



ASHTON COAL OPERATIONS



AIR QUALITY AND GREENHOUSE GAS MANAGEMENT PLAN

ASHTON COAL PROJECT

Version H
Date: 20 April 2023

CONTENTS

1	PURPOSE.....	5
2	SCOPE	7
2.1	Background and Project Overview	7
2.2	Integration of Ashton Underground Mine with Ravensworth Underground Mine	7
2.3	Scope and Objectives	9
2.4	Consultation and Plan Development	10
3	ACCOUNTABILITIES AND RESPONSIBILITIES	11
3.1	Roles and Responsibilities	11
4	REQUIREMENTS (CONTROLS)	13
4.1	Statutory Requirements and Compliance Criteria.....	13
4.1.1	Applicable Criteria	13
4.1.2	Air Quality Impact Assessment Criteria	14
4.1.3	Air Quality Acquisition Criteria	14
4.1.4	Monitoring Standards and Guidelines	15
4.1.5	Operating Conditions	16
4.2	Existing Environment and Potential Impacts.....	17
4.2.1	Location and Private Landholders	17
4.2.2	Prevailing Winds	17
4.2.3	ACP Sources of Emissions to Air	18
4.2.4	Baseline Data	19
4.2.5	Local Air Quality Context	19
4.2.6	Potential Impacts	20
4.2.7	Cumulative Impacts	20
4.3	Air Quality Management Procedures.....	22
4.3.1	Inductions	23
4.3.2	Planning Controls	23
4.3.3	Engineering and Operational Controls	24
4.3.4	Monitoring	28
4.3.5	Real Time Dust Management	29
4.3.6	Non-Compliance Investigation	30
4.3.7	Cumulative Air Quality Impact Reduction Protocol	31
4.3.8	Impacted Residence Protocol	32
4.3.9	Independent Review	35
4.3.10	Property Acquisition	36
4.3.11	Community Notification and Liaison	37

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

4.3.12	Investigation Programs and Continuous Improvement	39
4.4	Monitoring Network	40
4.4.1	Upper Hunter Air Quality Monitoring Network	43
4.5	Protocol for Compliance Evaluation	45
5	INFORMATION, TRAINING AND COMMUNICATION	46
5.1	Training and Competency	46
5.2	Communication, Consultation, Coordination and Cooperation	46
5.2.1	Reporting	46
5.2.2	Monitoring Records	50
6	REVIEW AND PERFORMANCE	51
7	RELATED DOCUMENTS AND REFERENCE INFORMATION	52
7.1	Internal Documents	52
7.2	External Documents	52
8	REVISION HISTORY	53
9	APPENDICES	54
Appendix A – Approval Conditions		54
Appendix B – Consultation Records		71

Figures

Figure 1:	Ashton Coal Project Locality and Arrangement Plan	6
Figure 2:	ACOL-operated RUM	8
Figure 3:	Seasonal Windroses for Ashton M2 meteorological station, 2021	18
Figure 4:	Local Air Quality with Context, Measured at PM ₁₀ Monitoring Sites at ACP	21
Figure 5:	ACOL Air Quality Monitoring Network	42
Figure 6	Upper Hunter Air Quality Monitoring Network at 11 – 12 pm on 16 August 2022 (https://www.dpie.nsw.gov.au/air-quality/air-quality-maps/live-air-quality-data-upper-hunter)	44

Tables

Table 1:	Roles and Responsibilities	11
Table 2:	Statutory Approvals for the Ashton Coal Project Relevant to Air Quality and Greenhouse Gas	13
Table 3:	Air Quality Criteria	14
Table 4:	Air Quality Acquisition Criteria	15
Table 5:	Guidelines and Standards for Air Quality Monitoring Infrastructure	15
Table 6:	Air Quality Management Measures	23
Table 7:	Location and Justification for Air Quality Monitoring Network	40
Table 8:	Summary of Reporting Requirements, Distribution and Timing	47
Table 9:	Ashton Development Consent Approval Conditions (Air Quality)	54
Table 10:	RUM Development Consent Approval Conditions (Air Quality)	67
Table 11:	ACP Modification Requirements	70

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

1 PURPOSE

This Air Quality and Greenhouse Gas Management Plan (AQGGMP) describes the measures to be implemented by Ashton Coal Operations Pty Limited (ACOL) to manage and mitigate impacts on air quality for the Ashton Coal Project (ACP). **Figure 1** illustrates the location of the ACP.

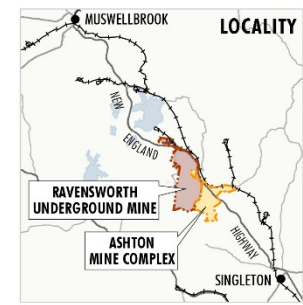
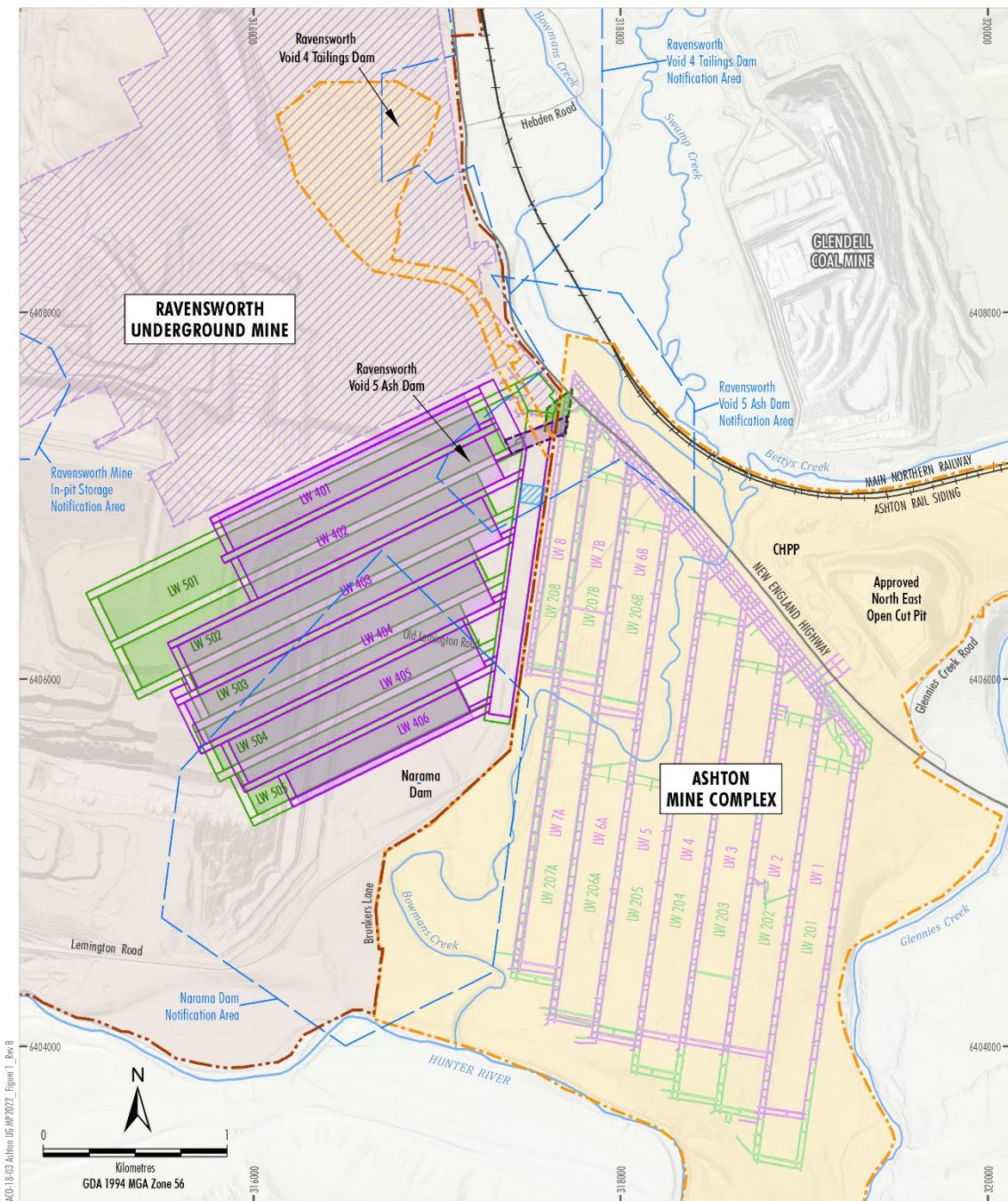
This document has been prepared to satisfy Schedule 3, Condition 17 and Schedule 5, Condition 2 of Development Consent DA 309-11-2001-i (Ashton DA) (dated 6 July 2022), as well as Schedule 3, Condition 18 of DA 104/96 (Ravensworth Underground Mine [RUM] DA), (dated 6 July 2022).

The NSW Department of Planning and Environment (DPE) approved Modification 11 to the Ashton DA and Modification 10 to the RUM DA on 6 July 2022. These modifications allow for the integration of the two neighbouring underground mines and enables ACOL to access and extract approved but unmined coal resources from a portion of the RUM. For operational and management purposes, this portion of the RUM will now form an integral part of the Ashton Mine Complex. This integration is further described in **Section 2.4**.

The requirements for management of air quality emissions from the ACP have changed significantly since the commencement of operations. Major construction activities and open cut mining in the North East Open Cut (NEOC) have now been completed. Remaining activities onsite including underground mining, coal processing, final void management, tailings and reject emplacement, intermittent rehabilitation maintenance activities, stockpile / laydown pad and road management, and train loading. These activities produce significantly lower overall dust emissions than were originally approved for the mine which included the operation of the NEOC.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4



- LEGEND**
- Dam Notification Area
 - Ashton Mine Complex
 - Ashton Coal Project Development Consent Boundary
 - Pikes Gully Seam Longwall Layout
 - Upper Lower Liddell Seam Longwall Layout
 - Ravensworth Underground Mine
 - Ravensworth Underground Mine Development Consent Boundary
 - Existing Shaft 5 Location
 - Completed Pikes Gully Seam Workings
 - Indicative Pikes Gully Seam Longwall Layout
 - Indicative Modified Pikes Gully First Workings
 - Indicative Middle Liddell Seam Longwall Layout
 - Indicative Middle Liddell Seam First Workings

Source: NSW Spatial Services (2022); Dams Safety NSW (2020)

Note: The approved Upper Liddell and Lower Barrett Seams at the Ashton Coal Project and approved Lemington and Barrett Seams at the Ravensworth Underground Mine are not shown on this figure.

YANCOAL
ASHTON UNDERGROUND MINE
Locality Plan
and General Arrangement

Figure 1

Figure 1: Ashton Coal Project Locality and Arrangement Plan

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

2 SCOPE

2.1 Background and Project Overview

ACOL, a wholly owned subsidiary of Yancoal Australia Ltd (Yancoal), operates the ACP, an underground coal mine (and completed open cut mine) located approximately 14 kilometres (km) north-west of Singleton in the Upper Hunter Valley, New South Wales (NSW). **Figure 1** illustrates the location of the ACP.

The key elements of the ACP include:

- An open cut pit (North East Open Cut [NEOC]) that has now been completed, with the final void remaining for the storage of coarse and fine reject;
- A four seam descending underground mine with approval to extract up to 5.45 Million Tonnes Per Annum (Mtpa) of Run of Mine (ROM) coal;
- Surface mine infrastructure associated with the underground mine, including gas drainage bores, ventilation fans and mine dewatering infrastructure;
- Coal handling and preparation facilities (CHPP) including rail siding and rail loading bin;
- Reject and tailings emplacement;
- Administration, bathhouse and workshop buildings; and
- Integration with the RUM to allow ACOL to access and extract approved but unmined coal resources from a portion of the RUM (refer **Section 2.2**).

DA 309-11-2001-i was initially granted for the ACP by the Minister for Planning in October 2002. The approval has been subsequently modified on several occasions.

Schedule 5, Condition 6 of the Ashton DA and Schedule 4, Condition 3 of the RUM DA requires the review (and where necessary the revision) of the Management Plans within 3 months of the submission of an incident report, Annual Review, Audit (as specified within the DA) or any modification to the conditions of the Development Consent.

This AQGGMP has been prepared following the approval of ACP Modification 11 and RUM Modification 10, and is specifically required by and has been prepared in accordance with Condition 17, Schedule 3 of the Ashton DA and Condition 18, Schedule 3 of the RUM DA.

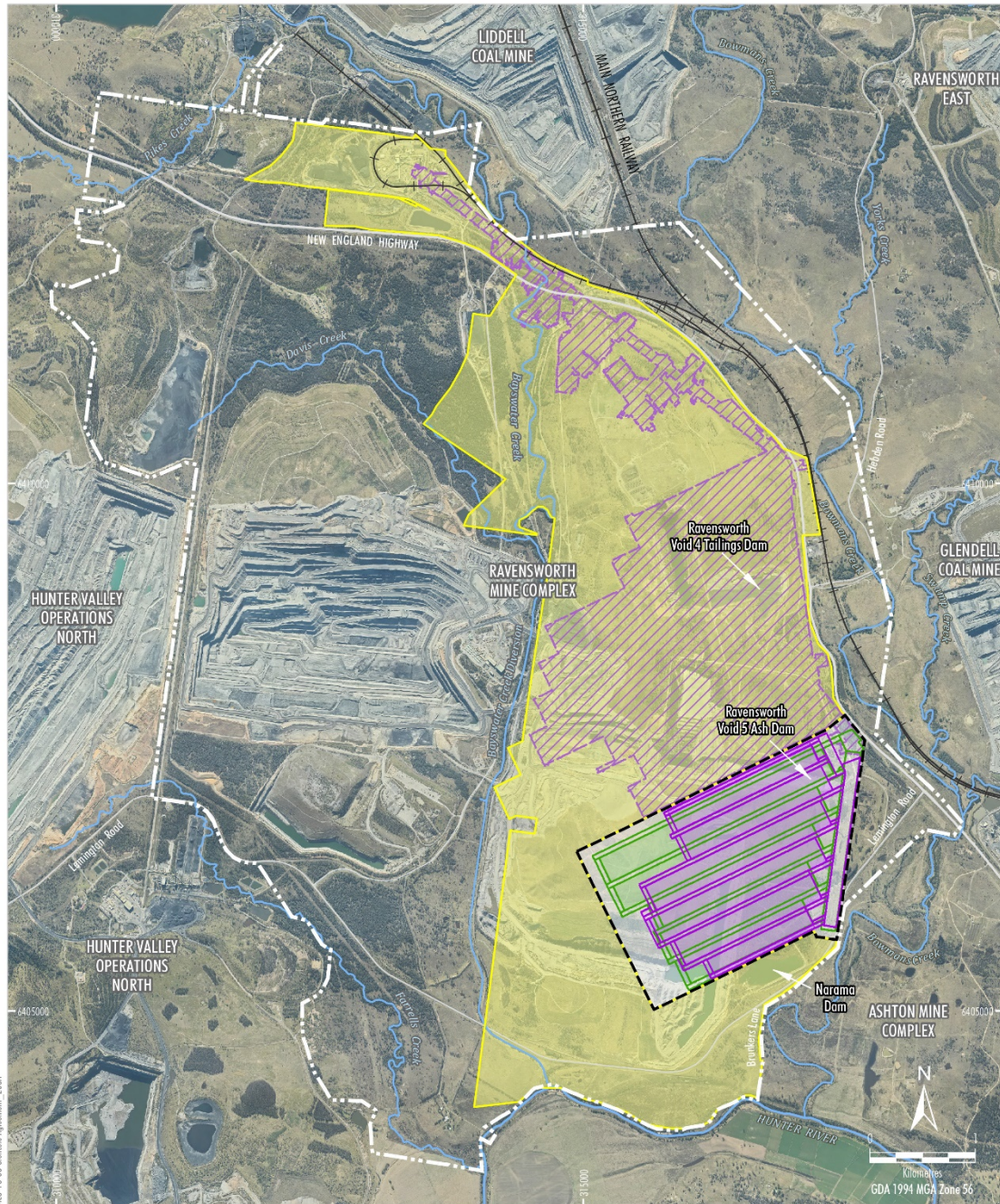
2.2 Integration of Ashton Underground Mine with Ravensworth Underground Mine

The Ashton Underground Mine and the RUM share a common mining lease boundary and the approved underground mining areas are separated (at their closest) by approximately 45 metres (m) (**Figure 1**).

