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NSW EPA

Your reference: SSD 6875
Our reference: DOC15/236151, EF13/2546
Contact: Bill George (02) 4908 6821
Electronic correspondence to: hunter.region@epa.nsw.gov.au

NSW Department of Planning and Environment
GPO Box 39
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Attention: Mr Matthew Sprott

Dear Mr Sprott

DRAYTON SOUTH COAL PROJECT – SSD 6875

I refer to your email to the Environment Protection Authority (EPA), dated 15 May 2015, inviting review and comment on the Drayton South Coal Project (the project), which is applied for by Anglo American Metallurgical Coal Pty Ltd (the proponent) under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The EPA has reviewed the project as detailed in the report titled 'Drayton South Coal Project, *Environmental Impact Statement*' (EIS), Volumes 1 – 6 and dated May 2015.

The project involves the following:

- continuing operations at the existing Drayton coal mine, with some minor additional mining, over a period of 15 years;
- developing a new open cut mining area, known as Drayton South, south of the existing mine, to enable the extraction of 73 million tonnes of run-of-mine coal at a rate of up to 6.4 million tonnes per year, over a period of 15 years;
- utilising a range of existing and additional infrastructure to support the mining operations;
- realigning a section of Edderton Road (including its intersection with the Golden Highway);
- exporting coal from the site via the existing Drayton mine rail facilities; and
- progressively rehabilitating the site.

The EPA has reviewed the EIS and provides the following comments. The EPA's proposed recommended conditions of approval are provided at **Attachment 1**.

Detailed comments on the EPA's assessment of the Air Quality Impact Assessment (AQIA) and Noise Impact Assessment (NIA) for the project are provided in **Attachment 2**.

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Surface Water Impacts

In reviewing the Surface Water Impact Assessment (SWIA) prepared by WRM on behalf of the proponent, the EPA advises that insufficient information has been provided to determine potential impacts on receiving waters, including the Hunter River, during wet weather discharges and proposed de-watering of sediment dams.

The water quality trigger values in the SWIA at Table 7.3, page Q-101 provides limited information to base decisions on the quality and sediment load of both controlled and uncontrolled discharges from sediment dams. Table 7.3 also references a proposed turbidity trigger of 45689 NTU but the EIS does not discuss how this trigger value was derived. The proposed trigger value for turbidity is not acceptable to the EPA – no instruments could be calibrated to such a value, even if standards existed. The ANZECC guideline trigger value range for lowland rivers in South East Australia is 6-50 NTU.

Total solids (TS) is a measure of the suspended and dissolved solids in water. Turbidity is a measure of how much the suspended material (Total Suspended Solids = TSS) in water attenuates the passage of light. As such, the dissolved solid fraction (i.e. salts) of TS is not expected to affect turbidity.

The relationship between TSS and turbidity depends on the optical nature of the suspended material, which may include soil particles (clay, silt, sand), algae, plankton, microbes and organic detritus. Broadly, a water sample with TSS of $10mgL^{-1}$ dominated by sand particles will have a much lower turbidity than a water sample with TSS of $10mgL^{-1}$ dominated by highly dispersive clay particles. It is likely that this explains the high slope in the observed turbidity / TSS relationship at the sample site in the EIS (i.e. TSS at the site is dominated by clay particles which impart much greater turbidity per unit weight).

The physical and chemical properties of the inorganic TSS load impact not only on the turbidity measured at the discharge location, but also affect the extent and duration of elevated turbidity downstream of the discharge. Highly dispersive clays would be expected to remain in suspension and affect turbidity for a long time.

Consideration should be given to the fate of TSS once it enters the stream system. Deposition of TSS can smother benthic communities and significantly alter the makeup of sediment loads. The deposition of material is affected by its settling velocity, current energy, and geochemical interactions. As salinity rises along an estuarine gradient, flocculation of clays occurs, and they are deposited to bed sediments where they are subject to resuspension by flow variations. This mechanism can trap fine material (e.g. clays) in the creek/estuarine sediments and cause a significant long term increase in turbidity.

