

**Submission  
No 18**

**INQUIRY INTO CURRENT AND POTENTIAL IMPACTS OF  
GOLD, SILVER, LEAD AND ZINC MINING ON HUMAN  
HEALTH, LAND, AIR AND WATER QUALITY IN NEW  
SOUTH WALES**

**Name:** Professor Warwick Giblin

**Date Received:** 27 August 2023

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**NSW legislative Council's Portfolio Committee No. 2**  
**Inquiry into Impacts of Gold, Silver, Lead & Zinc Mining on Human Health,**  
**Land, Air & Water Quality in NSW**

**Submission by**  
**Adjunct Professor Warwick Giblin**

**28 August 2023**

## **1. Scope of Submission Comments**

The focus of my submission is on the following aspects of the Terms of Reference (ToR):

Item (e): the effectiveness of the current regulatory framework in terms of monitoring, compliance, from mining activities;

Item (g): the effectiveness of NSW agencies to regulate and improve outcomes including the measurement and reporting;

Item (h): whether the regulatory framework for heavy metals and critical minerals mining is fit for purpose and able to ensure that the positive and negative impacts of heavy metals and critical minerals mining on local communities, economies (including job creation) and the environment are appropriately balanced;

Item (i): any other related matters.

## **2. Submission Lodgement**

I request that the submission and my name be published on the website.

## **3. Author's Bona Fides**

A summary of my credentials in relation to this matter are listed below:

- Have more than forty years executive level experience in Government and corporations in assessment and determination of mining projects in NSW. My experience has related to the operational realities of the EP&A Act and the POEO Act;
- First prepared EIS's for mining in the Hunter Valley in the 1980's. Have held senior executive roles in corporations pertaining to assessment, auditing and compliance of major operational facilities;
- Since 2011 I have assessed numerous gold, silver, lead and zinc mine proposals, including McPhillamys Gold, Tomingley Gold, Dargues Reef Gold, Federation (Trundle), New Cobar, Cowal Underground and Open Cut (West Wyalong), Scandium Ore (Nyngan). As well as multiple coal projects. Local Government was my client in most cases, with others I acted for landholders;
- Since 2011 I have liaised closely with the heads of the DPE and the IPC on mining planning and assessment matters, including Carolyn McNally and Professor Mary O'Kane. I briefed Lisa Corbyn, Nick Kaldis and the Productivity Commission during their reviews of the performance of the DPE and IPC in relation to mining and governance matters;
- Was adviser to the NSW Association of Mining & Energy Related Councils on planning and assessment matters for six years;
- 1989: appointed the Founding President of Environment Institute of Australia and New Zealand, the association for professional environmental practitioners. Am now a Fellow of the organisation;
- Am an Adjunct Professor, Faculty of Science, Agriculture, Business & Law, University of New England, appointed in recognition of my environmental and social advocacy for rural society.

## **4. ToR Item (e): Effectiveness of the Current Regulatory Framework in Terms of Monitoring & Compliance**

Please see my comments below under 'ToR Item (i): Other Related Matters'.

Of key concern is that the EPA over the past decade or more has not been permitted by the government of the day to pursue its statutory obligations.

## **5. ToR Item (g): Effectiveness of NSW Agencies to Regulate & Improve Outcomes Including Measurement & Reporting**

Please see my comments below under 'ToR Item (i): Other Related Matters'

The measurement and reporting process could be significantly improved by requiring all mines to providing live, real time monitoring data on the world wide web and also in public places such as the offices of local

councils. Such data would need to be presented in a simplistic format that is understandable by the general public. Public access to this performance data would go a long way to keeping interested parties informed and educated about mining operations. This initiative alone would be a big step forward.

**6. ToR Item (h): Whether the Regulatory Framework for Heavy Metals & Critical Minerals Mining is Fit for Purpose & Able to Ensure that the Positive & Negative Impacts of Heavy Metals & Critical Minerals Mining on Local Communities, Economies & the Environment are Appropriately Balanced**

Please see my comments below under ‘ToR Item (i): Other Related Matters’

The DPE asserted at the McPhillamys IPC Hearing that it now had a ‘full suite of technical tools/guidelines/policies to quantitatively assess all environmental elements – noise, dust, water, etc’. I assert that that many of the tools/guidelines/policies actually favour the miner, to the detriment of local people.

