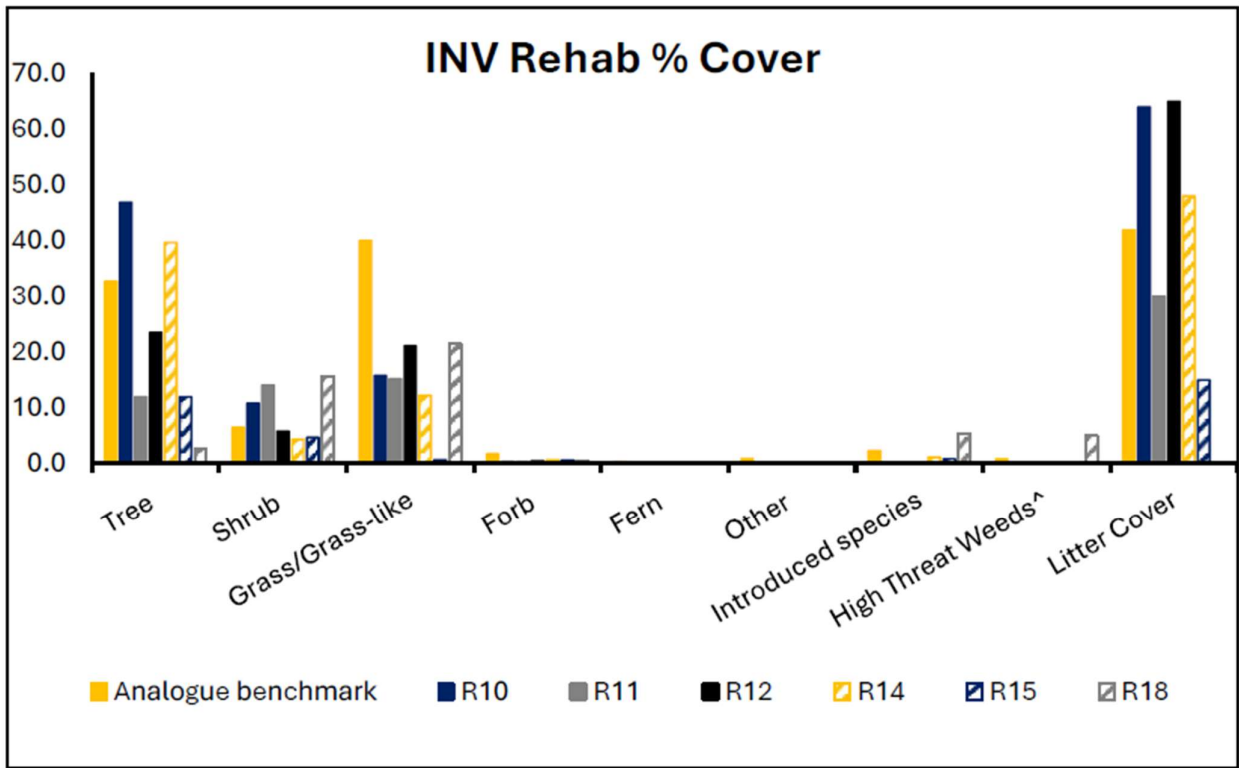
All six of the IC rehabilitation monitoring plots exceeded benchmark values for both canopy and shrub species richness. Ground cover species richness was generally below the benchmark values, with R15 and R18 exceeding benchmarks for forb richness. plant foliage cover was generally below benchmark across all strata, with two sites (R10 and R14) recording canopy cover values that exceeded benchmarks. Half the sites exceeded benchmarks for shrub cover, and no sites recorded values exceeding benchmarks for ground cover. Weed cover was lower throughout the rehabilitation, with only R18 exceeding the benchmark values with 5.4% PFC. R11, R15 and R18 recorded high threat weed species at lower abundance and cover, Kikuyu (*Cenchrus clandestinus*) was recorded at R11 and R18 and St John's Wort was recorded at R15.

Species richness and percentage foliage cover for each rehabilitation monitoring plot, as measured using BAM, were compared to their respective analogue benchmarks. These comparisons are presented in **Graph 5 - 6** An

additional summary of comparisons between each plot and their respective benchmarks are provided in **Table 8-2**.



**Graph 5: IC Rehabilitation monitoring plot species richness**



**Graph 6: IC Rehabilitation monitoring plot percent foliage cover**

**Table 8-2 Comparison of IC Rehabilitation monitoring plot observations to analogue site benchmarks**

	Parameter	R10	R11	R12	R14	R15	R18
Richness	Tree	7	4	5	6	5	3
	Shrub	10	8	8	9	6	6
	Grass/Grass-like	3	3	4	3	2	4
	Forb	3	4	4	7	10	9
	Fern	0	0	0	0	0	0
	Other	0	0	0	0	1	0
Cover	Tree	46.9	12	23.5	39.7	12	2.6
	Shrub	10.8	14.1	5.8	4.3	4.7	15.6
	Grass/Grass-like	15.8	15.2	21.1	12.2	0.7	21.5
	Forb	0.3	0.3	0.5	0.7	0.6	0.5
	Fern	0.0	0.0	0.0	0.0	0.0	0.0
	Other	0.0	0.0	0.0	0.0	0.2	0.0
Function	Total Length of Fallen Logs	25	15	10	10	6	7
	Litter Cover	64	30	65	48	15	0
	No. of Large Trees per Hectare	0	0	0	0	0	0
	Parameter	R10	R11	R12	R14	R15	R18
Richness	Tree	7	4	5	6	5	3
	Shrub	10	8	8	9	6	6
	Grass/Grass-like	3	3	4	3	2	4
	Forb	3	4	4	7	10	9
	Fern	0	0	0	0	0	0
	Other	0	0	0	0	1	0
Cover	Tree	46.9	12	23.5	39.7	12	2.6
	Shrub	10.8	14.1	5.8	4.3	4.7	15.6
	Grass/Grass-like	15.8	15.2	21.1	12.2	0.7	21.5
	Forb	0.3	0.3	0.5	0.7	0.6	0.5
	Fern	0.0	0.0	0.0	0.0	0.0	0.0
	Other	0.0	0.0	0.0	0.0	0.2	0.0
Function	Total Length of Fallen Logs	25	15	10	10	6	7
	Litter Cover	64	30	65	48	15	0
	No. of Large Trees per Hectare	0	0	0	0	0	0

**8.4.1.2 Fauna Monitoring Observations**

The 2025 monitoring recorded a decrease in overall species diversity throughout the IC Rehabilitation Area relative to the previous year’s monitoring, with a total of 39 species recorded, compared to 45 species recorded during the 2024 monitoring, and 55 in 2023. Within the IC Rehabilitation Area, fauna diversity consisted of 20 mammal species, 19 bird species and one frog.

Four threatened bat species were recorded, these included:

- Large-Eared Pied Bat (*Chalinolobus dwyeri*), listed as Endangered under the EBPC Act and Endangered under the BC Act
- Eastern Bent-winged Bat (*Miniopterus orianae oceanensis*) listed as Vulnerable under the BC Act

- Eastern False Pipistrelle (*Falsistrellus tasmaniensis*), listed as Vulnerable under the BC Act
- Greater Broad-Nose Bat (*Scoteanax rueppellii*), listed as Vulnerable under the BC Act
- Squirrel Glider (*Petaurus norfolcensis*), listed as Vulnerable under the BC Act.

Two clusters of six Nest Boxes are located in the Rehabilitation Area.

Fauna was recorded occupying two nest boxes near monitoring site R12 (Nest Boxes 1-6). Nest Box 1 recorded a Common Ringtail Possum (*Pseudocheirus peregrinus*) and Nest Box 4 recorded a Squirrel Glider. All nest boxes were in good condition.

#### **8.4.2 Summary**

The 2025 management outcomes for the IC Rehabilitation Area are summarised below in **Table 8-3**. The following assessment of rehabilitation areas against rehabilitation objectives (approved November 2024) was undertaken in accordance with the BMP and RMP.

**Table 8-3 Assessment of 2025 Monitoring Results against Invincible Colliery Rehabilitation Objectives**

Rehabilitation Objective Category	Rehabilitation Objective	Spatial Reference	2025 Monitoring Observations
Ecological rehabilitation	Levels of ecosystem function have been established that demonstrate the rehabilitation is self sustainable.	A4	All rehabilitation areas demonstrate self-sustainability to varying degrees.  Each site varied in its species diversity and layer composition. However, regeneration and native recruitment were evident at all sites.
Ecological rehabilitation	The vegetation composition of the rehabilitation contains species that are commensurate with the following native vegetation communities found in the local area (as described in the 2014 EA and RMP): <ul style="list-style-type: none"> <li>• Tableland Gully Ribbon Gum-Blackwood – Apple Box Forest (Northern Gullies)</li> <li>• Tableland Gully Mountain Gum, Broadleaved Peppermint Grassy Forest (Southern Gullies) and Exposed Blue Mountains Sydney Peppermint- Silvertop Ash Shrubby Woodland (Exposed Slopes).</li> </ul>	A4	Species composition present throughout the IC rehabilitation is generally commensurate with the native vegetation communities found in the local area.
Ecological rehabilitation	The vegetation structure of the rehabilitation is similar to that of the following native vegetation communities found in the local area: <ul style="list-style-type: none"> <li>• Tableland Gully Ribbon Gum-Blackwood – Apple Box Forest (Northern Gullies)</li> <li>• Tableland Gully Mountain Gum, Broadleaved Peppermint Grassy Forest (Southern Gullies) and Exposed Blue Mountains Sydney Peppermint- Silvertop Ash Shrubby Woodland (Exposed Slopes)</li> </ul>	A4	Canopy and midstory canopy values are trending toward their benchmark at all sites. Ground cover was generally below species richness and cover benchmark values but are trending towards rehabilitation objectives.
Land contamination	There is no residual soil contamination on the Project area that is incompatible with the final land use or that poses a threat of environmental harm.	A4	Soil was not monitored as part of the 2025 biodiversity monitoring.

Landform stability	Final landforms designed to minimise visual impacts as far as is reasonable and feasible	A4	Landform stability was not monitored as part of the 2025 biodiversity monitoring.
Landform stability	Landform that is free draining and commensurate with surrounding natural landform where appropriate.	A4	Landform stability was not monitored as part of the 2025 biodiversity monitoring.
Ecological rehabilitation	<p>The vegetation composition of the rehabilitation contains species that are commensurate with the following native vegetation communities found in the local area (as described in the 2014 EA and RMP):</p> <ul style="list-style-type: none"> <li>• Tableland Gully Ribbon Gum-Blackwood – Apple Box Forest (Northern Gullies)</li> <li>• Tableland Gully Mountain Gum, Broadleaved Peppermint Grassy Forest (Southern Gullies) and Exposed Blue Mountains Sydney Peppermint- Silvertop Ash Shrubby Woodland (Exposed Slopes).</li> </ul>	A4	Species composition present throughout the IC rehabilitation is generally commensurate with the native vegetation communities found in the local area.
Ecological rehabilitation	<p>The vegetation structure of the rehabilitation is similar to that of the following native vegetation communities found in the local area:</p> <ul style="list-style-type: none"> <li>• Tableland Gully Ribbon Gum-Blackwood – Apple Box Forest (Northern Gullies)</li> <li>• Tableland Gully Mountain Gum, Broadleaved Peppermint Grassy Forest (Southern Gullies) and Exposed Blue Mountains Sydney Peppermint- Silvertop Ash Shrubby Woodland (Exposed Slopes)</li> </ul>	A4	<p>Canopy and midstory canopy values are trending toward their benchmark at all sites.</p> <p>Ground cover was generally below species richness and cover benchmark values but are trending towards rehabilitation objectives.</p>
Land contamination	There is no residual soil contamination on the Project area that is incompatible with the final land use or that poses a threat of environmental harm.	A4	Soil was not monitored as part of the 2025 biodiversity monitoring.

Landform stability	Final landforms designed to minimise visual impacts as far as is reasonable and feasible	A4	Landform stability was not monitored as part of the 2025 biodiversity monitoring.
Landform stability	Landform that is free draining and commensurate with surrounding natural landform where appropriate.	A4	Landform stability was not monitored as part of the 2025 biodiversity monitoring.
Landform stability	The final landform is stable for the long-term and does not present a risk of environmental harm downstream / downslope of the site or a safety risk to the public/stock/native fauna.	A4	Landform stability was not monitored as part of the 2025 biodiversity monitoring.
Groundwater	Groundwater quality and groundwater regime are within range as predicted in environmental assessment, EPL 1095 and Water Management Plan. The risk to important groundwater assets has been addressed by the rehabilitation	A4	Groundwater was not monitored as part of the 2025 biodiversity monitoring.
Surface water	Surface water runoff quality is comparable to analogue sites (background water quality since 2011 (2014 EA)). Surface water quality in accordance with the Water Management Plan (Approved November 2022) and EPL 1095.	A4	Surface water was not monitored as part of the 2025 biodiversity monitoring.
Bushfire	The risk of bushfire and impacts to the community, environment and infrastructure has been addressed as part of rehabilitation.	A4	It was considered that the fuel loads present in any of the monitoring areas would likely not exceed regulatory requirements. Please note, bushfire advice is outside of our area of expertise and if there is potential for fuel loads to exceed regulatory requirements, a bushfire consultant will be required to make an assessment prior to the undertaking of any control burns.

## 9 Community

### 9.1 CCC Meetings

Two community consultation meetings were held during the reporting period. The meetings were held in April and October 2025.

The outcomes of the CCC meetings are detailed in the meeting minutes available on the Castlereagh Coal website. There were no actions from the meetings regarding Invincible Coal Mine that required further investigation. Complaints

In accordance with Condition M5 of the EPL, a community complaints line is operated by Invincible Colliery during the hours of operation. The complaints line is 0492 007 958 which is also displayed on the Castlereagh Coal website. This contact point provides the community with a mechanism by which to raise any concerns that they have with operations at Invincible Colliery.

Shoalhaven Coal maintains a complaint register to record and respond to complaints received from the community. There were four complaints received from the local community in relation to activities at Invincible Colliery during the reporting period. A comparison of complaints received between 2021 and 2025 is outlined in **Table 9-1**.

Invincible Colliery was in care and maintenance from 2013 until recommencing operations in July 2023. Three of the four complaints received during the 2025 reporting period related to coal material on the Castlereagh Highway adjacent the project site with the fourth complaint being about lack of fencing along the western boundary of the mine.

**Table 9-1 Comparison of Complaints for Invincible Colliery 2020 – 2025**

Complaint Type	2020	2021	2022	2023	2024	2025
Noise	0	0	0	0	0	0
Air quality	0	0	0	0	0	0
Blasting	0	0	0	0	0	0
Traffic	0	0	0	0	0	0
Water	0	0	0	1	0	0
Other	0	0	0	1	1	4
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>4</b>

## 10 Independent Audit

An action plan from the 2024 Independent Environmental Audit (IEA) was developed as an outcome of the audit findings and follow up actions have been implemented in consultation with DPHI. As of 31 December 2025 a total of 12 audit actions remained outstanding. The status of each audit action plan item can be found in **Appendix 3**.

In accordance with Condition 11 of Schedule 5 of the Project Approval, an IEA is required within a year of the recommencement of mining operations and three yearly thereafter. As such the next IEA is due to be undertaken in 2027. The results of the IEA when completed, will be reported in the subsequent Annual Review. The 2024 IEA and Invincible Colliery response to recommendations can be found on the Castlereagh Coal website.

## 11 Incidents and Non-Compliances during the Report Period

There was one environmental incident reported to the EPA during the reporting period. The reportable incident involved a coal spill on Castlereagh Highway. The Invincible Pollution Incident Response Management Plan was activated once during the reporting period with review of the PIRMP being undertaken in September 2025 (refer to the Castlereagh Coal website). Non-compliances which occurred during the reporting are discussed in **Section 1** and actions detailed in **Table 11-1**.