The EPA recommends that a site specific relationship between TSS and turbidity be derived from a comprehensive flow-weighted sampling regime, whereby samples are collected across a range of flow events. It is also recommend that the dispersive properties of the TSS loads be investigated to better understand the potential downstream impacts.

The EIS also proposes (page Q-54) that the EPA should include licensed discharge points for wet weather discharges at the outlet of each sediment dam and that any concentration limits for TSS prescribed in the Environment Protection Licence (EPL) may only be exceeded where rainfall exceeds the design standard of 35.9mm of rainfall in a 5 day period.

The EPA generally does not licence wet weather discharges from sediment dams on coal mining premises in the Hunter Valley. Instead, we rely on the proponent to operate all sediment dams in accordance with the requirements of the document 'Managing Urban Stormwater Soils and Construction Volume 2E - Mines and Quarries' (DECC, 2008) and to ensure that pollution of waters (as defined in the *Protection of the Environment Operations Act 1997* (POEO Act)) does not occur. The EPA will consider including monitoring points on the licence to monitor overflow events from sediment dams.

Discharge points are included on coal mine EPL's to authorise the discharge of saline water in accordance with the Protection of the Environment Operations (Hunter River Salinity Trading Scheme) (HRSTS) Regulation 2002. The EPA notes that the proponent is not intending to discharge under the HRSTS. The

high TS measured at the site most likely includes a significant contribution from dissolved salts, indicating that salinity in discharges should be regulated under the HRSTS.

In the absence of sufficient justification for the inclusion of wet weather discharge limits, particularly in relation to TSS and turbidity, the EPA has not included recommended conditions in relation to sediment dam discharges. The EPA will require a more detailed assessment of all potential pollutants, including but not limited to conductivity, total suspended solids, total dissolved solids, total solids, turbidity and metals, before authorising any discharges from the premises.

The EPA has provided recommended conditions in **Attachment 1** in relation to general water and soil management for the project.

Offensive Blast Fumes

The EPA has recently included an offensive blast fume condition on all coal mine EPL's in the Hunter Valley. This condition is currently on the Drayton Coal Mine EPL (No.1323) and will remain on the EPL for the Drayton South Project.

EPL 1323

Current mining operations at the Drayton Mine are authorised by an existing EPL under the POEO Act. The proponent will need to make a separate application to EPA to vary the conditions of this EPL to include the Drayton South project if approval is granted.

If you require any further information regarding this matter please contact Bill George on 4908 6821.

Yours sincerely

26.6.15

KAREN MARLER
Head Regional Operations Unit – Hunter
Environment Protection Authority

Encl: Attachment 1 – Recommended Conditions of Approval
Attachment 2 – EPAs detailed Air Quality Impact Assessment and Noise Impact Assessment comments

ATTACHMENT 1

RECOMMENDED CONDITIONS OF APPROVAL - DRAYTON SOUTH COAL PROJECT – SSD 6875

Environment Protection Licence (EPL) 1323 is already issued for the premises. The following recommended conditions of approval include only new or amended conditions to those already existing on EPL 1323. The EPA has not included an exhaustive list of all conditions currently in force in EPL1323 that will remain unchanged if the project approval is granted.

1. ADMINISTRATIVE

Premises or plant to which this licence applies

1.1 The proponent must provide the EPA with an updated premises description diagram/map prior to the commencement of any site works associated with the project. This diagram/map must be:

a. titled and dated;
b. prepared by a registered surveyor;
c. clearly identify the boundary of the premises subject to the project;
d. illustrate location and GPS coordinates of all discharge and/or monitoring sites; and
e. in size A1 in both electronic (shapefile format is preferred) and hard copy format.

2. NOISE, VIBRATION AND BLASTING

Limit Conditions

2.1 Noise generated at the premises must not exceed the noise limits in the table below. The locations referred to in the table below are indicated by Figure A1 of the *Acoustic Impact Assessment* (Bridges Acoustics 2015) in the document Drayton South Coal Project, *Environmental Impact Statement*' (EIS), Volumes 1 – 6 and dated May 2015.