**One example is the Noise Policy for Industry (NPI) – where the background noise level is assumed at 30dB, when in reality is often much lower in rural areas.**

In the McPhillamy’s case, the NPI permits a project noise allowance of 40dB. This is some **15dB above current night-time background** at some homes.

Another is the Voluntary Land Acquisition and Mitigation Policy (VLAMP) which supposedly promises neighbouring landholders mitigation measures for noise, dust and visual impacts, together with acquisition provisions.

Such agreements tabled by the miner are complex and technical and landholders often don’t know where to obtain relevant professional advice to guide in the negotiations. The DPE does not assist landholders in such matters.

**7. ToR Item (i): Other Related Matters**

I would like to address my comments to the level of adequacy of the over-arching administrative architecture of the State Government that controls and oversees the assessment, determination, monitoring and compliance of gold, silver, lead and zinc mining projects. In fact, all mining projects.

At issue is the level of opaqueness associated with how the Government instrumentalities interact and how they arrive at their decisions. I recommend there is an urgent need for greater exposure and transparency.

I also believe, based on firsthand experience, there are some key flaws in the governmental system that:

- i. Generate an underlying bias that favours approval of mining projects; and
- ii. The abovementioned skewing leads to landholders and local communities having environmental, social and economic costs that should be borne by the miner being ‘outsourced’ onto them.

I address each of the key government departments/entities in turn.

**7.1 The Department of Planning & Environment (DPE)**

How the advice provided by various statutory bodies to the DPE (for example from the EPA, DPE Water, Local Councils, etc.) is acted upon by the DPE is opaque and is done behind closed doors.

DPE appears to have final say, yet the other departments, such as the EPA, have their own statutory responsibilities which need to be properly taken into account.

In my experience of dealing with both the DPE and the EPA, the EPA has not been treated equitably by the DPE, with the latter making the final decision;

The DPE is under-resourced when it comes to in-house highly technical water, noise & economic and social assessments, so there is an inherent tendency to accept the proponent’s assertions.

I recommend the DPE and the EPA be required to apply far more technical and scientific rigour and discipline to scrutinising the reports tabled by proponents.

The DPE has a standard ‘baseline’ template that it adopts when it comes to issuing conditions of consent. The Developer always has a ‘right of reply’ to the draft conditions being contemplated by the DPE. Local communities are not provided with the same opportunity. There is an inherent bias at play here.

The current standard conditions also embed an unlevelness in the playing field, to the disadvantage of neighbours and local communities likely to bear the brunt of adverse impacts.

I recommend the DPE’s starting-point mining consent conditions be reviewed and overhauled to fit contemporary standards. Including more robust provisions regarding greenhouse gas emissions/carbon footprinting, management measures to mitigate fire storms, flooding, social impacts and the provision of social benefits.

Attachment 1 to this Submission is my suggested amendments to the typical mining conditions of consent I prepared for the IPC, at its request, in 2020.

### ***7.2 The Environment Protection Authority (EPA)***

Over the past decade or so the EPA has played ‘second fiddle’ to the DPE in relation to mining approvals and compliance management. In addition, the Government of the day effectively ‘muzzled’ the EPA’s work in relation to mining performance and it was effectively a regulator in name only.

See comments above in relation to the DPE.

### ***7.3 The Independent Planning Commission (IPC)***

Currently, whilst the IPC may listen to all points of view, there is very limited open discussion and dialogue about the relative merits or veracity of the evidence/assertions presented.

After the last review by the Government of the IPC, the IPC committed to being more inquisitorial. However, based on my experiences, this has not materialised. For instance, on the McPhillamy’s hearing the three Commissioners were swamped with three intense days of people making verbal presentations. There was no substantive examination or dialogue on points raised. Simply, there was no time for that.

All involved parties yearn for greater insight into how the Commissioners are going about their work, by observing what happens during the live hearings. As things stand, we are not gaining confidence into how they are addressing, for instance, completing claims.

