

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

INTEGRATED STATE SIGNIFICANT DEVELOPMENT

DETERMINATION OF DEVELOPMENT APPLICATION PURSUANT TO SECTIONS 76(A)9 & 80

I, the Minister for Urban Affairs and Planning, pursuant to Sections 76(A)9 & 80 of the Environmental Planning and Assessment Act, 1979 ("the Act") determine the development application ("the application") referred to in Schedule 1 by granting consent to the application subject to the conditions set out in Schedule 2.

The reasons for the imposition of the conditions are to:

- (i) minimise the adverse impact the development may cause through water and air pollution, noise, visual disturbance and subsidence effects;
- (ii) provide for environmental monitoring and reporting; and
- (iii) set requirements for mine infrastructure provision.

Andrew Refshauge MP
Minister for Urban Affairs and Planning,

Sydney,

28 August

2001

File No. N99/00230

Schedule 1

- Application made by:** Dartbrook Coal Pty Limited (ACN 007 377 577)
("the Applicant").
- To:** The Minister for Urban Affairs and Planning
(DA 231-07-2000)
- In respect of:** Land described in Appendix "1".
- For the following:** Extension to an underground coal mine and rejects
emplacement area, increase in coal production rate and
construction and operation of associated surface facilities ("the
Development").
- BCA Classification:** Class 5 - Administration building
Class 8 - Coal preparation plant building
Class 10(a) - Seam Access Slot, Ventilation Shafts
- Note:**
- 1) To ascertain the date upon which the consent becomes effective, refer to section 83 of the Act.
 - 2) To ascertain the date upon which the consent is liable to lapse, refer to section 95 of the Act.

SCHEDULE 2

Development Consent Conditions for the Dartbrook Extended Underground Coal Mine

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DEFINITIONS:

Agricultural Productivity – as defined by the Agricultural Suitability Classification System used by NSW Agriculture

Annual Review - The Annual Review required by Condition 9.2 (a)

Applicant - AQC Dartbrook Management Pty Ltd, or any person carrying out any development under this consent

Approved mine plan - The underground mine plan in Appendix 3

Built features - Includes any building or work erected or constructed on land, and includes dwellings and infrastructure such as any formed road, street, path, walk, or driveway; any pipeline, water, sewer, telephone, gas or other service main

Calendar year - A period of 12 months from 1 January to 31 December

CCC - Community Consultative Committee

CHPP – Coal Handling and Preparation Plant

Construction - All physical works to enable mining operations to be carried out, including demolition and removal of buildings or works, and erection of buildings and other infrastructure permitted by this consent

DA - Development Application

DA area - Development Application area which encompasses all surface and underground works on the site, as described in the documents referred to in Condition 1.1 (a)

Decommissioning - The deconstruction or demolition and removal of works installed as part of the development

Delivery shaft - *The coal delivery shaft to the Hunter Tunnel as described in the documents listed in Condition 1.1(a)(xi)*

Development - *The development described in the documents referred to in Condition 1.1 (a), as modified by the conditions of this consent*

East Site – *the CHPP complex (including coal stockpiles, rail loading facility, and rejects emplacement areas) to the east of the Hunter River and the New England Highway.*

EIS - *Environmental Impact Statement*

First workings – *Development of main headings, bord and pillar workings, longwall gate roads, related cut throughs and other in-seam workings for mine access and ventilation*

Environmental consequences - *The environmental consequences of subsidence impacts, including: damage to built features, loss of surface water flows to the subsurface, loss of standing pools, slope changes to streams, adverse water quality impacts, development of iron bacterial mats, cliff falls, rock falls, landslides, damage to Aboriginal heritage sites, impacts on aquatic ecology, and ponding*

Incident - *An occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance*

Kayuga Entry - *The mine entry to the Kayuga Seam located at the West Site*

Land - *Has the same meaning as the definition of the term in section 1.4 of the Environmental Planning & Assessment Act 1979, except for where the term is used in the noise and air quality conditions of this consent where it is defined to mean the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this consent*

Land capability – *Refers to the ability of a parcel of land to accept a type and intensity of use permanently, or for specified periods under specific management, without permanent damage.*

Material harm - *Is harm that involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, or results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment). This definition excludes “harm” that is authorised under either this consent or any other statutory approval*

Mining operations – *The carrying out of underground mining within the area covered by the approved mine plan, the extraction, processing, stockpiling and transportation of coal on the site and the emplacement of coarse/fine coal reject material resulting from underground mining on the site*

Mine water - *Water that accumulates within, or drains from, active mining and infrastructure areas and any other areas where runoff may have come into contact with carbonaceous material*

Minor - *Not very large, important or serious*

Mitigation - *Activities associated with reducing the impacts of the development prior to or during the occurrence of those impacts occurring*

Modification 7 - *The modification to the development as described in the documents referred to in Condition 1.1 (a)(xi)*

MOP – *Mining Operations Plan*

Mtpa - *Million tonnes per annum*

Negligible - *Small and unimportant, such as to be not worth considering*

Non-compliance - *An occurrence, set of circumstances or development that is a breach of this consent*

Privately-owned land - *Land that is not owned by a public agency or a mining, petroleum or extractive industry company (or its subsidiary)*

Public infrastructure - *Linear and related infrastructure that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas supply, electricity, telephone, telecommunications, etc*

Reasonable - *Means applying judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided and the nature and extent of potential improvements*

Recommencement - *Restarting construction or mining operations on the site after a period of care and maintenance*

Rehabilitation - *The restoration of land disturbed by the development to a good condition, to ensure it is safe, stable and non-polluting*

Remediation - *Activities associated with partially or fully repairing or rehabilitating the impacts of the development or controlling the environmental consequences of these impacts*

Residence - *Existing or approved dwelling at the date of grant of this consent*

ROM - *Run-of-Mine coal production*

Safe, serviceable and repairable criteria – *Category 3 to 5 for strain and/or category C or D for tilt, in accordance with Australian Standard AS2870-1996*

Second workings - *Extraction of coal from longwall panels and mini-wall panels*

Secretary - *Planning Secretary under the Environmental Planning and Assessment Act 1979, or nominee*

Site - *The land defined in Appendix 1 Schedule of Lands*

Subsidence - *The totality of subsidence effects, subsidence impacts and environmental consequences of subsidence impacts*

Subsidence effects - *Deformation of the ground mass due to mining, including all mining-induced ground movements, such as vertical and horizontal displacement, tilt, strain and curvature*

Subsidence impacts - *Physical changes to the ground and its surface caused by subsidence effects, including tensile and shear cracking of the rock mass, localised buckling of strata caused by valley closure and upsidence and surface depressions or troughs*

Surface facilities – *Associated surface facilities and infrastructure to facilitate mining operations*

West Site - *surface facilities to the west of the Hunter River and the New England Highway.*

Government Authorities

ARTC – Australian Rail Track Corporation

Department – NSW Department of Planning and Environment

DoI – NSW Department of Industry - Lands and Water

DRG – Division of Resources and Geoscience within the Department

DSC - Dams Safety Committee

EPA - Environment Protection Authority

MSC - Muswellbrook Shire Council

NSW Agriculture - New South Wales Agriculture

NSW Fisheries - New South Wales Fisheries

OEH – Office of Environment and Heritage

Resources Regulator – NSW Resources Regulator

RMS – NSW Roads and Maritime Services

SA NSW – Subsidence Advisory NSW

UHSC – Upper Hunter Shire Council

Red type represents June 2002 modification

Green type represents June 2003 modification

Blue type represents November 2003 modification

Orange type represents March 2004 modification

Pink type represents May 2005 modification

Brown represents November 2005 modification

Cyan type represents December 2018 modification

1. General

There is an obligation on the Applicant to prevent and minimise harm to the environment throughout the life of the project. This requires that all practicable measures are to be taken to prevent and minimise harm that may result from the construction, operation and, where relevant, decommissioning of the development.

1.1 Adherence to terms of DA, EIS, etc.

- (a) The development is to be carried out generally in accordance with Development Application No. 231-07-2000, and the EIS dated June 2000, prepared by HLA EnviroSciences Pty Ltd, and the following documentation:
- (i) ¹The following documents supplied to the EPA in relation to the development:
- Odour Analysis of Ventilation Air from the No.1 Ventilation Shaft at Dartbrook Mine, Office Memorandum, David Rollings, HLA Envirosciences Pty Ltd to Colin Phillips, HLA Envirosciences Pty Ltd, (dated 11th May 2000);
 - Laboratory Results from The Odour Unit Pty Ltd to HLA Envirosciences Pty Ltd, (dated 29th March 2000);
 - Stack Emissions Testing Dartbrook Coal Pty Ltd, Dartbrook, NSW, April 2000, dated 1st May 2000, prepared by HLA Envirosciences Pty Ltd on behalf of Dartbrook Coal Pty Ltd;
 - Analysis of Gaseous Discharges from Dartbrook Mine Operations and additionally, Ambient Air Samples from Selected Background Sites, Office Memorandum from Ken Ferguson/Dr Jim Orr, HLA Envirosciences Pty Ltd to Colin Phillips, HLA Envirosciences Pty Ltd, (dated 3 March 2000);
 - Dartbrook Ventilation Odour, Facsimile from Nigel Holmes, Holmes Air Sciences to Andrew Kerr, Shell Coal, (dated 28 September 2000);
- (ii) Additional information provided by the Applicant to the [OEH](#) in relation to archaeology and flora and fauna matters, during the assessment of DA 231-07-2000;
- (iii) Anglo Coal Dartbrook Extended Mine Project Commission of Inquiry, Primary Submission (Dartbrook Coal, dated March 2001);
- (iv) Anglo Coal Dartbrook Extended Mine Project Commission of Inquiry, Submission in Reply (Dartbrook Coal, dated May 2001); and
- (v) Dartbrook Underground Coal Mine Project Environmental Impact Statement, prepared by Envirosciences Pty Limited, November 1990;

¹ EPA General Terms of Approval

- (vi) Development Application No. 53-10-98, dated 12 October 1998, accompanying Statement of Environmental Effects dated October 1998 prepared by Dartbrook Coal Pty Limited and in accordance with the development consent to construct a 450ML Discharge Dam and Pipeline issued by the Minister of Urban Affairs and Planning to Dartbrook Coal Pty Limited on 5 March 1999;
 - (vii) The information titled '*Dartbrook Extended Coal Project Development Consent Modification Application Supporting Information*' prepared in support of a Section 96(1A) application for the Dartbrook Coal Mine, dated 27 May 2002, prepared by Hansen Consulting;
 - (viii) The information on the emergency tailings storage cell in the document titled "Dartbrook Extended Coal Project Development Consent Modification Application Supporting Information", dated 10 April 2003, prepared by Hansen Consulting;
 - (ix) The information titled "Dartbrook Coal Mine: Statement of Environmental Effects for Modification to Rejects Disposal System", dated 9 March 2004, prepared by Hansen Consulting;
 - (x) The information titled "Dartbrook Mine Statement of Environmental Effects for New ROM Coal Stockpiles, Underground Tailings Disposal & Nitrogen Injection Plant", dated 12 August 2005 and prepared by Hansen Consulting; and
 - (xi) The environmental assessment titled "*Dartbrook Mine Modification 7 Environmental Assessment Kayuga Seam Bord and Pillar Mining Operations*", dated June 2018 and prepared by Hansen Bailey Environmental Consultants, and the associated Response to Submissions titled "*Dartbrook Mine Modification 7 Response to Submissions*", dated August 2018 and prepared by Hansen Bailey Environmental Consultants, and the additional information dated 12 and 18 October 2018.
- (a1) The development must be carried out in compliance with the conditions of this consent.
 - (a2) The development must be carried out generally in accordance with the development layout in Appendix 2 and the approved mine plan in Appendix 3.
 - (a3) Consistent with the requirements in this consent, the Secretary may make written directions to the Applicant in relation to:
 - (i) the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this consent, including those that are required to be, and have been, approved by the Secretary; and
 - (ii) the implementation of any actions or measures contained in any such document referred to in Condition 1.1 (a).

If there is any inconsistency between the above, either the conditions of this consent or the most recent document shall prevail to the extent of the inconsistency.

- (b) In accordance with section 80A(5) of the Environmental Planning and Assessment Act 1979 and clause 97 of the Environmental Planning and Assessment Regulation 2000, the Applicant **must**, surrender to the Minister of Urban Affairs and Planning, the development consent for the Dartbrook Underground Mine (Authorisation 256) issued by the then Minister for Planning to Shell Company of Australia Ltd and Austen & Butta Limited and Bellambi Coal Company Pty Ltd and Dartbrook Coal Pty Limited on 2 December 1991, and the following development consents for Dartbrook Mine issued by the Minister for Planning or Muswellbrook Council by the **30 June 2005**, or such other later date agreed by the **Secretary**:
- (i) Amendment of a Development Consent (issued on 2 December 1991 by the Minister for Planning), dated 9 July 1997; and
 - (ii) Modification to a Development Consent (issued on 2 December 1991 by the Minister for Planning), dated 21 September 1999.

This consent will apply to all facilities and activities subject to these previous consents from the date they are relinquished.

- (c) If, at any time, the **Secretary** is aware of environmental impacts from the proposal that pose serious environmental concerns due to the failure of environmental management measures in place to ameliorate the impacts, the **Secretary** may order the Applicant to cease the activities causing those impacts until those concerns have been addressed to the satisfaction of the **Secretary**.
- (d) If any licence conditions are breached the applicant **must** comply with any modification to the work as specified by the relevant agency.

Note: Conditions of this consent relating to the matters of air quality, noise management and proponents obligations (Conditions 6.1, 6.4 and 11.2, 11.3 respectively) **must** prevail over the conditions related to these matters in the existing consents for Dartbrook Mine as listed under Condition 1.1(b).

1.2 Period of Approval/Project Commencement

- (a) **Mining operations may be carried out on the site until 5 December 2027.**

Note: Under this consent, the Applicant is required to decommission and rehabilitate the site and carry out other requirements in relation to mining operations. Consequently, this consent will continue to apply in all respects other than to permit the carrying out of mining operations until the rehabilitation of the site and other requirements have been carried out to the required standard.

- (b) At least two weeks prior to the commencement of construction and Mining Operations respectively or within such period as agreed by the **Secretary**, the Applicant **must** submit for the approval of the **Secretary** a compliance report detailing compliance with all the relevant conditions that apply prior to the commencement of construction and Mining Operations.

- (c) Date of commencement of construction and Mining Operations is to be notified in writing to the [Secretary, Resources Regulator](#), MSC and [UHSC](#) at least two weeks prior to commencement of construction and Mining Operations respectively.

1.3 Dispute Resolution

(Deleted)

1.4 Security Deposits and Bonds

Security deposits and bonds will be paid as required by [DRG](#) under mining lease approval conditions.

2. Mine Management

2.1 Mine Management Plan, Operations and Methods

- (a) No mining undertaken in accordance with this consent **must** occur until the Applicant has submitted and had accepted by the [DRG](#), a Mining Operations Plan (MOP) in accordance with current guidelines issued by [DRG](#). The Plan covers mining operations for a period of up to seven years.
- (b) The MOP **must**:
- (i) *(Deleted)*
 - (ii) demonstrate consistency with the conditions of this consent and any other statutory approvals;
 - (iii) demonstrate consistency with the Environmental Management Plans for the project site;
 - (iv) provide the basis for implementing mining operations, environmental management, and ongoing monitoring;
 - (v) include a mine rehabilitation and land use management plan **that**:
 - describes how the rehabilitation of the site would achieve the objectives identified in Table 3 (see Condition 3.7 (a));
 - include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site (including progressive rehabilitation), and triggering remedial action (if necessary); and
 - include a program to monitor and report on the effectiveness of the rehabilitation measures and progress against the detailed performance and completion criteria; and
 - (vi) identify a schedule of proposed mine development for the period covered by the plan and include:
 - the area proposed to be impacted by mining activity and resource recovery mining methods and remediation measures,
 - areas of environmental, heritage or archaeological sensitivity and mechanisms for appropriately minimising impact,
 - water management, and
 - proposals to appropriately minimise surface impacts.

- (c) In preparing the MOP, the Applicant **must** consult with affected service authorities and make arrangements satisfactory to those authorities for the protection or relocation of those services.
- (d) A copy of the MOP, excluding commercial in confidence information, **must** be forwarded to MSC, UHSC and the Secretary within 14 days of acceptance by DRG.
- (e) At least two years prior to the cessation of mining operations the Applicant **must** investigate, determine and report, taking account of the potential community benefits, on a final strategy for the future use of the mine site, weirs, dams and any other infrastructure in consultation with the Department, DoI, MSC and UHSC for approval of DRG and the Secretary.

2.2 Spontaneous Combustion

The Applicant must prepare, prior to the **recommencement** of mining operations, a Spontaneous Combustion Management Plan to the satisfaction of Resources Regulator. The plan must describe the measures to be implemented to prevent, detect and control spontaneous combustion.

2.3 Limits on Production or Hours of Operation

- (a) Run of Mine coal production **must** not exceed 6 Mtpa.
- (b) Heavy earth moving equipment **must** not operate on the rejects emplacement area, and coal rejects **must** not be hauled to the rejects replacement area, between the hours of 6.00pm and 7.00am, except in an emergency, and as agreed by the Secretary.
- (c) The haulage of coal between stockpiles and the CHPP within the East Site **must** be limited to the daytime period (7am-6pm Monday to Saturday and 8am-6pm on Sundays and Public Holidays) only.

Note: Road transport operating hours are further restricted by Conditions 7.2 (c) and (d).

3. Land and Site Environmental Management

3.1 Appointment of Environmental Officer

- (a) *(Deleted)*
- (b) *(Deleted)*

3.2 Environmental Management Strategies and Plans

- (a) Prior to the recommencement of mining operations, the Applicant must prepare an Environmental Management Strategy for the development.
- (b) This strategy must:
 - (i) provide the strategic framework for environmental management of the development;
 - (ii) identify the statutory approvals that apply to the development;
 - (iii) set out the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;

- (iv) set out the procedures to be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the development;
 - receive, record, handle and respond to complaints;
 - resolve any disputes that may arise during the course of the development;
 - respond to any non-compliance and any incident; and
 - respond to emergencies; and
 - (v) include:
 - references to any strategies, plans and programs approved under the conditions of this consent; and
 - a clear plan depicting all the monitoring to be carried out under the conditions of this consent.
- (c) *(Deleted)*
- (d) The Applicant **must** prepare the following environmental management plans:
- **Extraction Plans** (refer condition 3.3)
 - Archaeology and Cultural **Heritage** Management Plan (refer condition 3.4)
 - Flora and Fauna Management Plan (refer condition 3.5)
 - Erosion and Sediment Control Plan (refer condition 3.6(a))
 - Soil Stripping Management Plan (refer condition 3.6(c))
 - Landscape Management Plan (refer condition 3.8)
 - Bushfire Management Plan (refer condition 3.9)
 - Land Management Plan (refer condition 3.10(a))
 - Site Water Management Plan (refer condition 4.1)
 - **Flood Response Plan** (refer condition 4.3(a))
 - Waste Management Plan (refer condition 5.2(a))
 - **Air Quality and Greenhouse Gas Management Plan** (refer condition 6.1(f))
 - Blast Management Plan (refer condition 6.3(a))
 - Road Closure Management Plan (refer to condition 6.3(j))
 - Noise Management Plan (refer condition 6.4.2(a))
 - Lighting Management Plan (refer condition 6.5)
 - Vibration Management Plan (refer to condition 6.6(b))
- (e) The Applicant **must** implement the environmental management plans in Condition 3.2 (d) as approved by the Secretary.