Location (Lot and Deposited Plan information to be provided by the Proponent with the EPL application)	**Day**	**Evening**	**Night**
	$L_{Aeq(15min)}$	$L_{Aeq(15min)}$	$L_{Aeq(15min)}$
411	39	39	39
418	38	38	38
419	37	37	37
403	38	38	38
420E, 420W	37	37	37
402, 421, 423	38	38	38
398	39	39	37
401, 424	36	36	36
390	39	39	37
425	36	36	36
427	35	35	35
399	37	37	36
400	35	35	35

444, 446	35	35	35
387, 429	35	35	35
385, 432, 433E, 433W, 440, 443, 460	35	35	35
Any other residential sensitive receiver not subject to a negotiated agreement	35	35	35

2.2 For the purpose of condition 2.1;

- Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sunday and Public Holidays.
- Evening is defined as the period 6pm to 10pm.
- Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sunday and Public Holidays.

2.3 The noise limits set out in condition 2.1 apply under all meteorological conditions except for the following:

a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or

b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or

c) Stability category G temperature inversion conditions.

2.4 For the purposes of condition 2.3:

a) Data recorded by the meteorological station identified as EPA Identification Point (to be confirmed in the EPL application) must be used to determine meteorological conditions ; and

b) Temperature inversion conditions (stability category) are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the NSW Industrial Noise Policy.

2.5 To determine compliance:

a) with the $L_{eq(15\ minute)}$ noise limits in condition 2.1, the noise measurement equipment must be located:

- approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or
- within 30 metres of a dwelling façade, but not closer than 3m, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable
- within approximately 50 metres of the boundary of a National Park or a Nature Reserve.

b) with the $L_{A1(1\ minute)}$ noise limits in condition 2.1, the noise measurement equipment must be located within 1 metre of a dwelling façade.

c) with the noise limits in condition 2.1, the noise measurement equipment must be located:

- at the most affected point at a location where there is no dwelling at the location; or
- at the most affected point within an area at a location prescribed by conditions 2.5(a) or 2.5(b).

2.6 A non-compliance of condition 2.1 will still occur where noise generated from the premises in excess of the appropriate limit is measured:

- at a location other than an area prescribed by conditions 2.5(a) and 2.5(b); and/or
- at a point other than the most affected point at a location.

2.7 For the purposes of determining the noise generated at the premises the modification factors in Section 4 of the NSW Industrial Noise Policy must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.

3. Blasting Conditions

Airblast overpressure level

3.1 The airblast overpressure level from blasting operations at the premises must not exceed 120dB (Lin Peak) at any time at any noise sensitive locations. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

3.2 The airblast overpressure level from blasting operations at the premises must not exceed 115dB (Lin Peak) at any noise sensitive locations for more than five per cent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

Ground vibration level

3.3 Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 10mm/sec at any time at any noise sensitive locations. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

3.4 Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 5mm/sec at any noise sensitive locations for more than five per cent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

Blasting hours

3.5 Blasting at the premises may only take place between 9:00am-5:00pm Monday to Friday. Blasting is not permitted on public holidays.

3.6 Blasting outside of the hours specified in 3.5 can only take place with the written approval of the EPA.

Blast monitoring

3.7 To determine compliance with conditions 3.1 to 3.4:

a) Airblast overpressure and ground vibration levels experienced at the following noise sensitive locations, or locations representative of noise sensitive locations, must be measured and recorded for all blasts carried out on the premises;

- Exact locations of all blast monitors – including Lot & DP, street address and easting and northing grid coordinates to be provided with the EPL application.

b) Instrumentation used to measure and record the airblast overpressure and ground vibration levels must meet the requirements of Australian Standard AS 2187.2-2006.

NOTE: A breach of the licence will still occur where airblast overpressure or ground vibration levels from the blasting operations at the premises exceeds the limit specified in conditions 3.1 to 3.4 at any "noise sensitive locations" other than the locations identified in the EPL.

3.8 The airblast overpressure and ground vibration levels in conditions 3.1 to 3.4 do not apply at noise sensitive locations that are owned by the licensee or subject to a private agreement, relating to airblast overpressure and ground vibration levels, between the licensee and land owner.