**Table 11-1 Non-Compliance Recorded during the Reporting Period**

Relevant Approval	Condition No.	Condition Description/ Non-Compliance	Compliance Status	Comment	Actions
PA 07_0127 (MOD 5)	Schedule 3 Condition 16	Exceedance of air quality 24 hr assessment criteria for particular matter (PM <sub>10</sub> ) on 28 April, 2025.	Low Non-compliant	A sample taken from HV02 (PM <sub>10</sub> unit) on 28 April 2025 recorded a PM <sub>10</sub> reading of 62.00 µg/m <sup>3</sup> for the 24 hr period. The results were received by site 21 July 2025. An investigation into the elevated result did not identify a specific emission source. The result was an isolated incident, all other PM <sub>10</sub> results for April and May 2025 were compliant with assessment criteria. The exceedance result was determined to be an anomaly, potentially from an error in filter handling.	Castlereagh Coal will continue to monitor and report exceedances against the Project Approval
PA 07_0127 (MOD 5)	Schedule 3 Condition 16	Exceedance of air quality 24 hr assessment criteria for particular matter (PM <sub>10</sub> ) on 21 August, 2025.	Low Non-compliant	A sample taken from HV02 (PM <sub>10</sub> unit) on 21 August 2025 recorded a PM <sub>10</sub> reading of 180.00 µg/m <sup>3</sup> for the 24 hr period. The results were received by site 24 November 2025. An investigation into the elevated result did not identify a specific emission source. The result was an isolated incident, all other PM <sub>10</sub> results for August 2025 were compliant with assessment criteria and the TSP result was also 180 µg /m <sup>3</sup> suggesting that a testing error on the samples had occurred.	Castlereagh Coal will continue to monitor and report exceedances against the Project Approval
PA 07_0127 (MOD 5) EPL 1095	Schedule 3 Condition 20 Condition M2.2	Air Quality Monitoring – HVAS PM10 & TSP not monitored	Low Non-compliant	From 22 <sup>nd</sup> February to 30 <sup>th</sup> March 2025 PM10 and TSP were not monitored due to the High Volume Sampler failure. Subsequent catch-up runs occurred during April 2025 to ensure site met the required 60 air sample runs for the year 2025. A replacement air sampler was installed to ensure minimisation of future air quality sampling non-compliances.	Castlereagh Coal will endeavour to ensure that equipment is maintained regularly and replaced in a timely fashion in the event of failure to reduce the likelihood of long term sampling gaps.

Relevant Approval	Condition No.	Condition Description/ Non-Compliance	Compliance Status	Comment	Actions
PA 07_0127 (MOD 5) EPL 1095	Schedule 3 Condition 20 Condition M2.2	Air Quality Monitoring – HVAS PM10 & TSP not monitored	Low Non-compliant	From 28 <sup>th</sup> June to 3 <sup>rd</sup> August 2025 PM10 and TSP were not monitored due to generator failure. Subsequent catch-up runs occurred from August through to October to ensure site met the required 60 air sample runs for the year 2025. A replacement generator was installed to ensure minimisation of future air quality sampling non-compliances.	Castlereaugh Coal will endeavour to ensure that equipment is maintained regularly and replaced in a timely fashion in the event of failure to reduce the likelihood of long term sampling gaps.
PA 07_0127 (MOD 5 and 6) EPL 1095	Schedule 3 Condition 20 Condition M2.2	Air Quality Monitoring – HVAS PM10 & TSP not monitored every six days	Low Non-compliant	In 10 further instances during 2025, TSP and PM10 were monitored outside of the sampling frequency requirement as per EPL 1095 of every six days. Each frequency non-compliance occurred due to one of the following reasons - Generator fail - Filter handling error - Run time error - Staffing shortage over weekend periods to manually run samplers	Castlereaugh Coal has investigated the ongoing non-compliance of failure to sample air particulates on a regular, 6-day basis. Tighter routines for sampling has been enacted to prevent further occurrences of non-compliance.
PA 07_0127 (MOD 6)	Schedule 3 Condition 25 (Table 7)	Water Management Performance Measures – Sediment Dams	Low Non-compliant	Sediment dams 2, 3, 5 and 6 not designed, installed and maintained generally in accordance with the series <i>Managing Urban Stormwater: Soils and Construction – Volume 1 and Volume 2E Mines and Quarries</i> .	Castlereaugh Coal has commissioned a surface water investigation by an suitably qualified expert to advise on and make recommendations for the 2026 revision of the Invincible Colliery Water Management Plan. The revised WMP will be implemented on approval of Regulatory Authorities, which will include the re-design and maintenance of existing Sediment Dams.
PA 07_0127 (MOD 6)  EPL 1095	Schedule 3 Condition 25 (Table 7)  O1.1	Chemical and hydrocarbon storage	Low Non-compliant	Chemical and hydrocarbon products not stored in bunded areas in accordance with the relevant Australian Standards.	Castlereaugh Coal has investigated and actioned the non-compliance of chemical storage in Q1 of 2026 to meet Australian Standards. These actions include: - Replacement of non-compliant oil-water separator tank; - Installation of bunding appropriate for chemical storage; - Commissioning of waste oil tank.

## 12 Activities to be Completed in the Next Reporting Period

Activities to be completed in the next reporting period (i.e. during 2026) will include:

- Undertake works required by the Project Approval and EPL.
- Review relinquishment opportunities for rehabilitation areas that have met relevant criteria.
- Completion of annual CCC meetings, as agreed with CCC members.
- Continuation of environmental monitoring.
- Construction completion of Sediment Dam 8
- Completion of PRSP requirements for Environmental Dam low pH
- Completion of PRSP requirements for Site Water Management Investigation Report
- Update of the Water Management Plan and Site Water Balance
- Implementation of actions required from PRSP assessment
- Implementation of actions required from the 2024 IEA
- Attend to rehabilitation activities as per **Section 8.4**

### 13 References

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PA 07\_127 and DA 200-5-2003.

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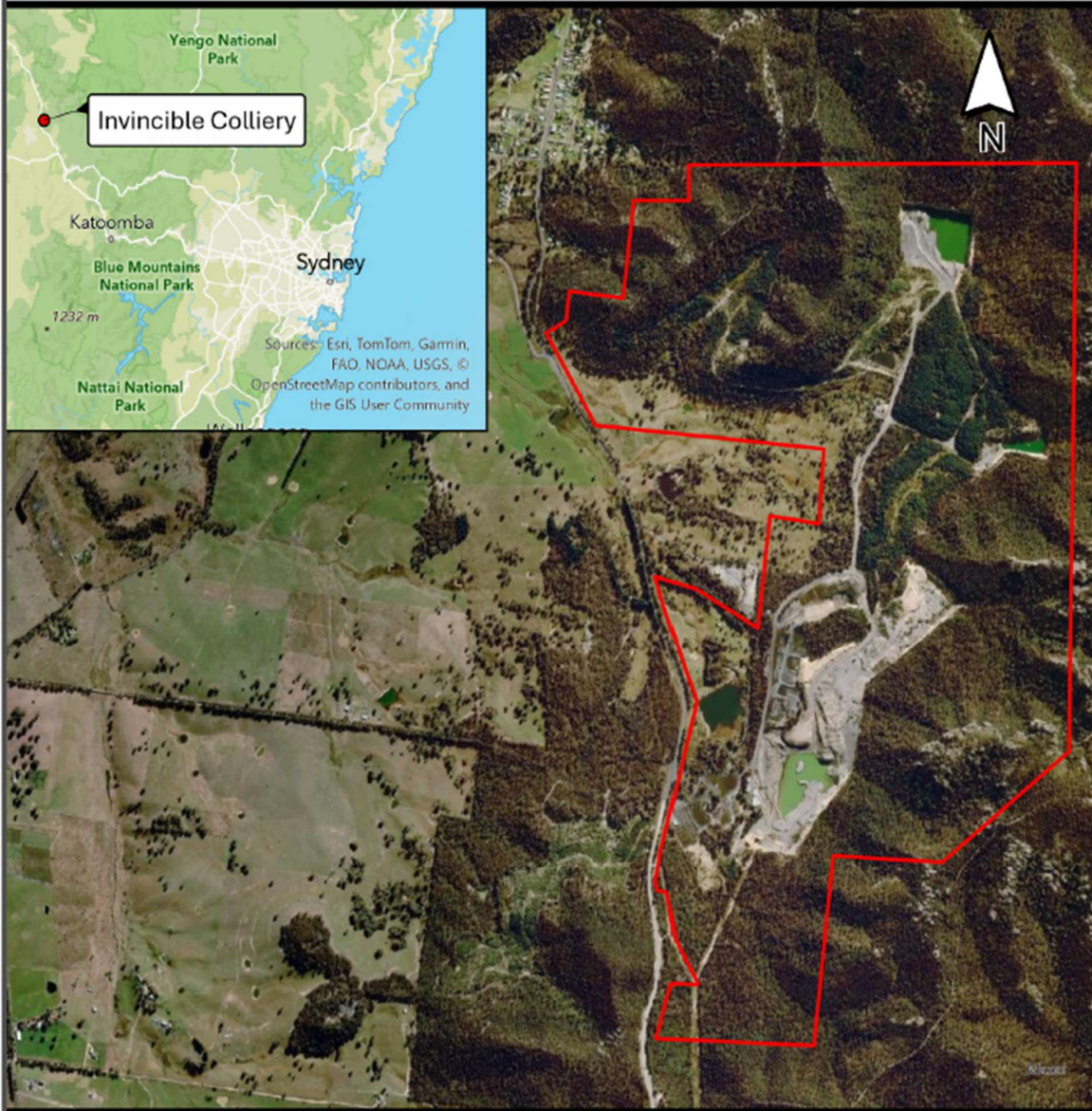
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## **APPENDIX 1 - FIGURES**

# Invincible Colliery

## Site Locality



 Invincible Project Approval Boundary (PA 07/0127)

0 0.28 0.55 1.1  
 Kilometers

Date Created: 13/03/2025  
Map Created By: J Pawson (Atlantech)  
Map Size: A4 Portrait  
Coordinate System: GDA2020 MGA Zone 56  
Map Reference: ATLGIS25-002\_A4-1

Figure 1



# Invincible Colliery

## 2024 Mining & Rehabilitation Areas



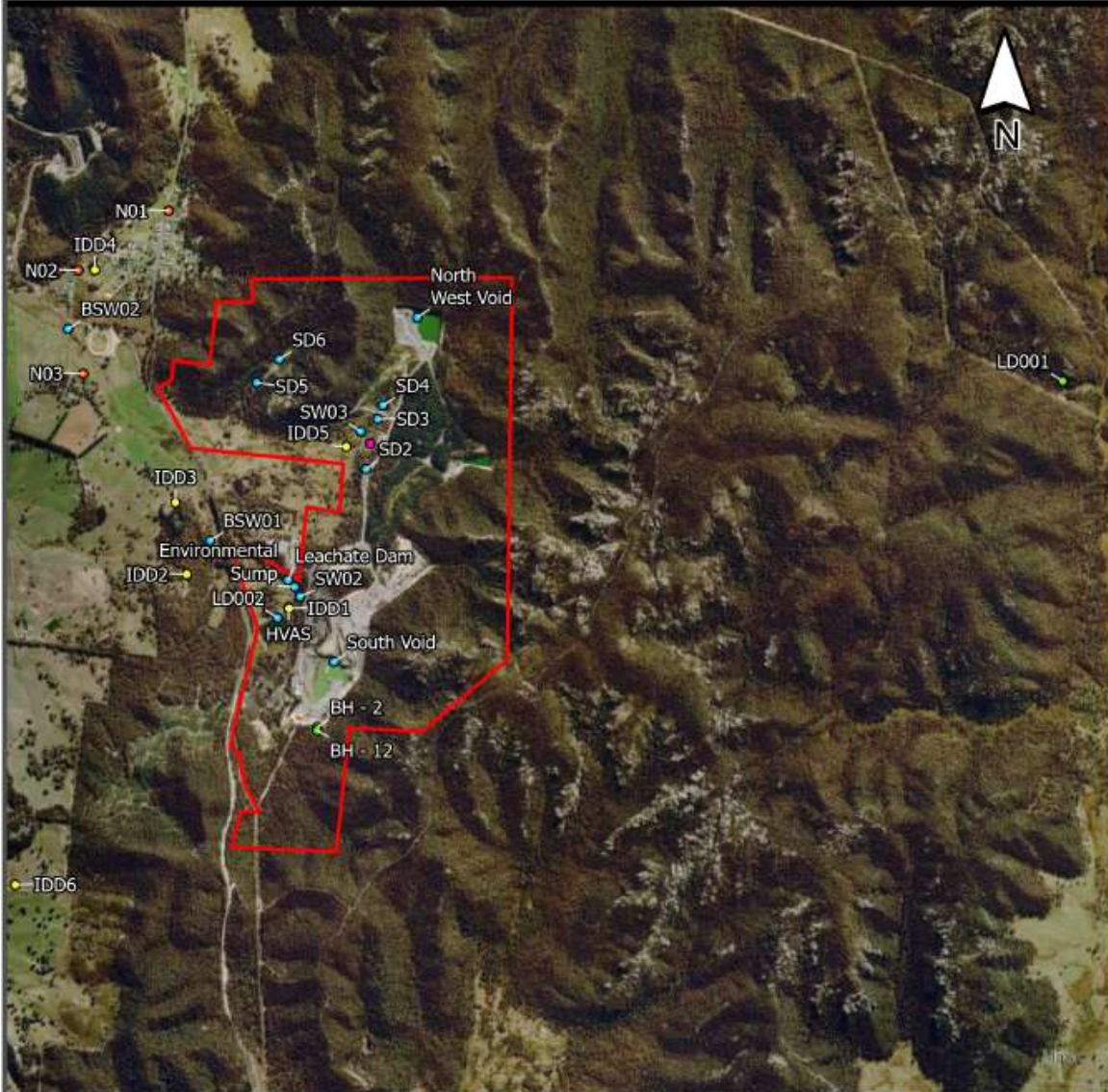
<ul style="list-style-type: none"> <li> Invincible Project Approval Boundary (PA 07/0127)</li> <li> Mining Lease Boundaries</li> <li> Exploration Lease Boundaries</li> </ul>	<ul style="list-style-type: none"> <li> Active Mining Area (Open cut void)</li> <li> Infrastructure Area</li> <li> Overburden Emplacement Area</li> <li> Rehabilitation Area</li> <li> Tailings Storage Facility</li> <li> Water Management Area</li> <li> Biodiversity Offset Area</li> </ul>	<p>0 0.25 0.5 1   Kilometers</p> <p>Date Created: 13/03/2025          Map Created By: J Pawson (Atlantech)          Map Size: A4 Portrait          Coordinate System: GDA2020 MGA Zone 56          Map Reference: ATLGIS25-002_A4-2</p>
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Figure 2



# Invincible Colliery

## Environmental Monitoring Locations



Invincible Project Approval Boundary (PA 07/0127)

- Air Quality Monitoring Locations
- Weather Station
- Surface Water Monitoring Locations
- Groundwater Monitoring locations
- Noise Monitoring Locations

0 0.42 0.85 1.7  
 Kilometers

Date Created: 26/03/2025  
 Map Created By: J Pawson (Atlantech)  
 Map Size: A4 Portrait  
 Coordinate System: GDA2020 MGA Zone 56  
 Map Reference: ATLGIS25-002\_A4-3

Figure 3



# Invincible Colliery

## Ecological Monitoring Sites



- Biodiversity Offset Area
- Rehabilitation Area

- Biodiversity Offset Monitoring Plot Locations
- Rehabilitation Monitoring Locations
- Nest Box Locations