Management Plan Requirements

- (f) Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:
- (i) a summary of relevant background or baseline data;
 - (ii) details of:
 - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - any relevant limits or performance measures and criteria; and

- 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;
- (iii) description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;
 - (iv) a program to monitor and report on the:
 - impacts and environmental performance of the development; and
 - effectiveness of the management measures set out pursuant to paragraph (iii);
 - (v) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;
 - (vi) a program to investigate and implement ways to improve the environmental performance of the development over time;
 - (vii) a protocol for managing and reporting any:
 - incident, non-compliance or exceedance of any impact assessment criterion or performance criterion);
 - complaint; or
 - failure to comply with other statutory requirements; and
 - (viii) a protocol for periodic review of the plan.

Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.

Evidence of Consultation

- (g) Where conditions of this consent require consultation with an identified party, the Applicant must:
 - (i) consult with the relevant party prior to submitting the subject document; and
 - (ii) provide details of the consultation undertaken including:
 - the outcome of that consultation, matters resolved and unresolved; and
 - details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.

Staging, Combining and Updating Strategies, Plans or Programs

- (h) With the approval of the Secretary, the Applicant may:
 - (i) prepare and submit any strategy, plan or program required by this consent on a staged basis (if a clear description is provided as to the specific stage and scope of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program);
 - (ii) 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);
 - (iii) update any strategy, plan or program required by this consent (to ensure the strategies, plans and programs required under this consent are updated on a regular

- basis and incorporate additional measures or amendments to improve the environmental performance of the development); and
- (iv) combine any strategy, plan or program required by this consent with any similar strategy, plan or program required by a consent or approval for an adjoining mine subject to common, shared or related ownership or management.
- (i) With the agreement of the Secretary, a strategy, plan or program may be staged or updated without consultation being undertaken with all parties required to be consulted in the relevant condition in this consent.

Revision of Strategies, Plans and Programs

- (j) Within three months of:
- (i) the notification of an incident under Condition 9.3 (a);
 - (ii) the submission of an Annual Review under Condition 9.2 (a);
 - (iii) the submission of an Independent Environmental Audit under Condition 8.1 (a); or
 - (iv) the approval of any modification of the conditions of this consent (unless the condition specifies otherwise),
- the suitability of existing strategies, plans and programs required under this consent must be reviewed by the Applicant.
- (k) If necessary, to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Secretary. Where revisions are required, the revised document must be submitted to the Secretary for approval within six weeks of the completion of the review in Condition 3.2 (j).

Note: This is to ensure strategies, plans and programs are updated on a regular basis and to incorporate any recommended measures to improve the environmental performance of the development.

Application of Existing Strategies, Plans or Programs

- (l) The Applicant must continue to apply existing management strategies, plans or monitoring programs approved prior to the approval of Modification 7, until the approval of a similar plan, strategy or program following the approval of Modification 7.

3.3 Extraction Plan

- (a) The Applicant must prepare an Extraction Plan for all second workings on the site to the satisfaction of the Secretary. Each Extraction Plan must:
- (i) be prepared by a suitably qualified and experienced person/s;
 - (ii) include detailed plans of existing and proposed first and second workings and overlying surface features, including any applicable adaptive management measures;
 - (iii) include adequate consideration of mine roof and floor conditions, pillar width to height ratio, final pillar design dimensions and the long-term stability of pillars which has been undertaken in consultation with the Resources Regulator;

- (iv) provide updated predictions of the potential subsidence effects, subsidence impacts and environmental consequences of the proposed mining covered by the Extraction Plan, incorporating any recently obtained information;
- (v) describe in detail the performance indicators to be implemented to ensure compliance with the performance measures in Table 1 and Table 2, and manage or remediate any impacts and/or environmental consequences to meet the rehabilitation objectives in Condition 3.7 (a);
- (vi) include a:
 - **Subsidence Monitoring Program** which has been prepared in consultation with the Resources Regulator to:
 - describe the ongoing conventional and non-conventional subsidence monitoring program;
 - provide data to assist with the management of risks associated with conventional and non-conventional subsidence;
 - validate the conventional and non-conventional subsidence predictions; and
 - analyse the relationship between the predicted and actual conventional and non-conventional subsidence effects and predicted and actual impacts under the plan and any ensuing environmental consequences;
 - **Built Features Management Plan** which has been prepared in consultation with the Resources Regulator, to manage the potential subsidence impacts of the proposed underground workings on built features (excluding mine-owned infrastructure), and which:
 - has been prepared in consultation with the owners of potentially affected features and has taken their views into account;
 - ensures that, with the consent of the owner, a pre-mining structural inspection is conducted of each structure and a report prepared on the structural integrity of all buildings in their entirety (including roofs, ceilings, openings, foundations and household sewage treatment and disposal systems);
 - addresses in appropriate detail all items of key public infrastructure (with particular consideration of transmission lines and towers (including angle towers), other public infrastructure and all classes of other built features);
 - recommends appropriate pre-mining mitigation measures to reduce environmental consequences and comply with the performance measures in Table 2;
 - recommends appropriate remedial measures and includes commitments to mitigate, repair, replace or compensate predicted impacts on potentially affected built features in a timely manner; and
 - in the case of all key public infrastructure, and other public infrastructure except roads, trails and associated structures, reports external auditing for compliance with ISO 31000 (or alternative standard agreed with the infrastructure owner), and provides for annual auditing of compliance and effectiveness during extraction which may impact the infrastructure;
 - **Water Management Plan** which has been prepared in consultation with EPA and DoI, which provides for the management of potential impacts and/or

environmental consequences of the proposed second workings on surface water and groundwater resources and flooding, including:

- surface and groundwater impact assessment criteria that build on the performance measures in Tables 1 and 4;
- a program to monitor and report on compliance with the surface and groundwater impact assessment criteria, including:
 - stream flows, quality and channel stability;
 - groundwater inflows to underground workings;
 - the height of groundwater depressurisation; and
 - groundwater levels, yield and quality, including for privately-owned bores, in the vicinity of the site; and
- a program to compare predicted impacts with actual impacts, including mapping of subsidence profiles;
- **Biodiversity Management Plan** which has been prepared in consultation with OEH, which provides for the management of potential impacts and/or environmental consequences of the proposed second workings on aquatic and terrestrial flora and fauna, with a specific focus on threatened species, populations and their habitats, endangered ecological communities and groundwater dependent ecosystems;
- **Land Management Plan** which has been prepared in consultation with any affected public authorities, which provides for the management of potential impacts and/or environmental consequences of the proposed second workings on land in general, with a specific focus on agricultural enterprises, cliffs, minor cliffs, rock face features and steep slopes;
- **Heritage Management Plan** which has been prepared in consultation with OEH and relevant stakeholders for heritage items, which provides for the management of potential impacts and/or environmental consequences of the proposed second workings on heritage items and includes all requirements under Condition 3.4;
- **Public Safety Management Plan** which has been prepared in consultation with the Resources Regulator to ensure public safety and manage access on the site;
- **Trigger Action Response Plan** to identify risks and specific follow up actions to avoid or remediate exceedances of the performance measures in Table 1 and Table 2; and
- **Contingency Plan** that expressly provides for adaptive management where monitoring indicates that there has been an exceedance of any performance measure in Table 1 and Table 2, or where any such exceedance appears likely.

Notes:

- *This condition does not apply to first or second workings which are covered by an Extraction Plan or Subsidence Management Plan approved, or submitted for approval, prior to the approval of Modification 7.*
- *In accordance with Condition 3.2 (i), the preparation and implementation of Extraction Plans may be staged, with each plan covering a defined area of underground workings. In addition, these plans are only required to contain management plans that are relevant to the specific underground methods that are being carried out.*

- (b) The Applicant must not undertake second workings until the relevant Extraction Plan is approved by the Secretary.

- (c) The Applicant must compensate landowners for compensable loss in accordance with the provisions of the Mining Act 1992 and/or the Coal Mine Subsidence Compensation Act 2017.

Performance Measures – Natural and Heritage Features

- (d) The Applicant must ensure that second workings do not cause any exceedances of the performance measures in Table 1.

Table 1: Subsidence impact performance measures – natural and heritage features etc

<i>Feature</i>	<i>Performance Measures</i>
<i>Watercourses</i>	
6 th Order Streams and their alluvium	<ul style="list-style-type: none"> Negligible subsidence impacts and environmental consequences
4 th and 5 th Order Streams and their alluvium	<ul style="list-style-type: none"> No subsidence impact or environmental consequence greater than minor No connective cracking between the surface, or the base of the alluvium, and the underground workings
1 st , 2 nd and 3 rd Order Streams	<ul style="list-style-type: none"> No subsidence impact or environmental consequence greater than predicted in the documents referred to in Condition 1.1 (a)
<i>Water Resources</i>	
Hunter Unregulated and Alluvial Water Sources	<ul style="list-style-type: none"> No greater environmental consequences greater than predicted in the documents referred to in Condition 1.1 (a) <i>or</i> as permitted under the performance measures for Watercourses (above)
<i>Biodiversity</i>	
Threatened species, threatened populations, or endangered ecological communities	<ul style="list-style-type: none"> Negligible environmental consequences
<i>Agriculture</i>	
Agricultural enterprises	<ul style="list-style-type: none"> Negligible loss in land capability or agricultural productivity
<i>Heritage sites</i>	
Aboriginal and Heritage sites	<ul style="list-style-type: none"> Negligible subsidence impacts or environmental consequences Negligible loss of heritage value

Notes:

- Streams are classified in accordance with the Strahler stream order system.*
- These performance measures apply to all mining taking place after the date of approval of Modification 7.*
- The Applicant will be required to define more detailed performance criteria for each of these performance measures in the various management plans that are required under this consent (see Condition 3.3(a)).*

- (e) Measurement and monitoring of compliance with performance measures and performance criteria in this consent is to be undertaken using generally accepted methods that are appropriate to the environment and circumstances in which the feature or characteristic is located. These methods are to be fully described in the relevant management plans and monitoring programs. In the event of a dispute over the appropriateness of proposed methods, the Secretary will be the final arbiter.

Additional Offsets

- (f) If the Applicant exceeds the performance measures in Table 1 and the Secretary determines that:
- (i) it is not reasonable or feasible to remediate the subsidence impact or environmental consequence; or
 - (ii) remediation measures implemented by the Applicant have failed to satisfactorily remediate the subsidence impact or environmental consequence,
- then the Applicant must provide a suitable offset to compensate for the subsidence impact or environmental consequence, to the satisfaction of the Secretary.

Performance Measures – Built Features

- (g) The Applicant must ensure that second workings meet the performance measures in Table 2.

Table 2: *Subsidence impact performance measures – built features*

<i>Feature</i>	<i>Performance Measures</i>
<i>Key Public Infrastructure</i>	
<ul style="list-style-type: none"> • Dartbrook and Dorset Roads • Main Northern Railway; and • Electricity transmission lines and towers 	<ul style="list-style-type: none"> • Always safe and serviceable • Damage that does not affect safety or serviceability must be fully repairable and must be fully repaired
<i>Other Infrastructure</i>	
<ul style="list-style-type: none"> • Electricity distribution lines, poles and associated towers; • Unsealed roads and road culverts, fire trails, fences and other built features; and • Other public infrastructure • Privately-owned residences • Other privately-owned built features and improvements, including farm dams, swimming pools, tennis courts, roads, tracks and fences 	<ul style="list-style-type: none"> • Always safe • Serviceability should be maintained wherever practicable • Loss of serviceability must be fully compensated • Damage must be fully repairable and must be fully repaired or else replaced or fully compensated
<i>Public safety</i>	
<ul style="list-style-type: none"> • Public Safety 	<ul style="list-style-type: none"> • Negligible additional risk.

Notes:

- *These performance measures apply to all mining taking place after the approval of Modification 7.*
 - *These performance measures do not apply to built features owned by the Applicant.*
 - *The Applicant will be required to define more detailed performance measures in the Built Features Management Plans or Public Safety Management Plan (see Condition 3.3(a)).*
 - *Requirements regarding safety or serviceability do not prevent preventative or mitigatory actions being taken prior to or during mining in order to achieve or maintain these outcomes.*
 - *Requirements under this condition may be met by measures undertaken in accordance with the Coal Mine Subsidence Compensation Act 2017.*
- (h) Any dispute between the Applicant and the owner of any built feature over the interpretation, application or implementation of the performance measures in Table 2 is

to be settled by the Secretary, following consultation with the Resources Regulator. Any decision by the Secretary shall be final.

First Workings

- (i) The Applicant may carry out first workings within the approved mine plan, other than in accordance with an approved Extraction Plan, provided that the Resources Regulator is satisfied that the first workings are designed to remain stable and non-subsiding in the long-term, except insofar as they may be impacted by approved second workings.

Note: The intent of this condition is not to require an additional approval for first workings, but to ensure that first workings are built to geotechnical and engineering standards sufficient to ensure long-term stability, with negligible resulting direct subsidence impacts.

Bord and Pillar Mining

- (j) Prior to undertaking bord and pillar extraction of the Kayuga Seam above previously extracted Wynn Seam longwall panels (see the area identified in Figure 8 of Appendix 3 as the 'Geotechnical Investigation Area'), the Applicant must prepare and submit to the Secretary for approval, a geotechnical study. This study must:
 - (i) be undertaken in consultation with the Resources Regulator; and
 - (ii) describe the final pillar design including pillar width to height ratio, final pillar design dimensions and long-term pillar stability predictions.

3.4 Heritage Assessment, Management and Monitoring

Assessment and Management

The Applicant **must** prior to the **recommencement** of construction or Mining Operations:

- (a) prepare an Archaeology and Cultural **Heritage** Management Plan to address Aboriginal and European cultural heritage issues. The Plan **must** be prepared in consultation with **local Aboriginal stakeholders** including the Upper Hunter Wonnarua Tribal Council, Wannaruah Local Aboriginal Land Council and **OEH in accordance with the Aboriginal Cultural Heritage Consultation Requirements for proponents (2010)**, and to the satisfaction of the **Secretary**. The Plan **must** include but not be limited to:
 - (i) provision of management strategies for known Aboriginal heritage sites for all parts of the DA area not affected by mining, **including protecting extant sites MAC 15 and KAY 4**;
 - (ii) identification of any future salvage, excavation and monitoring programs for any known heritage/archaeological sites within the DA area, prior to and during construction;
 - (iii) set out management procedures and protocols for issues relating to Aboriginal heritage for all stages of the development (induction of employees on archaeological and heritage issues; training of field crews, **Aboriginal stakeholders** participation; staging of works; salvage etc);
 - (iv) details of a program for salvaging known Aboriginal sites;

- (iv1) an unanticipated finds protocol to manage the discovery of any unrecorded Aboriginal heritage sites;
 - (v) details of consultation undertaken with Aboriginal stakeholders in the preparation of this Plan;
 - (vi) details of the measures to fully document, in accordance with the NSW Heritage Council guidelines, any non-indigenous heritage sites that will be required to be removed as a result of the development;
 - (vii) details of proposed monitoring that will be undertaken in the areas adjacent to the non-indigenous heritage sites identified within the DA area during their excavation and removal, to identify any further cultural material that may exist;
 - (viii) details of the methods to dispose of the excavated non-indigenous heritage sites in a manner approved by the NSW Heritage Council, and following consultation with MSC and the Muswellbrook and Upper Hunter Historical Society;
 - (ix) details of how public access to the Kayuga Cemetery **must** be maintained at all times; and
 - (x) details of the measures to mitigate any potential impacts resulting from the mine on the heritage homesteads Old Kayuga, New Kayuga, Riverview, the McIntyre family cemetery, Kayuga Cemetery and the Kayuga Estate and details of any maintenance procedures proposed to preserve their heritage value in accordance with the NSW Heritage Council requirements.
- (b) Within six months of the commencement of construction or Mining Operations, the Applicant **must** make a \$50,000 contribution towards the establishment of a trust fund set up by the Department of Urban Affairs and Planning through the Public Trustee. The funds are to be used for a regional study of Aboriginal sites and other cultural heritage projects as defined by the Trust Deed.
- (c) If, during the course of construction of any surface facilities or mining activities, the Applicant becomes aware of any heritage or archaeological sites not previously identified, all work likely to affect the site **must** cease immediately and the relevant authorities consulted about an appropriate course of action prior to recommencement of work. The relevant authorities may include OEH, the NSW Heritage Office, the Upper Hunter Wonnarua Tribal Council and Wannaruah Local Aboriginal Land Council. Any necessary permits or consents **must** be obtained and complied with prior to recommencement of work.
- (d) The Applicant is to consult regularly with Aboriginal stakeholders. The results of these consultations **must** be documented in the Annual Review.
- (e) Any proposed works that will affect non-indigenous heritage items, (including the items listed in Section 3.9.2 of the EIS) including demolition of the items, will require an approval under section 139 of the *Heritage Act 1977* and an application for an

excavation permit under section 140 of the *Heritage Act 1977* to disturb the relics will be required. This may also require additional approvals from [MSC](#) if the items are listed on the Heritage Schedule of the Local Environmental Plan.

- (f) The Applicant **must** engage an appropriately qualified person to prepare an oral history of the mining lease prior to the dispersal of local residents. This will include an investigation of:
- all buildings and sites within the lease area;
 - areas that will be affected by the mine;
 - the former Dartbrook authorisation area; and
 - the Kayuga cemetery.

The investigation will be carried out in consultation with a member of the Muswellbrook and Upper Hunter Historical Society, who is to be allowed reasonable access to the Applicant's properties for the purposes of assessing European archaeological features. The report **must** be made available to the Muswellbrook and Upper Hunter Historical Society, [MSC](#) and the [Secretary](#).

Monitoring

- (g) The Applicant **must** monitor the effectiveness of the measures outlined in the Archaeology and Cultural [Heritage](#) Management Plan [Condition 3.4(a)]. A summary of monitoring results **must** be included in the [Annual Review](#).
- (h) The Applicant **must** prepare a monitoring program of known indigenous heritage sites identified within the DA area, during the period of construction and mining operations. The monitoring program **must** be included in the Archaeology and Cultural Heritage Management Plan (Condition 3.4 (a)) and a summary of results will be included in the [Annual Review](#). The program **must**:
- ²monitor all known archaeological sites 12 months after undermining for the effects of subsidence and report on the results of these inspections in the Archaeology and Cultural Heritage Management Plan;
 - ³monitor the construction of sediment and erosion control works to identify new archaeology sites;
 - ⁴monitor locations in the subsidence area in order to assess the impacts of subsidence on the land surface, in areas that the Applicant has identified as being potentially affected by the following processes:
 - erosion;
 - rilling;
 - knickpoint initiation; and
 - areas prone to pooling.