3.9 The proponent must notify the EPA immediately they become aware of any exceedance of the limits in conditions 3.1 to 3.4.

4. Meteorological Monitoring Conditions

4.1 The meteorological weather station must be maintained so as to be capable of continuously monitoring the parameters specified in condition 4.2.

4.2 For each monitoring point specified in the table below the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns.

Point No. (to be specified in the EPL)

Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method
Air temperature	°C	Continuous	1 hour	AM-4
Wind direction	°	Continuous	15 minute	AM-2 & AM-4
Wind speed	m/s	Continuous	15 minute	AM-2 & AM-4
Sigma theta	°	Continuous	15 minute	AM-2 & AM-4
Rainfall	mm	Continuous	15 minute	AM-4
Relative humidity	%	Continuous	1 hour	AM-4

5. Requirement to Monitor Noise

5.1 To assess compliance with Condition 2.1, attended noise monitoring must be undertaken in accordance with Condition 2.5 and:

a) At each one of the locations listed in Condition 2.1 (or where this is demonstrated to be impractical, an alternate methodology to determine compliance may be approved by the EPA) ;

b) Occur at a frequency acceptable to the EPA;

c) Occur during each day, evening and night period as defined in the NSW Industrial Noise Policy for a minimum of:

- 1.5 hours during the day;
- 30 minutes during the evening; and
- 1 hour during the night.

d) Occur for three consecutive operating days.

6. Reporting Conditions

6.1 Noise Monitoring Report

A noise compliance assessment report must be submitted to the EPA within 30 days of the completion of the periodic monitoring being completed. The assessment must be prepared by a suitably qualified and experienced acoustical consultant and include:

a) An assessment of compliance with noise limits presented in Condition 2.1; and

b) An outline of any management actions taken within the monitoring period to address any exceedences of the limits contained in Condition 2.1.

7. Pollution Reduction Program – Mitigation of L_{Amax} (wagon bunching) noise impacts

7.1 The EPA may require the proponent to investigate all reasonable and feasible mitigation measures to mitigate awakening impacts from train wagon bunching noise at receivers identified in the EIS as receiving L_{Amax} noise levels in excess of the EPA's adopted sleep disturbance criteria.

Additions to Definition of Terms of the licence

- NSW Industrial Noise Policy - the document entitled "New South Wales Industrial Noise Policy" published by the Environment Protection Authority in January 2000.
- Noise – "sound pressure levels" for the purposes of conditions 2.1 to 2.7.
- "Noise sensitive locations" includes buildings used as a residence, hospital, school, child care centre, places of public worship and nursing homes. A noise sensitive location includes the land within 30 metres of the building.

AIR QUALITY

General Dust Conditions

1. The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.

2. Activities occurring in or on the premises must be carried out in a manner that will minimise the generation and emission of dust.

3. All trafficable areas, coal storage areas, and vehicle manoeuvring areas in or on the premises must be maintained, at all times, in a condition that will minimise the generation and emission from the premises of dust.

BLAST FUME

4. Offensive blast fume must not be emitted from the premises.

   Definition:
   Offensive blast fume means post-blast gases from the detonation of explosives at the premises that by reason of their nature, duration, character or quality, or the time at which they are emitted, or any other circumstances:
   (i) are harmful to (or is likely to be harmful to) a person that is outside the premises from which it is emitted; or
   (ii) interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted.

WATER AND SOIL MANAGEMENT

1. Except as may be expressly provided by an EPL issued under the POEO Act in relation to the project, section 120 of the POEO Act must be complied with in, and in connection with, the carrying out of the project.

2. All sediment dams and associated drainage lines must be installed and commissioned prior to the commencement of any clearing or grubbing works within the catchment area of the sediment dam(s) that may cause sediment to leave the licensed premises.

3. Sediment dams must be actively managed to collect and treat both the solid and soluble components of water and any other potential pollutants generated or liberated from exposed or disturbed soils. This should include active flocculation and regular de-silting of dams prior to their design capacity being exceeded.