In determining major mining projects, I recommend that the IPC be replaced by a Development Assessment Commission (DAC) chaired by a judge or pre-eminent lawyer.

Parties would be able to be self-represented and the legal rules of evidence would not apply.

Cross examination of evidence would be a key aspect of DAC’s work.

Members of the DAC would be appointed via an independent, transparent process, say on the recommendation of relevant professional bodies.

A comparable process that worked very well in the 1980’s and 1990’s was that of the NSW Office of The Commissioners of Inquiry for Environment and Planning chaired by John Woodward. Evidence was tested in the public arena and was there for all to see. I recommend the Government re-activate this approach.

### ***7.4 Precautionary Principle to Underpin Major Project Determinations***

I recommend a stricter precautionary approach be adopted to ensure that major mining projects are only permitted if they can satisfy the fundamental principles of Ecologically Sustainable Development, with a strong focus on addressing climate change risks. At present there appears to be no attention given to embracing this principle.

### ***7.5 Third Party Merit Appeals***

I recommend a third-party merit review process be allowed for all mining projects so parties can challenge the factual basis of any development decisions in the courts. In Australia’s democratic society this provision is

important and will reduce the scope for opaque deals between proponents and government and catch inappropriate decisions.

### **7.6 The Mining Act**

By its very nature the Mining Act, via the issuing of Mineral Exploration Licences, provides proponents with an imprimatur that emboldens them to think they have a 'done deal' with the State Government for a soon-to-be issued Mining Licence and hence the related EIS process is seen as a 'box ticking exercise' and is simply a procedural process of little material consequence.

Furthermore, the Mining Act allows miners to take 20,000 tonne 'bulk samples' under the premise that it is an 'exploration activity'. This quantum of extraction is well beyond exploration.

### **7.7 Regulatory Capture**

In my experience there is a lack of processes and procedures to prevent/minimise regulatory capture across the DPE and the EPA.

Regulatory capture occurs when regulatory agencies change overtime and move from acting in the public interest (their assigned statutory function) to promoting or advancing the interests of industries they are supposed to be regulating. It is akin to one interest group on the playing field seizing control of (ie 'capturing') the umpires, such that the game is no longer taking place on a level playing field.

The possibility of regulatory capture is a risk to which the DPE is exposed by the very nature of its functions. There are many and varied interest groups that lobby vociferously to influence planning and assessment policies and procedures related to mining.

I recommend that the NSW Government introduce to the DPE and EPA key internal and external measures to protect against regulatory capture and to help reinforce transparency and accountability and to improve public confidence in the system.

For instance, internal checks could include:

- Public reporting of the outcome of meetings between DPE and companies, local government, the various industry groups and other key stakeholders;
- Adopting more explicit guidelines for employee conduct; and
- Ensuring the DPE and the EPA engages with a diversity of interests, experts and change agents to avoid insulation.

Recommended external checks could include:

- For the IPC, the general public needs to be assured that it is completely independent of and at arm's length from the DPE, with more resources so is has the unfettered capacity to engage the specialist technical expert services it requires to address matters of public interest;
- That the Auditor General or an Environmental Ombudsman undertake annual, independent performance audits of the DPE and the EPA in relation to mining matters; and
- Remaking the law so the burden of proof lies with those promoting mining development, not those who may wish to query it, as is currently the case.

### **7.8 Other**

Documents I recommend the Portfolio Committee consider as part of this Inquiry include:

- a) 2018: Nick Kaldas' review of governance in the NSW planning system;
- b) 2017: Lisa Corbyn's (former head of the EPA) review of the DPE's Major Project Assessment Reports and recommendations to improve said reports;
- c) 2017: NSW Auditor-General's Report to Parliament -Performance Audit -Assessing major development applications; and

- d) 2013: The report by then NSW Commissioner of the Independent Commission Against Corruption The Hon David Ipp AO QC entitled 'Reducing the Opportunities and Incentives for Corruption in the State's Management of Coal Resources'

**8. Giving Evidence at a Hearing of the Inquiry**

I would be willing to give evidence at a hearing of the Inquiry.

Thank you for the opportunity to table this Submission.