Note	No Aboriginal archaeological sites, that have been identified, shall be destroyed without the approval of the OEH , under section 90 of the <i>National Parks and</i>
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² [OEH](#) General Terms of Approval

³ [OEH](#) General Terms of Approval

⁴ [OEH](#) General Terms of Approval

Wildlife Act 1974, prior to any disturbance of the identified sites by Construction or Mining Operations.

3.5 Flora and Fauna Assessment, Management and Monitoring

Assessment and Management

- (a) The Applicant **must** prior to **recommencement** of construction or Mining Operations prepare and implement a Flora and Fauna Management Plan for the management of flora and fauna issues for the DA area. The Plan is specifically required to outline procedures for clearing or disturbing vegetation and other habitat types, along with measures for habitat reinstatement and management.

The Plan **must** be prepared in consultation with **OEH** and to the satisfaction of the **Secretary**. The Plan **must** be prepared by an appropriately qualified and experienced ecologist. The ecologist **must** be responsible for providing advice to minimise potential impacts upon threatened and protected fauna species that may utilise the site and to provide expert advice on the regeneration and reconstruction of flora and fauna habitat on mined areas. The Plan **must** include but not be limited to:

- (i) details of strategic vegetation management, outlining timeframes for clearing and re-vegetation activities and a map illustrating the Plan. The Plan should aim to maximise scope for new vegetation to establish and restore ecological integrity;
 - (ii) details of the schedule for clearing activities incorporating seasonal habitat requirements for species such as bats and other mammals, with the objective of avoiding incidents during sensitive hibernation and breeding periods;
 - (iii) details of methods of how medium to large tree hollows (defined as being greater than 20 centimetres in diameter) and nests removed during construction are salvaged and replaced in adjacent vegetation; and
 - (iv) details of management measures to be applied if threatened species identified in the EIS are found on site.
- (b) If threatened species, not identified in the EIS, are identified on the site during construction or operation of the coal mine, the Applicant **must** cease any work immediately which could adversely impact on the species, pending investigation and negotiation of ameliorative measures. The Applicant **must** advise the **OEH** and engage a suitable qualified person to investigate, and identify appropriate amelioration measures.
- (c) The Applicant **must** ensure that the construction and operation of ventilation shafts **must** not require the clearing of trees, where practicable.
- (e) The Applicant **must** ensure that any vegetated areas cleared for construction purposes and not utilised in the Mining Operations are restored at least to its original condition.
- (f) The Applicant **must** use locally endemic species for revegetation purposes.

- (g) The Applicant **must** during the life of the mine and until the revegetated areas are established to the satisfaction of the **Resources Regulator**, maintain revegetated areas. Maintenance **must** include, where necessary, but not be limited to:
- replanting failed or unsatisfactory areas
 - repairing erosion problems
 - fire management – fire suppression or fire encouragement
 - pest and weed control
 - control of feral animal populations
 - maintain and repair fencing
 - fertiliser application
 - application of lime or gypsum to control pH and improve soil structure.
- (h) As well as the requirements under subclause (g), the efforts and progress of the Flora and Fauna Management Plan **must** be documented in the **Annual Review**.
- (i) Measures to control invasion of weeds as a result of construction activities **must** be addressed and managed.
- (j) The Applicant **must** not clear vegetation in advance of the immediate area required for use during construction or operation of the rejects emplacement area.

Monitoring

- (k) The restoration works **must** be monitored. The results of the monitoring and the effectiveness of the restoration **must** be reported as part of the **Annual Review**.
- (l) The Applicant **must** prepare a detailed monitoring program for habitat areas within the DA area, including any wetlands and aquatic habitats, during the development and for a period after the completion of the development to be determined by the **Secretary** in consultation with **OEH**. The monitoring program **must** be included in the Flora and Fauna Management Plan (Condition 3.5(a)) and a summary of the results **must** be provided in the **Annual Review**. The program **must**:
- (i) monitor impacts attributable to the development and include monitoring of the success of any restoration or reconstruction works. The Applicant **must** carry out any further works required by the **Secretary** and **Resources Regulator** as a result of the monitoring;
 - (ii) establish an ongoing monitoring program of the existing and proposed revegetated areas to assess their floristics and structure and to propose contingency measures for improvements to revegetation if required; and
 - (iii) establish an ongoing monitoring program in the rejects emplacement area, of fauna species diversity and abundance and the effectiveness of reconstructed ecosystems in providing fauna habitat and contingency measures should impacts be identified as occurring.

Note: The information obtained from the monitoring **must** be used to guide future revegetation efforts on the mine site.

3.6 Prevention of Soil Erosion

- (a) The Applicant must, prior to the recommencement of construction or mining operations, prepare an Erosion and Sediment Control Plan for construction and ongoing use of surface facilities to the satisfaction of the Secretary.
- (b) The Erosion and Sediment Control Plan must include but not be limited to:
- (i) details of temporary and permanent erosion and sediment control systems to be used during both construction and/or the expansion of the rejects emplacement area, including earthworks associated with landscaping;
 - (ii) details of soil salinity management where relevant;
 - (iii) ⁵measures that will be employed to minimise soil erosion and the discharge of sediment and other pollutants to lands and/or waters during construction and/or the expansion of the rejects emplacement area. The Plan should be prepared in accordance with the requirements for such plans outlined in *Managing Urban Stormwater: Soils and Construction* (available from the Department of Housing) or its latest version;
 - (iv) the consideration of the location and purpose of structures in the erosion and sediment control plan to maximise similarities between pre-development and post-development drainage networks with reference to catchment areas, drainage densities and discharge characteristics;
 - (v) consideration and management of erosion and sedimentation of affected surface watercourses/waterbodies, including creeklines within the DA areas;
 - (vi) measures to construct banks, channels and similar works to divert stormwater away from disturbed and contaminated land surfaces such as mine workings, coal handling areas and wastewater treatment facilities. All diversion banks, channels and points of discharge must be constructed or stabilised so as to minimise erosion and scouring; and
 - (vii) a program for reporting on the effectiveness of the erosion and sediment control systems.
- (c) The Applicant must also prepare a Soil Stripping Management Plan for the expansion of the rejects emplacement area, prior to the commencement of construction of the reject emplacement area, to the requirements of Resources Regulator and DoI that must include, but not be limited to:
- (i) details to ensure the maximum retrieval of suitable topdressing material and appropriate management of topsoil stockpiles including immediate revegetation to protect from soil erosion and to control potential weed problems;
 - (ii) details of the management of soil stockpiles, soil stripping techniques

⁵ EPA General Terms of Approval

and scheduling;

- (iii) control of weed infestation on topsoil stockpile material;
 - (iii) details of estimated quantities of suitable topdressing material required for subsequent respreading on rehabilitated land; and
 - (iv) a program for reporting on the effectiveness of the soil stripping methods and performance against objectives contained in the soil stripping management plan, and [the documents referred to in Condition 1.1 \(a\)](#).
- (d) The company is to re-establish a post-mining drainage system which is comparable to the drainage density and discharge characteristics of the pre-mining land for each affected drainage line discharging from the area of the mining development. The design and implementation of the post-mining drainage system is to be prepared prior to the cessation of mining and to the satisfaction of [DoI](#).
- (e) The Applicant [must](#) install a flexible drop structure in Sandy Creek or its tributaries and undertake such other measures as required by [DoI](#) when headward erosion of the creek bed becomes evident.
- (f) The Applicant [must](#) implement soil erosion mitigation measures at ventilation shafts to the satisfaction of [DoI](#), including a sedimentation structure to collect runoff from disturbed areas.

3.7 Site Rehabilitation Management

- (a) [The Applicant must rehabilitate the site to the satisfaction of Resources Regulator. This rehabilitation must be generally consistent with the proposed rehabilitation activities described in the documents referred to in Condition 1.1 \(a\) and comply with the objectives in Table 3.](#)

Table 3: *Rehabilitation objectives*

<i>Feature</i>	<i>Objective</i>
All areas of the site affected by the development	<ul style="list-style-type: none"> • Safe, stable and non-polluting • Fit for the intended post-mining land use/s
Areas proposed for native ecosystem re-establishment	<ul style="list-style-type: none"> • Establish self-sustaining ecosystems comprising flora species selected to re-establish and complement local and regional biodiversity
Areas proposed for agricultural or pastoral use	<ul style="list-style-type: none"> • Nominated land capability classification is achieved and is self-sustaining
Final Landform	<ul style="list-style-type: none"> • Consistent with surrounding topography to minimise visual impacts • Incorporate relief patterns and design principles consistent with natural drainage
Rehabilitation materials	<ul style="list-style-type: none"> • Soil and vegetative materials from areas disturbed under this consent (including topsoils, substrates and seeds) are recovered, managed and used as rehabilitation resources
Surface infrastructure of the development	<ul style="list-style-type: none"> • Decommissioned and removed, unless the Resources Regulator agrees otherwise

<i>Feature</i>	<i>Objective</i>
	<ul style="list-style-type: none"> All surface infrastructure sites are to be revegetated consistent with the post-mining land use
Portals and vent shafts of the development	<ul style="list-style-type: none"> To be decommissioned and made safe and stable Retain habitat for threatened species (e.g. bats), where practicable
Watercourses subject to mine water discharges and/or subsidence impacts or environmental consequences that are greater than negligible	<ul style="list-style-type: none"> Hydraulically and geomorphologically stable Aquatic ecology and riparian vegetation that is the same or better than prior to grant of this consent
Water quality	<ul style="list-style-type: none"> Water retained on the site is fit for the intended post-mining land use/s Water management is consistent with the regional catchment management strategy
Built features damaged by mining operations	<ul style="list-style-type: none"> Repair to pre-mining condition or equivalent unless the: <ul style="list-style-type: none"> owner agrees otherwise; or damage is fully restored, repaired or compensated for under the <i>Coal Mine Subsidence Compensation Act 2017</i>
Cliffs, minor cliffs, rock face features and steep slopes	<ul style="list-style-type: none"> No additional risk to public safety compared to prior to mining
Community	<ul style="list-style-type: none"> Ensure public safety Minimise adverse socio-economic effects associated with mine closure

Notes:

- These rehabilitation objectives apply to all subsidence impacts and environmental consequences caused by all underground mining as part of the development and to all surface infrastructure components of the development.
- Where remediation of watercourses is likely to cause environmental consequences greater than those that require rehabilitation, alternative equivalent works may be undertaken within the affected watercourse.

- (b) The Applicant must rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable steps must be taken to minimise the total area exposed at any time. Interim stabilisation and temporary vegetation strategies must be employed when areas prone to dust generation, soil erosion and weed incursion cannot be permanently rehabilitated.

Note: It is accepted that some parts of the site that are progressively rehabilitated may be subject to further disturbance at some later stage of the development.

3.8 Visual Amenity and Landscaping

- (a) A Landscape Management Plan **must** be prepared by the Applicant and approved by the Secretary prior to **recommencement** of construction. The Plan **must** be prepared in consultation with Resources Regulator, MSC and UHSC. In preparation of the plan, regard **must** be given to the Aberdeen Sheet of the *Synoptic Plan: Integrated Landscapes for Coal Mine Rehabilitation in the Hunter Valley of NSW*. The Landscape Management Plan **must** be appended to the Mining Operations Plan (Condition 2.1) and **must** include, but not be limited to, the following:

- i) An on-site landscaping strategy detailing design and proposed planting of trees and shrubs and/or the construction of mounding or bunding:
 - 1) adjacent to the Dam and Ventilation Shaft No.1 where screening of new infrastructure is required from Dartbrook Road.
 - 2) screening of new infrastructure, where required, from other public roads including Kayuga, and Dartbrook and Coal Creek Roads;
 - 3) around the [Kayuga Entry](#) to reduce lighting effects;
 - 4) in areas of the eastern facilities site where replanting of existing screening is required. This **must** include, where necessary, the construction of a suitably screened bund wall on the northern and southern ends of the CHPP to reduce visual effects on nearby residences at Aberdeen and nearby rural properties;
 - 5) as part of the rehabilitation of the Rejects Emplacement Area;
 - 6) along sections of the new access road to the mine site;
 - 7) along sections of the New England Highway; and
 - 8) at any other areas identified as necessary by [MSC](#) or [UHSC](#) for the maintenance of satisfactory visual amenity, and as agreed by the [Secretary](#).
- ii) Appropriate erosion control and sediment control practices for earthworks associated with the landscaping.
- iii) **Details of visual appearance of new buildings, structures, facilities or works (including paint colours, screenings and specifications). New buildings and structures (including the Nitrogen Injection Plant) **must** be designed and constructed so as to present a neat and orderly appearance and to blend as far as practicable with the surrounding landscape.**
- iv) Details, specifications and staged work programs to be undertaken, maintenance and monitoring of all landscape works and maintenance of building materials and cladding.
- v) Details of a monitoring program to assess the effectiveness of visual impact mitigation measures. The program will be developed in consultation with [MSC](#) and [UHSC](#) and be prepared to the satisfaction of the [Secretary](#);
- vi) Reporting of monitoring results in the [Annual Review](#) and to [MSC](#), [UHSC](#) and the [CCC](#). Monitoring results would specifically identify any remedial works required;
- vii) Details of contingency measures to be applied in the case that proposed visual mitigation measures are not successful;
- viii) the process of incorporating vegetation screening and fauna protection corridors into the proposed visual and landscaping works, where practicable;
- ix) use of indigenous species;
- x) details of predicted visual impacts from the proposed rejects emplacement area on residences not owned by the Applicant, [UHSC](#) land and Aberdeen. The predicted visual impacts **must** be in the form of a montage and transects showing clear sightlines from the viewer to the proposed rejects emplacement area;
- xi) details of an off-site landscape strategy which will detail proposed off-site mitigation measures and include the:
 - 1) identification of those properties to be offered off-site visual enhancement works, in accordance with predicted adverse visual impacts;
 - 2) details of consultation with the relevant landowners; and

- 3) details of the procedure to be followed to design and implement appropriate off-site vegetation screening if requested by landowners identified under 1 above; and
 - xii) consideration of the visual impact and adequacy of associated mitigating measures on the Aberdeen property of UHSC, with recommendations for any additional measures including consideration of buffer land, as applicable. This consideration **must** be undertaken by an independent qualified person(s) appointed by the Secretary, in consultation with UHSC and Applicant, and paid for by the Applicant.
- (b) In the event that a landowner other than those identified in subclause (a)(xi) above, considers that his/her residence is visually impacted by the proposal, greater than predicted in the Landscape Management Plan once the proposal is operational, the Applicant **must**, upon the receipt of a written request, consult the landowner, discuss their concerns and, if necessary, possible mitigation.
 - (c) Should the Applicant and/or landowner dispute the level of adverse impact or any proposed mitigation measures from subclause (a)(xi) or (b) above, then either party may refer the matter to the Secretary in consultation with MSC and/or UHSC.
 - (d) Notwithstanding subclauses (b) and (c) above, the Applicant **must** fund and undertake an independent review of the visual impact of the proposed rejects emplacement area on UHSC's land, every five years from the commencement of mining operations, unless otherwise agreed by the Secretary. The independent review **must** be undertaken by an independent Landscape Expert appointed by the Secretary in consultation with UHSC and the Applicant. The independent Landscape Expert **must** determine whether the actual visual impact of the rejects emplacement area on UHSC's land is greater than that predicted in the Landscape Management Plan. If the independent Landscape Expert determines that the impact on UHSC's land is greater than that predicted in the Landscape Management Plan, the independent Landscape Expert **must** make recommendations to mitigate the impact.
 - (e) If either party disputes the determination and recommendations of the independent Landscape Expert in subclause (d) above, either party may refer the matter to the Secretary for final determination.

3.9 Bushfire and other Fire Controls

The Applicant **must**:

- (a) provide adequate fire protection works, fire fighting equipment and hazard reduction measures with particular attention to boundaries of adjoining landholdings;
- (b) submit an annual report on fire management activities to the Muswellbrook Fire Management Committee;
- (b1) ensure all flammable materials are stored and handled in accordance with its Material Data Safety Sheets and relevant Australian Standard;
- (b2) include fire safety as part of mine safety inductions for employees and contractors; and

- (c) prepare a Bushfire Management Plan for all its holdings contained in the DA area, prior to commencement of mining operations, to the satisfaction of **MSC**, **UHSC** and the Rural Fire Service.

3.10 Land Management

- (a) The Applicant **must**, prior to commencement of construction or Mining Operations update the current Dartbrook Mine Land Management Plan for the areas of the proposed surface facilities, and its holdings in the DA area, to provide for proper land management in consultation with **DoI**, **MSC**, and to the satisfaction of the **Secretary**. The plan **must** include, but not be limited to:
 - (i) pastures and remnant vegetation management;
 - (ii) prevention and rehabilitation of land degradation;
 - (iv) assessment of the potential for commercial harvesting of standing timber removed from the site;
 - (v) eradication of vermin and noxious weeds as required by the Rural Lands Protection Board, the Upper Hunter Weeds Authority, the Prickly Pear Authority and other relevant authorities; and,
 - (vi) feral animal control.
- (b) The Applicant **must** minimise the removal of trees and other vegetation from the proposed surface facilities area, and restrict any clearance to the areas occupied by mine activity, buildings and paved surfaces, and those areas necessary for fire control in accordance with **MSC** requirements.
- (c) The Applicant **must** ensure that the agricultural capability of lands under its control within the mining lease area are at a level not less than the level at the date of this consent.
- (d) The Applicant **must** maintain a minimum 50 metre wide buffer strip between the southern rejects emplacement area and the adjacent land owned by Mr and Mrs L Wilkinson. Surface drains and an access road may be constructed within the 50 metre wide strip.