Modification 11 to the Ashton DA and Modification 10 to the RUM DA enable the integration of the Ashton Underground Mine and RUM, and for ACOL to access and extract approved but unmined coal resources from a portion of the RUM. The modifications allow for connections to be made between the two neighbouring mines via non-subsiding first workings (**Figure 2**). ACOL will utilise its existing longwall mining equipment and employees to mine the Pikes Gully and Middle Liddell coal seams at the RUM.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	



- LEGEND**
- Ravensworth Open Cut Operations Development Consent Boundary
 - Ravensworth Underground Mine
 - Completed Pikes Gully Seam Workings
 - Indicative Pikes Gully Seam Longwall Layout
 - Indicative Middle Liddell Seam Longwall Layout
 - Ravensworth Underground Mine - Management Responsibility under Development Consent DA 104/96
 - Operational Area to be managed by Resource Pacific Pty Ltd (Glencore) *
 - Operational Area to be managed by Ashton Coal Operations Ltd (Yancoal) # ^

* The Ravensworth Underground Mine includes ancillary infrastructure and surface disturbance associated with underground mining including, but not limited to, ventilation, gas management and water management infrastructure and subsidence monitoring, management and remediation activities.

^ This area is called the 'ACOL-operated portion of the RUM' in the Management Plan.

Source: NSW Spatial Services (2021) Orthophoto: Ravensworth Mine Complex (2021)



ASHTON UNDERGROUND MINE

ACOL's Management Responsibility Under Development Consent DA 104/96

Figure 2: ACOL-operated RUM

ACOL will handle, process and transport coal from the RUM in the same manner it handles coal from its Ashton Underground Mine. ROM coal will be transferred via underground conveyors to the Ashton Mine Complex and **APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED**

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

through to the Ashton pit top, via its existing coal clearance system. ROM coal will be processed at Ashton’s CHPP prior to being loaded onto trains for transportation to market using the existing rail infrastructure.

Rejects and tailings generated from the processing of the RUM ROM coal will be emplaced in the existing NEOC void and Ravensworth Void 4 Tailings Dam.

Water and gas from the RUM will also be transferred to the ACP to be managed within the existing water and gas management system.

The area of the RUM that will be managed and operated by ACOL under the RUM DA is shown on **Figure 2** (hereafter referred to as the ACOL-operated RUM)¹.

ACOL will implement the management, monitoring and reporting outlined in this EMS during mining of the ACOL-operated RUM.

The remaining areas of the approved RUM (i.e. outside of the ACOL-operated RUM) including the completed Pikes Gully seam Longwalls 1-9 as well as open cut mining activities associated with the Ravensworth Operations Project (Project Approval 09-0176) are managed in accordance with the Ravensworth Environmental Management Strategy (and associated management plans) and the RUM Rehabilitation Management Plan.

Regular meetings will be held between ACOL and Glencore to discuss the following:

- planned ACOL and Glencore activities within the ACOL-operated RUM and surrounds;
- potential interactions between the Ravensworth Operations Project and the ACOL-operated RUM, including any relevant consequences of subsidence;
- environmental monitoring results relevant to the ACOL-operated RUM; and
- data and report sharing.

In addition, the Built Features Management Plans required under Condition 6, Schedule 3 of the RUM DA will address interactions with Glencore’s and AGL’s assets and operations.

2.3 Scope and Objectives

This Management Plan is applicable to all employees, contractors and visitors to ACP² and ACOL-operated RUM.

The ACP and ACOL-operated RUM has the approved operating hours outlined in Schedule 2, Condition 8 of the Ashton DA, which restricts surface construction works on the site to:

- Day periods only, in the case of construction gas wells; and
- Day and evening periods only, in the case of all other construction activities.

Minor surface construction works outside of these hours may be undertaken in an emergency or where continuous operations are required (e.g. raise boring) and following the approval of the Planning Secretary.

All other operations can be undertaken at any time, including underground mining operations, ROM coal handling, CHPP operations, conveyor transport to and from the CHPP and training loading.

Environmental management for the ACP and ACOL-operated RUM is addressed by the ACP Environmental Management Strategy (EMS). This AQGGMP is one of many integrated management plans and monitoring

¹ The integration is referred to as the ACOL-operated portion of the RUM in the Ashton and Ravensworth Modification Reports

² The plan also applies to the ACOL-operated RUM as described in **Section 2.4**

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

programs that have been developed to support the overarching EMS. This AQGGMP provides a framework for the management of air quality from the ACP and ACOL-operated RUM approved under the Ashton and RUM DAs.

The core objectives for the plan are to:

- Comply with all statutory requirements;
- Minimise air quality impacts on surrounding residents;
- Minimise greenhouse gas emissions from the ACP and ACOL-operated RUM;
- Maintain reasonable levels of amenity for surrounding residents;
- Keep the local community and regulators informed and to respond quickly and effectively to issues and complaints;
- Include an air quality monitoring program that:
 - Uses real-time monitors to evaluate the performance of the ACP;
 - Includes a protocol for determining exceedances of the relevant conditions of approval; and
- Ensures that there is a suitable meteorological station in the vicinity of the site.

2.4 Consultation and Plan Development

This document (previously referred to as an Air Quality Management Plan [AQMP]) was initially prepared by Kleinfelder and Todoroski Air Sciences and has provided opportunity for comment with DPE, the Office of Environment and Heritage (OEH) and Singleton Council (SC). Further consultation has been undertaken with DPE, OEH, EPA and SC during the reviews of the AQMP, namely December 2012, January 2013 and February 2014. Further consultation was undertaken with the EPA in October 2016 during review of the air quality monitoring program, and in May 2017 during incorporation of changes arising from DA modification. Consultation with DPE, the EPA and Singleton Council (SC) was also undertaken for the Ashton-RUM Underground Integration Modifications.

The development of the current air quality management system is the product of over 10 years of onsite measurement and assessment that has included consultation with agencies and other mining operations regarding local and regional air quality considerations.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

3 ACCOUNTABILITIES AND RESPONSIBILITIES

3.1 Roles and Responsibilities

Table 1: Roles and Responsibilities

Role	Accountabilities / Responsibilities
Mine Operators Site Representative (Operations Manager)	<ul style="list-style-type: none"> Organise resources to ensure the requirements of the Management Plan can be effectively implemented.
Owner of the Procedure (Environmental and Community Relations Superintendent)	<ul style="list-style-type: none"> Review, amend and update the Management Plan as required. Audit the effectiveness of implementation of the Management Plan (at least 3 yearly). Approve the Management Plan, any revisions and associated plans and procedures.
Responsible Person for the Procedure (Environment and Community Coordinator)	<ul style="list-style-type: none"> Implement and review the requirements of this Management Plan. Participate in any review of the Management Plan. Participate in the underpinning risk assessment associated with the Management Plan.
Supervisors (All levels)	<ul style="list-style-type: none"> Become fully familiar and comply with the requirements of this Management Plan as it relates to their role. Maintain a safe work environment for all employees in accordance with the requirements outlined in this Management Plan. Supervise all work undertaken within their area of responsibility and ensure it is conducted in accordance with the requirements of this Management Plan and any associated Plans, Procedures or instructions. Organise for training and assessment of employees who may be affected by the requirements of this Management Plan including instruction on how the Management Plan is to be applied. Administer resources to facilitate effective compliance with this Management Plan. Deal with any non-compliance or reported hazard in an efficient and timely manner.
Workers	<ul style="list-style-type: none"> Comply with the requirements of this Management Plan as it relates to their role. Act promptly to rectify or report hazards once identified. Report any hazardous situations / occurrences, including near-misses immediately to the Supervisor. Report any issues that will impact ability to comply with the requirements of this Management Plan immediately to the Supervisor. Bring to the attention of the Supervisor any matter which requires attention in relation to this Management Plan.

The **Operations Manager** has the overall responsibility for works undertaken at the ACP and ACOL-operated RUM.

The **Environment and Community Relations Superintendent** reports to the **Operations Manager** and is responsible for engaging appropriately qualified personnel to undertake required actions and engage stakeholders appropriately to assist with actions as relevant.

The **Environment Coordinator** reports to the Environment and Community Relations Superintendent and is responsible for those tasks assigned or delegated to them.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

The term “**relevant area manager**” is used to refer to the responsible manager relevant to the location of the activity, such as **CHPP Superintendent** for the CHPP area and the **Underground Manager** for the underground area. These managers’ report to the Operations Manager.

Other Mine Personnel and **Contractors** involved in construction and operational activities will be required to follow the directions of ACOL personnel and abide by the requirements of this plan.

Section 4.3 presents a summary of the management procedures and responsibilities for minimising air quality impacts from the ACP and ACOL-operated RUM.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

4 REQUIREMENTS (CONTROLS)

4.1 Statutory Requirements and Compliance Criteria

Table 2 details the statutory approvals and licences relevant to air quality emissions from the ACP and ACOL-operated RUM. Details of the relevant conditions are included within **Appendix A** of this document.

Table 2: Statutory Approvals for the Ashton Coal Project Relevant to Air Quality and Greenhouse Gas

Project Number	Description	Approved	Legislation	Authority
Environmental Protection Licence				
EPL 11879 [^]	The site Environmental Protection Licence (EPL) for Ashton identifies EPL Monitoring Points and sets out operating, monitoring and reporting requirements relevant to air quality.	Variation approved 12/11/2019	<i>Protection of Environment Operations Act 1997</i> (POEO Act, 1997)	EPA
Development Consent				
DA 309-11-2001-i	Development Consent for the ACP (as modified). The project approval includes: Criteria limiting air quality impacts on neighbouring property; Mitigation processes to be implemented should those criteria be exceeded; Operating and reporting requirements relevant to air quality; The requirement for an AQGGMP.	Originally approved in 2002, and last modified 6 July 2022 (MOD 11)	Originally approved under Part 4 of <i>Environmental Planning and Assessment Act, 1979</i> (EP&A Act 1979). Last modified under Section 4.55(2) of the EP&A Act 1979	DPE
DA 104/96	Development Consent for the RUM (as modified). The project approval includes: <ul style="list-style-type: none"> Operating and reporting requirements relevant to air quality; The requirement for an AQGGMP. 	Originally approved in 1996, and last modified 6 July 2022 (MOD 10)	Originally approved under Part 4 of <i>Environmental Planning and Assessment Act, 1979</i> (EP&A Act 1979). Last modified under Section 4.55(2) of the EP&A Act 1979	DPE

[^] Operations at the RUM are currently approved under the existing EPL 2652, which is held by Ravensworth Operations Pty Ltd. EPL 2652 will be altered to remove the relevant part pertaining to the ACOL-operated RUM and incorporate it in EPL 11879.

The air quality related approved conditions are included within **Appendix A**, with resulting actions incorporated within the management procedures detailed within **Section 4.3**.

4.1.1 Applicable Criteria

The air quality criteria for the ACP are divided into two categories: impact assessment and acquisition criteria. The criteria is included as Conditions 12 and 15 of Schedule 3 of the Ashton DA, respectively, and summarised in **Section 4.1.2** and **Section 4.1.3** below.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

4.1.2 Air Quality Impact Assessment Criteria

Schedule 3, Condition 15 of the Ashton DA states that ACOL must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that the Ashton Mine Complex does not cause exceedance of the criteria listed in **Table 3** below at any residence on privately-owned land or on more than 25 percent of any privately-owned land. The table below is extracted from Condition 12 of Schedule 3 of the Ashton DA (Table 6).

As indicated in the footnotes to the tables, the criteria are cumulative (except for the allowable increase in deposited dust criterion) and are inclusive of existing background dust concentrations, plus any currently operating mines or those that will be approved in the future.

Table 3: Air Quality Criteria

Pollutant	Averaging Period	Criterion
Particulate matter <10 µm (PM ₁₀)	Annual	^a 30 µg/m ³
Particulate matter <10 µm (PM ₁₀)	24-hour	^b 50 µg/m ³
Total suspended particulate (TSP)	Annual	^a 90 µg/m ³
^c Deposited dust	Annual	^b 2 g/m ² /month ^a 4 g/m ² /month

Notes to Table 3

- ^a Total impact (i.e. incremental increase in concentrations due to the Ashton Mine Complex plus background concentrations due to all other sources).
- ^b Incremental impact (i.e. incremental increase in concentrations due to the Ashton Mine Complex on its own).
- ^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air – Determination of Particulate Matter – Deposited Matter – Gravimetric Method.
- ^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents or any other activity which has been endorsed by the EPA and then agreed to by the Planning Secretary.

There are no air quality impact assessment criteria applicable to the RUM.

4.1.3 Air Quality Acquisition Criteria

As per Condition 15 of Schedule 3 of the Ashton DA, if particulate matter emissions generated by the Ashton Mine Complex cause or contribute to exceedance of the cumulative criteria in Table 4, at any residence on privately owned land, or on more than 25 percent of any privately owned land, then upon receiving a written request for acquisition from the landowner, the Applicant must acquire the land in accordance with the procedures in Conditions 7 to 8 of Schedule 4 of the Ashton DA. Table 4 is extracted from Condition 15 of Schedule 3 of the Ashton DA (Table 7).

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Table 4: Air Quality Acquisition Criteria

Pollutant	Averaging period	d Criterion	
Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³	
Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 150 µg/m ³	
Particulate matter < 10 µm (PM ₁₀)	24 hour	^b 50 µg/m ³	
Total suspended particulate (TSP) matter	Annual	^a 90 µg/m ³	
^c Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month

Notes to Table 4:

- ^a Total impact (i.e. incremental increase in concentrations due to the Ashton Mine Complex plus background concentrations due to all other sources).
- ^b Incremental impact (i.e. incremental increase in concentrations due to the Ashton Mine Complex on its own).
- ^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: *Methods for Sampling and Analysis of Ambient Air – Determination of Particulate Matter – Deposited Matter – Gravimetric Method*.
- ^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, or any other activity which has been endorsed by EPA and then agreed by the Planning Secretary.

There are no air quality acquisition criteria applicable to the RUM.

4.1.4 Monitoring Standards and Guidelines

The air quality monitoring equipment has been installed in accordance with the relevant guidelines and standards contained within **Table 5**. This table also outlines the quality control and quality assurance processes required under the Ashton DA and the RUM DA

Table 5: Guidelines and Standards for Air Quality Monitoring Infrastructure.

Monitoring Equipment	Standard / Guideline
Weather Stations	<ul style="list-style-type: none"> The locations of the meteorological stations were chosen in accordance with <i>Australian Standard AS 2923 – 1987: “Ambient Air Guide for the measurement of horizontal wind for air quality applications”</i>. Meteorological data collection is in accordance with Condition 18 of Schedule 3 of Ashton DA and Condition 19 of Schedule 3 of the RUM DA, and EPL 11879 (Condition M4.1). Complies with the requirements in the <i>Approved Methods for Sampling of Air Pollutants in NSW</i> (DEC 2005) guideline. Is maintained by a suitably qualified contractor and includes field log sheets and maintenance schedules.
TEOM PM ₁₀ Monitoring	<ul style="list-style-type: none"> Continuous PM₁₀ monitoring is conducted in accordance with AM-22 of the NSW EPA <i>“Approved methods for the sampling and analysis of air pollutants in NSW”</i> (DEC 2005) or Australian Standard AS/NZS 3580.9.8-2001 <i>“Methods for sampling and analysis of ambient air – determination of suspended particulate matter – PM₁₀ continuous direct mass method using a tapered element oscillating microbalance analyser”</i>. Average PM₁₀ concentrations (in µg/m³) are recorded at EPL monitoring points 9, 10 and 11 at intervals of 10 minutes in accordance with Condition M7.1 of the EPL. Monitoring is undertaken by a suitably trained contractor.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Monitoring Equipment	Standard / Guideline
TSP Monitoring	<ul style="list-style-type: none"> TEOM PM₁₀ monitoring data from D10 (as closest location to neighbouring residences in Camberwell) is used to calculate annual average total suspended particulate (TSP) levels. Using the long-term monitoring data from co-located TSP and PM₁₀ monitors, a site-specific factor has been developed to calculate TSP from PM₁₀ data. For the ACP, a multiplying factor of 3x will be applied to the annual average PM₁₀ data to calculate TSP.
Dust Deposition Gauge	<ul style="list-style-type: none"> Dust deposition monitoring in accordance with AM-19 of the NSW EPA "Approved methods for the sampling and analysis of air pollutants in NSW" (DEC 2005). Australian Standard AS/NZS 3580.10.1:2003 "Methods for sampling and analysis of ambient air – Determination of particulate matter – Deposited matter – Gravimetric method". NATA Accredited analysis of insoluble solids. Deposited Matter is measured continuously and sampled monthly and results are averaged over a year to determine compliance. Monitoring is undertaken by a suitably trained contractor, and analysis is undertaken by a NATA approved laboratory Chain of Custody forms and monitoring field sheets are utilised and stored appropriately as environmental monitoring records
Greenhouse Gas (GHG) Emissions	<ul style="list-style-type: none"> GHG emissions measured and reported in accordance with: <ul style="list-style-type: none"> National Greenhouse and Energy Reporting Act, 2007; National Greenhouse and Energy Reporting (Measurement) Determination, 2008; and National Greenhouse and Energy Reporting Scheme Measurement Technical Guidelines for the Estimation of Greenhouse Gas Emissions by Facilities in Australia (Department of Environment and Energy [DoEE] 2016) (or its latest version).
National Pollution Inventory (NPI) substances	<ul style="list-style-type: none"> NPI substances will be measured and reported in accordance with the <i>National Pollution Inventory Guide – Version 6.1</i> (DoEE 2015) (or its latest version).
Gas Flaring	<ul style="list-style-type: none"> Flares are operated with no visible emission other than for a total period of no more than 5 minutes in any 2 hours, except for heat haze, in accordance with Condition L2.1 of the EPL.