If you have any queries, please don't hesitate to contact the undersigned

Yours sincerely

Warwick Giblin

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Incl: Attachment 1

## ATTACHMENT 1

### SUGGESTED CONSENT CONDITIONS FOR TYPICAL MINING PROJECTS

(using DPIE's conditions drafted for the Bylong Mine Project as the base doc. Text in red is additions by W Giblin. Doc was provided to the IPC in Feb 2020)

**AIM: TO MORE FAIRLY PROTECT THE RIGHTS OF LANDHOLDERS & THE LOCAL COMMUNITY**

#### Development Consent Section 4.38 of the Environmental Planning & Assessment Act 1979

The Independent Planning Commission (the Commission), as the declared consent authority under clause 8A of the State Environmental Planning Policy (State and Regional Development) 2011 and section 4.5(a) of the Environmental Planning and Assessment Act 1979, approves the development application referred to in Schedule 1, subject to the conditions in Schedules 2 to 6.

These conditions are required to:

- firstly, prevent adverse environmental and human wellbeing impacts;
- Secondly, minimise or offset adverse environmental and human wellbeing impacts;
- set standards and performance measures for acceptable environmental performance;
- apply timelines and target dates where appropriate
- Deliver timely and transparent monitoring and reporting; and
- provide for the ongoing sustainable environmental management of the development.



## DEFINITIONS

Feasible	Means what is <b>humanly possible, achievable, practical and fair to all parties, including those impacted or potentially impacted by material harm</b>
Material harm	Is harm that involves <b>actual or potential adverse impact</b> to the health, safety <b>or wellbeing</b> of human beings, <b>property</b> or to the environment that is not trivial
Minimise	Implement all reasonable and feasible mitigation measures to reduce the impacts of the development <b>that are fair, including those impacted or potentially impacted by harm</b>
Mitigation	<b>Actions or</b> activities associated with reducing the impacts of the development prior to or during those impacts occurring
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 subsidiaries)
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 <b>sound and sensible</b> judgement in arriving at a <b>fair, sustainable and transparent</b> decision, taking into account <b>the environmental, social and economic costs and benefits of taking preventative or mitigative action, the views of adversely impacted parties and, where relevant, the local community</b>
Reasonable costs	The costs agreed between the Department the Applicant <b>and any affected third party</b> for obtaining <b>the services</b> of independent experts to <b>assess, review and comment</b> on the adequacy of any aspect <b>of the project</b>
Remediation	Activities associated with partially or fully repairing or rehabilitating the impacts of the development or controlling the environmental consequences of this impact.

## **SCHEDULE 2: ADMINISTRATIVE CONDITIONS**

### **OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT**

1. In addition to meeting the specific performance criteria established under this consent, the Applicant must **first** implement all reasonable and feasible measures to prevent any **material harm to the environment or nearby landholders** that may result from the construction and operation of the development, and any rehabilitation required under this consent. **Secondly**, if prevention is not reasonable or feasible, **then** minimise any material harm to the environment **or nearby landholders**. **Such measures must satisfactorily address not only the pollution from a technical sense but also from a lived experience perspective.**

### **TERMS OF CONSENT**

2. The Applicant must carry out the development:

- (a) **in accordance with the EIS; and**
- (b) in accordance with the conditions of this consent.**

3. If there is any inconsistency between the documents in condition 2 above, the most recent document must prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail to the extent of any inconsistency.

4. The Applicant must comply with any reasonable requirement/s **jointly determined by relevant Government agencies (such as the EPA and water authorities) and the Planning Secretary** arising from the Department's assessment of:

- (a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this consent (including any stages of these documents);
- (b) any reviews, reports or audits undertaken or commissioned by the Department **or other Federal or State Government agencies** regarding compliance with this consent; and
- (c) the implementation of any actions or measures contained in these documents.

### **PROTECTION OF PUBLIC INFRASTRUCTURE**

13. Unless the Applicant and the applicable authority agree otherwise, the Applicant must:

- (a) **upgrade at its cost any local government public infrastructure deemed necessary by the relevant local government authority;**
- b) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and
- (c) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.