4. Water Management and Monitoring

4.1 Surface & Ground Water Management Plans

The Applicant **must**:

- (a) prior to the **recommencement** of Mining Operations, prepare a Site Water Management Plan for the DA area, in consultation with **DoI**, **MSC** and to the satisfaction of the **Secretary**, which **must** include, but not be limited to, the following matters:
 - (i) management of the quality and quantity of surface and groundwater **to comply with the water performance measures in Table 4, including:**
 - 1) **surface and groundwater impact assessment criteria; and**

- 2) a description of the water management system and water balance;
- (ii) management of stormwater and general surface runoff diversion to ensure separate effective management of clean and mine water; including details of temporary surface drainage works to minimise the flow of surface water onto the rejects emplacement area and details of drainage works to direct runoff from the active rejects emplacement areas to onsite storage dams;
 - (iii) measures to prevent the degradation of downstream surface water quality below the pre-mining ANZECC beneficial water use classification due to mining operations, particularly in the Hunter River;
 - (iv) measures to determine whether any groundwater from the Hunter River alluvium aquifers is captured by the mine including a response plan in the event that monitoring shows evidence of a dilution of salinity or change in water chemistry, or increase in inflow rate that may indicate leakage from the alluvium to the Hunter Tunnel;
 - (v) measures to be implemented in the event that the continued operation of the Hunter Tunnel leads to a significant increase in groundwater salinity in the alluvial aquifer system;
 - (vi) contingency plans for managing adverse impacts of the development on surface and groundwater quality which **must** include:
 - 1) contingency arrangements to manage excess saline water if the storage of the mine water management system is exceeded; and
 - 2) contingency measures to manage any impacts identified by monitoring that the management strategies have failed to predict or control, particularly relating to groundwaters associated with the alluvial aquifer of the Hunter River, in consultation with DoI.
 - (vii) *(Deleted)*
 - (viii) measures to ensure that waters of poorer quality are effectively segregated and reused on the site.
 - (ix) details of a strategy for the decommissioning of water management structures, including mine water dams and clean water diversion dams;
 - (x) measures to isolate heavily contaminated waters, including waters containing oil and grease, or other pollutants, operation chemical residues or other criteria, to avoid mixing with reuse or discharge waters;
 - (xi) measures for assessing chemical water quality impacts of the mining operation above and below the mine site;
 - (xii) projection of potential groundwater changes during mining (short term) and post-mining (long term) with particular attention given to the affect of changes to groundwater quality and mobilisation of salts including downgradient of the rejects emplacement area;

- (xiii) details of consultation with landholders who use water from the proposed longwall mining area and adjacent area and those parts of Dart Brook and Sandy Creek alluvia immediately adjacent to the mining areas, in relation to their requirements for and the availability of, water and **must** consider those water uses in the formulation of the management plan;
 - (xiv) details of a surface water and groundwater monitoring program (refer to clause 4.2(a)(ii); and
 - (xv) a program for reporting on the effectiveness of the water management systems and performance against objectives contained in the approved site water management plans, and EIS.
- (b) The Applicant **must** undertake annual assessments of the accuracy of the groundwater model predictions outlined in the EIS compared with monitored groundwater impacts in consultation with **DoI**. Details of the assessments **must** be reported in the **Annual Review** and the scope of the assessment **must** be determined in consultation with **DoI**. Should the assessment identify significant differences between the EIS model predictions and monitored impacts, the Applicant **must** revise the assessment of the potential impacts on groundwater systems in consultation with **DoI** and implement any further mitigation measures in consultation with **DoI**.
- (b1) The Applicant **must** comply with the performance measures in Table 4.

Table 4: *Water management performance measures*

<i>Feature</i>	<i>Performance Measure</i>
Water management – General	<ul style="list-style-type: none"> • Maintain separation between clean and mine water management systems • Minimise the use of clean and potable water on the site • Minimise the use of make-up water from external sources • Design, install, operate and maintain water management infrastructure in a proper and efficient manner
Erosion and sediment control works	<ul style="list-style-type: none"> • Design, install and maintain erosion and sediment controls in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction</i> including <i>Volume 1: Blue Book (Landcom, 2004)</i>, <i>Volume 2A: Installation of Services (DECC, 2008)</i>, <i>Volume 2C: Unsealed Roads (DECC, 2008)</i> and <i>Volume 2E: Mines and Quarries (DECC, 2008)</i> • Design, install and maintain any infrastructure within 40 metres of watercourses in accordance with the guidance series for <i>Controlled Activities on Waterfront Land (DPI Water, 2012)</i> • Design, install and maintain any creek crossings generally in accordance with the <i>Fisheries NSW Policy and Guidelines for Fish Habitat Conservation and Management (DPI, 2013)</i> and <i>Why Do Fish Need To Cross The Road? Fish Passage Requirements for Waterway Crossings (NSW Fisheries 2003)</i>
Clean water diversions and storage infrastructure	<ul style="list-style-type: none"> • Design, install and maintain the clean water system to capture and convey the 100 year Annual Recurrence Interval (ARI) flood • Maximise as far as reasonable the diversion of clean water around disturbed areas on the site, except where clean water is captured for use on the site

<i>Feature</i>	<i>Performance Measure</i>
Sediment dams	<ul style="list-style-type: none"> Design, install and maintain sediment dams in accordance with the guidance series <i>Managing Urban Stormwater: Soils and Construction</i> including <i>Volume 1: Blue Book (Landcom, 2004)</i> and <i>Volume 2E: Mines and Quarries (DECC, 2008)</i>
Mine water storages	<ul style="list-style-type: none"> Design, install and maintain mine water storage infrastructure to avoid unlicensed or uncontrolled discharges to surface waters as far as reasonable and practicable
Mine water discharges	<ul style="list-style-type: none"> No discharges to surface waters except in accordance with an Environment Protection Licence, section 120 of the <i>Protection of the Environment Operations Act 1997</i> or <i>Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002</i>
Chemical and hydrocarbon storage	<ul style="list-style-type: none"> Chemical and hydrocarbon products to be stored in bunded areas in accordance with the relevant Australian Standard
Tailings storages	<ul style="list-style-type: none"> Design and maintain tailings storage areas to encapsulate and prevent the release of tailings seepage/leachate

Note: These performance measures apply to all mining taking place after the approval of Modification 7.

Compensatory Water Supply

- (c) The Applicant must provide a compensatory water supply to any landowner of privately-owned land whose rightful water supply is adversely and directly impacted (other than an impact that is minor or negligible) as a result of the development, in consultation with DoI, and to the satisfaction of the Secretary.
- (c1) The compensatory water supply measures must provide an alternative long-term supply of water that is equivalent, in quality and volume, to the loss attributable to the development. Equivalent water supply should be provided (at least on an interim basis) as soon as practicable after the loss is identified, unless otherwise agreed with the landowner.
- (c2) If the Applicant and the landowner cannot agree on whether the loss of water is to be attributed to the development or 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 Secretary for resolution.
- (c3) If the Applicant is unable to provide an alternative long-term supply of water, then the Applicant must provide compensation, to the satisfaction of the Secretary.

Notes:

- *The Water Management Plan (see Condition 4.1(a)) is required to include trigger levels for investigating potentially adverse impacts on private water supplies.*
- *The burden of proof that any loss of surface water or groundwater access is not due to mining impacts rests with the Applicant.*

Water Supply

- (d) The Applicant must ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of the development to match its available water supply.
- (d1) The Applicant must report on water extracted from the site each year (direct and indirect) in the Annual Review, including water taken under each water licence.

Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain all necessary water licences for the development, including during rehabilitation and following mine closure.

- (e) ⁷The construction or mining operations **must** not damage or interfere with:
- vegetation outside the area of operation;
 - the stability of adjacent or nearby streams; or
 - the quality of water in the stream or watercourse except as authorised by the EPA.
- (f) ⁸The Applicant **must** ensure that soil and/or vegetation material to be removed from the area of operations **must** be disposed of to an appropriate site where it will not re-enter the watercourses or drainage systems.
- (g) ⁹The Applicant **must** be responsible for any excavation or soil removal undertaken by any other person at the mine site.
- (h) ¹⁰The Applicant **must** ensure that all drainage diversion works at the mine site **must** minimise adverse impacts, in consultation with DoI. This **must** include:
- (i) sufficient flow detention measures to provide flow rates at non-erosive velocities prior to re-entry into the natural drainage system;
 - (ii) provision of adequate scour protection to ensure that where flows re-enter natural drainage lines from the diversion drains, adverse erosion impacts do not occur;
 - (iii) designing all diversion systems to provide stability for the long-term for permanent diversions or for the designed life for temporary diversions;
 - (iv) undertaking a pre-construction survey, by a suitably qualified person, of the channel site and adjacent banks showing design channel profile on cross-sections;
 - (v) undertaking engineering hydraulic calculations by a suitably qualified person and assessment of scour potential of the channel to meet design flood capacity. This should be related to flow velocities, stability of design bed material type and bed slopes and profiles;
 - (vi) revegetating the banks of the new channel using suitable species immediately following excavation;
 - (vii) rehabilitating using locally grown species transplanted and embedded into erosion matting where required in areas of high scour rates. The diversion system may require time for appropriate revegetation prior to its connection to divert water;
 - (viii) ensuring the sizes of any culverts are determined by a suitably qualified person;
 - (ix) ensuring the flows or hydraulic levels upstream and downstream of any culverts **must** not hinder the passage of fish and aquatic animals where appropriate. Any culverts must be constructed so that they comply with NSW Fisheries Policy and Guidelines for culvert construction.
 - (x) preventing erosion of the bed and banks upstream and downstream of any culvert with suitable scour protection as recommended by a suitably qualified person.

4.2 Surface and Groundwater Monitoring

- (a) The Applicant **must**:

⁷ DoI Water General Terms of Approval

⁸ DoI Water General Terms of Approval

⁹ DoI Water General Terms of Approval

¹⁰ DoI Water General Terms of Approval

- (i) construct and locate surface and groundwater monitoring positions, as identified in the Site Water Management Plan (Condition 4.1(a)) in consultation with DoI, and to the satisfaction of the Secretary, at least three months prior to the commencement of mining operations;
- (ii) prepare a detailed monitoring program in respect of ground and surface water quality and quantity, including water in and around the DA area during mining works and post mine operations in consultation with DoI which **must** form part of the Site Water Management Plan. The monitoring program **must** have the capacity to collect sufficient data to adequately assess:
 - 1) the impact on groundwater levels on neighbouring properties and in the locality, and to identify any water quality impacts;
 - 2) the impact of the development on groundwaters associated with the alluvial aquifer of the Hunter River including the ongoing monitoring of the volume and quality of water inflows into the Hunter Tunnel;
 - 3) regional groundwater levels and water quality including the extension of the regional groundwater monitoring network to include bores RDH508-511; and
 - 4) any concerns or complaints from surrounding landholders on groundwater matters, and any ensuing actions, which **must** be recorded and be available to DoI.
- (iii) report on the monitoring results and raw data in the **Annual Review** on the following matters:
 - 1) a basic statistical analysis (mean, range, variance, standard deviation) of the results for the parameters measured in individual bores / wells and as a subset of the aquifer;
 - 2) an interpretation of the water quality results and changes in time for water quality and water levels (supported with graphs, contour plots showing changes in aquifer pressure levels);
 - 3) an interpretation of the water balance identifying the volume of water and comparing this to predictions made in the EIS or the previous **Annual Review**; and
 - 4) provide an electronic copy of the data forwarded to DoI.
- (iv) ¹¹The Applicant must consult with the DoI and submit the Groundwater and Surface Water Monitoring Program in subclause (a)(ii) to the EPA when an application for a licence variation is submitted.

4.3 Flood Response Plan

- (a) The Applicant must, prior to the commencement of construction of the delivery shaft, prepare and implement a Flood Response Plan, to the satisfaction of the Secretary. The Plan must identify flood risks and describe the mitigation measures and management procedures to mitigate these risks during construction and operation of the delivery shaft and ensure the safety of personnel on the site during flood events.

Notes:

¹¹ EPA General Terms of Approval

- In this condition, “flood” is considered to be any event exceeding the 20% Annual Exceedance Probability (AEP) up to and including the Probably Maximum Flood (PMF) event.
- Under the Work Health and Safety Act 2011 and the Work Health and Safety (Mines and Petroleum Sites) Act 2013, the Applicant is responsible for ensuring the safety of its workers and contractors.

5. Rejects Emplacement Area and Waste Management

5.1 Rejects Emplacement Area

(a) The Applicant must:

- Ensure the construction, operation and decommissioning of the rejects replacement area meets relevant geotechnical factors of safety and long-term stability criteria, suitable for a permanent feature of the landscape;
- Unless otherwise agreed to by the Resources Regulator, ensure the design of the rejects emplacement area addresses:
 - the need for subsurface drainage;
 - compaction of rejects within the emplacement to achieve a target of 95 percent standard compaction, and at all times achieve a 90 percent standard compaction;
 - temperate control and monitoring using thermo-couples within the emplacement; and
- Prepare and implement a surveillance program to monitor the geotechnical stability of the rejects emplacement area, including periodic geotechnical analysis of the reject material to ensure it continues to meet relevant design criteria,

to the satisfaction of the Resources Regulator.

(b) Prior to the emplacement of rejects in the southern and northern rejects emplacement areas, and for any subsequent modifications to the design of these emplacement areas, the Applicant must:

- Commission a suitably qualified, experienced and independent geotechnical expert, whose appointment has been approved by the Secretary, to review the detailed design (and surveillance program) for the southern and northern rejects emplacement areas to verify each design meets relevant geotechnical factors of safety and long-term stability criteria;
- Implement all reasonable and feasible recommendations made by the independent geotechnical expert to improve the detailed design or the surveillance program for the southern and northern rejects emplacement areas; and
- Provide a copy of the independent geotechnical expert’s report to the Resources Regulator and the Secretary,

to the satisfaction of the Resources Regulator.

- (c) Prior to emplacement of rejects in the southern rejects emplacement area, the Applicant **must** prepare and implement a revised Rehabilitation Strategy for all rejects emplacement areas at the mine, to the satisfaction of the Resources Regulator.

5.2 Waste

- (a) Prior to the commencement of construction or Mining Operations, the Applicant **must** prepare and implement a Waste Management Plan for the DA area in consultation with MSC and to the satisfaction of the Secretary. The Plan **must** include, but not be limited to:
- (i) details of measures to facilitate waste management on site;
 - (i) details of compliance with the Applicant's obligations under the *Protection of the Environment Operations Act (1997)*;
 - (ii) identification of all types and quantities of waste materials produced at the mine site during construction, commissioning and operation;
 - (iii) programs aimed at minimising the production of waste at the mine site through the implementation of operational and management measures;
 - (iv) details of the potential reuse and recycling avenues for waste materials produced at the mine site, including collection and handling procedures;
 - (v) details of appropriate disposal routes in the event that reuse and recycling avenues are not available or are not practicable; and
 - (vi) programs for involving and encouraging employees and contractors to minimise waste production at the mine site and reuse / recycling where appropriate.
- (b) The Applicant **must** dispose of all solid waste and putrescible matter from the site to the satisfaction of MSC or EPA, as relevant.
- (c) The Applicant **must** dispose of all treated sewage and sullage to the satisfaction of MSC and in accordance with the EPA Licence.

5.3 Tailings Disposal

- (a) The Applicant **must** not use tailing dams for the disposal of fine coal rejects, other than in emergency situations when the ratio of fine to coarse rejects are not within the specifications for the waste plant.
- (b) The Applicant **must** prepare a report to the Secretary every five years, or as otherwise agreed by the Secretary, reporting on the feasibility of using goaf areas of the Dartbrook Extended Mine, other than that described in the "Dartbrook Mine Statement of Environmental Effects for New ROM Coal Stockpiles, Underground Tailings Disposal & Nitrogen Injection Plant", dated 12 August 2005 and prepared by Hansen Consulting, for rejects disposal.

6. Air Quality, Noise and Light Management and Monitoring

6.1 Air Quality Management and Monitoring

Air Quality Standards/Goals

- (a) The Applicant must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the development do not cause exceedances of the criteria listed in Table 5 at any residence on privately-owned land.

Table 5: Air quality criteria

<i>Pollutant</i>	<i>Averaging period</i>	<i>Criterion</i>
Particulate matter < 10 µm (PM ₁₀)	Annual	^{a, c} 25 µg/m ³
	24 hour	^b 50 µg/m ³
Particulate matter < 2.5 µm (PM _{2.5})	Annual	^{a, c} 8 µg/m ³
	24 hour	^b 25 µg/m ³
Total suspended particulate (TSP) matter	Annual	^{a, c} 90 µg/m ³

Notes:

^a Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources).

^b Incremental impact (i.e. incremental increase in concentrations due to the development on its own).

^c Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Secretary.

- (b) The air quality criteria in Table 5 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or land to exceed the air quality criteria, and the Applicant has advised the Department in writing of the terms of this agreement.
- (c) Upon receiving a written request for acquisition from the owner of the land listed in Table 6, the Applicant must acquire the land in accordance with the procedures in Conditions 11.2 (C) and (D).

Table 6: Air quality affected land subject to acquisition upon request

<i>Acquisition Basis</i>	<i>Land</i>
Air Quality	Receiver 181
	Property 76
	Receiver 212*
	Receiver 228*
	Receiver 238*
	Receiver 242*
	Receiver 244*
	Receiver 374*
	Receiver 319*

Notes:

- *The Applicant is only required to acquire this property if acquisition rights are no longer available under the development consent for the Mt Pleasant mine.
- The location of the land referred to in Table 6 is shown on the figure in Appendix 4.

Mine-owned Land

- (d) Particulate matter emissions generated by the development must not exceed the criteria listed in Table 6 at any occupied residence on mine-owned land (including land owned by another mining company) unless:
- (i) the tenant and landowner (if the residence is owned by another mining company) have been notified of any health risks associated with such exceedances in accordance with the notification requirements under this consent;
 - (ii) the tenant of any land owned by the Applicant can terminate their tenancy agreement without penalty at any time, subject to giving reasonable notice;
 - (iii) air quality monitoring is regularly undertaken to inform the tenant and landowner (if the residence is owned by another mining company) of the likely particulate matter emissions at the residence; and
 - (iv) data from this monitoring is presented to the tenant and landowner in an appropriate format for a medical practitioner to assist the tenant and landowner in making informed decisions on the health risks associated with occupying the property.

Air Quality Operating Conditions

- (e) The Applicant must:
- (i) take all reasonable steps to minimise odour, fume, greenhouse gas and dust (including PM₁₀ and PM_{2.5}) emissions of the development;
 - (ii) minimise any visible off-site air pollution generated by the development;
 - (iii) minimise to the greatest extent practicable, the extent of potential dust generating surfaces exposed on the site at any given point in time;
 - (iv) ensure all ROM coal and dust-prone surfaces are watered and kept sufficiently moist to prevent or minimise emissions;
 - (v) operate an air quality management system commensurate with the risk of impact to ensure compliance with the relevant conditions of this consent;
 - (vi) minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see Note c to Table 5 above);
 - (vii) use all reasonable efforts to co-ordinate air quality management on the site with the air quality management at nearby mines to minimise cumulative air quality impacts;
 - (viii) carry out regular air quality monitoring to determine whether the development is complying with the relevant conditions of this consent; and
 - (ix) regularly assess the air quality monitoring data, and modify operations on the site to ensure compliance with the relevant conditions of this consent.