4.1.5 Operating Conditions

Operations and activities at the ACP and ACOL-operated RUM are undertaken in accordance with the following general requirements, as conditioned in the EPL.

- O1.1 – Licensed activities must be carried out in a competent manner, including the processing, handling, movement and storage of materials and substances, and the treatment, storage, processing, reprocessing, transport and disposal of waste.
- O2.1 – All plant and equipment installed or used in connection with the licensed activity must be maintained in a proper and efficient condition, and operated in a proper and efficient manner.
- O3.1 – All operations and activities must be carried out in a manner that will minimise the emission of dust.
- O3.2 – All trafficable areas, coal storage areas and vehicle manoeuvring areas must be maintained, at all times, in a condition that will minimise the generation, or emission from the premises, of wind-blown or traffic generated dust.
- O3.3 – The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

- O8.1 – There must be no incineration or open burning of any material(s) on the premises, except as specifically authorised by the EPA.

4.2 Existing Environment and Potential Impacts

4.2.1 Location and Private Landholders

The ACP is located in the Hunter Valley region of NSW approximately 14 km north-west of Singleton and 32 km south-east of Muswellbrook. The ACP is bound by the Main Northern Railway to the north, Hunter River to the south and Glennies Creek to the east with the New England Highway dividing the open cut from the underground mining areas (see **Figure 1**).

The closest sensitive receptors are located in, and adjacent to, Camberwell. There are currently 13 private landholders in the local area, 11 of these have an occupied residence. These include:

- Property 18
- Property 20 (adjacent to Pty 23, no dwelling)
- Property 23
- Property 24B
- Property 34
- Property 35
- Property 83
- Property 111
- Property 114
- Property 117
- Property 121
- Property 129
- Property 130 (Property 130B not inhabited).

4.2.2 Prevailing Winds

ACOL operates a meteorological station called M2 (or Repeater_ station) located on the rehabilitated NEOC overburden emplacement.

Based on 2021 meteorological data, prevailing winds are from the west to north-west in winter and the east to south-east in summer. Calm periods (that is, winds less than or equal to 1 metre per second [m/s]) occur approximately 22.2% of the time in winter and 13.6% in summer, with the mean wind speed approximately 2.55 m/s. Seasonal wind roses from the M2 Station in 2021 are presented in **Figure 3**. These are typical of the general wind patterns seen through the Hunter Valley.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

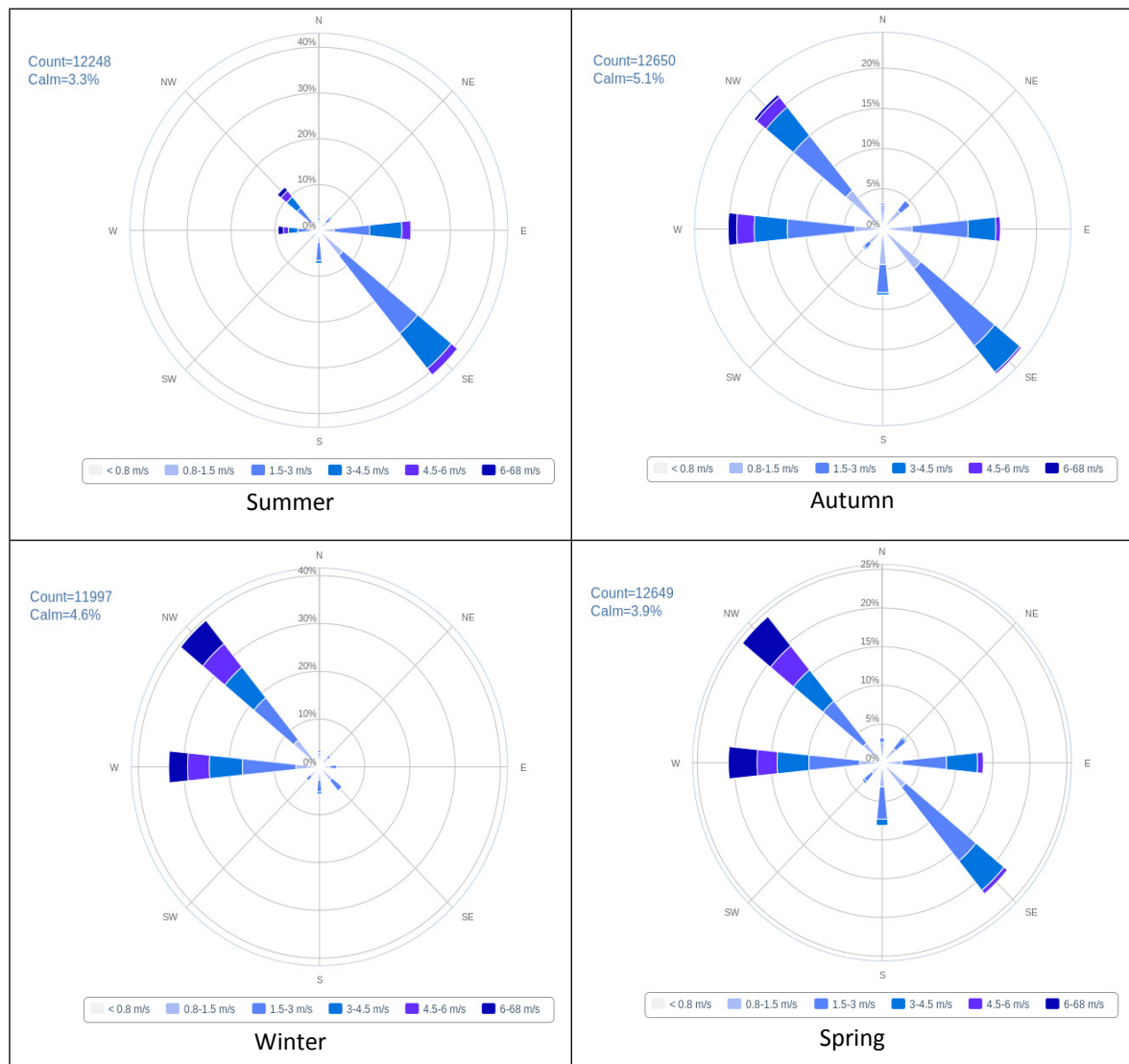


Figure 3: Seasonal Windroses for Ashton M2 meteorological station, 2021

4.2.3 ACP Sources of Emissions to Air

The following ACP and ACOL-operated RUM activities represent the greatest potential sources of operational emissions:

- Traffic on unsealed roads (light vehicles and reject hauling).
- Wind mobilisation of particulate matter from exposed surfaces including untreated stockpiles.
- Coal handling including loading and unloading of product and ROM coal.
- Underground ventilation fan exhaust and associated gas drainage structures.

Emissions of carbon monoxide (CO), nitrogen dioxide (NO₂) and sulphur dioxide (SO₂) would also occur from diesel-powered plant and equipment used on-site and vehicle movements to and from site.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan	
Document ID: ACO-ENVI-5020	Owner: Phil Brown
Last Review:	Next Review: 17/05/2026 Revision Number: 4

4.2.4 Baseline Data

ACOL has had an extensive monitoring network in and surrounding the existing ACP to monitor air quality since 1999, which provides comprehensive baseline data for the purposes of assessing potential impacts on air quality.

An Air Quality Assessment was conducted by Holmes Air Science for the Environmental Impact Statement (EIS) in November 2001, for the original development. This included a review of the background air quality within the vicinity of ACP based on existing monitoring networks from other mines as well as a new PM₁₀ monitor installed in Camberwell Village for ACP in June 2001.

Based on a review of the monitoring data collected in Camberwell Village from 5 June 2001 to 20 December 2002, the background levels were determined to be:

- Maximum 24 hour PM₁₀ concentration of 45 µg/m³ (or 32 µg/m³ under northwest winds);
- Annual Average PM₁₀ of 18 µg/m³;
- Annual Average TSP of 45 µg/m³ (calculated at 2.5 times the annual average PM₁₀ concentrations);
- Annual Average Dust Deposition of 1.5 g/m²/month (at St Clements Church).

Generally, the monitoring results were influenced by the existing mining operations, including mining in the NEOC, which was occurring during this time, as such it is not considered to be as relevant as the initial 2001 Air Quality Assessment.

The local air quality context is discussed further in **Section 4.2.5** below.

4.2.5 Local Air Quality Context

Mining within the NEOC was completed in late September 2011, with subsequent rehabilitation of the overburden emplacement being completed by May 2012. As a result, air quality emissions from the ACP have substantially decreased.

It is anticipated that ACOL will begin mining of the ACOL-operated RUM, located immediately west of the Ashton Underground Mine, in late 2022/early 2023.

Other mining operations in the area include the Ravensworth Complex, the Mount Owen Complex, Integra Underground, Hunter Valley Operations and Rix's Creek. Further afield are the AGL Macquarie Bayswater and Liddell power stations to the north west of the site as shown in **Figure 1**.

Figure 4 graphs the local air quality measured at the ACOL Sites 2 and 10 continuous air monitors in Camberwell, along with Sites 7 and 9 which are located to the north-west and north-east of ACP operations, respectively. Site 2 operated from 2005 to late 2019 and was functionally replaced by Site 10 which has been operating from March 2017. Key events relevant to air quality up to the end of 2019 are also annotated on **Figure 4**. The trend of air quality clearly shows that air quality results in Camberwell consistently follow, whilst remaining well below, the trend of the upwind sites (Sites 7 and 9). This suggests the other mines in the area strongly influence air quality within the vicinity of the ACP and Camberwell village. It is also evident that lower than average rainfall since mid-2016, exacerbated by hot, dry (and bushfire-impacted) conditions in late 2019, contributed to a gradual but steady increase in average PM₁₀ levels.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Since 2013 the Ashton underground has produced between 0.8 to 1.6 Mt of coal per annum. The CHPP had also processed all mined coal from the ACP.

The nearest neighbouring open cut mining operation to the ACP, Glendell Open Cut, is part of the Mount Owen Mine Complex. Since commencing mining in April 2008, Glendell open cut operations progressed south-east toward the ACP. Mining was at its southern-most limit from mid-2015 to late 2017, coming within 500m of Site 9, before changing direction and moving back towards the north-west (away from the ACP).

The Rix's Creek Open Cut (north) is located approximately 2.5km east of Camberwell Village, and remains at a relatively consistent distance for its duration.

The current area of the ACP that is not under rehabilitation, water, sealed or otherwise vegetated is approximately 74 ha (comprising 33 ha of infrastructure and 41 ha of void). Importantly, only 17 ha (of the 74 ha total) is utilised by vehicle-accessible roads and open hard stand, the remainder consisting of batters, infrastructure and stockpiles. In the context of nearby mining operations, this is a relatively small area, as can be seen on **Figure 1**.

4.2.6 Potential Impacts

The land to the north, north-west and west of ACP is dominated by mining operations, with no privately-owned residences. The greatest potential for air quality impacts from ACP operations is on the residential properties in Camberwell village, to the south-east of the mine. With the establishment of Site 10 between the ACP and Camberwell, and with reference to the Upper Hunter Air Quality Monitoring Network (discussed further in **Section 4.4**), the ACP monitoring network provides adequate PM₁₀ measurement coverage of any such potential ACP impacts. Despite being dominated by period of dry conditions, monitoring of PM₁₀ contribution from ACP operations between 2017 and early 2020 (calculated by direction-limited, downwind-minus-upwind PM₁₀ levels) has shown no exceedance of criteria at private receptors surrounding the mine.

4.2.7 Cumulative Impacts

Air quality within the local area is influenced by the cumulative generation of emissions from all potential sources, including mining (see local air quality context above), traffic on the New England Highway, power generation and agriculture.

All mining operations in the local area (including the ACP and ACOL-operated RUM) contribute to cumulative air quality emissions, and the ability of ACP to further reduce its emissions above what is specified within this plan is considered limited.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4



Figure 4: Local Air Quality with Context, Measured at PM₁₀ Monitoring Sites at ACP

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

A protocol between the mining companies has been developed where nominated environmental personnel from each mine meet quarterly to discuss the noise, blasting and air quality management at each site and methods to address cumulative impacts. The protocol includes the following Mining Operations:

- Ashton Coal Project
- Mount Owen Complex
- Ravensworth Operations Project
- Integra Underground Mine
- Rix’s Creek Mine

The meetings include discussions of monitoring results, criteria exceedance and investigations, and potential air quality cumulative impacts. ACOL will include relevant matters relating to the ACOL-operated RUM as part of the ACP discussions.

4.3 Air Quality Management Procedures

ACOL implement control measures under in the following categories:

- Planning controls.
- Engineering and operational controls.
- Responsive / real time actions.

Best practice engineering and operational controls are implemented at the ACP and ACOL-operated RUM sites during mining operations.

