

# INVINCIBLE COLLIERY

## Monthly Environmental Monitoring Data

### for

## Castlereagh Coal

### 1 INTRODUCTION

Castlereagh Coal owns and operates Invincible Colliery located near Cullen Bullen in the Central West district of New South Wales. This report has been prepared pursuant to Chapter 2, Part 3.5, Condition 66(6) of the Protection of the Environment operations Act 1997 for the publication of results of monitoring and the NSW Environmental Protection Authority guideline titled Requirements for publishing pollution monitoring data (2013).

### 2 ENVIRONMENTAL PROTECTION LICENCE DETAILS

**Licensee:** Shoalhaven Coal Pty Ltd

**Address:** Invincible Colliery, Castlereagh Highway, Cullen Bullen, NSW 2790

**Link:** <https://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=287085&SYSUID=1&LICID=1095>

### 3 ENVIRONMENTAL PROTECTION LICENCE DETAILS

#### 3.1 DEPOSITIONAL DUST

All depositional dust sampling locations were in compliance with the rolling annual average limit (4 g/m<sup>2</sup> /month) for the period October 2024 to September 2025. The maximum annual increase in deposited dust levels is also below the criteria limit of 2 g/m<sup>2</sup> /month.

Depositional dust monitoring results are presented in **Table 1**.

Table 1: Depositional Dust Monitoring Results: September 2025

| <b>Obtained:</b> 04/11/2025  |            | <b>Premise:</b> Invincible Colliery |  |  |
|------------------------------|------------|-------------------------------------|--|--|
| <b>Published:</b> 25/11/2025 |            | <b>Licensee:</b> Shoalhaven         |  |  |
|                              |            | <b>EPL Number:</b> 1095             |  |  |
|                              |            | <b>Exposure Period:</b> 31 days     |  |  |
| Sampling Point               | Start Date | End Date                            | Insoluble Solids (g/m <sup>2</sup> /month) | Rolling Annual Average (g/m <sup>2</sup> /month) |
| ID-D1 (EPA Point 3)          | 01/09/2025 | 02/10/2025                          | 0.8  | 0.94   |
| ID-D2 (EPA Point 4)          | 01/09/2025 | 02/10/2025                          | 0.8  | 1.23   |
| ID-D3 (EPA Point 5)          | 01/09/2025 | 02/10/2025                          | 5.7  | 1.43   |
| ID-D4 (EPA Point 6)          | 01/09/2025 | 02/10/2025                          | 3.9  | 1.48   |
| ID-D5 (EPA Point 7)          | 01/09/2025 | 02/10/2025                          | 6.0  | 1.47   |
| ID-D6 (EPA Point 8)          | 01/09/2025 | 02/10/2025                          | 1.2  | 1.00   |
| <b>Annual Average Limit</b>  |            |                                     |  | <b>4.0</b>                                       |

Required Frequency: Monthly - exposure period 30 ± 2 days

### 3.2 PM10 AND TSP

The 24-hour maximum PM<sub>10</sub> particulate matter concentration less than 10 microns (PM<sub>10</sub>) criterion of 50 µg/m<sup>3</sup> was not exceeded during September 2025.

The TSP and PM<sub>10</sub> annual rolling average results were calculated with the available data for the period of October 2024 to September 2025.

The average values were less than the annual average EPL limit as presented in **Table 2**.

Table 2: High Volume Air Sampler Monitoring Results: September 2025

| <b>Obtained:</b> 04/11/2025   |            | <b>Premise:</b> Invincible Colliery |                          |
|---|------------|-------------------------------------|--------------------------|
| <b>Published:</b> 25/11/2025  |            | <b>Licensee:</b> Shoalhaven         |                          |
|   |            | <b>EPL Number:</b> 1095             |                          |
| Sampling Point  | Run Date   | PM10 (µg/m <sup>3</sup> )           | TSP (µg/m <sup>3</sup> ) |
| HVAS1 (EPA Point 3)   | 01/09/2025 | 7                                   | 9                        |
|   | 02/09/2025 | 5                                   | 9                        |
|   | 03/09/2025 | 5                                   |                          |
|   | 04/09/2025 | 7                                   | 18                       |
|   | 08/09/2025 | 10                                  | 18                       |
|   | 09/09/2025 | 3                                   |                          |
|   | 11/09/2025 | 5                                   |                          |
|   | 15/09/2025 | 6                                   | 18                       |
|   | 16/09/2025 | 8                                   |                          |
|   | 19/09/2025 | 3                                   | 9                        |
|   | 25/09/2025 | 10                                  | 19                       |
| <b>Rolling Annual Average (Calculation period October 2024 to September 2025)</b> |            | 15                                  | 24                       |
| <b>24 Hour Limit</b>  |            | 50                                  | --                       |
| <b>Annual Average Limit</b>   |            | 30                                  | 90                       |