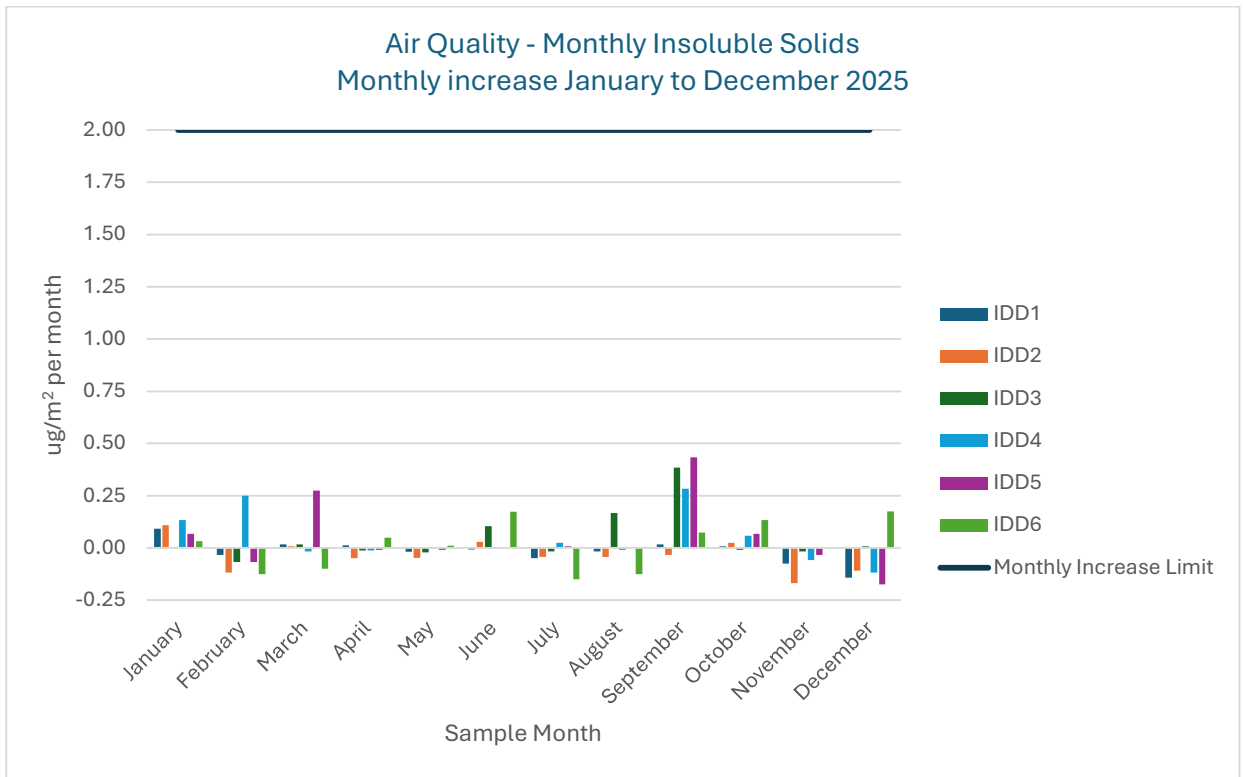
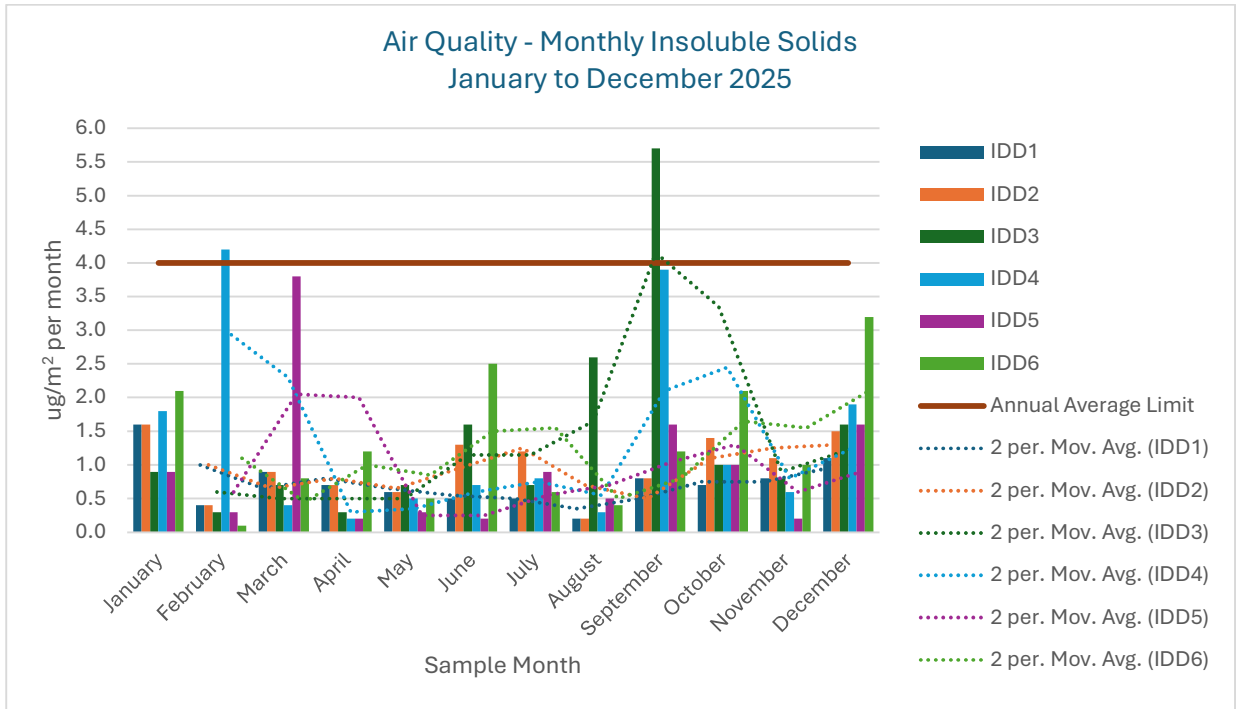
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Map Reference: ATLGIS25-002\_A4-4

Figure 4

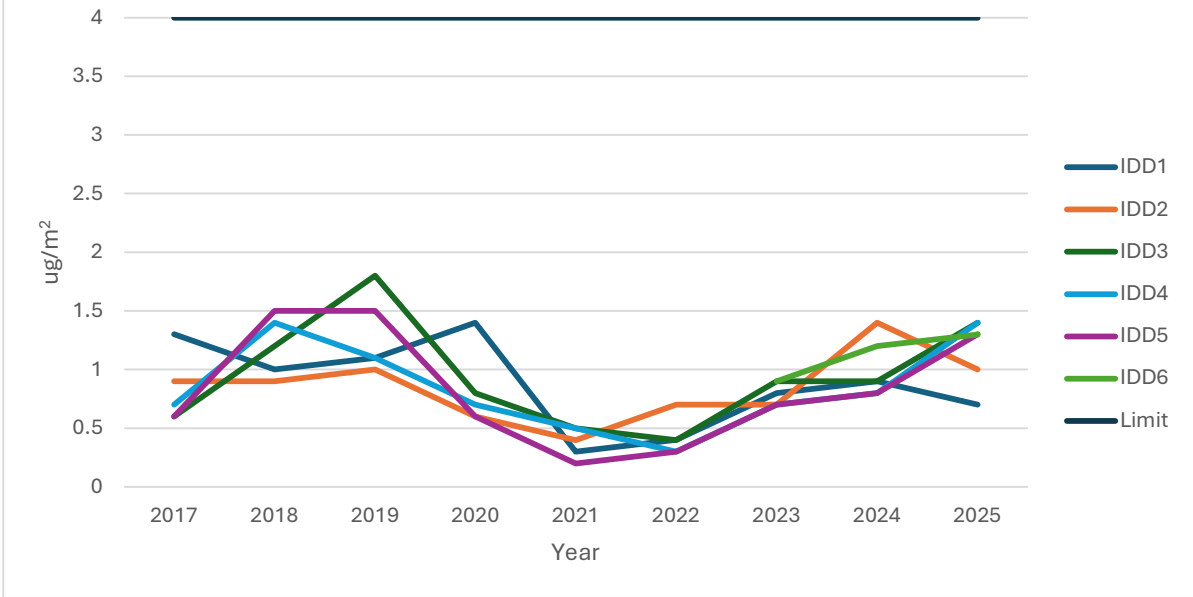


## **APPENDIX 2 – Monitoring Results**

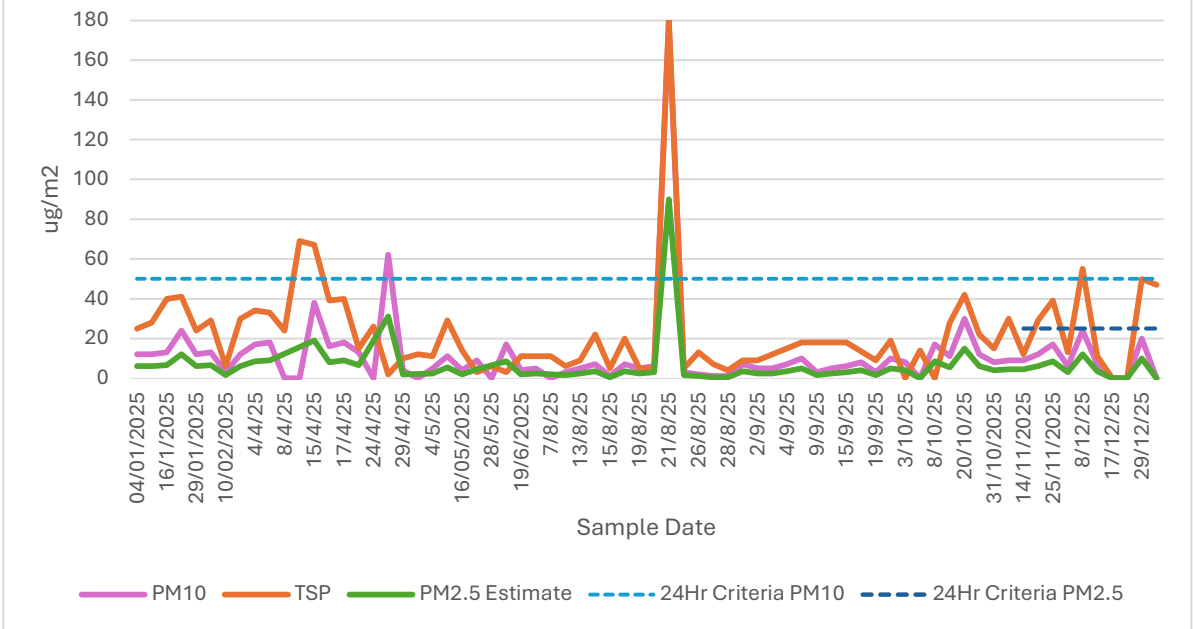
**Air Quality**



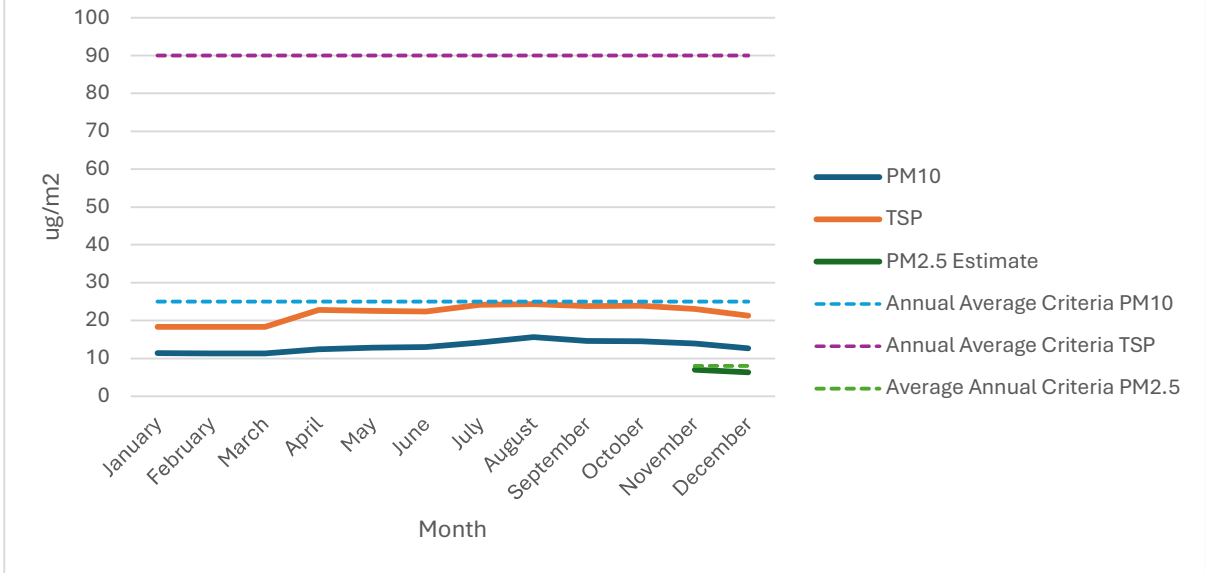
Air Quality - Depositional Dust - Insoluble Solids  
Annual Averages 2017-2025



Particulate Matter - 24 Hour Results  
January to December 2025

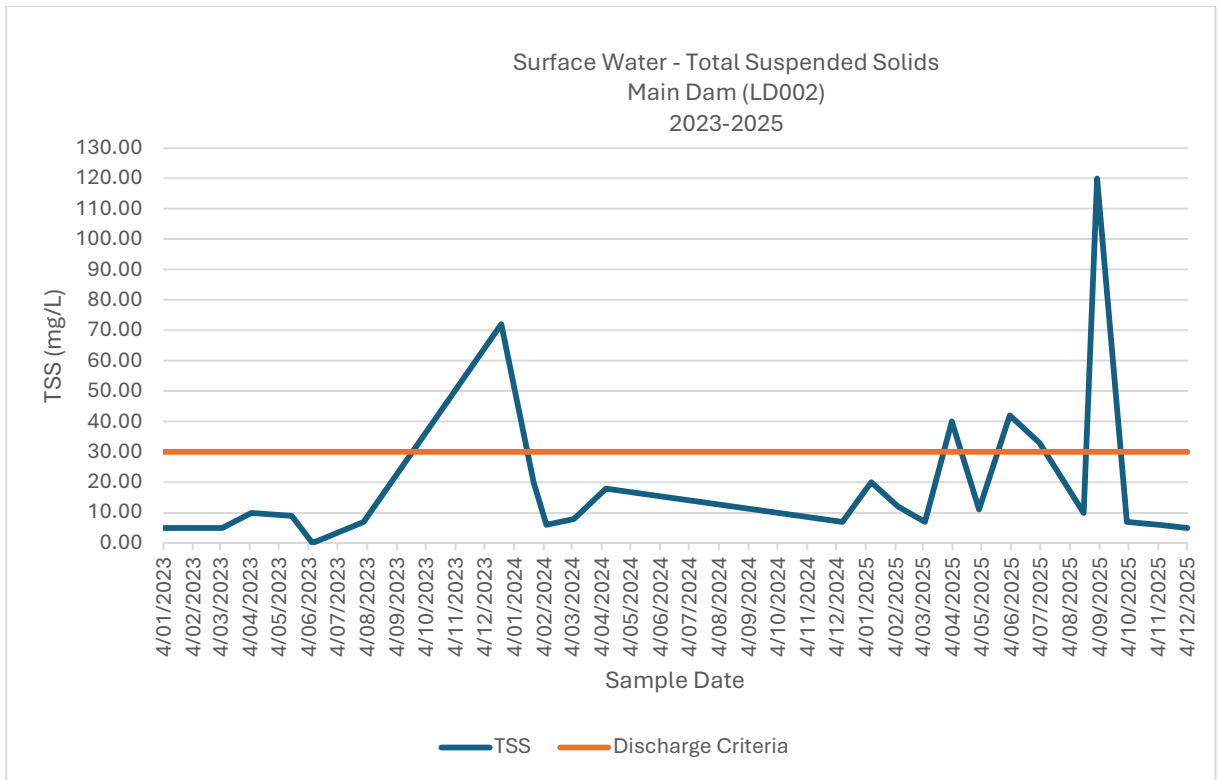
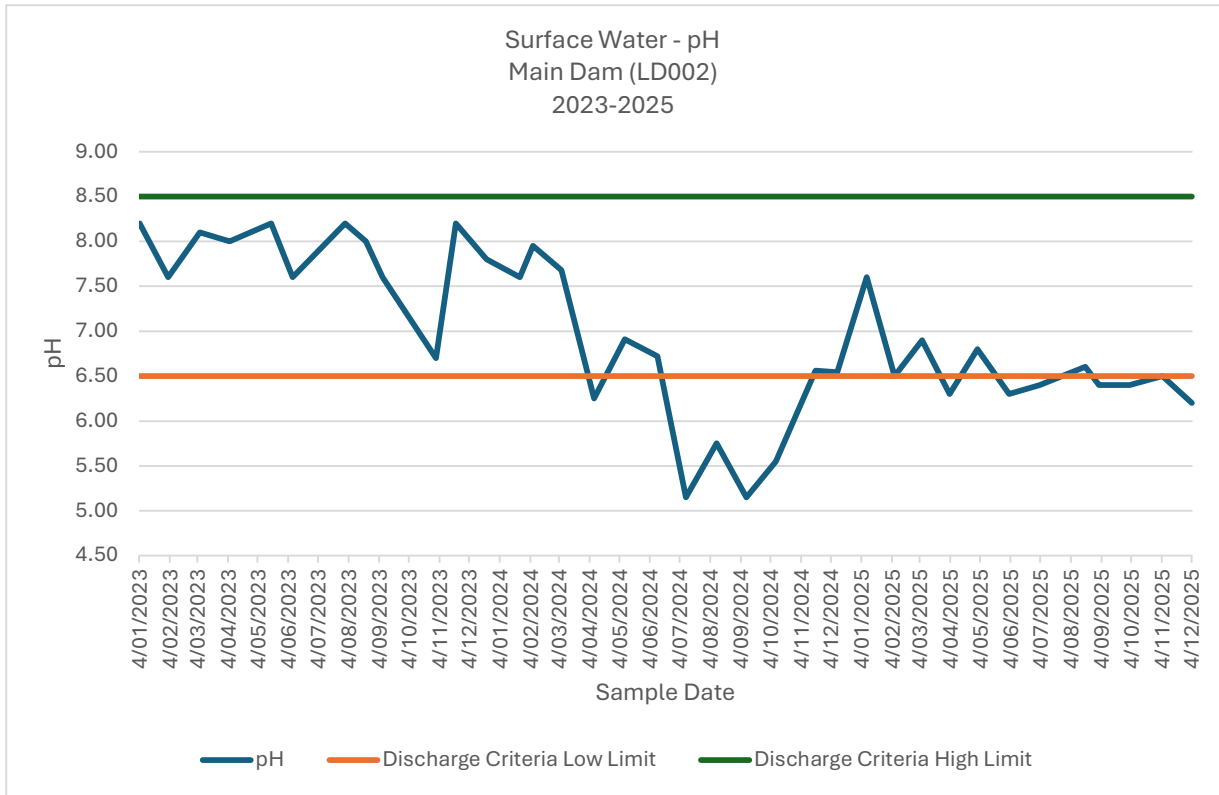