Table 6 details the proposed air quality management measures and requirements, refer to **Section 5.2.1** for additional information in relation to reporting.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

Table 6: Air Quality Management Measures

Item	Action	Trigger/Timing	Responsibility	Reporting
4.3.1 Inductions				
4.3.1A	Staff and contractor inductions will include where relevant an overview of dust management measures and responsibilities. This includes the duty to report observed significant dust emissions.	Ongoing	Environment and Community Relations Superintendent	NA
4.3.2 Planning Controls				
4.3.2A	The planning of any new activity with potential for significant dust or GHG generation will consider practical opportunities to minimise emissions, and balance these considerations with any relevant competing considerations such as cost, timeliness, and other environmental or social factors.	Any significant alteration or modification with potential for significant new dust or increased GHG emissions	Environment and Community Relations Superintendent Relevant Area Manager	Annual Review (if applicable)
4.3.2B	Daily dust alerts are received (from Weatherzone), assessed and distributed to potentially affected mine operations. Alerts predict rain, wind speed and direction, temperature (and lapse rate) for the upcoming 72 hours.	Daily	Environment and Community Relations Superintendent	NA

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Item	Action	Trigger/Timing	Responsibility	Reporting
4.3.3 Engineering and Operational Controls				
4.3.3A	<u>Day to Day Planning</u> <ul style="list-style-type: none"> Day-to-day planning of activities to minimise air quality impacts, taking account of forecast weather and actual weather conditions, particularly during adverse meteorological conditions and extraordinary events (such as bushfires or other fires, fog and dust storms). 	Daily	Environment and Community Relations Superintendent Relevant Area Manager	NA
4.3.3B	<u>General</u> <ul style="list-style-type: none"> Keep disturbance areas to the minimum area required for activity. Disturbance areas not required for ongoing activities will be promptly rehabilitated. 	At all times	Environment and Community Relations Superintendent Relevant Area Manager	NA
4.3.3C	<u>Unsealed Roads</u> <ul style="list-style-type: none"> Frequently trafficked unsealed roads must be surfaced with an appropriate non-friable material with a low silt/ fines content. Soft mudstone, claystone and shale must not be used. Roads are regularly graded to ensure that loose fine/ silty dust-generating surface material is kept to the lowest level practicable. Roads must be well-watered immediately following grading. Obsolete roads will be ripped and re-vegetated as soon as practicable Roads and trafficked areas will be watered as required using water trucks to minimise the generation of dust. Regular monitoring of water application rates to maintain optimum suppression while avoiding over application and degradation of road surface. All reject haul roads will have edges clearly defined with marker posts or equivalent to control their locations. 	Ongoing	CHPP Superintendent	NA

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Item	Action	Trigger/Timing	Responsibility	Reporting
	<ul style="list-style-type: none"> Speed limits on mine roads are restricted to 60 km/hr. Speed limits will be reduced if required to maintain dust emission at minimum levels. Grader speed will be maintained to below 8 km/hr (when grading). 			
4.3.3D	<p><u>Topsoil Stripping / Placement</u></p> <ul style="list-style-type: none"> Access tracks used by topsoil stripping equipment during their loading and unloading cycle will be watered. Minimise areas of disturbance. 	During topsoil stripping	Relevant Area Manager (CHPP or Underground)	NA
4.3.3E	<p><u>Surface Drilling</u></p> <ul style="list-style-type: none"> Drill areas are wetted down prior to drilling during dry and windy conditions where required. Dust aprons will be lowered where required. Drills will be equipped with dust extraction cyclones, or water injection systems where required. Water injection or dust suppression sprays will be used when high levels of dust are being generated. 	When drilling	Relevant Area Manager	NA
4.3.3F	<p><u>Heavy Machinery</u></p> <ul style="list-style-type: none"> Minimise travel speed and distance. Apply water to travel paths where feasible. Diesel equipment used on site will be maintained properly and fitted with appropriate pollution controls. 	When using heavy machinery	Relevant Area Manager	NA
4.3.3G	<p><u>Conveyors and Hoppers</u></p> <ul style="list-style-type: none"> Belt conveyors transporting potentially dust generating material, other than those whose functions preclude it, must be enclosed on the top and at least one side. Belt scrapers must be installed to effectively remove material from the underside of the belt. 	At all times	CHPP Superintendent	NA

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Item	Action	Trigger/Timing	Responsibility	Reporting
	<ul style="list-style-type: none"> Raw coal dump hoppers must be fitted with an automatically activated dust suppression water spray system and windshields on three sides to a height of at least 2m above the dump grate. This windshield requirement is not applicable to the underground raw coal dump hopper as its construction within the box cut adjacent to the highwall is likely to provide equivalent wind shielding. 			
4.3.3H	<p><u>Stockpile Management</u></p> <p>Implement materials and stockpile management to minimise dust generation, fumes and odour:</p> <ul style="list-style-type: none"> Water application by fixed sprays or water cart on ROM pad. Water sprays affixed to the product stockpile conveyor gantry will be activated in winds above 6m/s. Coal stockpile and reject emplacement will be managed to prevent spontaneous combustion in accordance with the Spontaneous Combustion Principal Hazard Management Plan (Note: current material is not prone to spontaneous combustion) Long term topsoil stockpiles will be re-vegetated. 	At all times	Environment and Community Relations Superintendent CHPP Superintendent	NA

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

Item	Action	Trigger/Timing	Responsibility	Reporting
4.3.3I	<p><u>Greenhouse Gas Emissions</u></p> <ul style="list-style-type: none"> Goaf drainage network bores will be constructed for mine goaf gas management. Treatment of the goaf gas will be through flaring where possible. Flaring of gas extracted from gas drainage bores, will be undertaken where feasible (e.g. where flow rate or gas bore location allows), to reduce GHG emission. Energy efficiency will be considered for all new and upgraded mobile or fixed plant. 	At all times	Ventilation Officer Relevant Area Manager	
4.3.3J	<p><u>Alternative Measures and Long Term Strategies</u></p> <ul style="list-style-type: none"> ACOL will investigate and, where appropriate, utilise other such technologies and initiatives as required to ensure that potentially problematic dust emissions from ACO operations are kept to a minimum. Where triggered by real-time monitoring or visual dust checks, operational responses will be implemented to reduce dust emissions from the site, with those actions being documented. 	As required/ where emissions are problematic	General Manager Environment and Community Relations Superintendent Relevant Area Manager	Annual Review

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Item	Action	Trigger/Timing	Responsibility	Reporting
4.3.4 Monitoring				
4.3.4A	<p><u>Monitoring Network</u></p> <ul style="list-style-type: none"> Operate and maintain monitoring network in accordance with relevant standards and guidelines (refer Table 5). Refer to Section 4.4 for the justification and location of the monitoring network. The monitoring network will include: <ul style="list-style-type: none"> One (1) TEOM located to the west of the ACP (Site 7) used as a management tool only for assessment of 'background' air quality. One (1) TEOM located to the North of the ACP (Site 9) Used as an upstream monitoring point. This monitor will be used as a downstream monitoring point depending upon the prevailing wind direction. One (1) TEOM located to the South of the ACP (Site 10) used as a downstream monitoring point. This monitor will be used as an upstream monitoring point depending upon the prevailing wind direction. 	At all times	Environment and Community Relations Superintendent	Monthly on ACOL website (for Site 7, 9 and 10 only). Annual Review EPL Annual Return.
	<ul style="list-style-type: none"> One (1) weather station (M2). Located on NEOC emplacement, utilised as site weather station measuring temperature, wind, rain, humidity, solar radiance. One (1) weather station (M1). Located in Camberwell and only required for temperature measurement for assessment of temperature inversions (lapse rate calculations). 	Connected in (near) real time to site computers via telemetry		
	<ul style="list-style-type: none"> One (1) dust deposition gauge. Note that this gauge is not required by EPL11879 and has been retained for DA compliance purposes only. 	Collected and analysed monthly		
4.3.4B	<ul style="list-style-type: none"> When a mobile gas plant is used on Macquarie Generation owned land or within 100m of Property 130, air sampling near non-ACOL owned land will be implemented to measure methane levels. 	On Macquarie Generation Lands or within 100m of Property 130	Environment and Community Relations Superintendent	Internal Records

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Item	Action	Trigger/Timing	Responsibility	Reporting
4.3.4C	<ul style="list-style-type: none"> The estimated contribution of ACOL's activities to the air quality monitoring results is to be assessed through consideration of "upwind" contributions measured at suitably placed monitoring stations used as management tools not for compliance. 	Where TEOMs record PM ₁₀ levels above criteria	Environment and Community Relations Superintendent	Internal Records
4.3.4D	<ul style="list-style-type: none"> GHG emissions (scope 1 and 2) will be measured in accordance with the National Greenhouse and Energy Reporting Scheme (NGER). Periodic reviews and monitoring of GHG emissions and energy efficiency initiatives will be undertaken to ensure that GHG per tonne of product coal are kept to the minimum practicable level. 	At all times	Ventilation Officer Environment and Community Relations Superintendent	NGER
4.3.4E	<p><u>Equipment Calibration</u></p> <ul style="list-style-type: none"> All monitoring equipment must be calibrated as specified by the respective equipment manufacturer. 	Reviewed annually for compliance	Environment and Community Relations Superintendent	Internal Records
4.3.5 Real Time Dust Management				
4.3.5A	<p><u>High Dust Risk Periods</u></p> <p>During summer months and other high-risk periods, efforts will be directed to application of water by watercart or static sprays to ancillary bare earth areas (in addition to the main trafficked areas) to minimise dust generation across the site.</p>	Where ground conditions are dry and predicted winds greater than 20km/h	CHPP Superintendent and Relevant Area Manager	Internal records

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Item	Action	Trigger/Timing	Responsibility	Reporting
4.3.5B	<p><u>Response Actions</u></p> <p>Response actions will depend on the activities occurring on-site at the time, but will for example involve:</p> <ul style="list-style-type: none"> Increasing the frequency of visual dust-checks by E & C staff to assess wind and dust conditions. Increasing the frequency of watering for unsealed roads, exposed areas and stockpiles. Limiting the footprint of site activities to minimise the area requiring active watering, and pre-watering non-operational areas to develop a surface-seal. Modifying the location, timing or intensity of site activities depending on the sources contributing to elevated levels. 	As required, with consideration to the intensity of activities onsite and the prevailing weather conditions.	CHPP Superintendent and Relevant Area Manager	Internal records
4.3.6 Non-Compliance Investigation				
4.3.6A	<p>An investigation of a suspected air quality non-compliance (as triggered by monitoring results or visual dust-checks) will involve the following:</p> <ul style="list-style-type: none"> Recording date, time, location and nature of the exceedance. Identify the cause (or likely cause) of the exceedance and responsible parties. Identify the activities that were occurring at the time of the non-compliance; Determine the activities that were most likely contributing to the non-compliance; Describe what action has been taken to date to address the exceedance. Describe the proposed measures to prevent recurrence. 	Compliance Evaluation (see Section 4.5) indicates non-compliance with the criteria and the ACP has potentially been the source.	Environment and Community Relations Coordinator	A summary of the findings will be reported in the Annual Review
4.3.6B	Where possible, upon determining the likely cause of the exceedance, further investigation of the likely cause will be undertaken to determine if the appropriate management measures were implemented. The investigation will consider:	Upon determination of the likely cause of an ACOL non-compliance with criteria	Environment and Community Relations Coordinator	Non-compliance Investigation

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Item	Action	Trigger/Timing	Responsibility	Reporting
	<ul style="list-style-type: none"> Where control measures were implemented at the time of the exceedance, were they adequate and sufficient? Where it is found that the measures implemented are insufficient, this will be documented and the measures will be reviewed to prevent similar potential exceedances. This will be communicated at daily / weekly meetings. Where control measures should have been implemented but were not at the time of the incident, discuss the non-compliance with the personnel involved and if necessary implement environmental training to relevant employees and contractors to ensure that appropriate measures are implemented in the future. <p>Corrective action may involve supplementary monitoring to identify the source of the non-compliance, or may involve modification of activities to avoid any recurrence.</p>			
4.3.6C	<p><u>Additional Air Quality Mitigation Measures</u></p> <p>In accordance with Condition 13 of Schedule 3 of the Ashton DA, upon written request from the owner of any residences where subsequent air monitoring shows dust generated by ACP exceeds air quality limits:</p> <ul style="list-style-type: none"> ACOL will consult with the owner and install additional reasonable and feasible dust mitigation measures (such as first-flush system, internal or external air filters and/or air conditioning). If within 3 months of receiving the request, an agreement cannot be reached on the measures to be implemented, or there is a dispute, either party can refer the matter to the Secretary of DPE. 	Upon written receipt from privately owned residences where air quality monitoring shows exceedances of air quality limits	Environment and Community Relations Superintendent	Non-compliance Investigation
4.3.7 Cumulative Air Quality Impact Reduction Protocol				
4.3.7A	The Upper Hunter Air Quality Monitoring Network (UHAQMN) currently includes 14 monitors in the upper Hunter Valley. The monitors all record PM ₁₀ , with some	As required	Environment and Community Relations Superintendent	Nil

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Item	Action	Trigger/Timing	Responsibility	Reporting
	monitors also recording PM _{2.5} , NO ₂ and SO ₂ . The Camberwell monitor records PM ₁₀ and PM _{2.5} . The UHAQMN will be utilised by ACOL as follows: <ul style="list-style-type: none"> • Understanding of regional dust levels. • Comparison with levels measured by the ACOL network. • Understanding of dust levels outside of the ACOL network that may be contributing to dust levels in the network. 			
4.3.7B	ACOL will also address cumulative impacts through sharing data and regular contact with neighbouring mines and industry groups (refer to Section 4.2.7), such as the Hunter Coal Environment Group or Upper Hunter Mining Dialogue Emissions and Air Quality working groups (where functioning).	As required	Environment and Community Relations Superintendent	Nil
4.3.8 Impacted Residence Protocol				
4.3.8A	<u>Initial Consultation</u> Consult with tenant or land-owner regarding the air quality results and seek resolution of issue.	Where a tenant or land holder is impacted or feels impacted due to the ACP operations	Environment and Community Relations Superintendent	Consultation Log
4.3.8B	<u>Advice to Tenants on Mine Owned Land (including land owned by adjacent Mines) – Schedule 3, Condition 14 and Schedule 4, Conditions 1-2 of DA 309-11-2001-i</u> In the circumstances where particulate matter emissions generated by ACOL operations exceeds (or are predicted to exceed) air quality criteria at any occupied residences on any mine-owned property (including land owned by adjacent Mines), ACOL will: <ul style="list-style-type: none"> • Advise the tenant of the potential health risks and provide a copy of the NSW Health fact sheet “Mine Dust and You” that can be accessed online at http://www.health.nsw.gov.au/environment/factsheets/Pages/mine-dust.aspx; 	No advice in addition to that supplied since the mine has been operating to any landowner or tenant is required at this stage. Where air quality monitoring or modelling of existing or future development shows an increase in fine particulate levels due to ACOL operations above the air quality Table 4 (of this document).	Environment and Community Relations Superintendent	Consultation Log

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Item	Action	Trigger/Timing	Responsibility	Reporting
	<ul style="list-style-type: none"> Provide contact details for ACOL, including the Environment and Community Response Line and how to access the ACOL website; Provide a right to terminate the Tenancy Agreement without penalty, subject to giving reasonable notice, and also provide assistance with relocation and sourcing of alternate accommodation; If requested by the tenant, install additional air mitigation measures such as air filters, a first flush roof water drainage system and/or air conditioner; and Undertake monitoring and provide the tenant with information relating to access of data on the ACOL website and the Upper Hunter Air Quality Monitoring Network station within Camberwell. <p>If Monitoring shows an exceedance, within 2 weeks of obtaining monitoring results ACOL will:</p> <ul style="list-style-type: none"> Notify the tenant in writing of an exceedance, and provide regular monitoring results until in compliance again; and Provide a copy of the NSW Health Fact Sheet 'Mine Dust and You'. <p>As the NEOC has now been completed there are no anticipated impacts to existing tenants due to ACOL operations.</p>			
4.3.8C	<p><u>Notification of Landowners - Schedule 4, Conditions 1 – 2 of DA 309-11-2001-i</u></p> <p>In the circumstances where a mine-owned property is to be leased to a potential tenant, and air quality monitoring data or modelling indicates the potential for an exceedance of the specified criteria, ACOL will:</p> <ul style="list-style-type: none"> Advise the potential tenant of the potential health risks and provide a copy of the NSW Health fact sheet "Mine Dust and You" that can be accessed online at http://www.health.nsw.gov.au/environment/factsheets/Pages/mine-dust.aspx; Provide information relating to access of the ACOL website and the Upper Hunter Air Quality Monitoring Network station within Camberwell; 	<p>New tenants and existing tenants on a two-yearly basis</p> <p>OR</p> <p>Where air quality monitoring or modelling of existing or future development shows an increase in fine particulate levels due to ACOL operations above the air quality criteria in Table 3, (of this document).</p>	<p>Environment and Community Relations Superintendent</p>	<p>Consultation Log</p>

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Item	Action	Trigger/Timing	Responsibility	Reporting
	<ul style="list-style-type: none"> • Provide contact details for ACOL, including the Environment and Community Response Line; and • Advise the tenant of the procedures to be followed in the event of any actual exceedances, as outlined in 4.3.8B above. <p>Where the property is not mine-owned, but is subject to an agreement in respect to exceedances of air quality criteria, the agreement is to include a requirement for the landowner to include a letter from Ashton detailing the same information to any prospective tenant.</p>			

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020	Owner: Phil Brown		
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Item	Action	Trigger/Timing	Responsibility	Reporting
4.3.9 Independent Review				
4.3.9A	<p>In accordance with Condition 3 – 6 of Schedule 4 of the Ashton DA, where a landowner believe they are being impacted by dust above criteria, they may ask the Secretary of DPE in writing for an Independent Review of the impacts on their land.</p> <p>If the Secretary is not satisfied that an Independent Review is warranted, the landowner will be notified in writing by the Secretary within 60 days of the request.</p> <p>If the Secretary is satisfied that an Independent Review is warranted, then within 2 months, ACOL will commission a qualified independent person (approved by the Secretary) to complete the Independent Review to quantify impact and determine the potential sources and the level of contribution from the ACP.</p> <p>If it is determined the criteria is being exceeded:</p> <ul style="list-style-type: none"> • Determine if more than one mine is responsible and the relative share of each mine towards the impact on the land; and • Identify potential measures that could be implemented to ensure compliance. <p>If the Review determines the ACP is primarily responsible for the exceedance, then ACOL will:</p> <ul style="list-style-type: none"> • Implement all reasonable and feasible mitigation measures (refer to Sections 4.3.2 and 4.3.3 above) and conduct further monitoring until in compliance again; or • Secure an agreement with the landowner to allow exceedances. <p>If the Review determined that more than one mine is responsible for any exceedances, then together, ACOL and the other mine/s will:</p> <ul style="list-style-type: none"> • Implement all reasonable and feasible mitigation measures and conduct further monitoring until in compliance again; or 	<p>Within 2 months of request from the Secretary of DPE</p>	<p>Environment and Community Relations Superintendent</p>	<p>Independent Air Quality Review</p>