Air Quality and Greenhouse Gas Management Plan

- (f) The Applicant must, prior to the recommencement of construction or mining operations, prepare an Air Quality and Greenhouse Gas Management Plan for the development to the satisfaction of the Secretary. This plan must:
- (i) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Secretary;
 - (ii) describe the measures to be implemented to ensure:

- compliance with the air quality criteria and operating conditions in this consent;
 - best practice management is being employed; and
 - the air quality impacts of the development are minimised during adverse meteorological conditions and extraordinary events;
- (iii) outline mitigation measures to be employed to minimise dust emissions including dust from rejects emplacement area in dry and windy conditions;
- (iv) describe the air quality management system in detail; and
- (v) include an air quality monitoring program that:
- uses monitors to evaluate the performance of the development against the air quality criteria in this consent and to guide day to day planning of operations;
 - adequately supports the air quality management system; and
 - includes a protocol for identifying an air quality-related exceedance, incident or non-compliance and notifying the Department and relevant stakeholders of any such event.

Odour Monitoring

- (g) ¹²The Applicant must not cause or permit the emission of offensive odours from the premises and must comply with section 129 of the Protection of the Environment Operations Act 1997.
- (h) ¹³Prior to construction of each ventilation air discharge vent (ventilation shaft), the Applicant must submit a report to the [EPA](#), which demonstrates, to the satisfaction of the [EPA](#), that the new ventilation air discharge vents are located and designed in a manner that will not cause offensive odour impacts.
- (i) ¹⁴Within 90 days of commissioning each new ventilation air discharge vent (ventilation shaft), the Applicant must submit a report to the [EPA](#), which includes the following site specific source emission test results:
- Concentration of odour (OU/m³);
 - Emission rate of odour (OU/s);
 - Concentrations and emission rates of all other relevant air pollutants;
 - Volumetric flow rate (m³/s);
 - Discharge velocity (m/s); and
 - Temperature (°C).

If the above parameters are outside the range used in the dispersion modelling study of each ventilation air discharge vent (ventilation shaft), then the odour impacts must be assessed once more and the results submitted to the [EPA](#).

¹² EPA General Terms of Approval

¹³ EPA General Terms of Approval

¹⁴ EPA General Terms of Approval

- (j) ¹⁵The location of sampling points and source emissions sampling and analysis must be conducted strictly in accordance with the Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales”, NSW EPA, 2007.

6.2 Dust Suppression and Control

- (a) The Applicant **must** ensure the prompt and effective rehabilitation of all disturbed areas of the mine site to minimise the generation of wind erosion dust.
- (b) The Applicant **must** keep the surface of the coal stockpiles and any unsealed roads sufficiently damp to minimise the emission of wind blown or traffic generated dust.

6.3 Blast Management and Monitoring

Blasting Overpressure

- (a) ¹⁶The overpressure level from blasting operations on the premises must not:
- exceed 115dB (Linear Peak) for more than 5% of the total number of blasts over a period of 12 months; and
 - exceed 120dB (Linear Peak) at any time,

at any residence or noise sensitive location (such as a school or hospital) that is not owned by the Applicant or subject to a private agreement between the owner of the residence or noise sensitive location and the Applicant as to an alternative overpressure level.

Ground Vibration

- (b) ¹⁷Ground vibration peak particle velocity from the blasting operations must not:
- exceed 5mm/s for more than 5% of the total number of blasts over a period of 12 months; and
 - exceed 10mm/s at any time,

at any residence or noise sensitive location (such as a school or hospital) that is not owned by the Applicant, or subject to a private agreement between the owner of the residence, or noise sensitive location and the Applicant, as to an alternative vibration level.

Time and Frequency of Blasting

- (c) ¹⁸Blasting operations may only take place between 9 am and 5 pm Monday to Friday inclusive;

¹⁵ EPA General Terms of Approval

¹⁶ EPA General Terms of Approval

¹⁷ EPA General Terms of Approval

¹⁸ EPA General Terms of Approval

- (d) ¹⁹Blasting at the premises is limited to 1 blast on each day on which blasting is permitted; and
- (e) ²⁰The hours of operation for blasting operations specified in this condition may be varied if the EPA, having regard to the effect that the proposed variation would have on the amenity of the residents in the locality, gives written consent to the variation.

Blast Management Plan

- (f) The Applicant **must** prepare and implement a Blast Management Plan to the satisfaction of the **Secretary**, prior to the commencement of any blasting. ²¹The Plan must include, but need not be limited to, the following matters:
- compliance standards;
 - mitigation measures;
 - remedial action;
 - monitoring methods and program;
 - monitoring program for flyrock distribution;
 - measures to be undertaken to demonstrate that Dartbrook Mine is achieving best practice in minimising both air blast overpressure and ground vibration levels;
 - measures to protect underground utilities (eg: rising mains, subsurface telecommunication and electric cables), native fauna and livestock nearby;
 - procedures for the notification of neighbours prior to detonation of each blast; and
 - measures to ensure no damage by flyrock to people, property, livestock and powerlines.
- (g) **The Applicant must as a minimum for large-scale blasts (with a maximum instantaneous charge greater than 20kg), advise residents within three (3) kilometres of blasting locations on a monthly basis and of any changes to monthly programs. For small-scale construction blasts (with a maximum instantaneous charge not greater than 20kg), the Applicant must as a minimum advise residents within one (1) kilometre of blasting locations.**
- (h) **Upon written request of the owner of any dwelling located within three (3) kilometres of large-scale blasting locations (with a maximum instantaneous charge greater than 20kg), or within one (1) kilometre of small-scale construction blasting locations (with a maximum instantaneous charge not greater than 20 kg), the Applicant must arrange at its own costs, for the inspection by a technically qualified person agreed to by both parties, to record the material condition of any structure on such a property within 14 days of receipt of the request. The Applicant must supply a copy of any inspection report, certified by the person who undertook the inspection, to the relevant property owner within fourteen (14) days of receipt of the report.**

¹⁹ EPA General Terms of Approval

²⁰ EPA General Terms of Approval

²¹ EPA General Terms of Approval

- (i) The Applicant **must** ensure that blasting **must** not take place within 500 metres of a public road while such road is open to traffic. Roads **must** not be closed for blasting purposes during the times that school buses use the road.
- (j) The Applicant **must** prepare a Road Closure Management Plan to the satisfaction of the **Secretary**, and in consultation with **MSC** and **UHSC** prior to any blasting within 500 metres of a public road. The Plan **must** include, but not be limited to, the following matters:
 - (i) details of the proposed safety management measures during the period of the road closure and blast;
 - (ii) details of the procedures for closing Dartbrook Road and the period which the road will be closed during blasting activities;
 - (iii) methods for ensuring the safety of road users and the general public during the blast period;
 - (iv) strategies for informing road users and the local community of the proposed road closure;
 - (v) details of the procedures for permitting the passage of emergency vehicles during the road closure. This **must** also include details of the proposed methods for sufficiently notifying emergency service providers of the proposed times and period of the road closures;
 - (vi) methods for clearing the road of any debris resulting from a blast; and
 - (vii) details of the disruptions that are likely to occur during the closure period.
- (k) Notwithstanding subclause (j) above, if blasting is proposed within 500 metres of the New England Highway, The Applicant **must** prepare a Road Closure Management Plan to the satisfaction of the **Secretary**, and in consultation with **RMS**, **MSC** and **UHSC**, prior to any blasting within 500 metres of the New England Highway. The Plan **must** include, but not be limited to, the matters in subclause (j) above.

Blast Monitoring

- (l) The applicant must monitor ground vibration and overpressure of all blasts.
- (m) Ground vibration or the overpressure must be measured at noise sensitive sites (eg. residences, hospitals, schools etc), selected in consultation with the **EPA**.

6.4 Noise Control

6.4.1 Noise Levels

Intrusive Noise Criteria

- (a) **Except for the carrying out of construction works, the Applicant must ensure that the noise generated by the development does not exceed the criteria in Table 7 at any residence on privately-owned land.**

Table 7: Operational noise criteria dB(A)

Noise Assessment Group	Day	Evening	Night	Night
	L_{Aeq} (15 min)	L_{Aeq} (15 min)	L_{Aeq} (15 min)	L_{A1} (1 min)
Aberdeen	49	42	41	52
East Site Receivers	50	50	41	52
West Site Receivers	40	40	35	52
Other privately-owned residences	40	35	35	52

Notes:

- To identify the locations referred to in Table 7, refer to Schedule 1 and Appendix 4.
- Daytime (between the hours of 7am and 6pm); evening (between 6pm and 10pm) and night time (between 10 pm and 7 am).

Noise generated by the development must be monitored and measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the *NSW Noise Policy for Industry* (EPA, 2017).

The noise criteria in Table 7 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or land to exceed the noise criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

Noise Acquisition Criteria

- (b) *(Deleted)*
- (c) Upon receiving a written request for acquisition from the owner of the land listed in Table 8, the Applicant must acquire the land in accordance with the procedures in Conditions 11.2(C)-(D).

Table 8: Land subject to acquisition upon request

Acquisition Basis	Land
Noise	Receiver 86

Note: The location of the land referred to in Table 8 is shown on the figure in Appendix 4.

Construction Noise

- (d) The Applicant must ensure that the noise generated by construction of the delivery shaft is managed in accordance with the requirements outlined in the *Interim Construction Noise Guideline* (DECC, 2009).

Noise Operating Conditions

- (e) The Applicant must:

- (i) take all reasonable steps to minimise all noise from construction and operational activities including low frequency noise and other audible characteristics, as well as road and rail noise associated with the development;
- (ii) operate a comprehensive noise management system commensurate with the risk of impact to ensure compliance with the relevant conditions of this consent;
- (iv) take all reasonable steps to minimise noise impacts of the development during noise-enhancing meteorological conditions;
- (v) only use locomotives and rolling stock that are approved to operate on the NSW rail network in accordance with the noise limits in ARTC's EPL and use reasonable endeavours to ensure that rolling stock is selected to minimise noise;
- (vi) carry out regular attended noise monitoring (at least once a month, unless otherwise agreed by the Secretary) to determine whether the development is complying with the relevant conditions of this consent; and
- (vii) regularly assess the noise monitoring data and modify or stop operations on the site to ensure compliance with the relevant conditions of this consent.

- (f) *(Deleted)*
- (g) *(Deleted)*
- (h) *(Deleted)*
- (i) *(Deleted)*
- (j) *(Deleted)*
- (k) *(Deleted)*
- (l) *(Deleted)*

6.4.2 Noise Management Plan

- (a) The Applicant must, prior to the recommencement of construction or mining operations, prepare a Noise Management Plan for the development to the satisfaction of the Secretary. This plan must:
 - (i) be prepared by a suitably qualified and experienced person/s;
 - (ii) describe the measures to be implemented to ensure:
 - compliance with the noise criteria and operating conditions in this consent;
 - best practice management is being employed;
 - noise impacts of the development are minimised during noise-enhancing meteorological conditions;
 - (iii) seek to minimise road traffic noise generated by coal haulage on internal haul roads and employee commuter vehicles on local public roads;
 - (iv) describe the noise management system in detail; and
 - (v) include a monitoring program that:
 - uses a combination of real-time and supplementary attended monitoring to evaluate the performance of the development;
 - monitors noise at the nearest and/or most affected residences;
 - includes a program to calibrate and validate the real-time noise monitoring results with the attended monitoring results over time;
 - adequately supports the noise management system; and
 - includes a protocol for identifying noise-related exceedance, incident and non-compliance and for notifying the Department and relevant stakeholders of any such event.

- (b) *(Deleted)*
- (c) *(Deleted)*
- (d) *(Deleted)*
- (e) *(Deleted)*
- (f) *(Deleted)*

6.5 *Lighting Emissions*

- (a) The Applicant **must**, prior to commencement of construction, prepare a Lighting Management Plan in consultation with **MSC**, **UHSC** and to the satisfaction of the **Secretary**. The Plan **must** include details of the implementation of visual controls to screen, direct or manage all on-site lighting from mine related activities in respect of residences and roadways. The Plan **must** include, but not be limited to:
 - i) details of the planting of vegetation screens along Dartbrook Road, to screen potential lighting impacts;
 - ii) details of the tree screen on the north side of the access road at the corner north of the Dam to screen potential lighting impacts;
 - iii) details of the tree and shrub screening around the Drift Access to reduce potential lighting impacts;
 - iv) details of technical measures and work practices necessary to minimise the spillage of light from areas to be illuminated, and to minimise the total night time glow from the mine;
 - v) details of the construction or placement of visual screens to screen lighting impacts;
 - vi) details of the proposed process and measures to address complaints that may be received from residents or road users impacted by lighting from the mine site; and
 - vii) details of any other effective operating practices to manage potential lighting impacts.
- (b) The Applicant **must** report on the effectiveness of the lighting emission controls in the **Annual Review**.
- (c) The Applicant **must** ensure that on-site lighting does not directly emit light into the line of sight of nearby dwellings. The light emitted from any direct flood lighting and any vehicle headlights **must** be directed away from dwellings and public roads.
- (d) The Applicant **must** ensure that light emitted from locomotive headlights whilst a locomotive is on or moving off the rail loop **must** be screened from dwellings to the satisfaction of **MSC** or as otherwise agreed by the **Secretary**.

6.6 *Vibration from Mine Operations*

- (a) Ground vibration peak particle velocity from the rail loop and/or CHPP facility must not:
 - exceed 2.82 mm/s at any time,at any residence or noise sensitive location (such as a school or hospital) that is not owned by the Applicant, or subject to a private agreement between the owner of the residence, or noise sensitive location and the Applicant, as to an alternative vibration level.

- (b) Prior to the commencement of mining operations, the Applicant **must** prepare and implement a Vibration Management Plan to the satisfaction of the **Secretary** which will include, but need not be limited to, the following matters:
- compliance standards;
 - monitoring program;
 - mitigation measures;
 - remedial action in an event of exceedance of criteria in subclause 6.6(a) above;
 - monitoring methods and program; and
 - measures to be undertaken to demonstrate that Dartbrook Mine is achieving best practice in minimising vibration levels from the rail loop and/or CHPP, irrespective of set standards.
- (c) *(Deleted)*

7. Transport and Utilities

7.1 Rail Transport

- (a) All coal **must** be transported from the CHPP by rail unless otherwise agreed by the **Secretary** and **MSC**.

7.2 Road Transport

- (a) The Applicant **must** give prior written notice to **MSC** and **UHSC** of the date of the commencement of the haulage of coal from the **Kayuga Entry to the delivery shaft**.
- (b) **The Applicant must not transport by private road haulage more than 1.5 million tonnes of ROM coal per calendar year from the Kayuga Entry to the delivery shaft.**
- (c) The Applicant **must** restrict road haulage of coal from the **Kayuga Entry to the delivery shaft**, to the hours of 7.00 am and 6.00 pm, Mondays to Fridays inclusive.
- (d) The Applicant **must** not road haul coal on Saturday, Sunday and Public Holidays.
- (e) **The Applicant must seal all coal haulage roads between the Kayuga Entry and delivery shaft before the recommencement of coal haulage.**
- (f) The Applicant **must** ensure that:
- (i) All traffic associated with the construction of the Kayuga Mine, with the exception of employees approved by the Dartbrook General Manager and living in the local area most directly accessed by local roads; access the Kayuga Mine surface facilities via the New England Highway, Western Access Road, Stair Street, Kayuga Road and Dartbrook Road, until the completion of contract mine construction activities when all portable construction workers' amenities, workshop and store **must** be removed. Approved employees may access the mine via local public roads and Stair Street;
 - (ii) All mine personnel (including contractors) access the Dartbrook Mine facilities via the New England Highway and the Western Access Road, with the exception

of employees approved by the Dartbrook General Manager and living in the local area most directly accessed by local roads. These employees can access the mine via local public roads and Stair Street;

- (iii) A list of approved employees under Conditions 7.2(f)(i) & (ii) be maintained by the Applicant, and made available to the Department upon request;
 - (iv) Kayuga Road, from the Hunter River bridge to the Castlerock Road intersection, is not used to access the mine or mine satellite surface facilities. Limited use of local roads by mine related traffic for access to mine satellite surface facilities is permitted, with internal access roads to be utilised where practicable; and
 - (v) The section of Kayuga Road between Stair Street and Dartbrook Road, and the section of Dartbrook Road between Kayuga Road and the entrance to the Kayuga Mine surface facilities, be maintained in consultation with MSC and to the satisfaction of the Secretary.
- (g) The Applicant **must** submit all designs and specifications associated with the proposed access road and Blairmore Lane Underpass to MSC or UHSC for approval, prior to the commencement of work. The proposed western access road **must** be sealed in accordance with the requirements of MSC or UHSC.
- (h) *(Deleted)*
- (i) *(Deleted)*
- (j) *(Deleted)*

7.5 Road Closures

- (a) *(Deleted)*

7.6 Provision of Utility Services

Refer Mining Operations Plan (Condition 2.1(c)).

7.7 Road and Rail Works

The Applicant **must**:

- (a) Install the pipeline crossings of Ely and Heir Streets (both undeveloped roads) to the satisfaction of Muswellbrook Council;
- (b) Install pipelines under the Main Northern Rail Line to the satisfaction of the Australian Rail Track Corporation; and
- (c) Prior to the commencement of any construction within the road reserve of the New England Highway the Applicant **must** prepare and subsequently implement a Traffic Management Plan in accordance with the RMS's *Traffic Control at Worksites* guidelines, to the satisfaction of Muswellbrook Council and the RMS. The Plan **must**:
 - (i) describes the schedule of the proposed road works;
 - (ii) describe the measures that would be implemented to minimise traffic impacts associated with the construction of the proposed development; and

- (iii) include a Traffic Control Plan that describes the measures that would be implemented to control construction traffic access to the classified road network.
- (d) Bore pipelines under the New England Highway to the satisfaction of the RMS.

Notes:

- (a) there will be no access from the New England Highway to the work site; the boring/ crossing locations *must* be perpendicular to the New England Highway road reserve at a location which offers the shortest length possible, unless otherwise approved by the RMS;
- (b) the location of the pipeline crossing *must* be in accordance with the RMS guideline and take into account the location of utilities another infrastructure;
- (c) the crossing *must* be constructed to Australian Standards and allow for future widening requirements of the New England Highway;
- (d) the crossing *must* be installed through trenchless technology unless otherwise approved by the RMS;
- (e) the crossings *must* maintain a minimum vertical buffer of 1.5 metres between the pipeline and the highway within the road reserve;
- (f) where steel casings are not used a trace wire *must* be provided to assist with the future location of the pipeline;
- (g) pipes installed under the road *must* be sleeved and grouted;
- (h) permanent markers *must* be provided at the entry and exist point of the road reserve;
- (i) any access points and values *must* be located outside of the road reserve; and
- (j) all areas within the road reserve that are disturbed by the development *must* be restored to their original condition to the satisfaction of the RMS.

8. Monitoring/Auditing

- (a) Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification, compliance report and independent audit.

Note: For the purposes of this condition, as set out in the EP&A Act, “monitoring” is monitoring of the development to provide data on compliance with the consent or on the environmental impact of the development, and an “environmental audit” is a periodic or particular documented evaluation of the development to provide information on compliance with the consent or the environmental management or impact of the development.

- (b) Monitoring under this consent is not required at all privately-owned residences and the use of representative monitoring locations can be used to demonstrate compliance with criteria.