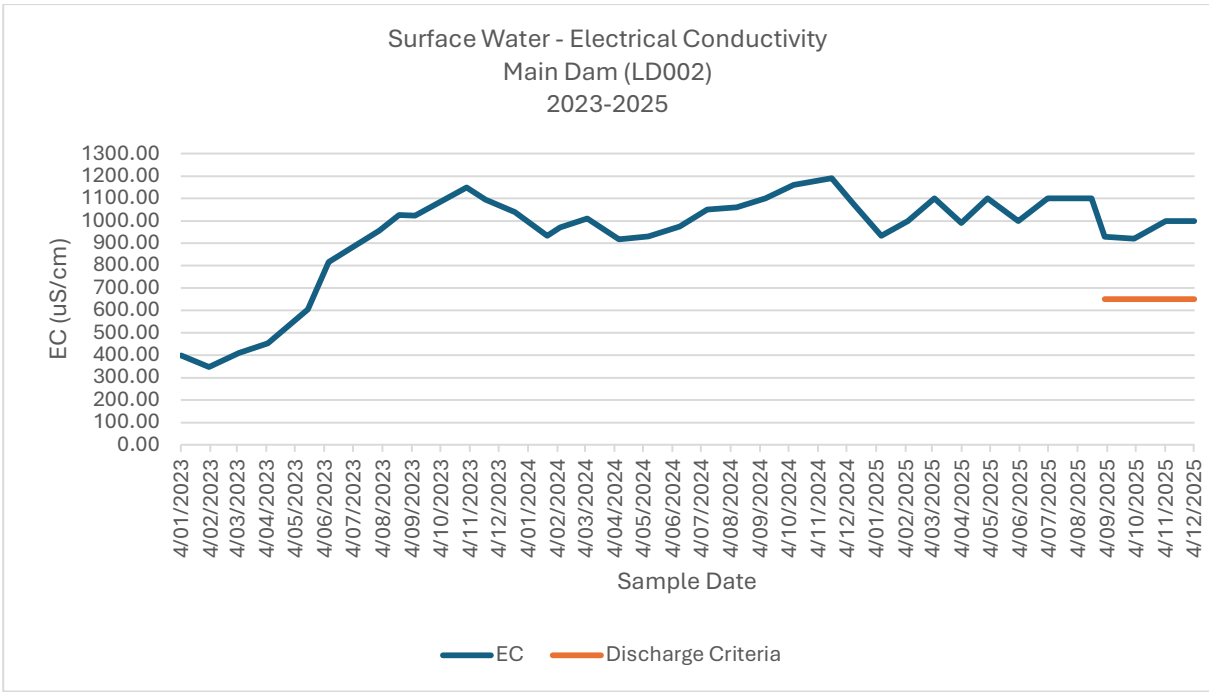
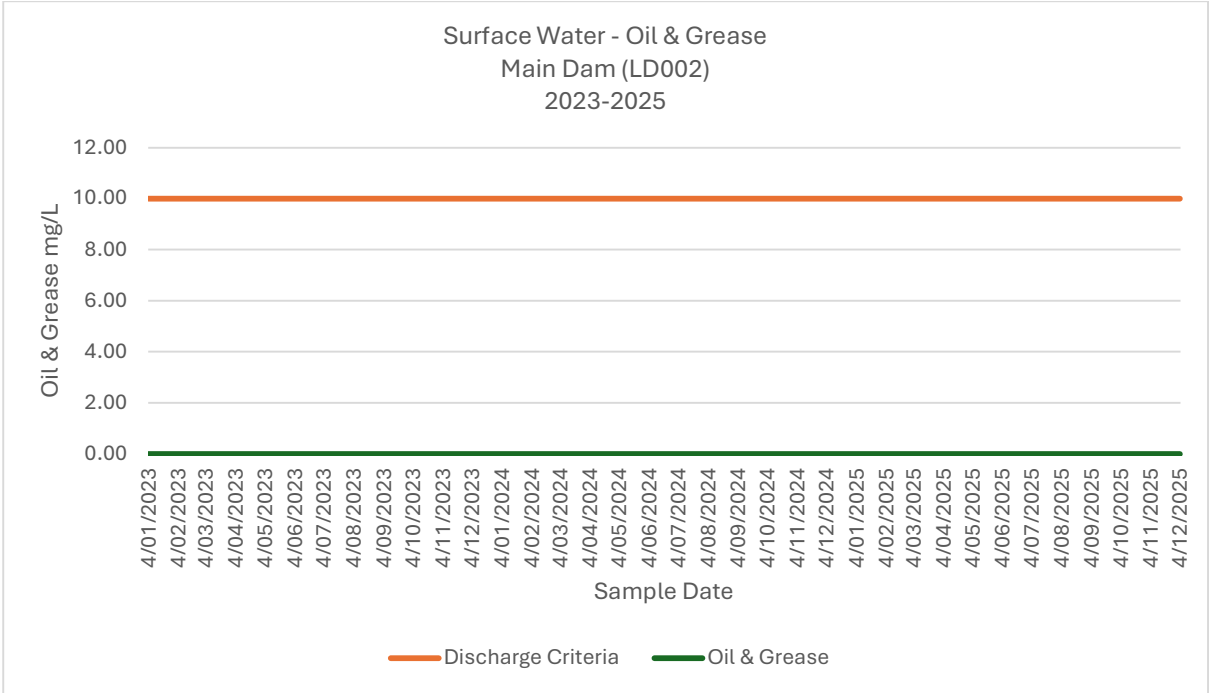
### Particulate Matter - Rolling Averages January to December 2025

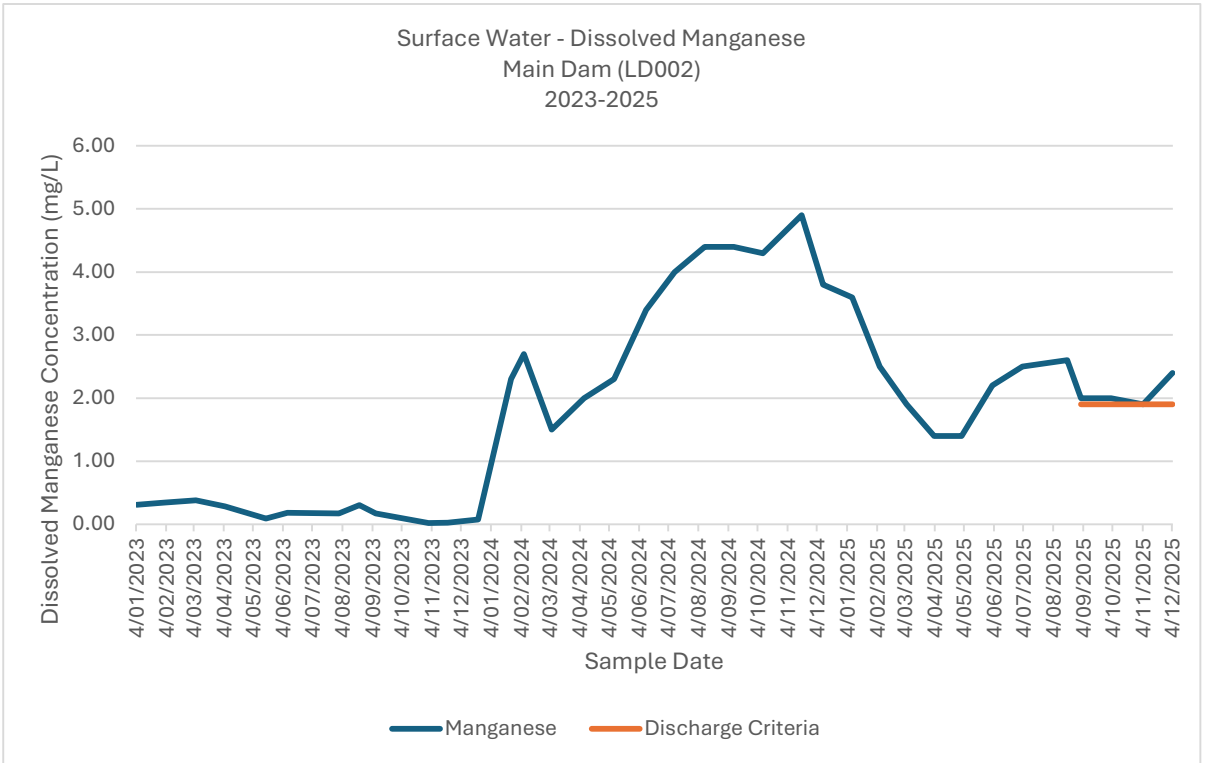
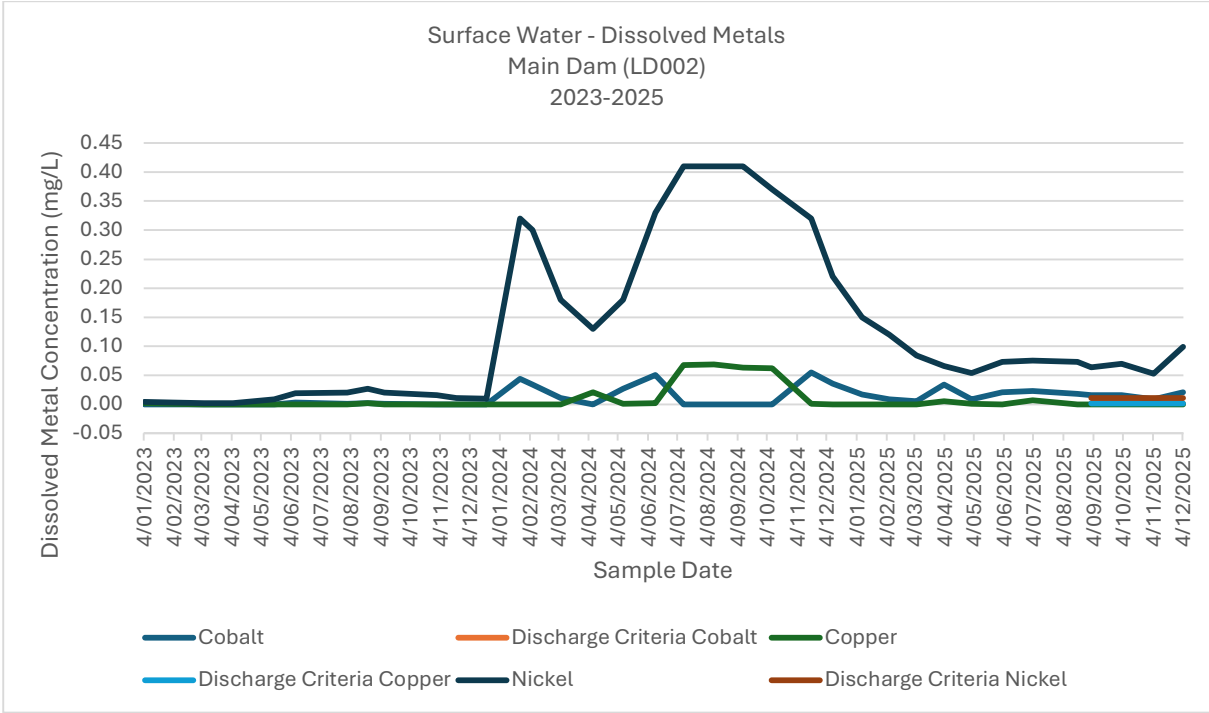


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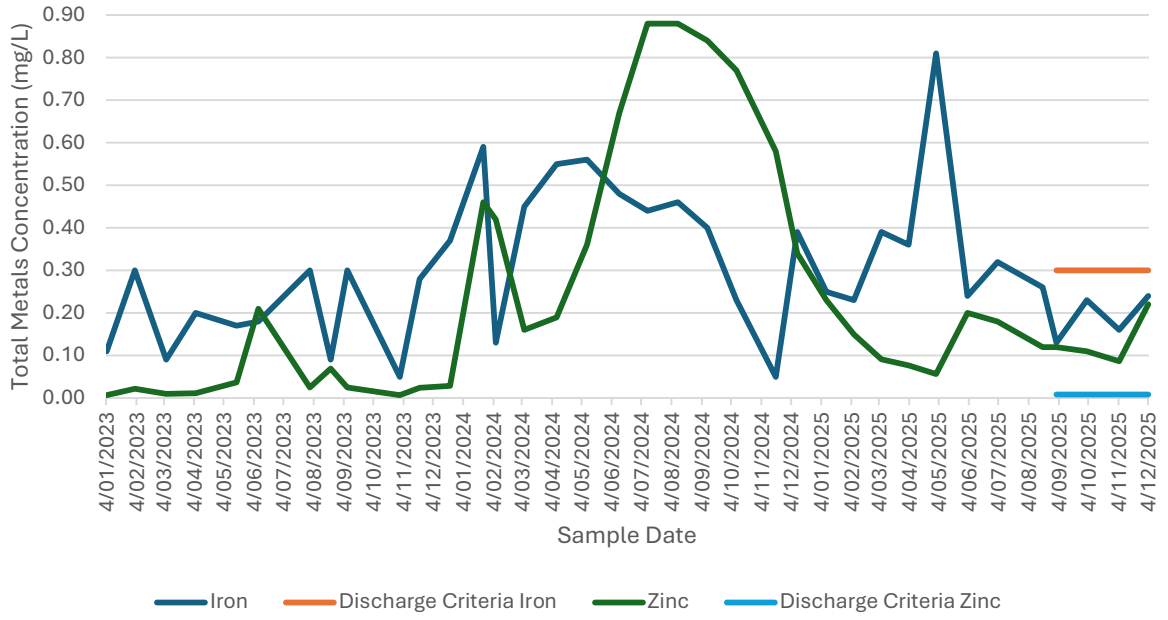
**Surface Water**