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020	Owner: Phil Brown		
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Item	Action	Trigger/Timing	Responsibility	Reporting
	<ul style="list-style-type: none"> Secure an agreement with the landowner to allow exceedances. 			
4.3.9B	While specification of procedures for independent investigation is ultimately at the discretion of the independent investigator, the procedure would be generally expected to be consistent with the <u>Protocol for Compliance Evaluation</u> detailed within Section 4.5 .			
4.3.9C	The Independent Review will cease with the approval of the Secretary of DPE.	Secretary is satisfied that that the impact criteria (Table 3 of this document) are not being exceeded and it is unlikely they will be exceeded in the future, or that the agreement / amelioration agreed upon is satisfactory.	Secretary Environment and Community Relations Superintendent	Consultation Log
4.3.10 Property Acquisition				
4.3.10A	<p>In accordance with Conditions 7 - 8 of Schedule 4 of the Ashton DA, where an Independent Review confirms an exceedance of air quality acquisition criteria and criteria cannot be met, or agreement reached, ACOL will acquire the relevant property at the written request of the land owner in accordance with Condition 7 and 8 of Schedule 4 of the Ashton DA.</p> <p>If the impact is due to the cumulative effect of ACOL and other mines, the acquisition will be made in consultation and negotiation with the other mining company.</p> <p>Current ACOL operations and other sources impacting air quality will be taken into account in consultation with DPE prior to negotiating acquisition.</p>	When air quality acquisition criteria (Table 4 of this document) are exceeded and where changes to mining operations do not reduce dust levels below acquisition criteria, or, an agreement cannot be reached.	Environment and Community Relations Superintendent	Consultation Log
4.3.10B	For continued complaints and dust investigations, ACOL will continue negotiations with land owners and other nearby mines where relevant until a resolution to the satisfaction of the Secretary of DPE is reached.	Where the 24 hour PM ₁₀ level is less than 150 µg/m ³ cumulatively, but greater than 50 µg/m ³ of the project in isolation.	Environment and Community Relations Superintendent	Consultation Log

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Item	Action	Trigger/Timing	Responsibility	Reporting
4.3.11 Community Notification and Liaison				
4.3.11A	<p><u>Environment and Community Response Line</u></p> <p>Maintain the Environment and Community Response Line 1800 657 639 for the recording of complaints and community enquiries. All comments and complaints are logged into a database.</p> <p>An initial response is provided to the complainant within 24 hours on a normal business day or the first business day following the complaint.</p>	At all times	Environment and Community Relations Superintendent	Nil, unless complaint – see below
4.3.11B	<p><u>Complaints</u></p> <p>Complaints are managed in accordance with the ACOL complaint handling protocol. All complainants are provided an initial response within 24 hours or the next business day.</p> <p>For complaints that are received, but are proven to be unfounded, ACOL will discuss dust levels with the complainant.</p> <p>Consistent with the EPL, at a minimum the record of the complaint will include:</p> <ul style="list-style-type: none"> • The date and time of the complaint; • The method by which the complaint was made; • Any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; • The nature of the complaint; • The action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and • If no action was taken by the licensee, the reasons why no action was taken. <p>Refer to the EMS for detail in relation to the complaint management system.</p>	Upon receiving complaint.	Environment and Community Relations Superintendent	When received in Complaints List and Complaint notification form EPL Annual Return AEMR

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Item	Action	Trigger/Timing	Responsibility	Reporting
4.3.11C	<p><u>Internet Site</u></p> <p>Maintain internet site (www.ashtoncoal.com.au) with as a minimum the following information related to air quality management:</p> <ul style="list-style-type: none"> • This management plan. • Air quality monitoring data. • Link to EPA UHAQMN- http://www.environment.nsw.gov.au/aqms/uhunteraqmap.htm. 	<p>Monitoring data updated every 30 days.</p> <p>The UHAQMN is updated on an hourly basis by EPA</p>	<p>Environment and Community Relations Coordinator</p>	<p>Nil</p>
4.3.11D	<p><u>Community Consultative Committee</u></p> <p>A Community Consultation Committee (CCC) has been established to address any concerns raised by local members of the community. The CCC is operated in general accordance with the <i>Guidelines for Establishing and Operating Community Consultative Committees for State Significant Projects</i> (DPIE, 2016).</p> <p>CCC meetings include an update on ambient air quality during the preceding period, and detail if any changes to air quality are anticipated during the coming period.</p>	<p>Every 4 months</p>	<p>Environment and Community Relations Superintendent</p>	<p>Minutes of the CCC</p>

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Item	Action	Trigger/Timing	Responsibility	Reporting
4.3.12 Investigation Programs and Continuous Improvement				
4.3.12A	ACOL maintains a commitment to the maintenance of best practice through an awareness of best practice dust reduction technologies and alternative operating methodologies. When any technologies are found to be feasible, reasonable and effective in the context of a safe and economic mining operation and where there is a clear public benefit in its application, ACOL will implement the technology, as required.	Continuous	Environment and Community Relations Superintendent	Annual Review

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020	Owner: Phil Brown		
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

4.4 Monitoring Network

In October 2016, the NSW EPA varied ACOL's EPL 11879 to include 3 TEOM PM₁₀ monitoring points only. This variation was initiated by the EPA in response to the establishment of the Upper Hunter Air Quality Monitoring Network (UHAQMN) to remove redundant monitoring requirements. **Table 7** lists the location of the monitoring network and details the purpose of the monitoring infrastructure. The location of the monitoring network is shown by **Figure 5**.

Table 7: Location and Justification for Air Quality Monitoring Network

Site #	Location	Purpose / Objective
Weather Station		
M1 Met Station (EPA ID no: 32)	Camberwell village	Measure temperature for inversion lapse rate calculation in conjunction with M2.
M2 Met Station (EPA ID no: 12)	NEOC Emplacement	Understand weather conditions representative of the elevated areas and the regionally prevailing conditions.
TEOM - PM₁₀		
Site 7 (EPA ID No: 9)	West of the ACP	Used as a management tool only for assessment of upstream air quality.
Site 9 (EPA ID No:10) *	Centre Rail	Used as an upstream monitoring point. This monitor may be used as a downstream monitoring point depending upon the prevailing wind direction.
Site 10 (EPA ID No: 11)	Church	Used as a downstream monitoring point. This monitor may be used as an upstream monitoring point depending upon the prevailing wind direction.
Camberwell UHAQMN	Camberwell Village	Reference site only (not compliance related data). Provides opportunity to validate results at nearby stations in the event of data loss.
TSP		
Site 10 (EPA ID No: 11)	Church	Used as a downstream monitoring point. This monitor may be used as an upstream monitoring point depending upon the prevailing wind direction. PM ₁₀ data obtained from Site 10 TEOM will be utilised to calculate TSP by applying a multiplying factor of 3x the annual average PM ₁₀ data.
Depositional Dust Gauges		
DG6	St Clements Church	For compliance purposes within the Camberwell village area

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

Methane	
Where required on Property 130 or AGL Macquarie Generation lands.	When a mobile gas plant is used on AGL Macquarie Generation owned land or within 100 m of Property 130, air sampling within the compound on non-ACOL owned land will be implemented to measure methane levels.
DG – Dust Gauge TSP – Total suspended particulates TEOM – Real-time Tapered Element Oscillating Microbalance sampler	

- The upstream monitoring point will be used to assist in determining ACP contribution to the overall dust levels at the downstream monitoring point, i.e., the difference in PM₁₀ concentrations between the upwind and downwind monitors is assumed to be ACP's contribution.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

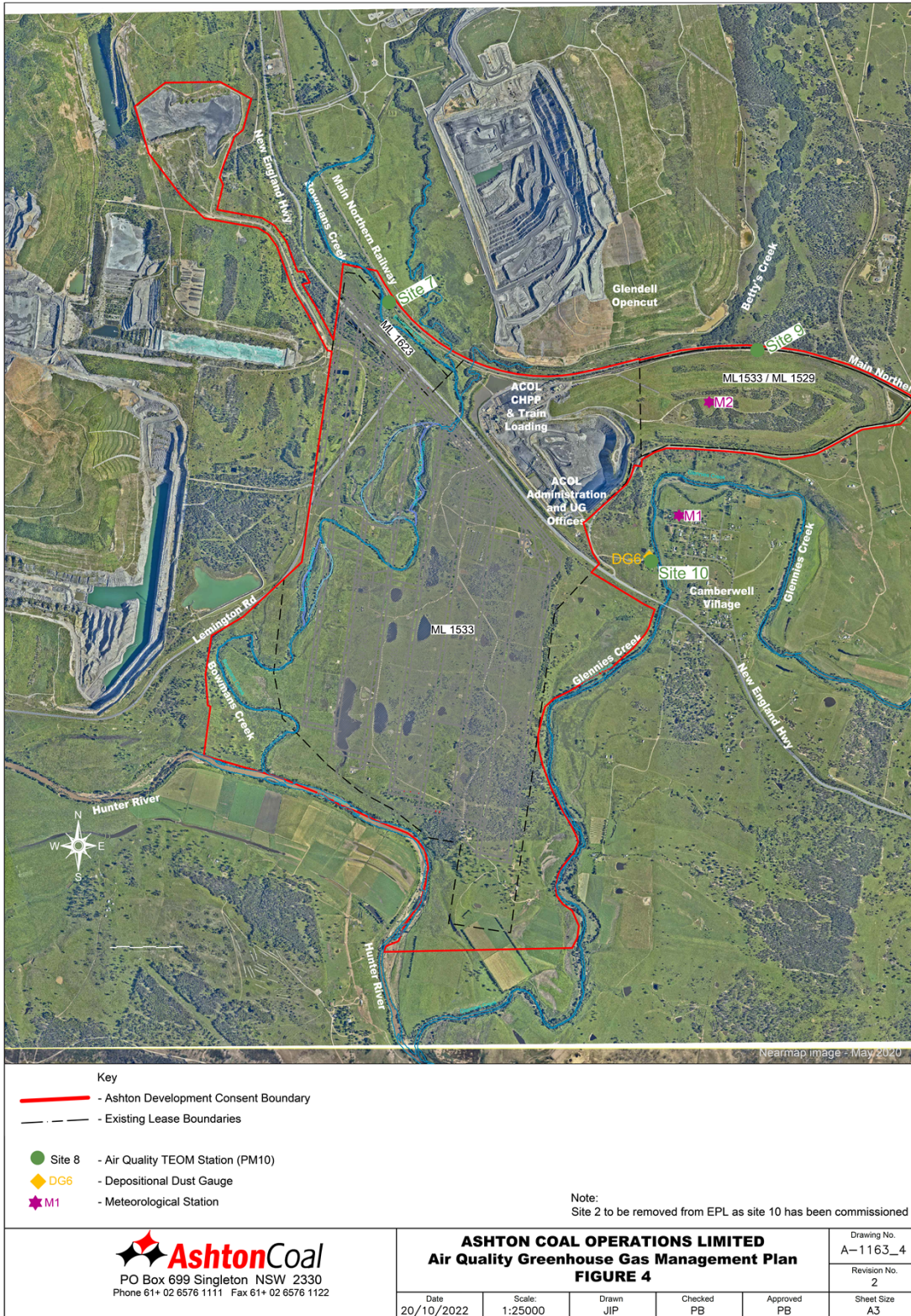


Figure 5:ACOL Air Quality Monitoring Network.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan	
Document ID: ACO-ENVI-5020	Owner: Phil Brown
Last Review:	Next Review: 17/05/2026 Revision Number: 4

4.4.1 Upper Hunter Air Quality Monitoring Network

The UHAQMN currently includes 14 monitors in the upper Hunter Valley. The monitors all record PM₁₀, with some monitors also recording PM_{2.5}, NO₂ and SO₂. The Camberwell monitor, located in Dulwich Place records PM₁₀ and PM_{2.5}.

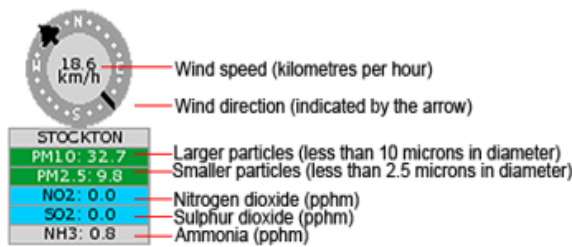
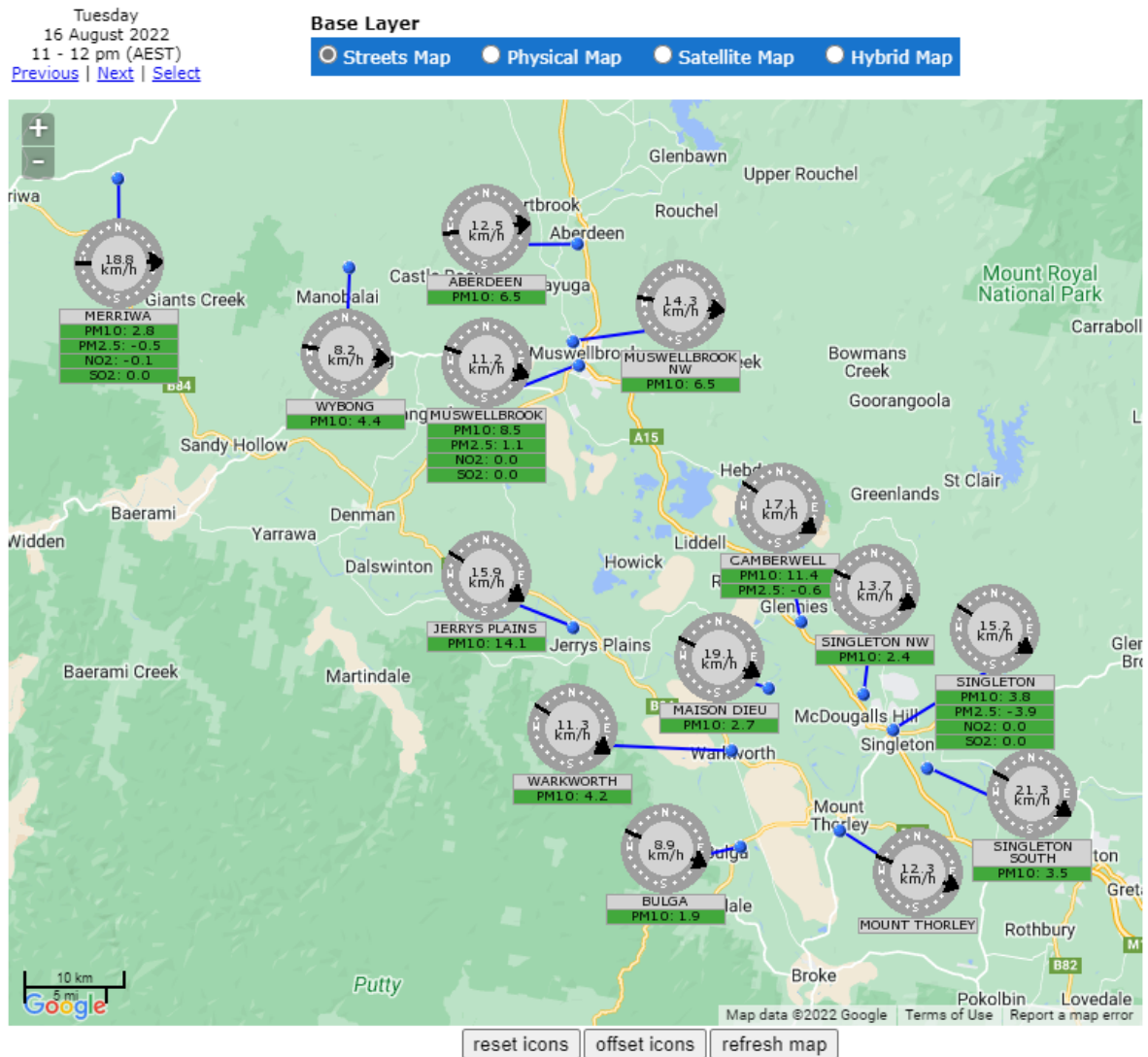
Public access to hourly average results is available through the NSW Planning and Environment website: <https://www.dpie.nsw.gov.au/air-quality/air-quality-maps/live-air-quality-data-upper-hunter>.