4. Where an overflow or discharge from a sediment dam(s) could potentially cause, or is causing water pollution, as defined in the POEO Act, the licensee must take all practical measures as soon as possible to reduce the level of stormwater and other material in the sediment dam. This should include, but need not be limited to, the transfer (pumping or otherwise) of such water to another water storage system.

5. This approval does not authorise the discharge of saline water (being water with an electrical conductivity of 400 micro Siemens or greater) from the premises.

6. Any overflow event(s) from sediment dams must be sampled and analysed pH, conductivity, total dissolved solids, total suspended solids, total solids, turbidity, sodium, magnesium, potassium, calcium, chloride, sulphate and bicarbonates.

WASTE

1. The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by a licence under the POEO Act.

FUEL AND CHEMICAL STORAGE

1. All chemicals, fuels and oils stored at the premises must be contained within appropriately designed bunded areas that meet the following requirements:

   a) comply with any relevant Australian Standards for the liquids being stored; and
   b) have impervious flooring and walls; and
   c) have a minimum capacity of 110% of the volume of the largest container stored within the bund.

   Note: Additional information on bunding design, construction and maintenance can be found in the EPA's Guide: *"Storing and Handling Liquids: Environmental Protection, Participants Manual"*

ATTACHMENT 2

EPA'S COMMENTS ON THE AIR QUALITY AND NOISE IMPACT ASSESSMENTS DRAYTON SOUTH COAL PROJECT, SSD 6875

The EPA has reviewed the air quality impact assessment (AQIA) for the revised proposal and provides the following comments.

Issue 1 Mitigation – emission minimisation

Section 12 of the AQIA sets out the proponents implied commitments to managing emissions to the air, including monitoring air quality. The proponent states that they are 'committed to best practice dust management and control'. They offer to take 'reasonable and practical measures' to prevent or minimise dust impacts.

Blasting is to be conducted according to both the Code of Good Practice and the proponent's blast fume management standard. Complying with the Code of Good Practice makes an exceedence of the NO_2 criterion due to blasting very unlikely (see issue 3 below).

The proponent also commits to continuous monitoring of PM_{10} at three sites – to the south or south-west of Drayton South, to the south-east of Drayton south, and to the north-east of Drayton. Monitoring data would be collected in real time and would be used as part of reactive management. Particular mitigation measures would be triggered by concentrations reaching trigger levels.

The proponent proposes to use a meteorological forecasting system in conjunction with the particle observations as part of their proactive management of emissions to ensure they minimise air quality impacts.

These commitments are reflected section 6 of the AQIA which sets out best practice controls for managing particle emissions, listing them in tables 6.1 and 6.2. Not all the best practice measures are adopted for the proposal. Further mitigation may therefore be feasible.

Issue 2 Overall Impact

The revised Drayton South Project significantly decreases dust emissions from the mine compared to the first (and rejected) Drayton South extension proposal. Implementation of current best practice as implemented at Drayton under their pollution reduction programs (PRPs) and the DustStop initiative combined with the reduced footprint and limiting mining behind the ridgeline reduces operational impacts on the closest identified receptors.

Simulation of impacts showed no receptor experiencing twenty-four hour concentrations of PM_{10} greater than 50 $\mu g/m^3$ due to the mine operation itself. Cumulative assessment was then carried out for the "worst impacted privately-owned residences", 217A, 226A, 226B, and 226C. Mine operations are assessed as contributing less than 20 $\mu g/m^3$ at these receptors, but a number of days exceed the air quality criterion of 50 $\mu g/m^3$. The number of days is not listed and not obtainable from the presented results. It is also possible for exceedences to occur at other receptors. The assessment is incomplete, but this is unlikely to alter the general conclusions of the assessment or overall advice.

Residence 226B experiences at least four days in year 4 of the mine exceeding 50 $\mu g/m^3$, one of which is an additional exceedence (background less than 50 $\mu g/m^3$). There are at least two additional exceedence days at residence 217A, and one at 226A. Among these four sites there are at least an additional eight exceedence days in year 6, and at least seven in year 12. Presentation in tables 8.5 to 8.7 is limited to the 15 days with highest background concentration. It is possible that other days also exceed.

Assessment of cumulative impact for annual PM_{10} found no cases where the air quality criterion was exceeded (30 $\mu g/m^3$).