Surface Water - Total Metals  
Main Dam (LD002)  
2023-2025



**Monthly Monitoring Results Environmental Dam (SW02)**

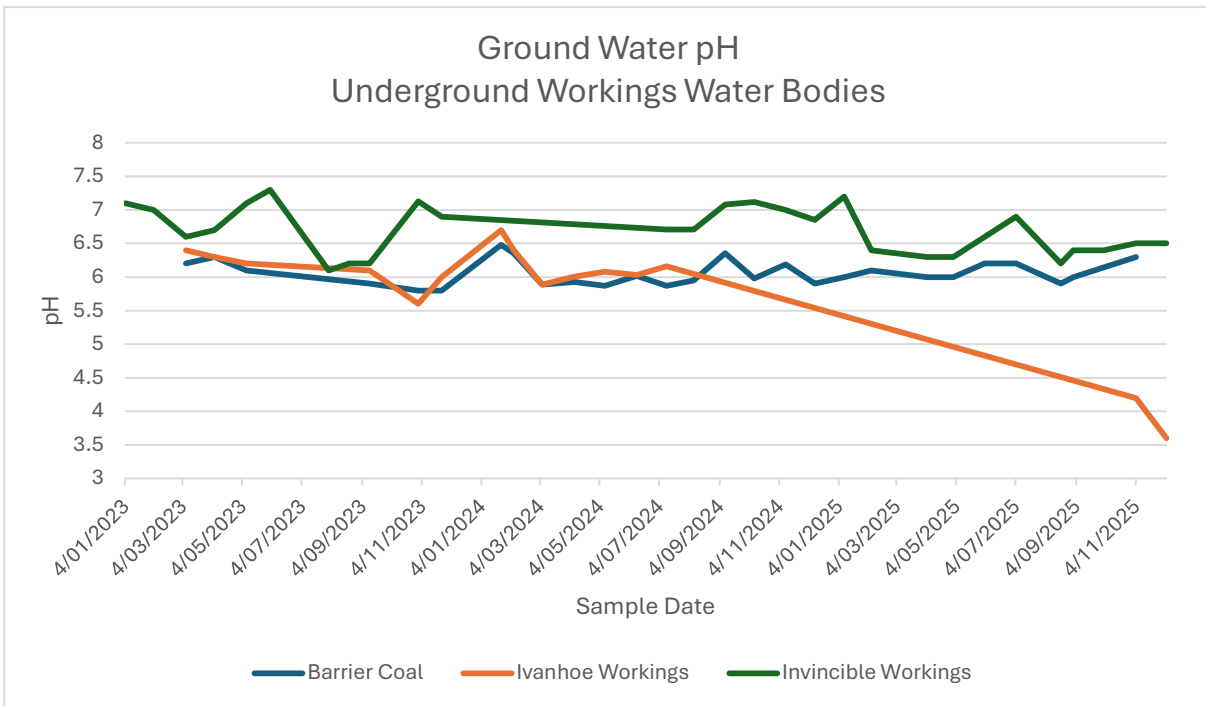
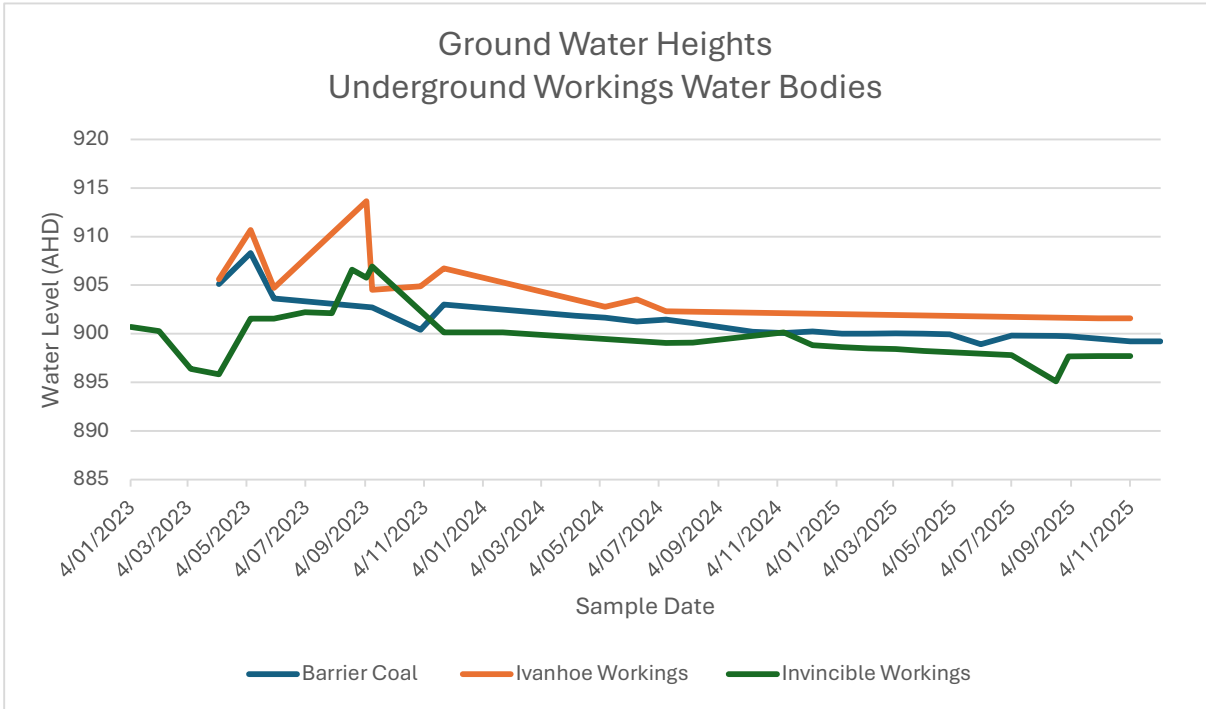
Environmental Dam (SW02)										
Sampling Date	pH	TSS (mg/L)	Oil & Grease (mg/L)	EC (uS/cm)	Cobalt dissolved (mg/L)	Copper dissolved (mg/L)	Manganese dissolved (mg/L)	Nickel dissolved (mg/L)	Iron total (mg/L)	Zinc total (mg/L)
09/01/2025	3.2	11	<5	1,100	No data	No data	No data	No data	9.2	No data
06/02/2025	3.4	63	<5	1,200	No data	No data	No data	No data	28.0	No data
06/03/2025	3.4	13	<5	1,200	No data	No data	No data	No data	9.0	No data
04/04/2025	3.4	<5	<5	1,200	No data	No data	No data	No data	19.0	No data
01/05/2025	3.5	8	<5	1,100	No data	No data	No data	No data	6.7	No data
02/06/2025	3.5	12	<5	1,100	No data	No data	No data	No data	7.4	No data
03/07/2025	5.0	7	<5	940	No data	No data	No data	No data	16.0	No data
18/08/2025	3.5	14	<5	1,100	No data	No data	No data	No data	9.0	No data
01/09/2025	3.4	<5	<5	1,100	No data	No data	No data	No data	7.6	No data
02/10/2025	3.2	14	<5	1,100	No data	No data	No data	No data	8.0	No data
04/11/2025	3.2	<5	<5	1,300	0.086	0.006	7.1	0.079	3.3	No data
04/12/2025	3.1	5	<5	1,300	0.073	0.002	7.8	0.062	5.2	0.17

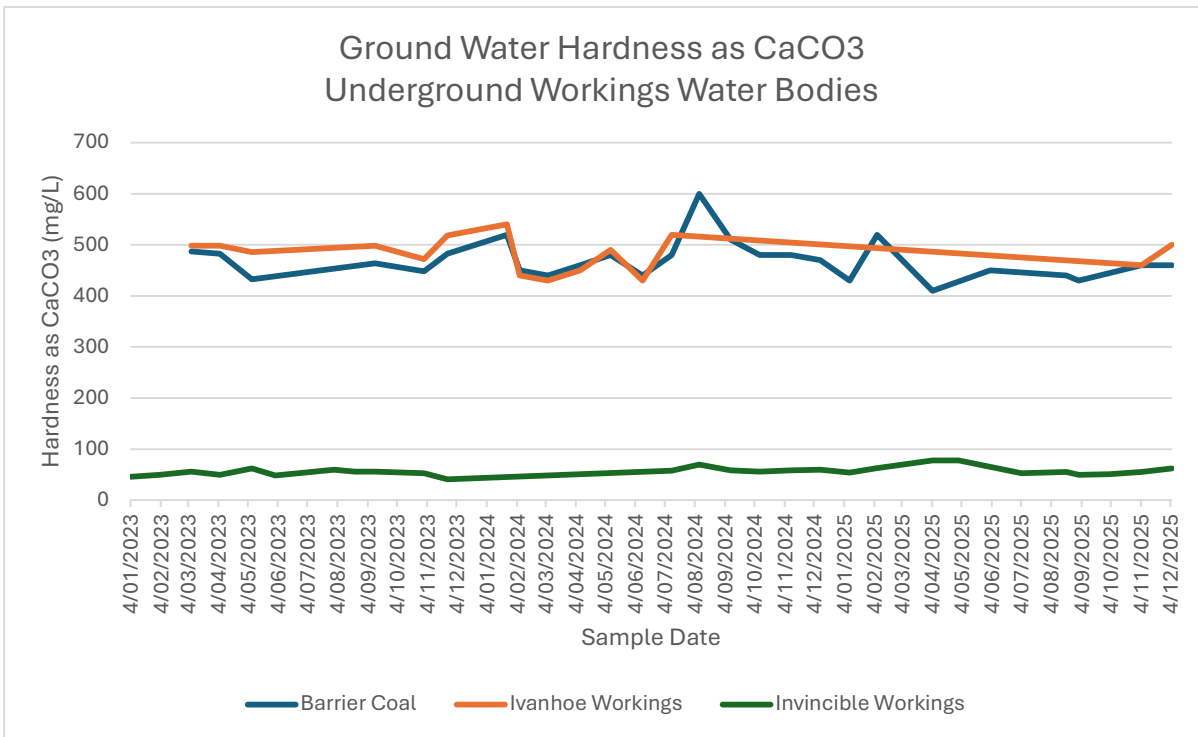
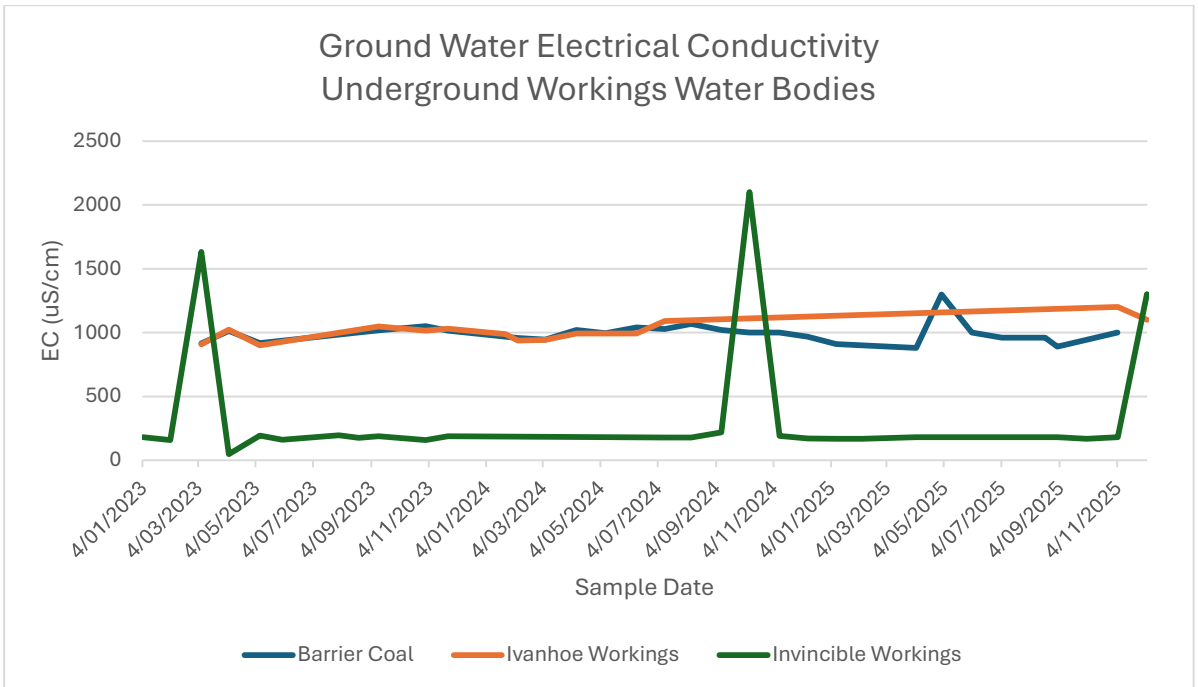
**Monthly Monitoring Results Silt Dam (SW03)**

Silt Dam (SW03)										
Sampling Date	pH	TSS (mg/L)	Oil & Grease (mg/L)	EC (uS/cm)	Cobalt dissolved (mg/L)	Copper dissolved (mg/L)	Manganese dissolved (mg/L)	Nickel dissolved (mg/L)	Iron total (mg/L)	Zinc total (mg/L)
09/01/2025	6.0	10	<5	1,000	<0.001	<0.001	0.54	0.003	0.34	0.003
06/02/2025	6.2	20	<5	1,100	<0.001	<0.001	0.087	0.003	0.31	<0.001
06/03/2025	6.6	9	<5	1,200	<0.001	<0.001	0.11	0.002	0.51	0.003
04/04/2025	6.2	18	<5	1,200	<0.001	<0.001	0.093	0.003	0.44	0.002
01/05/2025	7.7	42	<5	1,100	<0.001	<0.001	0.18	0.003	0.47	0.002
02/06/2025	7.0	15	<5	880	<0.001	<0.001	0.35	0.003	0.35	0.003
03/07/2025	7.3	9	<5	1,200	0.001	0.002	0.64	0.004	0.41	0.003
18/08/2025	7.3	16	<5	1,200	0.002	0.006	0.8	0.005	0.15	0.003
01/09/2025	7.0	8	<5	1,000	0.001	<0.001	0.59	0.004	0.19	0.12
02/10/2025	7.0	8	<5	1,000	<0.001	<0.001	0.45	0.004	0.18	<0.001
04/11/2025	7.6	5	<5	1,200	<0.001	0.002	0.1	0.004	0.15	0.002
04/12/2025	6.4	12	<5	170	<0.001	<0.001	0.45	0.003	0.16	0.003

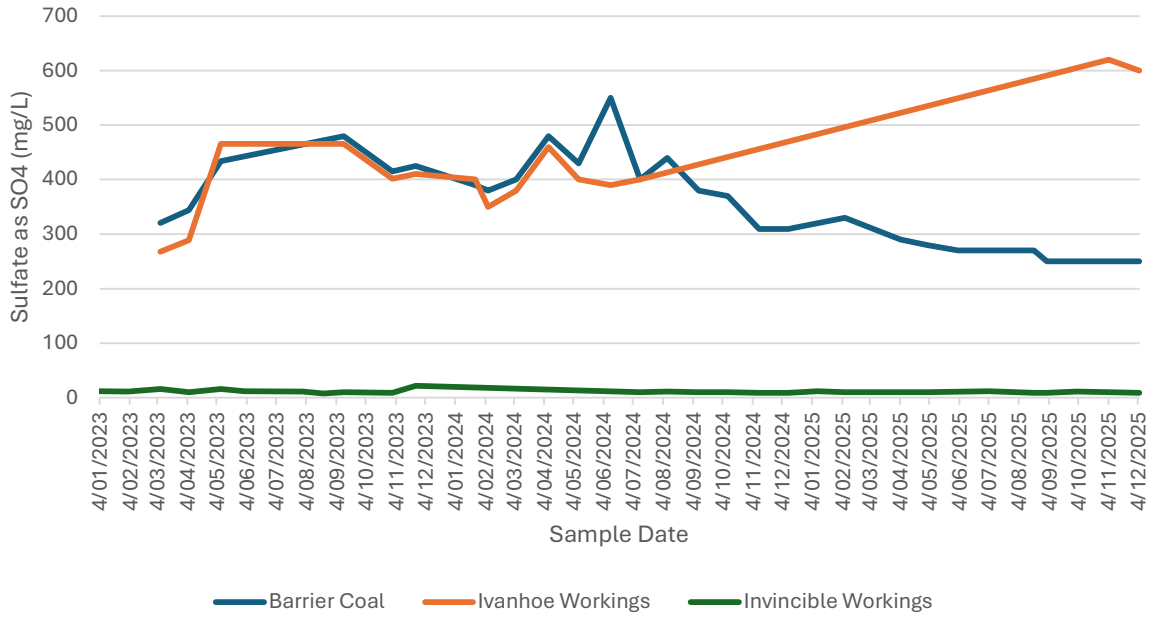


**Groundwater**

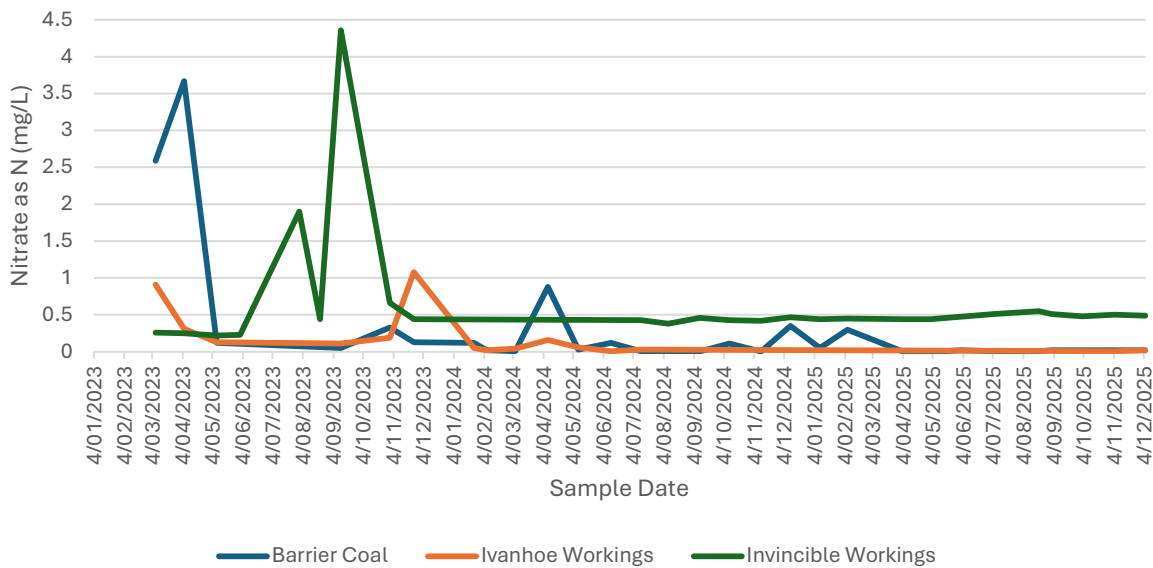




### Ground Water Sulfate as SO4 Underground Workings Water Bodies



### Ground Water Nitrate as N Underground Workings Water Bodies



Historical noise monitoring results for years 2011 and 2012 are shown below. Contribution from Invincible was inaudible for all monitoring undertaken for 2013 – 2025.