A copy of the graph from the website, which illustrates the data available and location of monitors from the network is shown in **Figure 6**.

The network provides ACOL with an understanding of regional dust levels, while the Camberwell station provides opportunity to validate results at nearby stations in the event of data loss.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4



Prior to February 2020, PM₁₀ and PM_{2.5} were measured by rolling 24-hour averages.

Air pollutant	GOOD	FAIR	POOR	VERY POOR	EXTREMELY POOR
Nitrogen dioxide NO ₂ (pphm)	<8	8-12	12-18	18-24	24 and above
Sulfur dioxide SO ₂ (pphm)	<13.3	13.3-20.0	20.0-30.0	30.0-40.0	40.0 and above
Particulate matter < 10 µm PM ₁₀ (ug/m ³)	<50	50-100	100-200	200-600	600 and above
Particulate matter < 2.5 µm PM _{2.5} (ug/m ³)	<25	25-50	50-100	100-300	300 and above

The numbers above shows hourly average data for all parameters. All readings are updated hourly.

Figure 6 Upper Hunter Air Quality Monitoring Network at 11 – 12 pm on 16 August 2022
 (<https://www.dpie.nsw.gov.au/air-quality/air-quality-maps/live-air-quality-data-upper-hunter>)

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

4.5 Protocol for Compliance Evaluation

ACOL has a protocol for evaluating elevated air quality monitoring results, to determine if levels exceeding regulatory criteria have resulted from, or are likely to have resulted from, dust generated by Ashton's operations. The protocol (*Protocol for the Determination of Compliance with Regulatory Criteria following Measurement of Elevated Air Quality Results*) is designed specifically for PM₁₀ data; however, similar processes will be followed for evaluation of TSP and dust deposition data. For PM₁₀ evaluation, the protocol utilises the monthly AQ investigation workbooks saved in annual folders at: K:\22 MONITORING\22 01 Air\06 Exceedances Investigations Notifications).

Compliance against the 24-hour PM₁₀ criteria was previously evaluated by considering the potential contributions from the ACP plus background concentrations due to all other sources using this protocol to determine the likelihood of the ACP contributing to elevated levels above the relevant criteria. However, it has been found through review of the data, that the ACP's contribution to the cumulative PM₁₀ level is relatively minor. Accordingly, the 24-hour PM₁₀ air quality criterion was amended under Modification 11 to be based on the incremental impact (i.e. incremental increase in concentrations due to the ACP on its own) given open cut operations are no longer proposed.

Additional monitoring data for 24-hour PM₁₀ can be obtained from the UHAQMN to determine if the regional levels of PM₁₀ levels were elevated on the day and/or days preceding the localised elevated level.

The first step of the approach to compliance evaluation can be applied similarly for annual average impacts, by comparing the monitoring data, daily and annual wind patterns and annual average background/regional pollutant levels on days where the results have contributed to increased annual average results.

If multiple exceedances are determined using this protocol during a three-month period, identifying an increasing trend in dust generation from ACP activities, an expert air quality consultant will be engaged for further assessment and advice.

For non-compliance investigation and reporting procedures, refer to **Section 5.2.1**.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

5 INFORMATION, TRAINING AND COMMUNICATION

5.1 Training and Competency

Relevant requirements of this Management Plan shall be incorporated into the Yancoal Induction Program.

5.2 Communication, Consultation, Coordination and Cooperation

5.2.1 Reporting

The reports and documentation required by this management plan are detailed in **Table 8**.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

Table 8: Summary of Reporting Requirements, Distribution and Timing

Report	Requirements	Distribution	Trigger/Timing
<p align="center">Annual Review</p>	<p>In accordance with Condition 13 of Schedule 5 of the Ashton DA and Condition 9 of Schedule 4 of the RUM DA, air quality monitoring results will be publicly available on ACOLs website with summaries reported as part of the Annual Review.</p> <p>In accordance with Condition 10 of Schedule 5 of the Ashton DA and Condition 2 of Schedule 4 of the RUM DA, the Annual Review will include the following information relevant to air quality:</p> <ul style="list-style-type: none"> • Description of the works (including any rehabilitation) that were carried out during the previous year; • Description of the works that that are proposed to be carried out in the current year; • A comprehensive review of monitoring results and complaints received, including a comparison of the results against: • Relevant statutory requirements, limits or performance measures/ criteria; • Monitoring results of previous years; and; • Relevant predictions in the EA and previous EIS's. • Identification of any non-compliances over the last year, and describe what actions were (or are being) taken to ensure compliance; • Identification of any trends in the monitoring data over the life of the ACP and ACOL-operated RUM; • Identification and analysis of any discrepancies between the predicted and actual impacts of the ACP and ACOL-operated RUM; and • Description of the measures to be implemented over the next year to improve the environmental performance of ACP 	<p align="center">DPE CCC Website within 30 days of approval</p>	<p align="center">Annually by 31 March</p>

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020	Owner: Phil Brown		
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Report	Requirements	Distribution	Trigger/Timing
Complaints Register	Records key details of all complaints received by the Environment and Community Response Line and publish on ACOL Website.	ACOL Website	Upon receipt of complaint Published on website within 30 days
Complaint/ Enquiry notification form	To provide a standard format for the investigation and response to received complaints.	Internal	Upon receipt of complaint
EPL Annual Return	The EPL requires the submission of an Annual Return detailing complaints received and details of monitoring that has been undertaken as required by the EPL.	EPA	Annually
EPL Monitoring Data	In accordance with Section 66(6) of the <i>POEO Act 1997</i> all monitoring data collected pursuant to EPL 11879 will be available on the ACOL website.	Public	Updated monthly (note continuous data is available following monthly checks and verification)
NGER	In accordance with the <i>National Greenhouse and Energy Reporting Act 2007</i> , greenhouse gas emissions (scope 1 and 2) will be measured and reported under the NGER scheme.	Commonwealth Clean Energy Regulator	Annually by 31 October
NPI	In accordance with the <i>National Pollution Inventory Guide – Version 6.1</i> (DoEE 2015)	EPA	Annually by 30 September
Incident Report	<p>Incidents causing or threatening material harm to the environment must be reported to the Secretary of DPE, EPA and any other relevant agencies, at the earliest opportunity.</p> <p>Any other incident (breach or exceedance of the limits or performance measures/ criteria in the DA), associated with the ACP or ACOL-operated RUM, must be reported to DPE and any other relevant agencies as soon as practicable after becoming aware of the incident.</p> <p>Submissions can also occur online through the relevant agencies online portal</p> <p>A detailed report is to be provided to the Secretary of DPE and any other relevant agencies, within 7 days of the date of the incident, and any such further reports as may be requested.</p> <p>A non-compliance investigation will be undertaken (refer below), with the report provided to the DPE and other relevant agencies, if requested.</p>	<p>EPA, DPE and other relevant agencies</p> <p>Annual Return</p> <p>A summary is provided in the Annual Review</p>	<p>Immediately after becoming aware of material harm incident.</p> <p>As soon as practicable after becoming aware of another incident.</p>

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020	Owner: Phil Brown		
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Report	Requirements	Distribution	Trigger/Timing
Non-Compliance Investigation	<p>Within 7 days of becoming aware of a non-compliance, ACOL will notify the DPE in writing via the DPE's Major Projects Website of the non-compliance, which must include the DA number and name. When a non-compliance with the impact criteria occurs, an investigation will be undertaken. The investigation will:</p> <ul style="list-style-type: none"> Describe the date, time, location and nature of the exceedance; Identify the cause (or likely cause) of the exceedance; Identify the activities that were occurring at the time of the non-compliance; Determine the activities that were most likely contributing to the non-compliance; Describe what action has been taken to date; and Describe the proposed measures to address the exceedance. <p>Compliance evaluation procedures for identifying non-compliance are outlined in Section 4.5.</p>	<p>The outcome of the investigation is reported to DPE</p> <p>A summary is provided in the Annual Review</p>	<p>When Compliance evaluation determines non-compliance with Impact Criteria</p>
Independent Air Quality Review	The Review will detail the proceedings and findings of independent reviews.	DPE	Upon written request by landowner and direction by DPE
ACOL website (www.ashtoncoal.com.au)	Among other purposes, the ACOL website is used to provide updates on the environmental management and monitoring results for the ACP and ACOL-operated RUM. Revised versions of AQMP will be updated on the ACOL website within 30 days of approval as required.	Public	Updated monthly
AQGGMP revisions	The current revised version of this Management Plan is required to be distributed and placed on the website within 30 days of approval.	Relevant government agencies, SC, CCC and website	Within 30 days of approval

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

5.2.2 Monitoring Records

In accordance with Condition M1 of the EPL, all monitoring records required under the licence will be:

- In a legible form, or in a form that can readily be produced to a legible form;
- Kept for at least 4 years after the monitoring or event to which they relate took place; and
- Produced in a legible form to any authorised officer of the EPA who asks to see them.

The following records must be kept in respect of any samples required to be collected:

- The date(s) on which the sample was taken;
- The time(s) at which the sample was collected;
- The point at which the sample was taken; and
- The name of the person who collected the sample.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

6 REVIEW AND PERFORMANCE

This Management Plan will be reviewed and maintained to ensure that it remains effective. A review of this Management Plan will be triggered by the following (as applicable to the Management Plan):

- A frequency-based review period (minimum 3-yearly);
- Changes to legislation or other requirements (e.g. associated Codes of Practice, Australian Standards or Technical Reference Guides);
- Changes to any design principles, engineering standards and technical standards relied on for control measures;
- Significant changes in operations that will affect health and safety, environment or community;
- Directives (in writing) from regulatory bodies (e.g. Chief Inspector or the Secretary of DPE);
- Alerts or notices from regulatory bodies, OEM's or other relevant external stakeholders;
- Significant incidents or accidents (including Notifiable Incidents);
- Audit findings indicating deficiencies or weaknesses;
- Recommendations from external equipment manufacturers or suppliers; or
- Adverse site or regional environmental trends.

In addition to the above, the AQGGMP will be reviewed, and updated, if necessary, to the satisfaction of the Secretary of DPE, in accordance with Condition 6 of Schedule 5 of the Ashton DA and Condition 3 of Schedule 4 of the RUM DA within 3 months of a:

- Lodgement of an Annual Review;
- Submission of an incident causing or threatening to cause material harm to the environment in relation to air quality;
- Submission of an Independent Environmental Audit (IEA); and
- Modification to the conditions of the Ashton and RUM DAs which has the potential to alter impacts from the ACP and ACOL-operated RUM.

In order to assess the performance of the management plan the following aspects will be considered:

- The nature, frequency and extent of non-compliance (if any);
- If the management plan and actions still fulfil the objectives;
- Whether the management actions and reporting completed were as specified within the plan; and
- Whether there are any aspects of the plan now obsolete, inefficient or ineffective.

The response to these aspects will inform the update of the AQGGMP. If required, the plan will be updated in consultation with relevant regulatory agencies and to the satisfaction of the Secretary of DPE. Any revised documents will be published on the ACOL website within 30 days of approval of the document from the Planning Secretary.

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

7 RELATED DOCUMENTS AND REFERENCE INFORMATION

7.1 Internal Documents

- Ashton Auditing Procedure
- Ashton Communication, Consultation, Coordination and Co-Operation Procedure
- Ashton Pollution Incident Response Management Plan
- Ashton Coal Protocol for the Determination of Compliance with Regulatory Criteria following measurement of Elevated Air Quality Results
- Yancoal Regional Document Control Procedure
- Yancoal Regional Performance Standards and Auditing Procedure
- Yancoal Regional Risk Management Procedure
- Yancoal Regional Training and Competency Management Procedure

7.2 External Documents

- *Environment Planning and Assessment Act, 1979;*
- *Protection of the Environment Operations Act, 1997;*
- *National Greenhouse and Energy Reporting Act, 2007;*
- *National Greenhouse and Energy Reporting (Measurement) Determination, 2008;*
- *Australian Standard - AS 2923 – 1987: Ambient Air Guide for the measurement of horizontal wind for air quality applications;*
- *Australian Standard - AS/NZS 3580.9.8-2008 Methods for sampling and analysis of ambient air – determination of suspended particulate matter – PM₁₀ continuous direct mass method using a tapered element oscillating microbalance analyser;*
- *Australian Standard AS/NZS 3580.10.1:2016 “Methods for sampling and analysis of ambient air - Determination of particulate matter - Deposited matter - Gravimetric method;*
- *AM-18 of the NSW EPA Approved methods for the sampling and analysis of air pollutants in NSW (DEC 2005);*
- *Guidelines for Establishing and Operating Community Consultative Committee for State Significant Projects, DPIE (2016);*
- *National Greenhouse and Energy Reporting Scheme Measurement Technical Guidelines for the Estimation of Greenhouse Gas Emissions by Facilities in Australia (DoEE 2016);*
- *National Pollution Inventory Guide – Version 6.1 (DoEE 2015);*

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

8 REVISION HISTORY

The management of air quality emissions from the ACP has been the subject of various management plans since the inception of the project, which has included a Construction Air Quality Management Plan (Part 1 construction now completed), and the Operations Air Quality Management Plan and the various versions of this plan, as detailed below.

Air Quality and Greenhouse Gas Management Plan Version History

Version	Version Date	Description of changes	Authorised/ Approved for Issue
Version A	12 January 2004		Peter Barton
Version B	30 August 2005		Peter Horn
Version C	19 August 2006		Tracey Rock
Version D	05 March 2014		Julie McNaughton
Version E	25 June 2015	Minor administrative changes	Digby Short
Version E1	6 June 2016	Minor changes to environmental monitoring program	Digby Short
Version E2	26 October 2016	Amendment to Environmental Monitoring Program due to UHAQMN	Digby Short
Version F	2 June 2017	Minor changes to reflect DA Modification 5	Phillip Brown
Version F1	10 October 2017	Approved by DPE	Phillip Brown
Version G	05 September 2020		Phillip Brown
Version G1	24 September 2020	Approved by DPE	Phillip Brown
Version H	August 2022	Integration of Ashton Underground Mine with Ravensworth Underground Mine	Phillip Brown

External Approval Register

Organisation	Nominated Representative	Version	Date Issued	Date Approved
Department of Planning and Environment	Scott Brooks	Version D8	2 April 2014	3 April 2014
Department of Planning and Environment	Chris Knight	Version E	29 June 2015	21 July 2015
Department of Planning and Environment	Howard Reed	Version E2	26 October 2016	24 February 2017
Department of Planning and Environment	Matthew Sprott	Version F1	10 October 2017	4 October 2017
Department of Planning, Industry and Environment	Matthew Sprott	Version G1	24 September 2020	16 November 2020
Department of Planning and Environment	Wayne Jones	Version H	October 2022	20 April 2023

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

9 APPENDICES

Appendix A – Approval Conditions

Table 9: Ashton Development Consent Approval Conditions (Air Quality)

Condition	Detail	Where Addressed
Schedule 3, Condition 10	<p>Odour</p> <p>The applicant must ensure that no offensive odours are emitted from the site, as defined under the POEO Act, unless otherwise authorised by an EPL.</p>	Section 4.3.3H
Schedule 3, Condition 11	<p>Greenhouse Gas Emissions</p> <p>The Applicant must implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site to the satisfaction of the Planning Secretary.</p> <p><i>Note: This condition does not extend to Scope 3 emissions, as defined in the National Greenhouse Energy Reporting Guidelines.</i></p>	Section 4.3.3I