Required Frequency: Weekly – High Volume Air Sample run events occur every six days for 24 hours.

-- No Limit

#### 4 SURFACE WATER QUALITY

A discharge event is deemed to occur when water leaves the site either through the overflow channel of the Main Dam or as a result of actively pumping water. No discharge occurred from the Main Dam Discharge Point 2 (LD002) during September 2025. A monthly sample was collected from the Main Dam for due diligence purposes only.

Water quality results are presented in **Table 3**.

**Table 3: Discharge Water Quality Results – September 2025**

| <b>Sampled:</b> 01/09/2025<br><b>Obtained:</b> 04/11/2025<br><b>Published:</b> 25/11/2025 |                             | <b>Premise:</b> Invincible Colliery<br><b>Licensee:</b> Shoalhaven<br><b>EPL Number:</b> 1095 |                                    |                      |
|---|-----------------------------|---|------------------------------------|----------------------|
| Sampling Point  | Frequency                   | Pollutant   | 100 Percentile Concentration Limit | Sample Concentration |
| Main Dam  | Monthly (for due diligence) | pH (pH unit)  | --                                 | 6.4                  |
|   |                             | TSS (mg/L)  | --                                 | 120                  |
|   |                             | Oil & Grease (mg/L)   | --                                 | <5                   |
|   |                             | Conductivity (µs/cm)  | --                                 | 930                  |
|   |                             | Cobalt (dissolved) (mg/L)   | --                                 | 0.02                 |
|   |                             | Copper (dissolved) (mg/L)   | --                                 | <0.001               |
|   |                             | Manganese (dissolved) (mg/L)  | --                                 | 2                    |
|   |                             | Nickel (dissolved) (mg/L)   | --                                 | 0.06                 |
|   |                             | Iron (Total) (mg/L)   | --                                 | 0.13                 |
|   |                             | Zinc (Total) (mg/L)   | --                                 | 0.12                 |
|   |                             | Discharge Point 2 (LD002) (EPA Point 2)   | Weekly during discharge            | pH (pH unit)         |
| TSS (mg/L)  | 30                          |   |                                    | N/A                  |
| Oil & Grease (mg/L)   | 10                          |   |                                    | N/A                  |
| Conductivity (µs/cm)  | 650                         |   |                                    | N/A                  |
| Cobalt (dissolved) (mg/L)   | 0.0014                      |   |                                    | N/A                  |
| Copper (dissolved) (mg/L)   | 0.0014                      |   |                                    | N/A                  |
| Manganese (dissolved) (mg/L)  | 1.9                         |   |                                    | N/A                  |
| Nickel (dissolved) (mg/L)   | 0.011                       |   |                                    | N/A                  |
| Iron (Total) (mg/L)   | 0.3                         |   |                                    | N/A                  |
| Zinc (Total) (mg/L)   | 0.008                       |   |                                    | N/A                  |

--No limit applies

#### 5 NOISE LIMITS

Attended noise monitoring is required to be undertaken on a quarterly frequency. Noise Monitoring reports for previous quarters are available on the Castlereagh Coal website:

<https://ccoal.com.au/environmental-reporting-compliance/>

## **6 BLASTING**

No blasting was undertaken during September 2025.

## **7 DISCLAIMER**

This report is considered accurate at the date of issue with regard to current environmental conditions. Monitoring results may vary from those presented in this report following further assessment. This report must not be reproduced except in full. Results or figures from this report must not be used without acknowledgment.

Yours Faithfully,

**CASTLEREAGH COAL**