#### Quarterly Noise Monitoring Results 2011

2011 Quarterly Noise Monitoring Results					
Location	Criterion (dB)	Q1 (L <sub>Aeq</sub> 15 min)	Q2 (L <sub>Aeq</sub> 15 min)	Q3 (L <sub>Aeq</sub> 15 min)	Q4 (L <sub>Aeq</sub> 15 min)
Cullen Bullen Central (N01)	40	IA	IA	IA	IA
Cullen Bullen West (N02)	40	IA	IA	IA	IA
Cullen Bullen South (N03)	40	IA	NM	IA	IA

IA – Noise from the mine was inaudible

NM – Noise was inaudible but not measurable

#### Quarterly Noise Monitoring Results 2012

2012 Quarterly Noise Monitoring Results					
Location	Criterion (dB)	Q1 (L <sub>Aeq</sub> 15 min)	Q2 (L <sub>Aeq</sub> 15 min)	Q3 (L <sub>Aeq</sub> 15 min)	Q4 (L <sub>Aeq</sub> 15 min)
Cullen Bullen Central (N01)	40	IA	<30	IA	IA
Cullen Bullen West (N02)	40	IA	<30	IA	IA
Cullen Bullen South (N03)	40	IA	34	IA	IA

IA – Noise from the mine was inaudible

## **APPENDIX 3 – IEA 2024 Action Plan**

Unique Finding Identifier	Aspect	Recommendation	Proponent's Response (as applicable)
NC1	Obligation to Minimise Harm to the Environment	NC REC 1 As per Recommendations raised in this audit report.	Finding and
NC2	Final Layout Plans	<p>Undertake a detailed Mine Planning process that produces a Life of Mine rehabilitation schedule, materials balance and supporting operational strategies to facilitate achievement of rehabilitation commitments.</p> <p>2. Review compliance and operational management systems and processes to ensure that the outcomes of the detailed Mine Planning process are integrated into Business-As-Usual activities to ensure compliance with applicable measures and requirements and progression of rehabilitation activities in accordance with planned activities and timings.</p> <p>3. Implement a program of temporary rehabilitation to minimise disturbance based on commitments within the RMP and EIS.</p> <p>4. Undertake remedial works on the west pit rehabilitation area to address land stability issues (dump slip) and drainage line scouring</p>	<p>NC REC 2.1 A Castlereagh of Mine plan reflected in Program.</p> <p>NC REC 2.2 A CC will review determine w necessary in operation.</p> <p>NC REC 2.3 A CC will enga conduct tem</p> <p>NC REC 2.4 A CC will unde (required) to</p>
NC3	Notification of Recommencement	<p>1. Engage with DPHI to seek confirmation of the recommencement notification. If notification was completed, seek a copy of the correspondence. If correspondence cannot be verified, submit a retrospective notification.</p> <p>2. Following Item 1, ensure a copy of the recommencement notification is retained and is accessible within the mine's environmental compliance management system.</p>	<p>NC REC 3.1 A CC will enga notification cannot be v Condition 12</p> <p>NC REC 3.2 A A copy will b</p>
NC4	Blast Management Plan	Engage with DPHI to seek confirmation of agreement by the Secretary to not prepare a Blast Management Plan for the current phase of mining activities.	<p>NC REC 4.1 A CC will enga to not prepa corresponde to be exemp</p>
NC5	Operating Conditions	Introduce a maintenance regime for cleaning the access road, existing the site following the wheel wash.	<p>NC REC 5.1 A CC have intr modifying th</p>
NC6	Air Quality Management Plan	<p>1. Review, and update where necessary, the Air Quality Management Plan (AQMP) to reflect the current status of the operation. In undertaking the review, consider implementation status of mitigation measures. Also give consideration whether the level of detail within the AQMP is fit for purpose given the recommencement of operations and EIS commitments.</p> <p>2. Ensure key measures to address Air Quality operating conditions and to protect air quality are implemented, including monitoring for ongoing effectiveness and implementation of corrective actions as required to ensure risks to Air Quality are mitigated. (Action also refers to EPL Condition O3.2)</p>	<p>NC REC 6.1 A CC will review Schedule 5,</p> <p>NC REC 6.2 A CC will ensu protect air q</p>
NC7	Water Management Performance Measures	<p>1. Undertake an assessment of water management systems and implementation measures for separate clean, dirty and mine water systems by a suitably qualified person.</p> <p>2. Complete an improvement program for the wastewater, oily water separator and associated infrastructure. (Refer also to findings at Schedule 3, Condition 15).</p> <p>3. Complete drainage repairs for LPD2 to divert water away from the highway and restore</p> <p>Note: Recommendations regarding the EPL PRP are included within the EPL Checklist</p>	<p>NC REC 7.1 A CC will enga Management</p> <p>NC REC 7.2 A CC will unde required rep functional. C management</p> <p>NC REC 7.3 A CC will unde into the nat</p>

					has occurred since the completion of the IEA). Update 28/02/2025: No resolution has been reached with the neighbour. The EPA was notified on February 19 regarding the re-diversion and any potential complications that may arise during its implementation. CC is currently awaiting feedback from the EPA. Update 31/12/25: No discharges have occurred or are planned to occur from LDP002 until this issue is resolved. <b>Action outstanding.</b>
<b>NC8</b>	Water Management Plan	<p>1. Engage with DPHI to seek confirmation of expert endorsement of the approved Water Management Plan (Water MP). If endorsement was completed, seek a copy of the correspondence. If endorsement cannot be verified, submit an updated request for expert endorsements for the next management plan revision trigger.</p> <p>2. Undertake an assessment of the surface water management system and associated implementation measures by a suitably qualified person.</p> <p>3. Undertake Dam Integrity Inspections on key dam embankments such as the Main Storage Dam.</p> <p>4. Implement measures to manage pipeline/pump failure risks for infrastructure associated with seepage management.</p> <p>5. Review the current operations against the Aquifer Interference Policy.</p> <p>6. Engage the EPA for a modification of the Environment Protection Licence to permit discharge via the underground workings.</p> <p>7. Document staged Progressive Erosion and Sediment Control Plans (PESCPs) as per the Water MP for key areas across the site</p>	<p><b>NC REC 8.1 ACTION</b> CC will engage with DPHI to seek confirmation of expert endorsement of the approved Water MP, and if possible, seek a copy of the correspondence. If endorsement cannot be verified, CC will request endorsement for the Water MP revision.</p> <p><b>NC REC 8.2</b> Finding and recommendation noted. No further action is proposed. Covered under NC REC 7.1 Action</p> <p><b>NC REC 8.3 ACTION</b> CC will conduct a Dam Embankment Integrity Inspection on the Main Storage Dam by a person qualified in surveillance of embankment dam inspections.</p> <p><b>NC REC 8.4 ACTION</b> CC will review the pipeline/pump failure risks for infrastructure associated with seepage management and if necessary, revise the seepage management process.</p> <p><b>NC REC 8.5 ACTION</b> Finding and recommendation noted. No further action is proposed. Covered under NC REC 7.1 Action</p> <p><b>NC REC 8.6 ACTION</b> CC will engage with EPA to determine if a EPL variation is necessary and will submit an application to modify if required.</p> <p><b>NC REC 8.7</b> Finding and recommendation noted. No further action is proposed.</p>	<p><b>8.1</b> 08/03/25</p> <p><b>8.2</b> N/A</p> <p><b>8.3</b> 08/04/25</p> <p><b>8.4</b> 16/05/25</p> <p><b>8.5</b> N/A</p> <p><b>8.6</b> 23/05/25</p> <p><b>8.7</b> N/A</p>	<p><b>8.1</b> DPHI were engaged on 12/12/24 regarding an RFI. DPHI have yet to respond regarding this RFI. CC are currently finalising the scope of the WMP revision and will be seeking endorsement of personnel undertaking the revision. Update 28/02/25: CC has finalised the scope of the WMP revision and is currently working through the revision process. A formal request for an extension to complete revision of the WMP will be sort by CC through the Major Projects Portal by 08/03/2025. 3/4/2025 – Endorsement received from DPHI for Umwelt Consultants to prepare WMP. <b>Action Closed</b></p>
<b>NC9</b>	Water Management Plan	As for Schedule 3, Condition 25. <b>(OBS4)</b>	Finding and recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>NC10</b>	Biodiversity Offset Strategy	<p>1. Prepare and implement a detailed action plan to resolve all outstanding requirements / commitments / conditions related to Biodiversity.</p> <p>2. Provide quarterly updates of action plan implementation to relevant agencies.</p>	<p><b>NC REC 10.1 ACTION</b> CC will prepare and implement an action plan to resolve the outstanding requirements/ commitments/ conditions related to biodiversity.</p> <p><b>NC REC 10.2 ACTION</b> CC will provide quarterly updates of the action plan to relevant agencies when the action plan is triggered and until the action plan is completed.</p>	<p><b>10.1</b> 02/05/25</p> <p><b>10.2</b> N/A</p>	<p><b>10.1</b> No update has been received from Crown Lands regarding Biodiversity Offset. Crown lands have notified again. Update 31/12/25: CC is actively engaged with the Minister and Crown Lands regarding the planned Biodiversity Offset for Invincible Colliery Southern Extension. The matter is currently with the Minister. <b>Action Outstanding</b></p>
<b>NC11</b>	Retirement of Credits	As for Schedule 3, Condition 29. <b>(NC10)</b>	Finding and recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>NC12</b>	Biodiversity Management Plan	<p>1. Review, and update where necessary, the Biodiversity Management Plan (BMP) to revise the current status of the operation, consider implementation status of mitigation measures and consider if the level of detail is fit for purpose given the recommencement of operations and EIS commitments. Consideration should also be given to increasing the timing and specificity of outlining the measures to be implemented and how / when these are to be implemented.</p> <p>2. Ensure key measures to address Biodiversity Management and to protect biodiversity are implemented, including monitoring for ongoing effectiveness and implementation of corrective actions as required to ensure risks to biodiversity are mitigated.</p> <p>3. Ensure site clearing limits and no-go areas are clearly delineated and/or fenced.</p> <p>4. Reinstate exclusion fencing around translocation areas.</p> <p>5. Undertake assessment of the need for vertebrate pest control and implement as required.</p>	<p><b>NC REC 12.1 ACTION</b> CC will review and revise the BMP where necessary in accordance with Schedule 5, Condition 5.</p> <p><b>NC REC 12.2</b> Finding and recommendation noted. No further action is proposed. This is covered under NC REC 12.1 ACTION.</p> <p><b>NC REC 12.3 ACTION</b> CC has surveyed and pegged out the clearing limits and the no-go areas are clearly marked.</p> <p><b>NC REC 12.4 ACTION</b> CC will reinstate exclusion fencing around translocation areas.</p> <p><b>NC REC 12.5 ACTION</b> CC will review the latest inspection reports and determine whether a pest control plan is required and will implement if required.</p>	<p><b>12.1</b> 08/03/25</p> <p><b>12.2</b> N/A</p> <p><b>12.3</b> Completed</p> <p><b>12.4</b> 31/10/25</p> <p><b>12.5</b> 30/05/25</p>	<p><b>12.1</b> The BMP has been reviewed, and it is noted that a revision will be necessary in the near future concerning the biodiversity offset areas. However, no immediate revision is required, as the BMP serves as a document for the entire Southern Extension project, rather than a rolling plan updated to reflect the current status of clearing or rehabilitation throughout the project's lifecycle. Additionally, the implementation of mitigation measures has been reviewed, and any that were previously carried out have now been addressed and completed. <b>Action Closed</b></p> <p><b>12.4</b> Adequate exclusion fencing has been reinstated. <b>Action Closed</b></p>
<b>NC13</b>	Aboriginal Cultural	1. Engage with DPHI to seek confirmation regarding approval of the Aboriginal Cultural	<b>NC REC 13.1 ACTION</b>	<b>13.1</b> 17/01/25	<b>13.1</b> DPHI were engaged on 12/12/24

	Heritage Management Plan	Heritage (ACH) Management Plan. If approval was completed, seek a copy of the correspondence. If correspondence cannot be verified, submit a retrospective approval.	CC will engage with DPHI to seek confirmation regarding approval of the ACH Management Plan. If approval was completed, seek a copy of the correspondence. If correspondence cannot be verified, submit a retrospective approval.		regarding an RFI. On 17/12/24 DPHI sent an email finding the ACH approval closing this action out. <b>Action Closed</b>
<b>NC14</b>	Hours of Work	1. Review, and update where necessary, the Transport Management Plan (TMP) to reflect the current status of the operation. In undertaking the review, consider implementation status of mitigation measures. Also give consideration whether the level of detail within the TMP is fit for purpose given the recommencement of operations and EIS commitments. (Action also applies at EPL Condition O3.1)  2. Ensure key measures to address Transport Management and to protect environmental and amenity quality are implemented, including monitoring for ongoing effectiveness and implementation of corrective actions as required to ensure risks to the environment and amenity are mitigated.	<b>NC REC 14.1 ACTION</b> CC will review and revise the TMP where necessary in accordance with Schedule 5, Condition 5. <b>NC REC 14.2</b> Finding and recommendation noted. No further action is proposed.	<b>14.1</b> 08/03/25	<b>Action Closed</b>
<b>NC15</b>	Rehabilitation Objectives	As for Schedule 2, Condition 11. <b>(NC2)</b>	Finding and recommendation noted. No further action is proposed.		<b>Action Closed</b>
<b>NC16</b>	Rehabilitation Strategy	As for Schedule 2, Condition 11. <b>(NC2)</b>	Finding and recommendation noted. No further action is proposed.		<b>Action Closed</b>
<b>NC17</b>	Rehabilitation Management Plan	1. Following approval of the Rehabilitation Objectives and Criteria, revise the Rehabilitation Management Plan (RMP) based on the amendment requirements of current Mining Lease Conditions.  2. Ensure RMP measures are implemented in accordance with planned activities and timings.	<b>NC REC 17.1 ACTION</b> CC will revise the RMP following approval of the Rehabilitation Objectives and Criteria. <b>NC REC 17.2</b> Finding and recommendation noted. No further action is proposed.	<b>17.1</b> Trigger based action	<b>17.1</b> Update 31/12/25 An updated RMP has been developed and submitted via the Major Projects Portal. 2024 Rehabilitation Objectives and Criteria are still under assessment by the Resources Regulator. The RMP will be revised on receipt of the assessment outcomes. <b>Action Outstanding</b> <b>17.1 Action Closed</b>
<b>NC18</b>	Rehabilitation Management Plan	1. Review, and update where necessary, the Rehabilitation Management Plan (RMP) to reflect the current status of the operation. In undertaking the review, consider implementation status of mitigation measures. Also give consideration whether the level of detail within the RMP is fit for purpose given the recommencement of operations and EIS commitments.  2. Ensure key rehabilitation measures are implemented, including monitoring for ongoing effectiveness and implementation of corrective actions as required to ensure risks to the environment are mitigated.	<b>NC REC 18.1 ACTION</b> CC will review and revise the RMP where necessary in accordance with Schedule 5, Condition 5. <b>NC REC 18.2</b> Finding and recommendation noted. No further action is proposed.	<b>18.1</b> 08/03/25	<b>18.1</b> An updated RMP has been submitted via the Major Projects Planning Portal. <b>Action Closed</b>
<b>NC19</b>	Annual Review	Introduce a systematic process to ensure commitments that have been included in management plans for reporting within Annual Reviews are addressed for future submissions.	<b>NC REC 19.1 ACTION</b> CC will investigate and if required implement a compliance database where all actions will be registered.	<b>19.1</b> 27/06/25	<b>19.1</b> Update 31/12/25: A compliance database and action register is maintained and managed by CC.
<b>NC20</b>	Regular Reporting	Introduce a systematic process to ensure commitments that have been included in management plans for reporting within Annual Reviews are addressed for future submissions.	<b>NC REC 20.1</b> Refer to NC REC 19.1 ACTION	N/A	<b>Action Closed</b>
<b>NC21</b>	Access to Information	Introduce a systematic process to ensure website uploads occur in accordance with the Consent.	<b>NC REC 21.1</b> Refer to NC REC 19.1 ACTION	N/A	<b>Action Closed</b>
<b>NC22</b>	Concentration Limits	Investigate the pH results reported outside the parameters of the EPL and implement corrective actions as necessary to mitigate non-compliance with Conditions L2.1 and L2.2 of EPL1095.	<b>NC REC 22.1 ACTION</b> CC has engaged a contractor to investigate the exceedance of pH results outside the parameters of the EPL. An investigation will be completed in accordance with the WMP.	<b>22.1</b> 25/04/25	<b>22.1</b> 31/12/25 update: As part of the Low pH study (requirement under the EPL PRP) a contractor has been engaged to investigate the exceedance of pH results. This study is due for submission to EPA by 26/02/2026 which will be used to inform the WMP due for submission 31/03/2026. <b>Action Closed</b>
<b>NC23</b>	Concentration Limits	As per Condition L2.1.	Finding and recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>NC24</b>	Dust	1. Review, and update where necessary, the Transport Management Plan (TMP) to reflect the current status of the operation. In undertaking the review, consider implementation status of mitigation measures. Also give consideration whether the level of detail within the TMP is fit for purpose given the recommencement of operations and EIS commitments. (Action also applies at MP07_0127 MOD5, Schedule 3, Condition 43)  2. Review, and update where necessary, the Air Quality Management Plan (AQMP) to reflect the current status of the operation. In undertaking the review, consider implementation status of mitigation measures. Also give consideration whether the level of detail within the AQMP is fit for purpose given the recommencement of operations and EIS commitments. (Action also refers to MP07_0127 MOD5 Schedule 3, Condition 20)  3. Ensure key measures to address Air Quality operating conditions and to protect air quality are implemented, including monitoring for ongoing effectiveness and	<b>NC REC 24.1</b> Refer to NC REC 14.1 ACTION <b>NC REC 24.2</b> Refer to NC REC 6.1 ACTION <b>NC REC 24.3</b> Finding and recommendation noted. No further action is proposed.	N/A	<b>24.1 Action Closed</b> <b>24.2 Action Closed</b> <b>24.3 Action Closed</b>