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

Condition	Detail	Where Addressed															
Schedule 3, Condition 12	<p>Air Quality Criteria</p> <p>Except for the land listed as air quality impacts in Table 1 (whilst condition 1 has effect), the Applicant must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that the Ashton Mine Complex does not cause or contribute to exceedance of the criteria listed in Table 6 at any residence on privately-owned land or on more than 25 percent of any privately-owned land.</p> <p>Table 6: Air Quality Criteria</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>d Criterion</th> </tr> </thead> <tbody> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>Annual</td> <td>^a 30 µg/m³</td> </tr> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>24 hour</td> <td>^b 50 µg/m³</td> </tr> <tr> <td>Total suspended particulate (TSP) matter</td> <td>Annual</td> <td>^a 90 µg/m³</td> </tr> <tr> <td>Deposited Dust</td> <td>Annual</td> <td>^b 2 g/m²/month ^a 4 g/m²/month</td> </tr> </tbody> </table> <p><i>Notes to Table 6</i></p> <p>a) Total impact (i.e. incremental increase in concentrations due to the Ashton Mine Complex plus background concentrations due to all other sources);</p> <p>b) Incremental impact (i.e. incremental increase in concentrations due to the Ashton Mine Complex on its own);</p> <p>c) Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method.</p> <p>d) Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents or any other activity which has been endorsed by EPA and then agreed to by the Planning Secretary.</p> <p>For the purposes of this condition, ‘reasonable and feasible avoidance and mitigation measures’ include, but are not limited to, the requirements in conditions 16 and 17 to develop and implement a real-time air quality management system that ensures effective operational responses to the risks of exceedance of the criteria.</p>	Pollutant	Averaging Period	d Criterion	Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	24 hour	^b 50 µg/m ³	Total suspended particulate (TSP) matter	Annual	^a 90 µg/m ³	Deposited Dust	Annual	^b 2 g/m ² /month ^a 4 g/m ² /month	<p>Section 4.1 and Section 4.3.6</p>
Pollutant	Averaging Period	d Criterion															
Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³															
Particulate matter < 10 µm (PM ₁₀)	24 hour	^b 50 µg/m ³															
Total suspended particulate (TSP) matter	Annual	^a 90 µg/m ³															
Deposited Dust	Annual	^b 2 g/m ² /month ^a 4 g/m ² /month															

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Condition	Detail	Where Addressed
Schedule 3, Condition 13	<p>Additional Air Quality Mitigation Measures</p> <p>Upon receiving a written request from the owner of any residences on any privately-owned land where subsequent air quality monitoring shows the dust generated by the Ashton Mine Complex exceeds the air quality limits in Table 6, the Applicant must implement additional reasonable and feasible dust mitigation measures (such as a first-flush roof system, internal or external air filters and/or air conditioning) at the residence in consultation with the owner.</p> <p>If within 3 months of receiving this request from the owner, the Applicant and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Planning Secretary for resolution.</p> <p>Note: For this condition to apply, the exceedance of the criteria must be systemic.</p>	<p>Section 4.3.6C and 4.3.9</p>
Schedule 3, Condition 14	<p>Exceedance at Occupied Residences on Mine-owned Land</p> <p>The Applicant shall ensure that particulate matter emissions generated by the Ashton Mine Complex do not exceed the criteria listed in Table 6, at any occupied residence on any mine-owned land (including land owned by adjacent mines) unless:</p> <ol style="list-style-type: none"> the tenant, and landowner (where owned by a mine other than the Applicant), has been notified of health risks in accordance with the notification requirements under Schedule 4 of this consent; the tenant of land owned by the Applicant can terminate their tenancy agreement without penalty, subject to giving reasonable notice, and the Applicant uses its best endeavours to provide assistance with relocation and sourcing of alternative accommodation; air mitigation measures such as air filters, a first flush roof water drainage system and/or air conditioning) are installed at the residence, if requested by the tenant and landowner (where owned by a mine other than the Applicant); particulate matter air quality monitoring is undertaken to inform the tenant and landowner (where owned by a mine other than the Applicant) of potential health risks; and the monitoring data is provided to the tenant in an appropriate format, for a medical practitioner to assist the tenant in making an informed decision on the health risks associated with occupying the property. <p>to the satisfaction of the Planning Secretary.</p>	<p>Section 4.3.8</p>

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

Condition	Detail	Where Addressed																		
Schedule 3, Condition 15	<p>Air Quality Acquisition Criteria</p> <p>If particulate matter emissions generated by the Ashton Mine Complex cause or contribute to exceedance of the cumulative criteria, in Table 7 at any residence on privately-owned land, or on more than 25 percent of any privately-owned land, then upon receiving a written request for acquisition from the landowner, the Applicant shall acquire the land in accordance with the procedures in conditions 7 to 8 of Schedule 4.</p> <p>Table 7: Air Quality Acquisition Criteria</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>d Criterion</th> </tr> </thead> <tbody> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>Annual</td> <td>a 30 µg/m³</td> </tr> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>24 hour</td> <td>a 150 µg/m³</td> </tr> <tr> <td>Particulate matter < 10 µm (PM₁₀)</td> <td>24 hour</td> <td>b 50 µg/m³</td> </tr> <tr> <td>Total suspended particulate (TSP) matter</td> <td>Annual</td> <td>a 90 µg/m³</td> </tr> <tr> <td>Deposited Dust</td> <td>Annual</td> <td>b 2 g/m²/month a 4 g/m²/month</td> </tr> </tbody> </table> <p><i>Notes to Table 7:</i></p> <p>a) Total impact (i.e. incremental increase in concentrations due to the Ashton Mine Complex plus background concentrations due to all other sources);</p> <p>b) Incremental impact (i.e. incremental increase in concentrations due to the Ashton Mine Complex on its own);</p> <p>c) Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method.</p> <p>d) Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents or any other activity which has been endorsed by EPA and then agreed to by the Planning Secretary.</p>	Pollutant	Averaging Period	d Criterion	Particulate matter < 10 µm (PM ₁₀)	Annual	a 30 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	24 hour	a 150 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	24 hour	b 50 µg/m ³	Total suspended particulate (TSP) matter	Annual	a 90 µg/m ³	Deposited Dust	Annual	b 2 g/m ² /month a 4 g/m ² /month	<p>Section 4.1 and Section 4.3.10</p>
Pollutant	Averaging Period	d Criterion																		
Particulate matter < 10 µm (PM ₁₀)	Annual	a 30 µg/m ³																		
Particulate matter < 10 µm (PM ₁₀)	24 hour	a 150 µg/m ³																		
Particulate matter < 10 µm (PM ₁₀)	24 hour	b 50 µg/m ³																		
Total suspended particulate (TSP) matter	Annual	a 90 µg/m ³																		
Deposited Dust	Annual	b 2 g/m ² /month a 4 g/m ² /month																		

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Condition	Detail	Where Addressed
Schedule 3, Condition 16	<p>Operating Conditions</p> <p>The Applicant must:</p> <ul style="list-style-type: none"> a) Implement best practice air quality management, including all reasonable and feasible measures to minimise off-site odour, fume and dust emissions generated by the Ashton Mine Complex, including those generated by any spontaneous combustion. b) Minimise the surface disturbance of the site; c) Minimise any off-site air pollution generated by the Ashton Mine Complex; d) Ensure that: <ul style="list-style-type: none"> • The conveyor is enclosed on at least 3 sides including the side facing Camberwell village, and on all 4 sides where the conveyor crosses Glennies Creek and the New England Highway, prior to the commencement of conveyor operations; • The bund along the northern boundary is constructed and revegetated as quickly as is practicable; e) Ensure that the ROM hopper operates water sprays during all dumping of coal f) Operate a comprehensive air quality management system that uses a combination of predictive meteorological forecasting, predictive and real-time air dispersion modelling and real-time air quality monitoring data to guide the day-to-day planning of mining operations and the implementation of both proactive and reactive mitigation measures to ensure compliance with the relevant conditions of this consent; g) Manage PM_{2.5} levels in accordance with any requirements of an EPL; h) Minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see note (d) under Table 7); i) Minimise the air quality impacts of the development during meteorological conditions when winds blow from the southerly direction (160-220 degrees), particularly when PM₁₀ levels are elevated, or likely to be elevated; j) Co-ordinate the air quality management on site with the air quality management at nearby mines to minimise the cumulative air quality impacts of the mines <p>To the satisfaction of the Planning Secretary.</p> <p>Note: Condition 16(d), (f) and (i) above only have effect following the recommencement of open cut mining operations (including overburden removal) at the Ashton Mine Complex.</p>	<p>Section 4.3</p> <p>Section 4.3.3B</p> <p>Section 4.3.3G</p> <p>Section 4.3.4</p> <p>Section 4.3.7</p> <p>Noted above</p>

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020	Owner: Phil Brown		
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Condition	Detail	Where Addressed
Schedule 3, Condition 17	<p>Air Quality and Greenhouse Gas Management Plan</p> <p>The Applicant must prepare and implement an Air Quality and Greenhouse Gas Management Plan for the Ashton Mine Complex to the satisfaction of the Secretary to manage potential impacts of the development. This plan must:</p> <ol style="list-style-type: none"> Be prepared in consultation with the EPA, and be submitted to the Planning Secretary for approval; Describe the measures that would be implemented to ensure: <ul style="list-style-type: none"> • Best practice air quality management is: <ul style="list-style-type: none"> - Being employed; - Regularly benchmarked against contemporary industry standards; and - Regularly reviewed to ensure continual improvement; and • Compliance with the air quality criteria, operating and greenhouse gas conditions of this consent; Describe the air quality management system in detail; Include an air quality monitoring program that: <ul style="list-style-type: none"> • Uses a combination of real-time monitors and supplementary monitors to evaluate the performance of the Ashton Mine Complex; • Includes a protocol for determining any exceedances of the relevant conditions in this consent; • Evaluates and reports on the effectiveness of the air quality management system and the best practice air quality management measures; • Includes sufficient random audit of operational responses to the real-time air quality management system to determine the ongoing effectiveness of these responses in maintaining the Ashton Mine Complex within the relevant criteria in this Schedule and the requirements of condition 16 above; • Includes a mechanism for publication of the results of these audits and for an independent annual review of these results, including any recommendations for improvement in performance; and Include a protocol that has been prepared in consultation with the owners of nearby mines to minimise the cumulative air quality impacts of all mines. <p>The applicant must implement the approved management plan as approved from time to time by the Planning Secretary</p>	<p>This AQGGMP Section 2.3</p> <p>Section 4.3</p> <p>Sections 4.1 and 4.3</p> <p>This AQGGMP Sections 4.4, 4.5, 5.2.1 and 6 (Note: The Real-time air quality system is not yet required as per conditions 16 f & i above).</p> <p>Section 4.3.7 This AQGGMP</p>
Schedule 3, Condition 18	<p>Meteorological Monitoring</p> <p>For the life of the development, the Applicant must ensure that there is a meteorological station in the vicinity of the site that:</p> <ol style="list-style-type: none"> Complies with the requirements in the <i>Approved Methods for Sampling of Air Pollutants in New South Wales</i> guideline; and Is capable of continuous real-time measurement of temperature lapse rate in accordance with the <i>NSW Industrial Noise Policy</i>, or as otherwise approved by the EPA. 	<p>Section 4.1.4 and Section 4.4</p>

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020	Owner: Phil Brown		
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Condition	Detail	Where Addressed
Schedule 4, Condition 1	<p>Notification of Landowners</p> <p>Prior to entering into any tenancy agreement for any land owned by the Applicant that is predicted to experience exceedances of the noise criteria in condition 2 of Schedule 3 or the dust criteria in condition 12 of Schedule 3, the Applicant shall:</p> <ol style="list-style-type: none"> a) Advise the prospective tenants of the potential health and amenity impacts associated with living on the land and give them a copy of the NSW Health fact sheet entitled “Mine Dust and You” (as may be updated from time to time); and b) Advise the prospective tenants of the rights they would have under this consent, <p>To the satisfaction of the Planning Secretary.</p>	Section 4.3.8
Schedule 4, Condition 2	<p>Within 2 weeks of obtaining monitoring results showing:</p> <ol style="list-style-type: none"> a) An exceedance of any relevant criterion in Schedule 3, the Applicant shall notify the affected landowner and/or tenants in writing of the exceedance, and provide regular monitoring results to each of these parties until the development is again complying with the relevant criterion; and b) An exceedance of any relevant criterion in condition 12 of Schedule 3, the Applicant shall send a copy of the NSW Health fact sheet entitled “Mine Dust and You” (as may be updated from time to time) to the affected landowners and/or existing tenants of the land (including the tenants of mine-owned land). 	Section 4.3.8
Schedule 4, Condition 3	<p>Independent Review</p> <p>If an owner of privately-owned land considers the development to be exceeding any relevant criteria in Schedule 3, then he/she may ask the Planning Secretary in writing for an independent review of the impacts of the development on his/her land.</p>	Section 4.3.9
Schedule 4, Condition 4	<p>If the Planning Secretary is not satisfied that an independent review is warranted, the Planning Secretary will notify the landowner in writing of that decision, and the reasons for that decision, within 60 days of the request for a review.</p> <p>If the Planning Secretary is satisfied that an independent review is warranted, then within 2 months of the Planning Secretary’s decision, the Applicant must:</p> <ol style="list-style-type: none"> a) Commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Planning Secretary, to: <ol style="list-style-type: none"> (i) Consult with the landowner to determine his/her concerns; (ii) Conduct monitoring to determine whether the development is complying with the relevant criteria; and (iii) If the development is not complying with these criteria then: <ul style="list-style-type: none"> • Determine if the more than one mine is responsible for the exceedance, and if so the relative share of each mine towards the impact on the land; • Identify the measures that could be implemented to ensure compliance with the relevant criteria; and b) Give the Planning Secretary and landowner a copy of the independent review. 	Section 4.3.9
Condition	Detail	Where

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

		Addressed
Schedule 4, Condition 5	<p>If the independent review determines that the development is complying with the relevant criteria, then the Applicant may discontinue the independent review with the approval of the Planning Secretary.</p> <p>If the independent review determines that the development is not complying with the relevant criteria, and that the development is primarily responsible for this non-compliance, then the Applicant shall:</p> <ol style="list-style-type: none"> Implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent person, and conduct further monitoring until the development complies with the relevant criteria; or Secure a written agreement with the landowner to allow exceedances of the relevant criteria, <p>To the satisfaction of the Planning Secretary.</p> <p>If the independent review determines that the development is not complying with the relevant acquisition criteria, and that the development is primarily responsible for this non-compliance, then upon receiving a written request from the landowner, the Applicant shall acquire all or part of the landowner's land in accordance with the procedures in conditions 7 to 8 below.</p>	<p>Section 4.3.9 and 4.3.10</p>
Schedule 4, Condition 6	<p>If the independent review determines that the relevant criteria are being exceeded, but that more than one mine is responsible for this non-compliance, then together with the relevant mine/s, the Applicant shall:</p> <ol style="list-style-type: none"> Implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent person, and conduct further monitoring until there is compliance with the relevant criteria; or Secure a written agreement with the landowner and other relevant mines to allow exceedances of the relevant criteria. <p>To the satisfaction of the Planning Secretary.</p> <p>If the independent review determines that the development is not complying with the relevant acquisition criteria, but that more than one mine is responsible for this non-compliance, then upon receiving a written request from the landowner, the Applicant must acquire all or part of the landowner's land on as equitable basis as possible with the relevant mine/s, in accordance with the procedures in conditions 7 to 8 below.</p>	<p>Section 4.3.9 and 4.3.10</p>

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Condition	Detail	Where Addressed
Schedule 4, Condition 7	<p>Land Acquisition</p> <p>Within 3 months of receiving a written request from a landowner with acquisition rights, the Applicant shall make a binding written offer to the landowner based on:</p> <ol style="list-style-type: none"> a) The current market value of the landowner’s interest in the land at the date of this written request, as if the land was unaffected by the development, or the current market value of properties that are of an equivalent standard to the landowner’s existing dwelling (including associated facilities such as a pool) in the Singleton or Muswellbrook local government areas (whichever is greater), having regard to the: <ul style="list-style-type: none"> • Existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and • Presence of improvements on the land and/or any approved building or structure which has been physically commenced at the date of the landowner’s written request, and is due to be completed subsequent to that date, but excluding any improvements that have resulted from the implementation of the additional mitigation measures required under conditions 3 and/or 13 of Schedule 3; b) The reasonable costs associated with: <ul style="list-style-type: none"> • Relocating within the Singleton or Muswellbrook local government areas, or to any other local government area determined by the Planning Secretary; and • Obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is to be acquired; and c) Reasonable compensation for any loss attributable to disturbance and severance, if any, caused by the land acquisition process, if any; d) Reasonable compensation for any special value of the land to the person on the date of acquisition, if any; and e) Solatium, if any. <p>For the purposes of this consent, the terms ‘market value’, ‘disturbance’, ‘severance’, ‘special value’ and ‘solatium’ are to be construed in the same way as those terms are defined in the <i>Land Acquisition (Just Terms Compensation) Act 1991</i>, and as interpreted by the judiciary with the same limitations applied.</p> <p>For the purposes of this consent the term ‘landowner’ is to be construed in the same way as the term ‘owner’ as defined in the <i>Land Acquisition (Just Terms Compensation) Act 1991</i>, and as interpreted by the judiciary.</p> <p>However, if at the end of this period, the Applicant and landowner cannot agree on the acquisition price of the land and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Planning Secretary for resolution.</p> <p>Upon receiving such a request, the Planning Secretary may request the President of the NSW Division of the Australian Property Institute to appoint a qualified independent valuer to:</p> <ol style="list-style-type: none"> a) Consider submissions from both parties; b) Determine a fair and reasonable acquisition price for the land and/or the terms upon which the land is to be acquired, having regard to the matters referred to in paragraphs (a)-(c) above; c) Prepare a detailed report setting out the reasons for any determination; and 	Section 4.3.10