8.1 Third Party Monitoring/Auditing

Independent Environmental Audit

- (a) Within one year of the recommencement of mining operations, and every three years after, unless the Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the development. The audit must:
 - (i) be led and conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
 - (ii) be carried out in consultation with the relevant agencies and the CCC;

- (iii) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent, water licences and mining leases for the development (including any assessment, strategy, plan or program required under these approvals);
 - (iv) review the adequacy of any approved strategy, plan or program required under the abovementioned approvals and this consent;
 - (v) recommend appropriate measures or actions to improve the environmental performance of the development and any assessment, strategy, plan or program required under the abovementioned approvals and this consent; and
be conducted and reported to the satisfaction of the Secretary.
- (b) Within three months of commencing an Independent Environmental Audit, or other timeframe agreed by the Secretary, the Applicant must submit a copy of the audit report to the Secretary, and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Secretary.

Note: The audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.

- (c) *(Deleted)*

8.2 Meteorological Station(s)

- (a) The Applicant must continue to maintain and operate a suitable meteorological station operating in the vicinity of the site that:
 - (i) complies with the requirements in the Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales (2007); and
 - (ii) is capable of measuring meteorological conditions in accordance with the NSW Noise Policy for Industry (2017),
unless a suitable alternative is approved by the Secretary following consultation with the EPA.

9. Reporting

9.1 Reports on Operations

- (a) The Applicant **must** report on mine operations in accordance with the **MOP** (refer to Condition 2.1).

9.2 Environmental Reporting

Annual Review

- (a) By the end of March in each year after the commencement of the development, or other timeframe agreed by the Secretary, a report must be submitted to the Department reviewing the environmental performance of the development, to the satisfaction of the Secretary. This review must:

- (i) describe the development (including any rehabilitation) that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;
 - (ii) include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, including a comparison of these results against the:
 - relevant statutory requirements, limits or performance measures/criteria;
 - requirements of any plan or program required under this consent;
 - monitoring results of previous years; and
 - relevant predictions in the documents referred to in Condition 1.1(a);
 - (iii) identify any non-compliance or incident which occurred in the previous calendar year, and describe what actions were (or are being) taken to rectify the non-compliance or incident and avoid reoccurrence;
 - (iv) evaluate and report on:
 - the effectiveness of the noise and air quality management systems;
 - socio-economic impact of the development including the workforce characteristics of the previous calendar year; and
 - the surveillance of any prescribed dam on the site to the satisfaction of the DSC;
 - the outcome of the water budget for the year, the quantity of water used from water storages and details of discharge of any water from the site; and
 - compliance with the performance measures, criteria and operating conditions in this consent;
 - (v) identify any trends in the monitoring data over the life of the development;
 - (vi) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
 - (vii) describe what measures will be implemented over the next calendar year to improve the environmental performance of the development.
- (b) Copies of the Annual Review must be submitted to the Department, Council and made available to the CCC and any interested person upon request.
- (c) *(Deleted)*

9.3 Incident and Non-Compliance Reporting

Incident Notification

- (a) 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 to compliance@planning.nsw.gov.au and identify the development (including the development application number and name) and set out the location and nature of the incident.

Non-Compliance Notification

- (b) 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 to compliance@planning.nsw.gov.au 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, the way in which 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.

Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

10. Community Consultation/Obligations

10.1 Community Consultative Committee

- (a) The Applicant must operate a Community Consultative Committee (CCC) for the life of the development, or other timeframe agreed by the Secretary, in accordance with the Department's *Community Consultative Committee Guidelines: State Significant Projects* (2016).

Notes:

- *The CCC is an advisory committee only.*
- *In accordance with the Guidelines, the Committee should comprise an independent chair and appropriate representation from the Applicant, Council and the local community.*
- *This condition does not require the re-constitution of any CCC members established under previous conditions of consent.*

10.2 Community Consultation

(Deleted)

11. Proponents Obligations

11.1 Cumulative Impact Management

- (a) *(Deleted)*
(b) *(Deleted)*

11.2 Compensation and Land Acquisition and as a Result of Subsidence

Note: Compensation and other measures for subsidence impacts, are also available under the provisions of the Mining Act 1992 and the [Coal Mine Subsidence Compensation Act 2017](#).

(A) Compensation and Acquisition – Significant Structural Damage to Dwellings

- (a) Where a dwelling within the DA area is, or is likely to be subject to damage beyond the safe, serviceable and repairable criteria as a result of the development, the landowner may request the Applicant in writing to:

- (i) carry out such works as agreed by the landowner to remedy or mitigate any damage; or
 - (ii) compensate the landowner for such effects; or as a last resort and failing all other measures,
 - (iii) acquire the whole of the property, or such part of the property requested by the landowner where subdivision is approved.
- (b) The Applicant **must** comply with any such request for compensation or acquisition in accordance with Conditions 11.2(C) and (D). If necessary to confirm the impact, the Applicant **must**, at the request of the landowner in writing, conduct a follow-up structural inspection.
- (c) Any disputes relating to compensation may be referred by either party to:
- the **Land and Environment Court** at any time in accordance with the provisions of the Mining Act; or
 - the **SA NSW** at any time in accordance with the provisions of the **Coal Mine Subsidence Compensation Act 2017**.
- (d) Any disputes relating to land acquisition (except those relating to valuation matters) may be referred by either party to the **Secretary** for consideration and advice if no agreement is reached within three months of receipt by the Applicant of the written request.

(B) Compensation and Acquisition – Land Capability Impacts

- (a) Where a landowner suffers, or is likely to suffer a loss of land capability or agricultural productivity, as a result of the development, the landowner, after receiving notification from the Applicant, may request the Applicant in writing to:
- (i) carry out such works as agreed by the landowner to rectify the problem; or
 - (ii) compensate the landowner for such effects; or, as a last resort and failing all other measures,
 - (iii) acquire the whole of the property, or such part of the property requested by the landowner where subdivision is approved.
- (b) Any disputes relating to compensation may be referred by either party to the **Land and Environment Court** at any time in accordance with the provisions of the Mining Act.
- (c) Any disputes relating to acquisition (except those relating to valuation matters) may be referred by either party to the **Secretary** for consideration and advice if no agreement is reached within three months of receipt by the Applicant of the written request.
- (d) If the matter is referred to the **Secretary** in accordance with subclause (c) above, the **Secretary** shall appoint an Independent Expert, in consultation with the Applicant and the landowner. The Applicant **must** bear the costs of engaging the Independent Expert.
- (e) The Independent Expert shall determine the level and extent of loss or impacts, and recommend whether acquisition is required, and in doing so, shall consider the following matters:
- the level of predicted or actual subsidence;

- the level of land capability and/or agricultural productivity as unaffected by underground mining;
- the assessment of agricultural utilisation, agricultural improvements and the underlying agricultural productivity of the relevant property prior to mining operations;
- the impact of subsidence on the land capability and agricultural productivity of the land;
- the nature and extent of feasible mitigation measures; and
- previous compensation considerations under the Mining Act.

A recommendation for acquisition of a property may only be made by the Independent Expert where the Expert is satisfied that after consideration of feasible mitigation measures the impact of subsidence is such as to significantly adversely affect the existing and future land capability and/or agricultural productivity.

- (f) Where it is determined by the **Secretary** that a property is eligible for acquisition, and acquisition is requested by the landowner, the Applicant **must** comply with any such request in accordance with Conditions 11.2(C)-(D).

(C) Acquisition – Procedure

- (a) Upon receipt of a written request to purchase property in accordance with any part of **conditions 6.1 (c), 6.4.1 (c) and 11.2**, the Applicant **must offer in writing to acquire** the whole of the property (unless the request specifically requests acquisition of only part of the property and subdivision has already been approved) within six months of receipt of the request. The Applicant **must** pay the landowner an acquisition price resulting from proper consideration of:
- (i) a sum not less than the current market value of the owner's interest in the land at the date of this consent, as if the land was unaffected by Dartbrook Mine, having regard to:
 - the existing use and permissible use of the land in accordance with the applicable planning instruments at the date of the written request; and
 - the presence of improvements on the land and/or any Council approved building or structure which although substantially commenced at the date of the request is completed subsequent to that date.
 - (ii) the owner's reasonable compensation for disturbance allowance and relocation within the Singleton, **Upper Hunter** or Muswellbrook Local Government Areas, or within such other location as may be determined by the Secretary in exceptional circumstances;
 - (iii) the owner's reasonable costs for obtaining legal advice and expert witnesses for the purposes of determining the acquisition price for the land and the terms upon which it is to be acquired; and
 - (iv) the purchase price determined by reference to points (i), (ii) and (iii) shall be reduced by the amount of any compensation awarded to a landowner pursuant to the *Mining Act, 1992* or other legislation providing for compensation in relation to coal mining but limited to compensation for dwellings, structures

and other fixed improvements on the land, unless otherwise determined by the [Secretary](#) in consultation with the [Resources Regulator](#) or [SA NSW](#).

- (b) An offer by the Applicant to purchase a property under the conditions of this consent must remain open to the landowner for the following periods from the date of the offer:
 - (i) for damage to a dwelling beyond the safe, serviceable and repairable criteria (Condition 11.2(A)), three years after completion of mining of longwall panels that affect the property;
 - (ii) for land capability and/or agricultural productivity impacts (Condition 11.2(B)), five years after completion of mining of longwall panels that affect the property; **and**
 - (iii) **for land listed in Tables 6 and 8, for the life of the development.**
- (c) Notwithstanding any other Condition of this consent, the landowner and the Applicant may enter into any other agreed arrangement regarding compensation; or the Applicant may, upon request of the landowner, acquire any property affected by the project during the course of this consent on terms agreed to between the Applicant and the landowner.

(D) Independent Valuation

- (a) In the event that the Applicant and the landowner cannot agree within three months upon the acquisition price of the land and/or the terms upon which it is to be acquired under the terms of this consent, then either party may refer the matter to the [Secretary](#) who shall request an independent valuation to determine the acquisition price. The independent valuer shall consider any submissions from the landowner and the Applicant in determining the acquisition price.
- (b) If the independent valuer requires guidance on any contentious legal, planning or other issues, the independent valuer shall refer the matter to the [Secretary](#), who, if satisfied that there is a need for a qualified panel, shall arrange for the constitution of the panel. The panel shall consist of:
 - (i) the appointed independent valuer;
 - (ii) the [Secretary](#); and/or
 - (iii) the President of the Law Society of NSW or nominee.The qualified panel shall, on the advice of the valuer, determine the issue referred to it and advise the valuer.
- (c) The Applicant **must** bear the costs of any independent valuation or survey assessment requested by the [Secretary](#).
- (d) The Applicant **must**, within fourteen days of receipt of a valuation by the independent valuer, offer in writing to acquire the relevant land at a price not less than the said valuation.

(E) Additional Mitigation Upon Request

- (a) Upon receiving a written request for mitigation from the owner of any residence on the land listed in Tables 6 and 8, the Applicant **must** implement additional mitigation

measures at or in the vicinity of the residence in consultation with the landowner. These measures must be consistent with the measures outlined in the *Voluntary Land Acquisition and Mitigation Policy for State Significant Mining, Petroleum and Extractive Industry Development* (2018). They must also be reasonable and feasible, proportionate to the level of predicted impact and directed towards reducing the noise and/or air quality impacts of the development. The Applicant must also be responsible for the reasonable costs of ongoing maintenance of these additional mitigation measures until the cessation of mining operations.

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 Secretary for resolution.

(F) Notification of Landowners/Tenants

- (a) Within one month of the approval of Modification 7, the Applicant must:
 - (i) notify in writing the owner of:
 - the land listed in Tables 6 or 8 that they have the right to require the Applicant to acquire their land at any stage during the development; and
 - the residences on the land listed in Tables 6 or 8 that they are also entitled to ask the Applicant to install additional mitigation measures at the residence;
 - (ii) notify the tenants of any mine-owned land of their rights under this consent; and
 - (iii) send a copy of the NSW Health fact sheet entitled “*Mine Dust and You*” (2017) to the owners and/or existing tenants of any land (including mine-owned land) where the predictions in the documents referred to in Condition 1.1 (a) identify that dust emissions generated by the development are likely to be greater than the relevant air quality criteria identified in Condition 6.1 (a) at any time during the life of the development.
- (b) Prior to entering into any tenancy agreement for any land owned by the Applicant that is predicted to experience exceedances of the recommended dust and/or noise criteria, the Applicant must:
 - (i) 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*” (2017); and
 - (ii) advise the prospective tenants of the rights they would have under this consent, to the satisfaction of the Secretary.

11.3 Excessive Noise and/or Dust

Notification of Exceedances

- (a) As soon as practicable and no longer than 7 days after obtaining monitoring results showing an exceedance of any noise or air quality criterion in condition 6.1 (a) and condition 6.4.1 (a) of this consent, the Applicant must:
 - (i) provide to any affected landowners and tenants; and
 - (ii) publish on its website,

the full details of the exceedance.

- (b) For any exceedance of any air quality criterion in condition 6.1 (a) of this consent, the Applicant must also provide to any affected land owners and tenants copy of the NSW Health fact sheet entitled “*Mine Dust and You*” (2017).

Independent Review

- (c) If a landowner considers the development to be exceeding any air quality or noise relevant criterion in condition 6.1 (a) or condition 6.4.1 (a) of this consent, they may ask the Secretary in writing for an independent review of the impacts of the development on their residence or land.
- (d) If the Secretary is not satisfied that an independent review is warranted, the Secretary will notify the landowner in writing of that decision, and the reasons for that decision, within 21 days of the request for a review.
- (e) If the Secretary is satisfied that an independent review is warranted, within 3 months, or other timeframe agreed by the Secretary and the landowner, of the Secretary’s decision, the Applicant must:
- (i) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:
 - consult with the landowner to determine their concerns;
 - conduct monitoring to determine whether the development is complying with the relevant criteria in condition 6.1 (a) or condition 6.4.1 (a); and
 - if the development is not complying with the relevant criterion, identify measures that could be implemented to ensure compliance with the relevant criterion; and
 - (ii) give the Secretary and landowner a copy of the independent review; and
 - (iii) comply with any written requests made by the Secretary to implement any findings of the review.

11.4 Contributions to Council

Planning Agreement – MSC

- (a) Within six months of the approval of Modification 7, or other timeframe agreed by the Secretary, the Applicant must enter into a Planning Agreement with MSC in accordance with:
- (i) Division 7.1 of Part 7 of the EP&A Act; and
 - (ii) the terms of the offer in Appendix 5.

Planning Agreement – UHSC

- (b) Within six months of the approval of Modification 7, or other timeframe agreed by the Secretary, the Applicant must enter into a Planning Agreement with UHSC in accordance with:

- (i) Division 7.1 of Part 7 of the EP&A Act; and
- (ii) the terms of the offer in Appendix 5.

12. Further Approvals and Agreements

12.1 Statutory Requirements

- (a) The Applicant **must** ensure that all statutory requirements including but not restricted to those set down by the Local Government Act 1993, Protection of the Environment Administration Act 1991, Protection of the Environment Operations Act 1997, Rivers and Foreshores Improvement Act 1948, Water Act 1912, National Parks and Wildlife Act 1974, and all other relevant legislation, Regulations, Australian Standards, Codes, Guidelines and Notices, Conditions, Directions, Notices and Requirements issued pursuant to statutory powers by the **MSC, EPA, DRG, OEH, DoI, RMS, NSW Agriculture**, and NSW Fisheries, are fully met.

- (b) Structural Adequacy

Detailed plans and specifications relating to the design and construction of each structural element associated with the proposed development are to be submitted to the Principal Certifying Authority prior to the construction of each particular building or structure. Such plans and specifications must be accompanied by certification provided by a practicing professional structural engineer or an accredited certifier certifying the structural adequacy of the proposed building design and compliance with the Building Code of Australia.

- (c) Verification of Construction

Upon completion of building works and prior to the issue of an occupation certificate, a certificate/s prepared by a suitably qualified person or a compliance certificate/s issued by an accredited certifier, is to be submitted to the Principal Certifying Authority certifying that the following building components, where relevant, have been completed in accordance with approved plans and specifications:

- (i) footings;
- (ii) concrete structures, including ground floor and any subsequent floors, retaining walls and columns;
- (iii) framing and roof structure;
- (iv) fire protection coverings to building elements required to comply with the Building Code of Australia; and
- (v) mechanical ventilation.

The certificate/s **must** demonstrate at what stage of construction inspections were undertaken.

12.2 Approvals within a Mine Subsidence District

- (a) ²⁹The Applicant must seek the approval of the SA NSW for the construction of any improvements, including those related to the mine buildings and associated works, any relocation or diversion of infrastructure or existing improvements, prior to undertaking the works.

13. Access to Information

- (a) Prior to the recommencement of mining operations until the completion of all rehabilitation required under this consent, the Applicant must:
- (i) make the following information and documents (as they are obtained, approved or as otherwise stipulated within the conditions of this consent) publicly available on its website:
- the documents referred to in Condition 1.1 (a) of this consent;
 - all current statutory approvals for the development;
 - all approved strategies, plans and programs required under the conditions of this consent;
 - minutes of CCC meetings;
 - regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent;
 - a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
 - a summary of the current stage and progress of the development;
 - contact details to enquire about the development or to make a complaint;
 - a complaints register, updated monthly;
 - the Annual Reviews of the development;
 - audit reports prepared as part of any Independent Environmental Audit of the development and the Applicant's response to the recommendations in any audit report; and
 - any other matter required by the Secretary; and
- (ii) keep such information up to date, to the satisfaction of the Secretary.

²⁹ SA NSW General Terms of Approval

SCHEDULE A

The table below provides a link between the original receiver 'locations' and the new receiver identifications introduced under Modification 7.