		implementation of corrective actions as required to ensure risks to Air Quality are mitigated. (Action also refers to MP07_0127 MOD5 Schedule 3, Condition 20)			
<b>NC25</b>	Dust	As per Condition O3.1. <b>(NC24)</b>	Finding and recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>NC26</b>	Dust	1. Clean up coal tracked onto Castlereagh Highway near the site entrance. 2. Review and advance the arrangements to prevent coal tracking onto the Castlereagh Highway.  (Actions also apply at MP07_0127 MOD5, Schedule 3, Condition 41) <b>(OBS7)</b>	<b>NC REC 26.1 ACTION</b> CC will further liaise with Road Maritime Services to further clean up the small remainder of coal on the side of the Castlereagh Highway. <b>NC REC 26.2</b> Refer to NC REC 5.1 ACTION	<b>26.1</b> 11/07/25 <b>26.2</b> N/A	<b>26.1</b> contractor was engaged in consultation with Road Maritime Services to clean up the small remainder of coal on the side of the Castlereagh Highway on 19/12/2024. <b>Action Closed</b> <b>26.2 Action Closed</b>
<b>NC27</b>	Requirement to monitor concentration of pollutants discharged – Air Monitoring Requirements	1. Review environmental sample collection and monitoring data protocols and procedures to ensure timely collection, compliance review and investigation of environmental quality data is carried out and followed up where necessary. 2. Finalise and implement contractual arrangements with monitoring contractors to ensure timely collection of environmental monitoring data in accordance with EPL1095 and MP07_0127 MOD5 requirements.	<b>NC REC 27.1 ACTION</b> CC will review the sample collection and protocols to ensure timely collection, compliance review and investigation of data. <b>NC REC 27.2</b> CC has finalised the contractual arrangements with monitoring contractors and continues to liaise regarding timely reporting.	<b>27.1</b> 13/06/25 <b>27.2</b> N/A	<b>27.1</b> 31/12/25 update: CC has reviewed and implemented procedures for the timely collection, compliance review and investigation of data. <b>Action Closed</b> <b>27.2 Action Closed</b>
<b>NC28</b>	Low pH Water Investigation and Management	Engage with EPA regarding the proposed EPL Variation (DOC24/308221)	<b>NC REC 28.1</b> CC has made comment on the EPL draft variation and responded to EPA. The response is currently sitting with EPA in review as of 15/11/2024. CC will continue to liaise with EPA regarding the draft EPL variation.	<b>28.1</b> N/A	<b>28.1</b> 31/12/25 update: EPL variation finalised <b>Action Closed</b>
<b>NC29</b>	Protection of the environment and rehabilitation - Must prevent or minimise harm to environment	Refer to Items Below	Finding and recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>NC30</b>	Protection of the environment and rehabilitation - Rehabilitation to occur as soon as reasonably practicable after disturbance	As for MP07_0127 MOD 5, Schedule 3, Condition 11. <b>(NC2)</b>	Finding and recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>NC31</b>	Risk Assessment – Rehabilitation Risk Assessment	Introduce Rehabilitation Resourcing, Planning and Scheduling process that is linked to budget cycles and considers the forward program to ensure key rehabilitation risks are mitigated.	<b>NC REC 31.1</b> Covered under NC 2.1 ACTION	N/A	<b>Action Closed</b>
<b>NC32</b>	Rehabilitation Documents – Rehabilitation management plans for large mines	As for MP07_0127 MOD 5, Schedule 2, Condition 11. <b>(NC2)</b>	Finding and recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>NC33</b>	Rehabilitation Documents – Rehabilitation outcome documents	As for MP07_0127 MOD 5, Schedule 3, Condition 52. <b>(NC16)</b>	Finding and recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>NC34</b>	Rehabilitation Documents – Forward program and annual rehabilitation report	Finalise and submit the 2024 Annual Rehabilitation Report and Forward Program.	<b>NC REC 34.1 ACTION</b> Finding and recommendation noted. The 2024 Annual Rehabilitation Report and Forward Program will be submitted in accordance with the guideline post the 2024 reporting period.	<b>34.1</b> 01/03/25	<b>34.1</b> The Annual Rehabilitation Report and Forward Program is currently being prepared in accordance with the guideline. The following will be submitted in Regulator portal. <b>Action Closed</b>
<b>NC35</b>	Rehabilitation Documents – Forward program and annual rehabilitation report	As for RMP ML Condition 13(1). <b>(NC34)</b>	Finding and recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>NC36</b>	Rehabilitation Documents – Times at which documents must be prepared and given	As for RMP ML Condition 13(1). <b>(NC34)</b>	Finding and recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>NC37</b>	Rehabilitation Documents – Times at which documents must be prepared and given	As for RMP ML Condition 13(1). <b>(NC34)</b>	Finding and recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>NC38</b>	Rehabilitation Documents – Certain documents to be publicly available	As for RMP ML Condition 9. <b>(NV11)</b>	Finding and recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>

<b>NC39</b>	Records, reporting and notification – records demonstrating compliance	Consider the development of a comprehensive system / tool for compliance management. The system / tool would identify regulatory commitments and obligations with actions and timeframes to facilitate planning and execution of compliance actions.	<b>NC REC 39.1</b> Refer to NC 2.2 ACTION	N/A	Action Closed
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Unique Finding Identifier	Aspect	Recommendation	Proponent's Proposed Action / Action Taken / Response (as applicable)	Proposed Action Due Date (if applicable)	2024 Annual Review Updates
<b>NV1</b>	Water Supply	<p>1. Complete the current works program for updating the Site Water Balance.</p> <p>2. Introduce a systematic method to ensuring the Site Water Balance is reviewed and reported in accordance with the Water Management Plan.</p> <p>3. Include a clear and definitive description within the 2024 Annual Review of the outcomes of the current works program for updating the Site Water Balance.</p>	<p><b>NV REC 1.1</b> Refer to NC 7.1 ACTION</p> <p><b>NV REC 1.2</b> Refer to NC 2.2 ACTION</p> <p><b>NV REC 1.3 ACTION</b> Recommendation noted. The works program for the site water balance will be included in the 2024 Annual Review</p>	<p><b>NV1.1</b> N/A</p> <p><b>NV1.2</b> N/A</p> <p><b>NV1.3</b> 31/03/25</p>	<p><b>1.1 Action Closed</b></p> <p><b>1.2 Action Closed</b></p> <p><b>1.3</b> Umwelt consulting have been engaged to update the site water balance for the WMP. <b>Action Closed</b></p>
<b>NV2</b>	Biodiversity Offset Strategy	As for Schedule 3, Condition 29. <b>(NC10)</b>	Recommendation noted. No further action is proposed.	N/A	<b>9.1</b> On 18/12/24 a meeting on site with the monitoring consultant regarding was undertaken with the consultant agreeing to update future reporting and confirming that monitoring is conducted in accordance with the applicable conditions. <b>Action Closed</b>
<b>NV3</b>	Retirement of Credits	As for Schedule 3, Condition 29. <b>(NC10)</b>	Recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>NV4</b>	Biodiversity Management Plan	As for Schedule 3, Condition 29. <b>(NC10)</b>	Recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>NV5</b>	Conservation Bond	As for Schedule 3, Condition 29. <b>(NC10)</b>	Recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>NV6</b>	Determination of Meteorological Conditions	As for Schedule 3, Condition 21. <b>(OBS4)</b>	Recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>NV7</b>	Compliance Monitoring	As for Schedule 3, Condition 21. <b>(OBS4)</b>	Recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>NV8</b>	Pollution of Waters	<p>1. Investigate potential diesel contamination of the Environmental Dam, including an assessment of compliance against Section 120 of the Protection of the Environment Operations Act 1997, noting also the definitions provided in Schedule 6 of that Act for harm, environment, pollution, pollution incident, water pollution / pollution of waters and waters.</p> <p>2. Ensure actions are taken to remove the source of the diesel spill and remediate any contamination of surrounding land, water or groundwater that may have occurred due to the spill.</p> <p>3. Following the assessment outlined in Item 2, in the event that environmental harm and/or non-compliance with EPL1095 Condition L1.1 is indicated, provide notification to EPA and DPHI in accordance with Conditions R2.1 and R2.2 of EPL1095 and Schedule 5, Condition 9 of MP07_0127 MOD 5 respectively.</p>	<p><b>NV REC 8.1 ACTION</b> CC has undertaken an investigation of the diesel contamination. A incident form was completed and actions to rectify the contamination were also completed which included the removal of contaminated soil.</p> <p><b>NV REC 8.2</b> Refer to NV 8.1 ACTION</p> <p><b>NV REC 8.3</b> Recommendation noted. No further action is proposed.</p>	<p><b>NV8.1</b> Completed</p> <p><b>NV8.2</b> N/A</p> <p><b>NV8.3</b> N/A</p>	<p><b>NV8.1 Action Closed</b></p> <p><b>NV8.2 Action Closed</b></p> <p><b>NV8.3 Action Closed</b></p>
<b>NV9</b>	Noise Limits	<p>1. Review noise monitoring protocols, including the Noise Management Plan and associated procedures as relevant, and update as relevant to reference current requirements of EPL1095 Condition L4.4 and also Schedule 3, Conditions 1-3 and Appendix 4 of MP07_0127 MOD5.</p> <p>2. Following Item 1, implement updated noise monitoring protocols to ensure compliance with requirements of</p>	<p><b>NV REC 9.1 ACTION</b> CC will review the monitoring protocols and make sure that these protocols are understood by the sampling contractor, and it is detailed in the monitoring report. The reports will also be published with reference to the most up to date EPL1095 conditions.</p> <p><b>NV REC 9.2</b> Refer to NV 9.1 ACTION</p>	<p><b>NV 9.1</b> 31/12/24</p> <p><b>NV 9.2</b> N/A</p>	<p><b>NV9.1 Action Closed</b></p> <p><b>NV9.2 Action Closed</b></p>

		EPL1095 Condition L4.4 and also Schedule 3, Conditions 1-3 and Appendix 4 of MP07_0127 MOD5.			
<b>NV10</b>	Low pH Water Investigation and Management	As per Condition U1.1 <b>(NC28)</b>	Recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>NV11</b>	Rehabilitation Documents – General requirements for documents	Introduce a systematic process to ensure website uploads occur in accordance with the ML.	<b>NV REC 11.1</b> Refer to NC 2.2 ACTION	N/A	<b>Action Closed</b>
<b>NV12</b>	Rehabilitation Documents – Certain documents to be publicly available	As for RMP ML Condition 9. <b>(NV11)</b>	Recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>NV13</b>	Water Access Licence – Water Accounts	Engage with WaterNSW to obtain copies of current water accounts.	<b>NV REC 13.1 ACTION</b> CC will engage with WATERNSW to obtain copies of current water accounts and WAL Part A conditions.	<b>NV13.1</b> 15/01/25	<b>13.1</b> On 12/12/24 an email was sent to WATERNSW requesting the following information.  Copies were provided to CC by WATER NSW on 13/12/24. <b>Action Closed</b>
<b>NV14</b>	Water Access Licence - Part A Conditions	Engage with WaterNSW to obtain copies of the WAL Part A conditions and include a detailed compliance report as part of the next annual review.  Additionally the report should address: - storage, diversion, interception or extraction is clearly documented and is authorised by a relevant Water Access Licence or exemption under the Water Management (General) Regulation 2018 - Water metering at the site is in accordance with the NSW Non-Urban Metering Framework - Water Access Licence/s used to account for water take by the project nominates the work where the water is being taken from	<b>NV REC 14.1 ACTION</b> CC will engage with WATERNSW as per NV REC 13.1 ACTION. If copies of the WAL Part A conditions are received CC will include a detailed compliance report within the next annual review from receiving the information	<b>14.1</b> Trigger based action	Copies were provided to CC by Water NSW on 13/12/24 <b>Action Closed</b>
<b>NV15</b>	S240 Notice Action Plan	Continue to engage with the Resources Regulator regarding the status of the action plan, obtain copies of the Warning Letter and any subsequent actions contained within. Include a detailed compliance report as part of the next annual review. (NV15).	<b>NV REC 15.1 ACTION</b> CC will provide an update of any non-compliances and active notices from the reporting period within the 2024 Annual Review.	<b>15.1</b> 31/03/25	Annual Review submitted in the Major Projects Portal 31/3/25 <b>Action Closed</b>

Unique Finding Identifier	Aspect	Recommendation	Proponent's Proposed Action / Action Taken / Response (as applicable)	Proposed Action Due Date (if applicable)	2024 Annual Review Updates
<b>OBS1</b>	Mining Restrictions	1. Ensure geographic survey and peg-out of approved project boundary and disturbance areas is completed.  2. Following Item 1, ensure the site survey plan is integrated into the mine's compliance and operational management systems and processes to ensure that mining activities are only undertaken within the approved boundaries.	<b>OBS REC 1.1</b> Refer to NC REC 12.3 <b>OBS REC 1.2</b> Refer to NC REC 2.2	N/A	<b>Action Closed</b>
<b>OBS2</b>	Operation of Plant and Equipment	1. Undertake maintenance and cleaning of the wastewater catch drain system.  2. Conduct a maintenance inspection and integrity test of the wastewater collection system including bunding, tanks and piping.  3. Repair the breakage in the piping that leads from the wastewater catch drain to the oil/water separator and waste oil collection tank. Investigate whether any soil contamination has resulted from the breakage.  4. Install bunding around the waste oil collection tank (if it is to remain operational).	<b>OBS REC 2.1</b> Refer to NC REC 7.2 <b>OBS REC 2.2 ACTION</b> CC will implement a periodic maintenance inspection workorder to inspect the integrity of the wastewater collection system. <b>OBS REC 2.3</b> Refer to NC REC 7.2 <b>OBS REC 2.4 ACTION</b> CC have engaged a contractor to install bunding around the waste oil collection tank so that it can be made operational. <b>OBS REC 2.5 ACTION</b> CC has reviewed the chemical storage areas, housekeeping arrangements and has implemented corrective actions to ensure all	<b>2.1</b> N/A <b>2.2</b> 04/04/25 <b>2.3</b> N/A <b>2.4</b> 31/01/25 <b>2.5</b> Completed <b>2.6</b> N/A <b>2.7</b> 29/08/25	<b>2.1 Action Closed</b> <b>2.2</b> Wastewater collection system under review as at 31/12/2025. Revised due date for maintenance and testing 28/02/2026. <b>2.3 Action Closed</b> <b>2.4</b> A contractor completed the bunding for the waste oil tank on 30/01/25. The oil tank has been commissioned <b>Action Closed</b> <b>2.5</b> 31/12/2025 update: Inspection of chemical storage area shows non-conformances in storage. CC is actively rectifying the bunding arrangements and plans to complete the action by 31/01/2026. <b>Action Outstanding</b>