Assessment of $PM_{2.5}$ impacts shows no days on which any receptor experienced a twenty-four hour $PM_{2.5}$ concentration greater than the adopted criterion of 25 $\mu g/m^3$. Cumulative annual $PM_{2.5}$ impacts were also below the criterion of 8 $\mu g/m^3$.

Assessment of annual TSP showed no cases where the cumulative impact was greater than the assessment criterion of 90 $\mu g/m^3$.

Assessment of dust deposition showed no exceedences of the incremental criterion of 2 g/m^2/month. The cumulative criterion of 4 g/m^2/month was also met at all receptors.

The EPA notes that the assessed impacts assume the mitigation measures used to derive emissions. If the project is approved, EPA recommends that both development approval and the EPL (via the DustStop PRP's) include conditions requiring the proponent enact all the mitigation measures used in the derivation of the emissions estimates in the AQIA.

The EPA advises that the assessment shows impacts exceeding the assessment criteria for at least four privately-owned residences. The EPA recommends that this be a factor in determining approval for the project.

Issue 3 Blast Fume Impacts

The AQIA includes consideration of potential impacts from blast fumes. The assessment found a theoretical potential for exceedence of the nitrogen dioxide (NO_2) one-hour goal at nearby receptors.

The theoretical exceedence occurs only for adverse weather conditions occurring at night when mixing is least. Blasting is carried out during the day and thus an exceedence of the NO_2 goal is unlikely. The EPA notes that blast fumes may adversely impact amenity without exceeding NO_2 criteria. EPL conditions are recommended to mitigate these impacts.

NOISE ASSESSMENT

Criteria were developed in general accordance with policy

1. Criteria for operational mine noise were developed in general accordance with the Industrial Noise Policy (INP).
2. Realignment of Edderton Road was assessed against the *Interim Construction Noise Guideline* and all other construction work was assessed against the INP.

Operational criteria will not be exceeded, except where already exceeded by the approved Drayton Coal Mine

3. No noise levels were predicted above criteria in the vicinity of the project.
4. "Mild" and "moderate" impact exceedences of operational noise criteria were predicted in Antiene, due to the existing Drayton Coal Mine. The proponent will continue to liaise with land owners about noise management and mitigation at Antiene.
5. A 3°C/100m temperature gradient was modelled for the night time at the Drayton Mine and for the evening and night time periods at the Drayton South Mine, but without a 2m/s wind as drainage flow winds were not a feature of the source to receiver paths.

Screening criteria will not be exceeded, except where already exceeded by the approved Drayton Coal Mine

6. The sleep disturbance assessment suggested that, excluding train wagon bunching, maximum noise levels would be less than 45 dB at identified receivers.
7. Including wagon bunching, L_{Amax} were predicted between 45 and 50 dB at four receivers, between 51 and 60 dB at 14 receivers, and above 60 dB (61 and 66 dB) at two receivers. The EPA notes that these impacts are existing as part of the current Drayton Mine operations and may address these exceedances through a Pollution Reduction Program condition on the EPL.
8. Based on the criteria adopted in the Acoustic Impact Assessment (pI-19), maximum noise levels are likely to cause awakening reactions at one receiver location (location 178), and may cause awakening reactions at another receiver location (location 179).
9. Coal export volumes by rail will be less than currently approved, and require an average of four train movements per day, similar to actual production in 2013 (NIA pI-42).

Construction noise will not exceed criteria, and will take place during the day time only

10. Edderton Road will be realigned during the daytime period only, and works will not exceed Noise Management Levels at any receiver location (NIA pI-39).
11. The NIA predicted an increase in $L_{eq(day)}$ road traffic noise of up to 0.5 dBA during construction (pI-41).

Blasting will comply with criteria

12. Blasting with a Maximum Instantaneous Charge up to 2000 kg can meet ANZEC (1990) criteria at all privately owned residences and heritage structures.
13. Blasting will occur up to five times per week during daylight hours (EIS p23).
14. The mitigation measures for blasting proposed in the NIA (pp I-46 to I-47) are appropriate.