Location	Receiver ID	Lot / Section and DP Number		
East Site Receivers				
Knight*	302	1453		628493
Day	86	51		776564
O'Brien	303	170		723261
	422	7		844651
Gordon*	304	1452		583830
West Site Receivers				
Blairmore Point*	295	3		835733
"Waitomo"	371	100		1177385
"Maryvale"	153	156		750926
Standing	181	5	23	758554
Loneragan	212	7	21	758554
MacIntyre 1*	69	110		873834
MacIntyre 2*	69	110		873834
MacIntyre 3*	69	110		873834
"Woodburn"***	137	102		1124883
"Athlone"***	344	28		750926
"Glenmore"***	512	177		750926
"Belgrave"	336	74		750926
"Woodlands"*	36	180		750951
"Mayvale"	35	178		750951
"Malara"	34	181		750951

* *Property acquired by the Applicant, now mine-owned*

***Property acquired by MACH Energy, now mine-owned*

SCHEDULE B

(Deleted)

SCHEDULE C

(Deleted)

Appendix 1 - Schedule of Land

Schedule of Land

ID	Lot	Section	DP
5	164		750951
6	164		750951
8	165		750951
14	1771		1175346
15	1770		1175346
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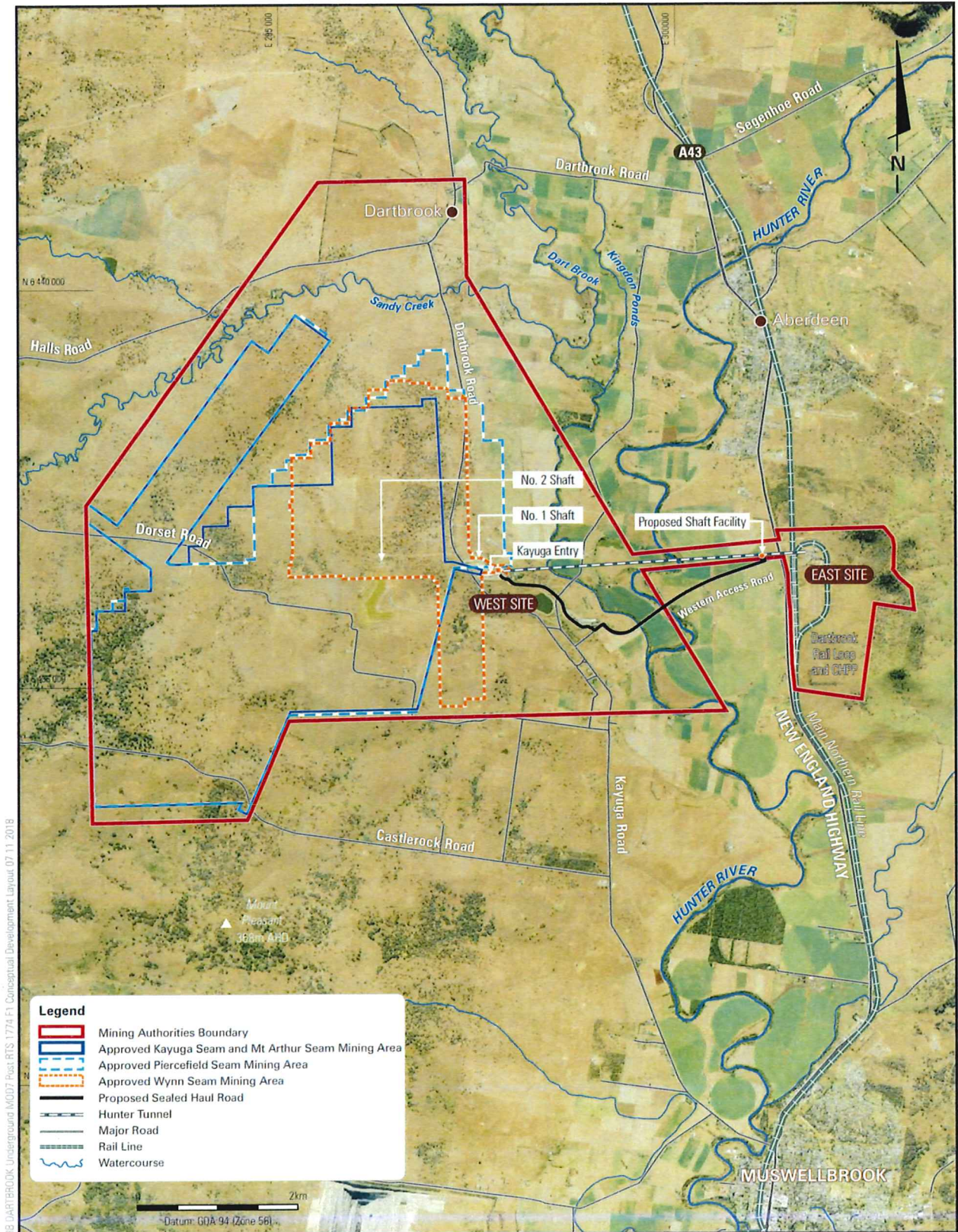
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ID	Lot	Section	DP
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Appendix 2 - Development Layout Plans

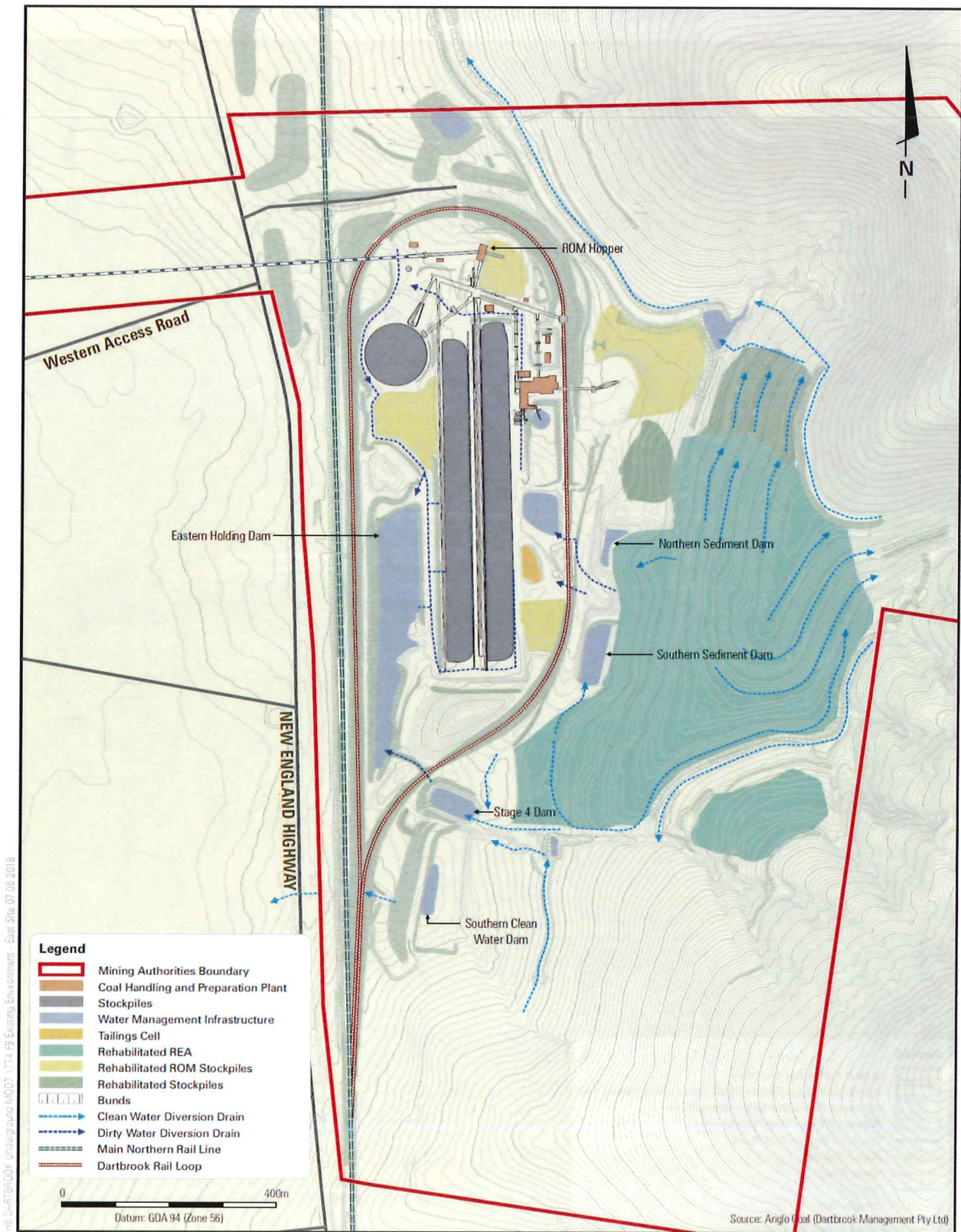


DARTBROOK MINE

Conceptual Development Layout



Figure 1: Development Layout

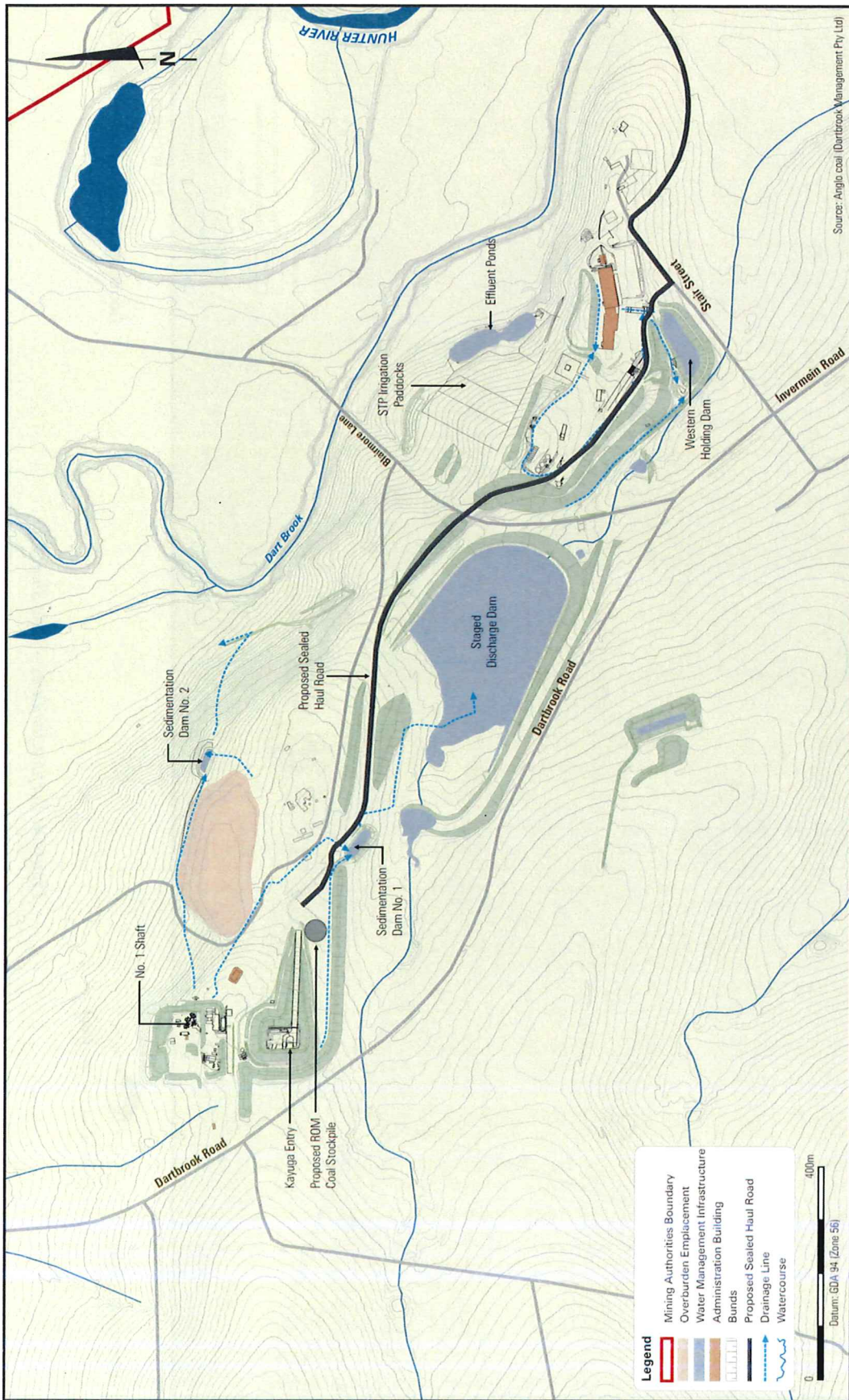


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Existing East Site Infrastructure



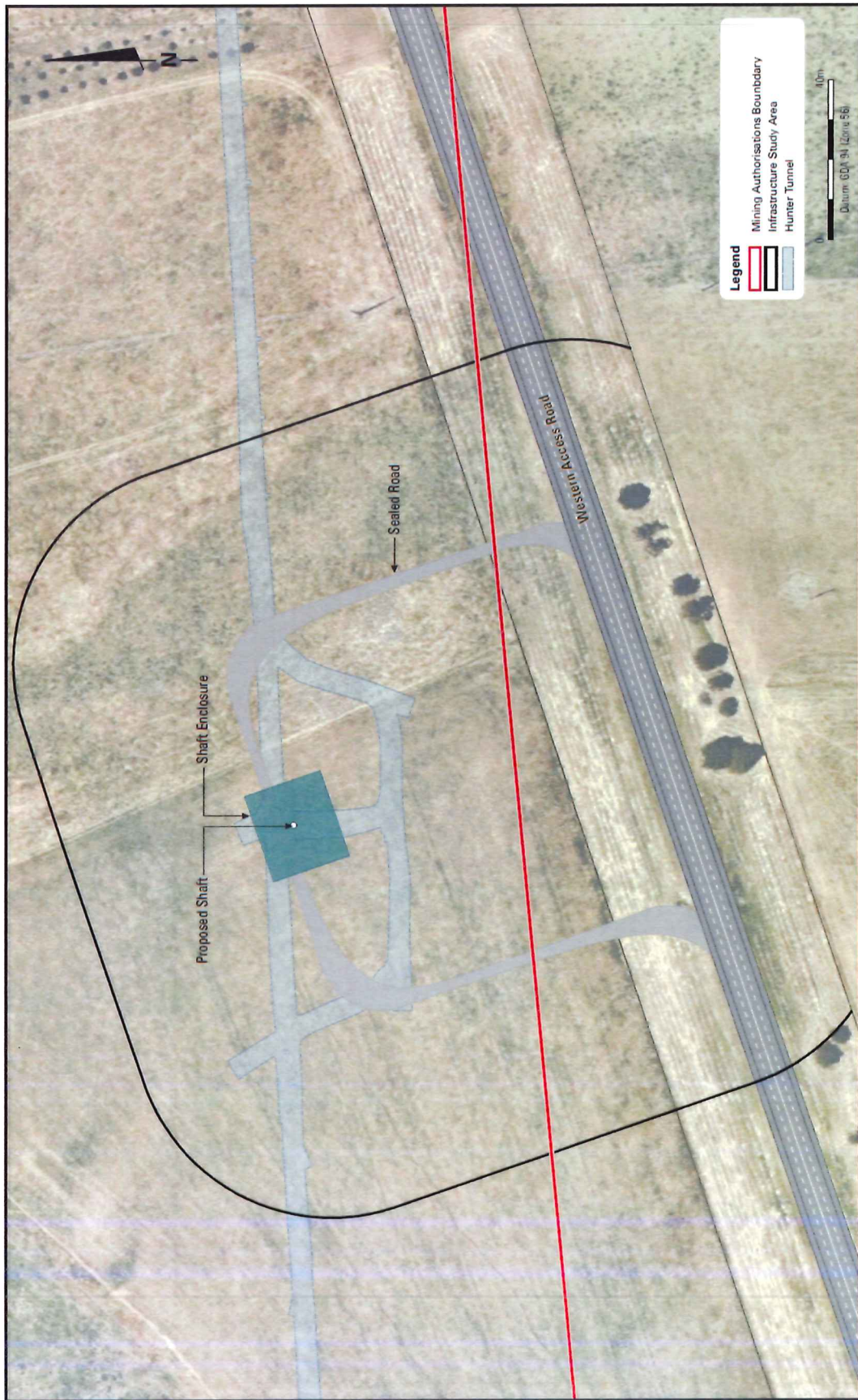
Figure 2: Surface facilities – East Site