		<p>5. Review chemical storage areas and implement corrective actions to ensure that all chemicals are stored within secondary containment; the chemical register and SDS are current and readily available; the waste collection system is inspected, maintained and repaired (as required).</p> <p>6. Review housekeeping arrangements in workshop, equipment, tools and waste storage areas to ensure appropriate storage arrangements are in place to prevent leaks, spills and other potential environmental impacts.</p> <p>7. Consideration should be given to documenting a Training Needs Analysis, followed by the development of training packages and a site wide training program.</p>	<p>chemicals and hydrocarbons are stored within secondary containment. All chemicals on site and any chemicals that are introduced to site require SDS as per the Work Permit.</p> <p><b>OBS REC 2.6</b> Refer to OBS REC 2.5 ACTION</p> <p><b>OBS REC 2.7 ACTION</b> CC will investigate a Training Needs Analysis program and implement it if required.</p>		
<b>OBS3</b>	Planning Agreement	Introduce a systematic method to ensuring payments are made in accordance with the nominated agreement timeframes.	<b>OBS REC 3.1</b> Refer to NC REC 2.2 ACTION	N/A	<b>Action Closed</b>
<b>OBS4</b>	Meteorological Monitoring	Complete a review of the existing and/or proposed upgraded meteorological station / sensors to ensure the meteorological station complies with requirements of Schedule 3, Condition 21, including the capability to measure temperature inversions in accordance with the NSW Industrial Noise Policy.	<b>OBS REC 4.1 ACTION</b> Finding and recommendation noted. CC will review the meteorological station to ensure compliance with application requirements.	<b>4.1</b> 22/08/25	<b>31/12/25 update:</b> Contractor has been contacted for comment on compliance of meteorological station to condition. <b>Action Outstanding</b>
<b>OBS5</b>	Clean Water Diversion Strategy	<p>1. Review, and update where necessary, the Water Management Plan (WMP) to revise the current status of the operation, consider implementation status of mitigation measures and consider if the level of detail is fit for purpose given the recommencement of operations and EIS commitments. Consideration should also be given to increasing the timing and specificity of outlining the measures to be implemented and how / when these are to be implemented.</p> <p>In the review, a suitability qualified and experienced person should be engaged to review water management systems and implementation measures for separate clean, dirty and mine water systems against requirements of Schedule 3, Condition 26.</p> <p>2. Ensure key measures to address Water Management and to protect water quality are implemented, including monitoring for ongoing effectiveness and implementation of corrective actions as required to ensure risks to Water Quality are mitigated.</p>	<p><b>OBS REC 5.1</b> Recommendation noted. Covered under NC REC 7.1 ACTION.</p> <p><b>OBS REC 5.2</b> Recommendation noted. Covered under NC REC 7.1 ACTION.</p>	N/A	<b>5.1 Action Closed</b> <b>5.2 Action Closed</b>
<b>OBS6</b>	Aboriginal Cultural Heritage Management Plan	<p>1. Review, and update where necessary, the Aboriginal Cultural Heritage Management Plan (ACHMP) to revise the current status of the operation, consider implementation status of mitigation measures and consider if the level of detail is fit for purpose given the recommencement of operations and EIS commitments. Consideration should also be given to increasing the timing and specificity of outlining the measures to be implemented and how / when these are to be implemented.</p> <p>2. Ensure key measures to address ACH Management and to protect ACH are implemented, including monitoring for ongoing effectiveness and implementation of corrective actions as required to ensure risks to ACH are mitigated.</p> <p>3. Review current ACH management status and approved management strategies as part of updating the ACH Database for ongoing use as part of Ground Disturbance Permitting.</p>	<p><b>OBS REC 6.1 ACTION</b> CC will review and revise the ACHMP where necessary in accordance with Schedule 5, Condition 5.</p> <p><b>OBS REC 6.2</b> Refer to OBS REC 6.1 ACTION</p> <p><b>OBS REC 6.3</b> Refer to OBS REC 6.1 ACTION</p>	<p><b>6.1</b> 08/03/25</p> <p><b>6.2</b> 08/03/25</p> <p><b>6.3</b> 08/03/25</p>	<b>6.1-6.3</b> All management plans have been reviewed. A letter of review has been submitted in the projects portal. <b>Action Closed</b>
<b>OBS7</b>	Approved Plans to be On-Site	<p>1. Clean up coal tracked onto Castlereagh Highway near the site entrance.</p> <p>2. Review and advance the arrangements to prevent coal tracking onto the Castlereagh Highway.</p> <p>(Actions also apply at EPL1095, Condition O3.4) <b>(NC26)</b></p>	<p><b>OBS REC 7.1</b> Refer to NC REC 26.1 ACTION</p> <p><b>OBS REC 7.2</b> Refer to NC REC 26.1 ACTION</p> <p><b>OBS REC 7.2</b> Refer to NC REC 5.1 ACTION</p>	N/A	<b>OBS7.1-7.3 Action Closed</b>
<b>OBS8</b>	Rehabilitation Strategy (RS)	1. Review, and update where necessary, the Rehabilitation Strategy (RS) to reflect the current status of the operation. In undertaking the review, consider implementation status of mitigation measures. Also give consideration whether the level of	<p><b>OBS REC 8.1 ACTION</b> CC will review and revise the RS where necessary in accordance with Schedule 5, Condition 5.</p> <p><b>OBS REC 8.2</b> Refer to OBS REC 8.1 ACTION</p>	<p><b>8.1</b> 08/03/25</p> <p><b>8.2</b> N/A</p>	<b>8.1-8.2</b> All management plans have been reviewed. A letter of review has been submitted in the projects portal. <b>Action Closed</b>

		<p>detail within the RS is fit for purpose given the recommencement of operations and EIS commitments.</p> <p>2. Undertake a detailed review of all commitments, requirements and regulatory/enforcement actions related to rehabilitation to ensure key rehabilitation measures are implemented, including monitoring for ongoing effectiveness and implementation of corrective actions as required to ensure risks to the environment are mitigated. Incorporate the outcomes of the detailed review into the revised Rehabilitation Strategy and/or Rehabilitation management Plan.</p>			
<b>OBS9</b>	Environmental Management Strategy (EMS)	<p>1. Review, and update where necessary, the Environmental Management Strategy (EMS) to revise the current status of the operation, consider implementation status of mitigation measures and consider if the level of detail is fit for purpose given the recommencement of operations and EIS commitments. Consideration should also be given to increasing the timing and specificity of outlining the measures to be implemented and how / when these are to be implemented.</p> <p>2. Ensure key measures to address Environmental Management and to protect environmental quality are implemented, including monitoring for ongoing effectiveness and implementation of corrective actions as required to ensure risks to Environmental Quality are mitigated.</p>	<p><b>OBS REC 9.1 ACTION</b> CC will review and revise the EMS where necessary in accordance with Schedule 5, Condition 5.</p> <p><b>OBS REC 9.2</b> Refer to OBS REC 9.1 ACTION.</p>	9.1 08/03/25	<p><b>9.1-9.2</b> All management plans have been reviewed. A letter of review has been submitted in the projects portal.</p> <p><b>Action Closed</b></p>
<b>OBS10</b>	Community Consultative Committee	Confirm that the CCC has adopted and is operating in accordance with the 2023 CCC Guidelines.	<p><b>OBS REC 10.1 ACTION</b> CC will liaise with the CCC Chairperson to confirm that it is adhering to the 2023 CCC Guidelines</p>	10.1 25/04/25	<p><b>10.1.</b> 31/12/25 update: CC has liaised with CCC Chairperson for comment on adherence to CCC guidelines.</p> <p><b>Action Outstanding</b></p>
<b>OBS11</b>	Voluntary Planning Agreement	Introduce a systematic method to ensuring payments are made in accordance with the nominated agreement timeframes.	<p><b>OVS REC 11.1</b> Refer to NC REC 2.2 ACTION</p>	N/A	<b>Action Closed</b>
<b>OBS12</b>	Activities must be carried out in a competent manner	Consideration should be given to establishing a fit for purpose compliance database to capture commitments and obligations across all approvals, authorisations and licences, and for collation of records and evidence that demonstrate compliance against applicable requirements.	<p><b>OVS REC 12.1</b> Refer to NC REC 2.2 ACTION</p>	N/A	<b>Action Closed</b>
<b>OBS13</b>	Other Operating Conditions - Truck Wheel Wash	As per Condition 03.4. <b>(NC26)</b>	Recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>OBS14</b>	Recording of Pollution Complaints	Review the format of Complaint Reports and update as relevant to explicitly address each item of EPL1095 Condition M4.2 (a to f).	<p><b>OBS REC 14.1 ACTION</b> CC will review the format of the site Complaint Reports and revise if required to meet the M4.2 condition</p>	14.1 28/02/25	<p><b>14.1</b> Template updated on 12/12/24 closing this action out.</p> <p><b>Action Closed</b></p>
<b>OBS15</b>	Records, reporting and notification – Nominated contact person	Confirm with the Resources Regulator portal that Tim Haig is the nominated contact person for CC.	<p><b>OBS REC 15.1 ACTION</b> CC will confirm the status of the nominated contact person for CC</p>	15.1 18/01/25	<p><b>15.1</b> The Resources Regulator noted that Tim Haig was not the nominated contact for CC. CC has now updated the nominated contact.</p> <p><b>Action Closed</b></p>
<b>OBS16</b>	Pollution Incident Response Plan	Consideration should be given to updating the site Pollution Incident Response Plan (PIRMP) to address the updated Regulations Protection of the Environment Operations (General) Regulation 2022 (the General Regulation) and the updated Guideline: Pollution Incident Response Management Plans (2022).	<p><b>OBS REC 16.1 ACTION</b> CC will review and revise the PIRMP following the next PIRMP test scheduled in December 2024</p>	16.1 31/12/2024	<p><b>16.1</b> On 19/12/24 The PIRMP was tested and the revised.</p> <p><b>Action Closed</b></p>
<b>OBS17</b>	Training and Competence	Consider documenting a Training Needs Analysis, followed by the development of training packages and a site wide training program.	<p><b>OBS REC 17.1</b> Refer to OBS REC 2.7 ACTION</p>	N/A	<b>Action Closed</b>
<b>OBS18</b>	Inspections and Maintenance	Consider reinstating the general monthly environmental inspections described in the EMS, including the formalisation of the inspection checklist and reporting outcomes to the mine manager.	<p><b>OBS REC 18.1 ACTION</b> CC is currently undertaking monthly environmental inspections in accordance with the EMS. CC will investigate the transition of moving to digital inspection reporting.</p>	18.1 05/12/25	<p><b>18.1</b> Monthly test inspection created on online version through cloud assess.</p> <p><b>Action Closed</b></p>
<b>OBS19</b>	Inspections and Maintenance	Consider undertaking a comprehensive Walkover Inspection of all rehabilitation areas (to complement the existing rehabilitation monitoring) to capture all current maintenance requirements for prioritisation and rectification. It is noted that the Annual Walkover for rehabilitation is included within the EMS but not the RMP.	<p><b>OBS REC 19.1 ACTION</b> CC will implement the comprehensive walkover inspection of all rehabilitation areas.</p>	19.1 31/12/24	<p><b>19.1</b> Monthly test inspection created on online version through cloud assess which includes comprehensive a walkover inspection.</p> <p><b>Action Closed</b></p>

<b>OBS20</b>	Environmental Monitoring and Measurement	In conjunction with management plan revisions, consider increasing the utilisation of monitoring results and long terms trends, including ANZECC results for identifying change and managing environmental performance.	<b>OBS REC 20.1 ACTION</b> CC will review and revise management plans where necessary in accordance with Schedule 5, Condition 5	20.1 08/03/25	<b>Action Closed</b>
<b>OBS21</b>	Environmental Monitoring and Measurement	Consider implementing a system / process / tool for easily tracking monitoring data against criteria, annual trends, long term trends.	<b>OBS REC 21.1 ACTION</b> CC has implemented a new filing system which includes long term trend data.	21.1 Completed	<b>Action Closed</b>
<b>OBS22</b>	Environmental Monitoring and Measurement	Monthly environmental monitoring reports to include the results of visual inspections for ferrous iron oxidation and other contamination.	<b>OBS REC 22.1 ACTION</b> CC will include the visual inspections of ferrous iron oxidation and other contamination with the monthly inspection report template.	22.1 31/01/25	<b>22.1</b> Monthly test inspection created on online version through cloud assess. This includes visual inspections of iron oxidation and other contamination in the template.  <b>Action Closed</b>
<b>OBS23</b>	Compliance Management, Systems and Reporting	As per Division 4, Condition 17. <b>(NC39)</b>	Recommendation noted. No further action is proposed.	N/A	<b>Action Closed</b>
<b>OBS24</b>	Compliance Management, Systems and Reporting	Consider adopting environmental performance management systems commonly used in the NSW mining industry, such as weather forecasting tools, compliance databases, monitoring databases, spatial databases.	<b>OBS REC 24.1 ACTION</b> CC will investigate environmental performance management systems and determine whether there are any databases that will need to be purchased.	24.1 10/04/26	31/12/25 update: CC is consulting with contractors for development of database for storage of GIS based information as well as automatic storage of laboratory results. Estimated completion date 30/06/2026. <b>Action Outstanding</b>
<b>OBS25</b>	Life of Mine	Given the current Life of Mine, noting commencement of MOD6 and the Forward Program, prepare and implement a Mine Closure Plan in accordance with the relevant guidelines (which may include but are not limited to: Australian and New Zealand Minerals and Energy Council (ANZMEC) Strategic Framework for Mine Closure (ANZMEC/MCA 2000), Standards for mine closure and reclamation management ISO/TC 82/SC 7 and the International Council of Mining and Metals (ICMM) Planning for Integrated Mine Closure Toolkit).	<b>OBS REC 25.1 ACTION</b> Investigate the implementation of a Mine Closure Plan within three years of consent expiration, with the exemption if a development consent extension approval process is underway.	25.1 Trigger based action	Development consent until 31/12/2030. Exemption from action <b>Action Closed</b>
<b>OBS26</b>	Aquatic Monitoring	Consider establishing an aquatic monitoring program in Cullen Creek to assess mining impacts.	<b>OBS REC 26.1 ACTION</b> Refer to NC REC 7.1 ACTION regarding to WMP Review	N/A	Aquatic monitoring forms part of the Surface Water Management Study which will inform the updated WMP due for submission 31/03/2026 <b>Action Closed</b>

**APPENDIX 4 – Resources Regulator Section 240 Notices and Targeted Assessment Program Actions**

# Invincible Colliery

Table 2: Response to 2022 Section 240 Notices NTCE0008970 and NTCE0008971

Unique Finding Identifier	Resources Regulator TAP Recommendation	Proposed Action Due Date	Castlereagh Coal Update 31/12/2025
1	Complete detailed monitoring, including an ecological evaluation, of established areas of final landform at Invincible to establish current status. Biodiversity /rehabilitation monitoring is an annual program (due 31/12/yearly) and can be complemented with the physical landform and structures stabilisation considerations.	Annually (due 31/12)  30/4/26	Annual Biodiversity survey conducted in Spring which includes an ecological evaluation of established areas of final landform and rehabilitation monitoring. Next survey due September 2026.  <b>Action Ongoing</b> Physical landform and structures stabilisation considerations included in monthly ESC inspections. Incorporate an annual inspection report of structural stability into program of works  <b>Action Outstanding</b>
2	Consider sourcing high density LiDAR and develop DTM of Invincible following completion of current mining at Invincible and completion of review of future mining options at Invincible.	Annually (due 31/12)	Annual LiDAR survey conducted to inform future mine plan, rehabilitation forward program and final landform design. Next survey due December 2026.  <b>Action Ongoing</b>
3	Develop an ongoing monitoring and assessment strategy to identify established areas of final landform at Invincible that require intervention to achieve long term stability	31/03/2026	Ongoing monitoring and assessment strategy to be developed 1 <sup>st</sup> quarter 2026 to inform action UFI1.  <b>Action Outstanding</b>
4	Develop detailed final landform designs for areas at Invincible yet to be established	Complete	Final landform designs completed and adjusted to suit as required.  <b>Action Closed</b>
5	Develop long term drainage structure designs for revised Invincible final landform designs	31/12/2026	Designs of long term drainage structures to be completed.  <b>Action Outstanding</b>
6	Revise materials inventory assessment based on revised Invincible final landform designs and detailed DTM	30/06/2026	Materials inventory in progress. Material shortfalls identified in previous studies. Ensure inventory balance is adjusted to any final landform changes.  <b>Action Outstanding</b>