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020	Owner: Phil Brown		
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

	<p>d) Provide a copy of the report to both parties.</p> <p>Within 14 days of receiving the independent valuer's report, the Applicant shall make a binding written offer to the landowner to purchase the land at a price not less than the independent valuer's determination.</p> <p>However, if either party disputes the independent valuer's determination, then within 14 days of receiving the independent valuer's report, they may refer the matter to an independent arbiter agreed to by the parties. If the parties cannot agree on an independent arbiter, the matter must be referred to the Planning Secretary to appoint an independent arbiter from the NSW Bar Association approved list or arbitrators.</p> <p>The independent arbitrator's costs must be borne by the Applicant, and the Applicant must compensate the landowner for any reasonable costs incurred by the landowner as a result of the matter being referred to arbitration, including any reasonable costs incurred by the landowner in obtaining legal and expert advice or representation for the purposes of arbitration.</p> <p>Within 14 days of receiving the independent arbiter's determination, the Applicant shall make a binding written offer to the landowner to purchase the land at a price not less than the independent arbiter's determination.</p> <p>If the landowner refuses to accept the Applicant's binding written offer under this condition within 6 months of the offer being made, then the Applicant's obligations to acquire the land will cease, unless the Planning Secretary determines otherwise.</p>	
<p>Schedule 4, Condition 8</p>	<p>The Applicant must pay all reasonable costs associated with the land acquisition process described in condition 7 above, including the costs associated with obtaining Council approval for any plan of subdivision (where permissible), and registration of this plan at the Office of the Registrar-General.</p>	<p>Section 4.3.10</p>

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

Condition	Detail	Where Addressed
Schedule 5, Condition 2	<p>Management Plan Requirements</p> <p>The Applicant must ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines, and include:</p> <ul style="list-style-type: none"> a) Detailed baseline data; b) A description of: <ul style="list-style-type: none"> • The relevant statutory requirements (including any relevant approval, licence or lease conditions); • Any relevant limits or performance measures/criteria; • The specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures; c) A description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria; d) A program to monitor and report on the: <ul style="list-style-type: none"> • Impacts and environmental performance of the development; • Effectiveness of any management measures (see (c) above); e) A contingency plan to manage any unpredicted impacts and their consequences; f) A program to investigate and implement ways to improve the environmental performance of the development over time; g) A protocol for managing and reporting any: <ul style="list-style-type: none"> • Incidents; • Complaints; • Non-compliances with the conditions of this consent and statutory requirements; and • Exceedances of the impact assessment criteria and/or performance criteria; and h) A protocol for periodic review of the plan. <p>Note: The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.</p>	<p>Section 4.2</p> <p>This Table</p> <p>Section 4.1</p> <p>Section 4.3</p> <p>Sections 4.4, 5.2.1 and 6</p> <p>Section 4.5</p> <p>Section 6</p> <p>Section 5.2.1</p> <p>Section 6</p> <p>Noted</p>
Schedule 5, Condition 3	<p>The Applicant must submit all management plans required under Schedule 3 (with the exception of Extraction Plans required under condition 32 of Schedule 3) for approval by the Planning Secretary at least 3 months prior to recommencement of open cut mining operations (including overburden removal) at the Ashton Mine Complex.</p> <p>Prior to approval of management plans required under Schedule 3 (with the exception of Extraction Plans required under condition 32 of Schedule 3), all existing management plans, monitoring programs, strategies, programs, protocols, etc. in effect as at the date of approval of Modification 5 will continue to have full force and effect, and may be revised under condition 6 below, or otherwise with the approval of the Planning Secretary.</p>	<p>Noted. Not required yet.</p> <p>This Plan (approved at time of Modification 5) continues to have full effect. This AQGGMP was revised following 2016 Annual Review, IEA and to reflect Modification5, where required.</p>

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020	Owner: Phil Brown		
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Condition	Detail	Where Addressed
Schedule 5, Condition 5	<p>Updating and Staging Submissions of Strategies, Plans and Programs</p> <p>The Applicant must regularly review the strategies, plans and programs required under this consent and ensure that these documents are updated to incorporate measures to improve the environmental performance of the development and reflect current best practice in the mining industry. To facilitate these updates, the Applicant may at any time submit revised strategies, plans or programs for the approval of the Planning Secretary. With the agreement of the Planning Secretary, the applicant may also submit any strategy, plan or program required by this consent on a staged basis.</p> <p>With the agreement of the Planning Secretary, the applicant may prepare a revision or stage of any strategy, plan or program required under this consent, without undertaking consultation with all parties nominated under the applicable condition in this consent.</p> <p>With the agreement of the Planning Secretary, the Applicant may:</p> <p>(a) combine any strategy, plan or program required by this consent (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined); and</p> <p>(b) combine any strategy, plan or program required by this consent with any similar strategy, plan or program required under the Ravensworth Underground Mine Consent for areas identified on Figure 5 of Appendix 2 as the “Operational Area to be managed by Ashton Coal Operations Ltd (Yancoal)”</p> <p>Notes:</p> <ul style="list-style-type: none"> • While any strategy, plan or program may be submitted on a staged basis, the Applicant must ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times. • If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program. 	Noted
Schedule 5, Condition 6	<p>Within 3 months of:</p> <p>a) Submission of an incident report under condition 8 below;</p> <p>b) Submission of an annual review under condition 10 below;</p> <p>c) Submission of an audit under condition 11 below; and</p> <p>d) Any modification to the conditions of this consent (with the exception of MOD 5)</p> <p>The Applicant shall review, and if necessary revise, the strategies, plans, and programs required under this consent to the satisfaction of the Planning Secretary.</p> <p>The Applicant shall publish on its website any revised document resulting from these reviews within 30 days of the Planning Secretary’s approval of the document.</p> <p><i>Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development.</i></p>	Section 6

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020	Owner: Phil Brown		
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Condition	Detail	Where Addressed
Schedule 5, Condition 8	<p>Incident Reporting</p> <p>The Applicant must immediately notify the Department and any other relevant agencies immediately after it becomes aware of an incident. The notification must be in writing via the Department’s Major Projects Website and identify the development (including the development application number and name) and set out the location and nature of the incident.</p>	Section 5.2.1
Schedule 5, Condition 8A	<p>Non-Compliance Notification</p> <p>Within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non-compliance. The notification must be in writing via the Department’s Major Projects Website and identify the development (including the development application number and name), set out the condition of this consent that the development is non-compliant with, why it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.</p> <p><i>Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.</i></p>	Section 5.2.1
Schedule 5, Condition 13	<p>The Applicant must:</p> <p>a) Make copies of the following publicly available on its website:</p> <ul style="list-style-type: none"> • The documents listed in condition 2(a) • The current statutory approvals for the development • Approved strategies, plans and programs required under the conditions of this consent; • A comprehensive summary of the monitoring results of the development, including model performance results which have been reported in accordance with the various plans and programs approved under the conditions of this consent; • A complaints register, which is to be updated on a monthly basis; • Minutes of CCC meetings; • The annual reviews over the life of the development; • Any independent environmental audit, and the Applicant’s response to the recommendations in any audit; • Any other matter required by the Planning Secretary; and <p>Keep this information up to date by ensuring that all management plans, monitoring results and reports are available on the Applicant’s website within 30 days of their completion.</p>	Section 5.2.1

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020	Owner: Phil Brown		
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Table 10: RUM Development Consent Approval Conditions (Air Quality)

Condition	Detail	Where Addressed
Schedule 3, Condition 15	Odour The Applicant must ensure that no offensive odours are emitted from the site, as defined under the POEO Act, unless otherwise authorised by an EPL.	Section 4.3.3H
Schedule 3, Condition 16	Greenhouse Gas Emissions The Applicant must implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site to the satisfaction of the Planning Secretary. <i>Note: This condition does not extend to Scope 3 emissions, as defined in the National Greenhouse Energy Reporting Guidelines.</i>	Section 4.3.3I
Schedule 3, Condition 17	Operating Conditions The Applicant must: <ol style="list-style-type: none"> implement best practice air quality management, including all reasonable and feasible measures to minimise off-site odour, fume and dust emissions generated by the development, including those generated by any spontaneous combustion; minimise any visible off-site air pollution generated by the development; regularly assess meteorological forecasting data and relocate, modify and/or suspend operations to ensure compliance with the relevant conditions of this approval; and co-ordinate air quality management on site with the air quality management at nearby mines, including the Ravensworth Operations Project to minimise the cumulative air quality impacts of the mines, to the satisfaction of the Planning Secretary. 	Section 4.3 Section 4.3.3F and 4.3.3I Section 4.3.5A Section 4.3.7
Schedule 3, Condition 18	Air Quality and Greenhouse Gas Management Plan The Applicant must prepare and implement an Air Quality and Greenhouse Gas Management Plan for the development to the satisfaction of the Planning Secretary. This plan must: <ol style="list-style-type: none"> be submitted to the Planning Secretary for approval by the end of October 2013; describe the measures that would be implemented to ensure compliance with the relevant conditions of this approval; include an air quality monitoring program that includes a protocol for determining exceedances of the relevant conditions of this approval; and include a protocol that has been prepared in consultation with the owners of nearby mines to minimise the cumulative air quality impacts of the mines. 	Section 2.3 Section 4.3 Section 4.4, 4.5, 5.2.1 Section 4.3.7

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

Condition	Detail	Where Addressed
Schedule 4, Condition 3	<p>Revision of Strategies, Plans and Programs</p> <p>Within 3 months of:</p> <ul style="list-style-type: none"> (a) submission of an incident report under condition 8 below; (b) submission of an annual review under condition 10 below; (c) submission of an audit under condition 11 below; and (d) any modification to the conditions of this consent (with the exception of MOD 5); <p>the Applicant must review, and if necessary revise, the strategies, plans, and programs required under this consent to the satisfaction of the Planning Secretary.</p> <p>The Applicant must publish on its website any revised document resulting from these reviews within 30 days of the Secretary's approval of the document.</p> <p><i>Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development.</i></p>	Section 6
Schedule 4, Condition 5	<p>Incident Reporting</p> <p>The Applicant must immediately notify the Department and any other relevant agencies immediately after it becomes aware of an incident. The notification must be in writing via the Department's Major Projects Website and identify the development (including the development application number and name) and set out the location and nature of the incident.</p>	Section 5.2.1
Schedule 4, Condition 5A	<p>Non-Compliance Notification</p> <p>Within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non-compliance. The notification must be in writing via the Department's Major Projects Website and identify the development (including the development application number and name), set out the condition of this consent that the development is non-compliant with, why it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.</p> <p><i>Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.</i></p>	Section 5.2.1

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

Condition	Detail	Where Addressed
Schedule 4, Condition 9	<p>Access To Information</p> <p>From 30 September 2013, the Applicant must:</p> <p>(a) make copies of the following publicly available on its website:</p> <ul style="list-style-type: none"> • the EAs; • all current statutory approvals for the development; • all approved strategies, plans and programs required under the conditions of this consent; • a summary of the monitoring results of the development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent; • a complaints register, updated on a monthly basis; • minutes of CCC meetings; • the annual reviews (over the last 5 years); • any independent environmental audit, and the Applicant's response to the recommendations in any audit; • any other matter required by the Planning Secretary; and <p>(b) keep this information up-to-date, to the satisfaction of the Planning Secretary.</p>	Section 5.2.1

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan		
Document ID: ACO-ENVI-5020	Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4

Statement of Commitments

Table 11: ACP Modification Requirements

Item	Modification 7 - Air Quality Commitments	Where Addressed
2a	Site disturbance will be minimised as far as practicable.	Section 4.3.3B and 4.3.3C
2b	Vehicle access will be restricted to designated site access routes.	Section 4.3.3C
2c	A water cart will be used to suppress dust on access tracks and on well pad disturbance areas, where required.	Section 4.3.3C and 4.3.3H
2d	Disturbed areas not required for ongoing operations will be promptly rehabilitated.	Section 4.3.3B
2e	Mine related dust emissions will be monitored and managed to within acceptable criteria using real-time monitoring.	Section 4.3.3 and 4.4
Modification 9 - Air Quality Commitments		
3a	A water cart will be used to suppress dust on access tracks and on disturbed areas, where required.	Section 4.3.3B and 4.3.3C
3b	Disturbed areas not required for ongoing operations will be promptly rehabilitated	Section 4.3.3B
Modification 10 - Air Quality Commitments		
2a	Site disturbance will be minimised as far as practicably possible, including limiting vegetation clearing and soil disturbance and minimising the number and size of soil stockpiles.	Section 4.3.3B and 4.3.3H
2b	A water cart will be used to suppress dust on access tracks and on disturbance areas, particularly during dry and windy conditions.	Section 4.3.3C
2c	Disturbed areas not required for ongoing operations will be promptly rehabilitated.	Section 4.3.3B
2d	Vehicle speeds on unsealed tracks will be restricted to a level that minimises dust generation. Vehicle movements (such as delivery and movement of materials) will be coordinated to avoid unnecessary trips on unsealed access tracks.	Section 4.3.3C
2e	When a mobile gas plant is used on Macquarie Generation owned land or within 100 m of Property 130, Air sampling near non-ACOL owned land work areas will be implemented to measure methane levels.	Section 4.3.4B

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Appendix B – Consultation Records

Organistaion	Date	Fomat	Topic
Ashton Community Consultative Committee (ACCC)	9.07.2020	ACCC meeting https://www.ashtoncoal.com.au/page/sustainability/community/community-consultative-committee/ccc-meeting-minutes/2020-july-ccc-minutes/	AWGGMP
EPA	3.09.2019	Correspondence	EPL variation including Noise Assessment Groups
EPA	19.05.2022	Site Visit and Meeting	Proposed EPL variation to incorporate RUM
CCC	2.12.2021 24.02.2022 23.06.2022	ACCC Meeting https://www.ashtoncoal.com.au/page/sustainability/community/community-consultative-committee/ccc-meeting-minutes/	Ashton-RUM Integration Project

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	

Department of Planning and Environment



Our ref: DA309-11-2001-I-PA-21

Phillip Brown
Environment & Community Relations Superintendent
Ashton Coal Operations Pty Limited
Level 18, 201 Sussex Street
Sydney, NSW, 2000

20/04/2023

Subject: Ashton Mine Complex (DA309-11-2001-I) - Air Quality and Greenhouse Gas Management Plan

Dear Mr. Brown,

I refer to your request for review and approval of the Air Quality and Greenhouse Gas Management Plan for the Ashton Mine Complex (DA309-11-2001-I).

The Department has carefully reviewed the document and is satisfied that it generally meets the requirements of the relevant conditions of approval.

Accordingly, as nominee of the Planning Secretary, I approve the Air Quality and Greenhouse Gas Management Plan (Revision H, dated October 2022) under Schedule 3, Condition 17.

Please ensure you make the document publicly available on the project website at the earliest convenience.

If you wish to discuss the matter further, please contact Scotney Moore, on 02 9274 6342.

Yours sincerely



Wayne Jones
Team Leader - Post Approval
Resource Assessments

As nominee of the Planning Secretary

APPROVED DOCUMENT IS UNCONTROLLED WHEN PRINTED

Title: Plan- Ashton Coal Operations Air Quality and Greenhouse Gas Management Plan			
Document ID: ACO-ENVI-5020		Owner: Phil Brown	
Last Review:	Next Review: 17/05/2026	Revision Number: 4	