DARTBROOK MINE
Surface Facilities - West Site



Figure 3: Surface facilities – West Site

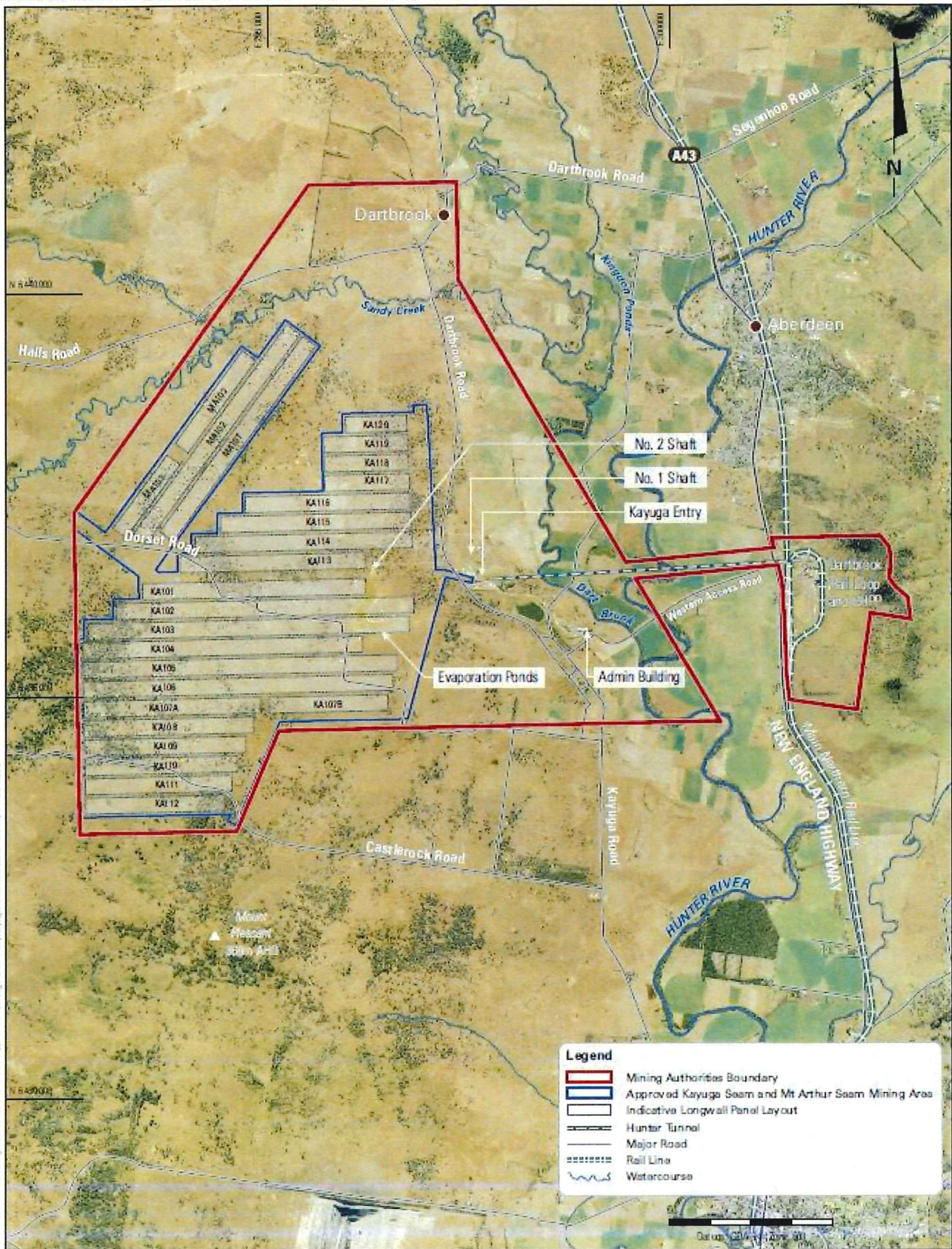


DARTBROOK MINE
 Conceptual Layout of New Shaft Site



Figure 4: Surface facilities – New Shaft Site

Appendix 3 - Underground Workings



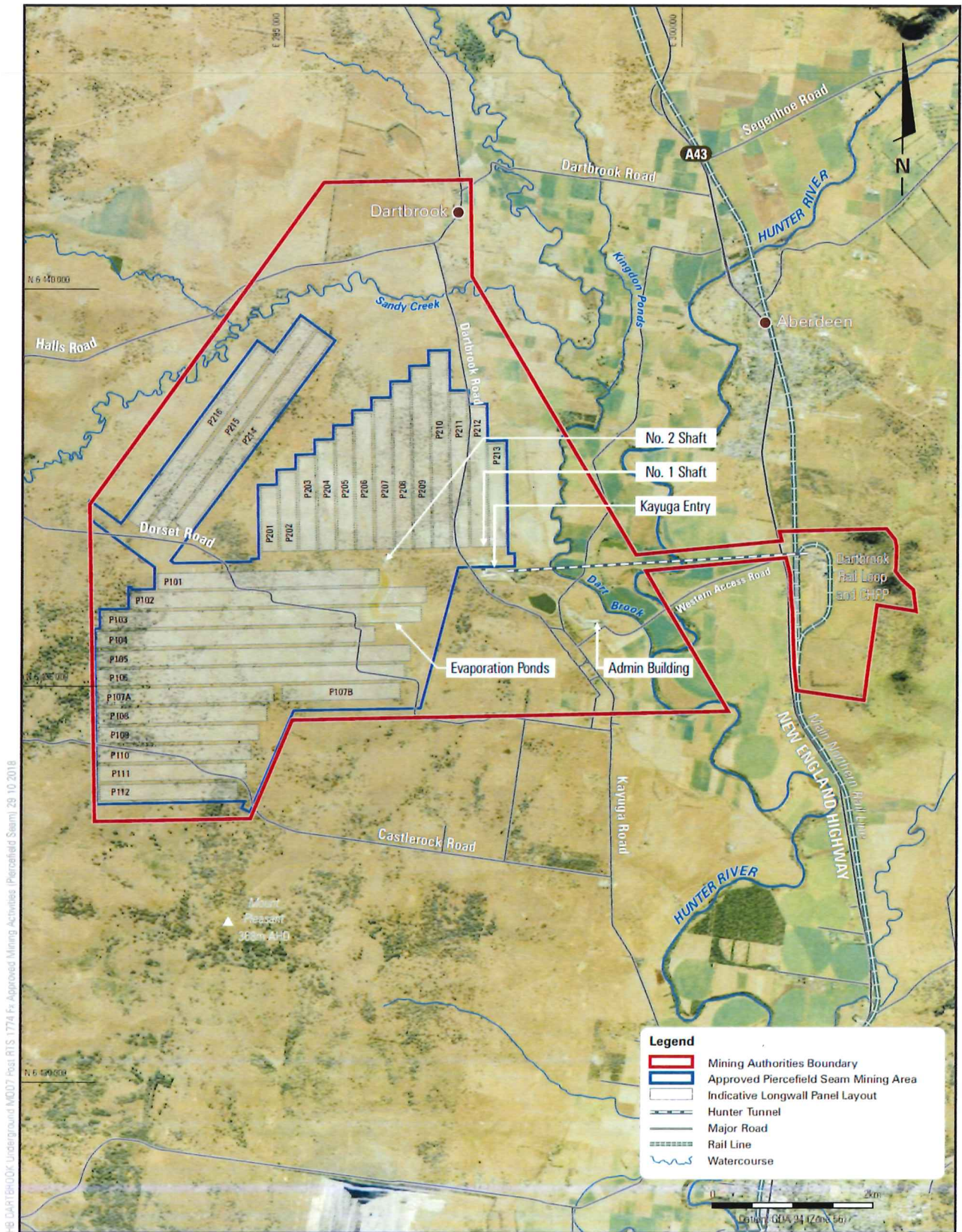
DARTBROOK MINE

Hansen Bailey



Approved Mining Activities (Kayuga and Mt Arthur Seams)

Figure 5: Approved Longwall Mine Plan – Kayuga and Mt Arthur Seams

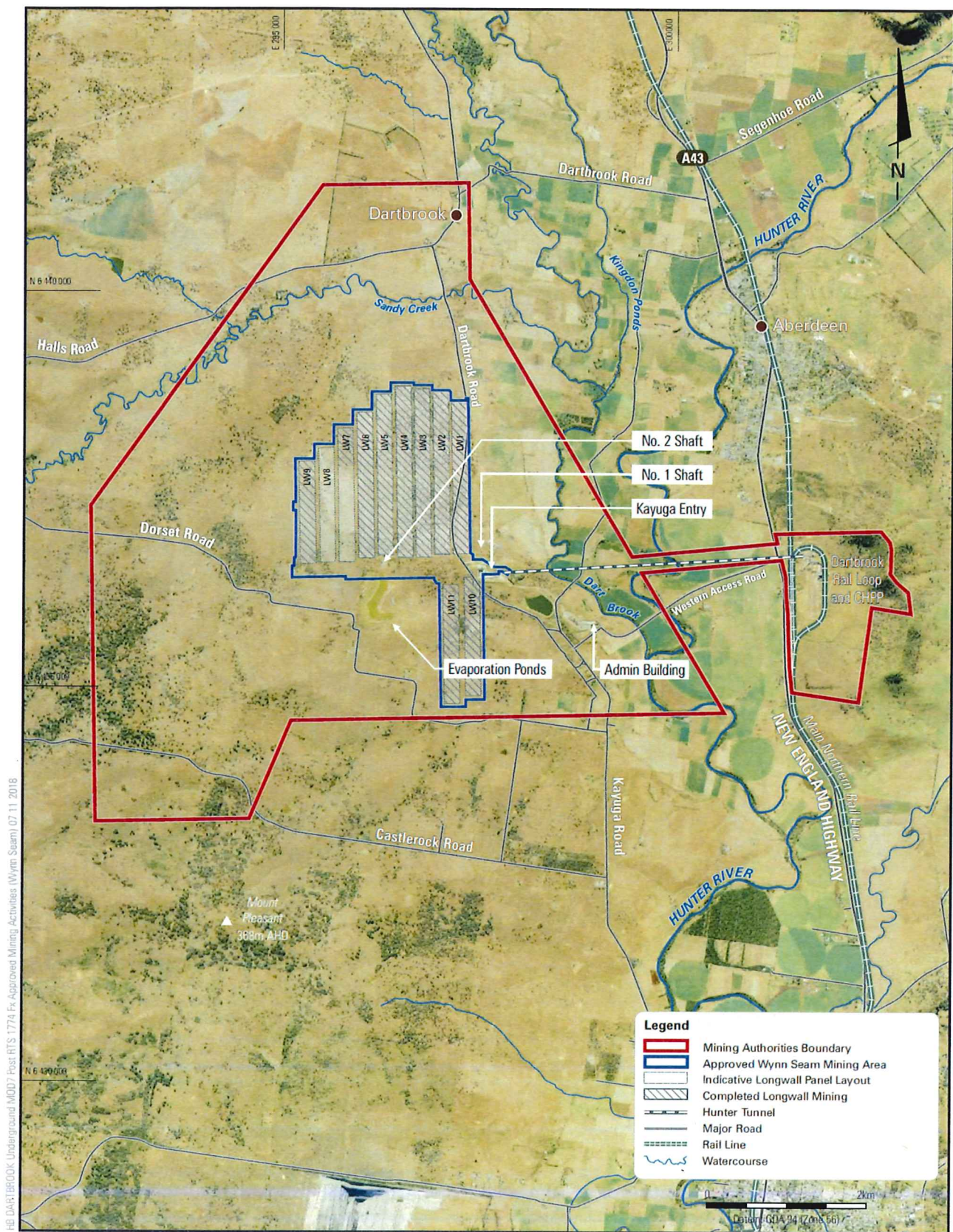


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Approved Mining Activities (Piercefield Seam)

Figure 6: Approved Longwall Mine Plan – Piercefield Seam

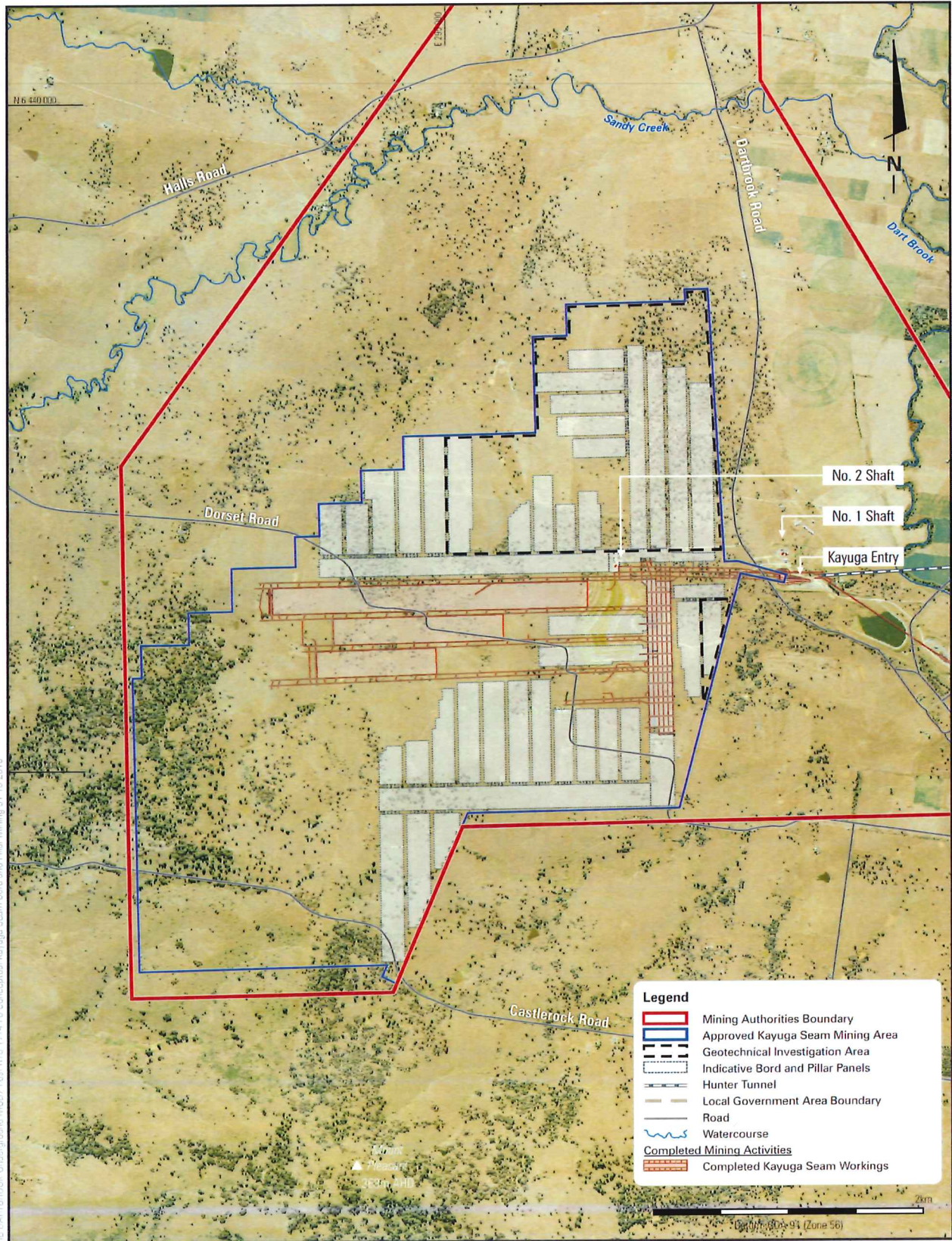


HE DARTBROOK Underground M007 Post RT'S 1774 Ex Approved Mining Activities (Wynn Seam) 07.11.2018



DARTBROOK MINE
Approved Mining Activities (Wynn Seam)

Figure 7: Approved Longwall Mine Plan – Wynn Seam



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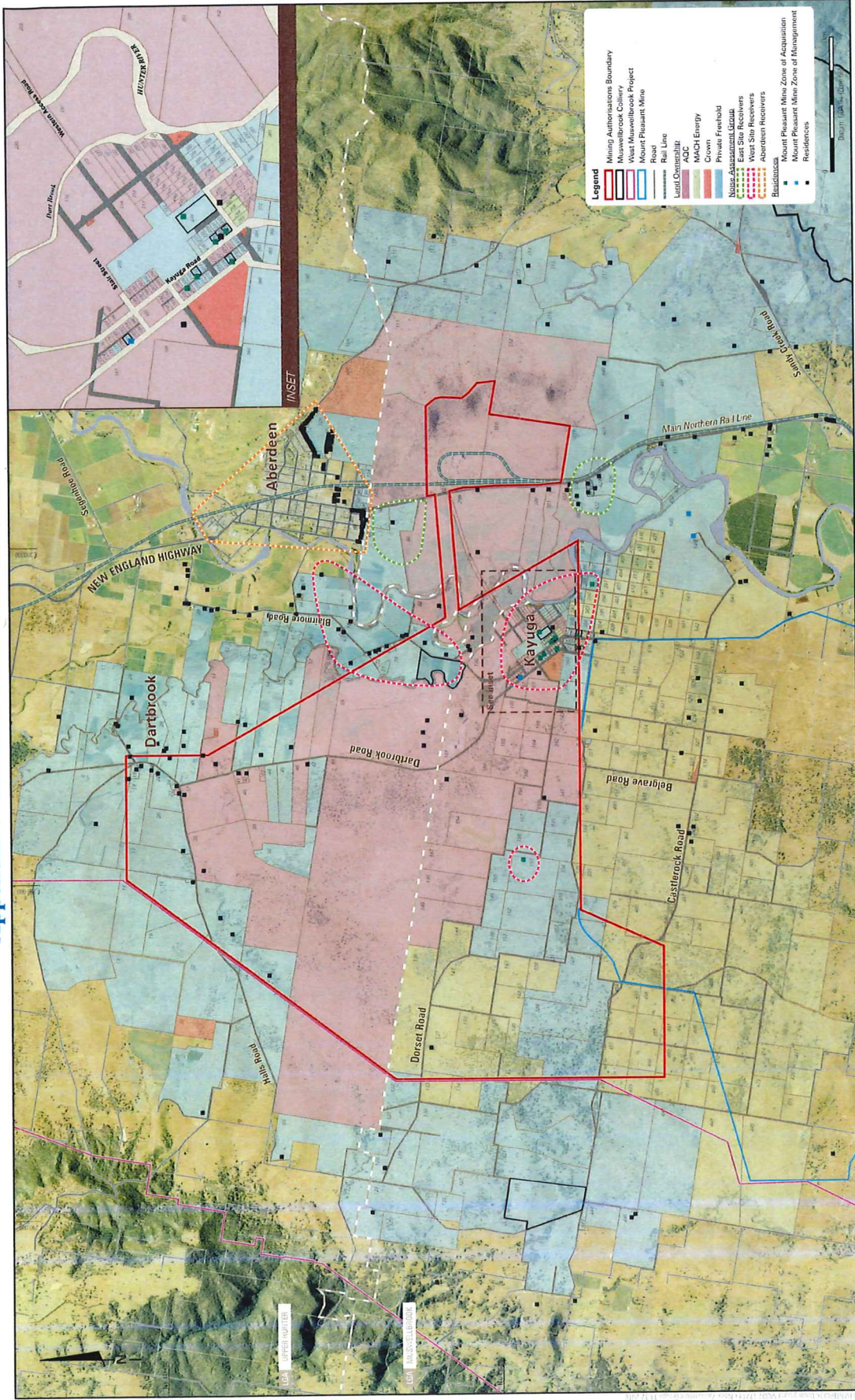
HansenBailey
ENVIRONMENTAL CONSULTANTS

Australian Pacific Coal

Conceptual Kayuga Seam Bord and Pillar Mining

Figure 8: Approved Bord and Pillar Mine Plan – Kayuga Seam

Appendix 4 - Receiver Zones and Locations



DARTBROOK MINE

Noise Assessment Groups

Figure 9: Receiver Zones and Locations



Appendix 5 - General Terms of Applicant's VPA Offer

Components of Proposed Planning Agreement with MSC

Description of Contribution	Quantity	Purpose of Contribution
Levy on coal production	\$0.068 per tonne of product coal extracted from within the Muswellbrook LGA	Funding for the provision of public infrastructure and services within the Muswellbrook LGA. This cents per tonne rate will be indexed annually according to the Consumer Price Index (CPI).
Contribution of funding toward an Environmental Officer	\$10,000 per annum	Funding toward an Environmental Officer, who will be responsible for environmental matters associated with development in the Muswellbrook LGA. Noting that the same condition is inserted in proposed UHSC VPA. This annual financial contribution will be indexed annually according to the Consumer Price Index (CPI).
Training of Apprentices	Target of two apprentices at any given time with preference given to residents of Muswellbrook & Upper Hunter Shire LGA's	To assist in building a skilled labour force within the Muswellbrook & Upper Hunter Shire LGAs. Same condition proposed in UHSC VPA.
Revision of the Muswellbrook Western Roads Strategic Traffic Study (1997)	Cost of revising the relevant aspects of the study and road upgrades relevant to the modification's contribution	To reimburse MSC for a revision to the relevant aspects of the Western Roads Strategic Traffic Study (as is relevant to the proposed Modification to DA 231-7-2000 to incorporate the traffic generated by the Modification). Contribute to road upgrades relevant to the modification's traffic contribution.

Components of Proposed Planning Agreement with UHSC

Description of Contribution	Quantity	Purpose of Contribution
Community Enhancement Fund	\$100,000 per annum payable in quarterly instalments commencing twelve (12) months after the date of approval of MOD 7 to DA 231-7-2000.	Funding for the provision of public infrastructure and services within the Upper Hunter LGA particularly focusing on the Aberdeen Area and its surrounds. This payment will be indexed annually according to the Consumer Price Index (CPI).
Contribution of funding toward an Environmental Officer	\$10,000 per annum	Funding toward an Environmental Officer, who will be responsible for environmental matters associated with development in the Upper Hunter LGA. Noting that the same condition is inserted in the proposed Muswellbrook Shire VPA. This annual financial contribution will be indexed annually according to the Consumer Price Index (CPI).
Training of Apprentices	Target of two apprentices at any given time with preference given to residents of Upper Hunter & Muswellbrook LGAs.	To assist in building a skilled labour force within the Upper Hunter & Muswellbrook LGAs. Same condition inserted in proposed MSC VPA.