*Note: This condition does not apply to any damage to roads caused as a result of general road usage.*

### **OPERATION OF PLANT AND EQUIPMENT**

14. The Applicant must ensure that all plant and equipment used on site, or to monitor the performance of the development **is:**

- (a) maintained in a proper and efficient condition; and
- (b) operated in a proper and efficient manner.

### **COMMUNITY ENHANCEMENT**

15. From the date of commencement of development the Applicant **must implement the Voluntary Planning Agreement (VPA) executed with the relevant Councils.**

## SCHEDULE 4: ENVIRONMENTAL PERFORMANCE CONDITIONS – GENERAL

### PRIVATE LANDHOLDING SUBJECT TO ADVERSE IMPACTS REQUESTING REDRESS

Upon receiving a written request from the owner of any land near the Project site who considers he/she is adversely affected by the project, the Applicant must commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties, to:

- a) identify measures that should be implemented to overcome any demonstrable, adverse environmental or social wellbeing impacts;
- b) provide a copy of the report to the landowner;
- c) reach agreement with the landowner as to any additional noise, air quality, water (surface or ground) or night lighting mitigation measures. The mitigation measures must, to the satisfaction of the landholder acting reasonably, be feasible, reasonable and proportionate with the level of actual, experienced impacts.

If the Applicant considers the written request ill-founded or without justification, it may appeal to the Planning Secretary for a ruling to dismiss the claim, without investigation. However, if the Planning Secretary so rules it must convey detailed reasons to both the Applicant and the Landholder as to why it dismisses the claim.

If, within three months of receiving the initial request from the landowner, the Applicant and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of such measures, then either party may refer the matter to the Planning Secretary for resolution.

### Noise Criteria

The Applicant must ensure that the noise generated by the development during operations does not exceed the standard, routine criteria at any residence on privately-owned land.

Note: We consider that the requirements of the NSW Industrial Noise Policy provide an unfair bias towards the development, often to the serious detriment of local landholders. These environmental/social costs are being outsourced by the Applicant to the detriment of those who live/experience adverse impacts that may significantly compromise their relationship with the landscape/place.

### Operating Conditions

1. The Applicant must:
  - (a) implement all reasonable and feasible measures to prevent noise pollution and to minimise the construction, operational, low frequency road and rail noise of the development;
  - (b) operate a comprehensive, live noise management system on site that uses a combination of predictive meteorological forecasting and real-time noise monitoring data to guide the day-to-day planning of mining operations and the implementation of both proactive and reactive noise mitigation measures to ensure compliance with the relevant conditions of this consent;
  - (c) prevent noise pollution and minimise the noise impacts of the development during meteorological conditions when the noise limits in this consent do not apply (see Appendix 5);
  - (d) ensure that all fixed and mobile plant are fitted with the most relevant noise attenuation units;
  - (e) 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
  - (f) conduct ongoing, continuous monitoring to determine whether the development is complying with the relevant conditions of this consent and, whenever necessary, adjust the scale of operations on site to meet the criteria in this consent.

## Noise Management Plan

- 2 Prior to carrying out any development under this consent the Applicant must prepare a Noise Management Plan for the development to **the joint satisfaction of the EPA and** the Planning Secretary. This plan must:
  - (a) be prepared in consultation with **the local community and the CCC**;
  - (b) describe the measures that would be implemented to ensure compliance with the relevant noise criteria and operating conditions of this consent;
  - (c) describe the proposed noise management system in detail;
  - (d) include a monitoring program that:
    - evaluates and reports on:
      - the effectiveness of the noise management system;
      - compliance against the noise criteria in this consent; and
      - compliance against the noise operating conditions;
    - includes a program to calibrate and validate the **live**, real-time noise monitoring results with the attended monitoring results over time (so the real-time noise monitoring program can be used as a trigger for further attended monitoring where there is a risk of non-compliance with the noise criteria in this consent); and
    - defines what constitutes a noise incident and includes a protocol for identifying and notifying the Department and relevant stakeholders of any noise incidents.
- 3 The Applicant must implement the approved Noise Management Plan for the development.

## BLASTING

### Blasting Criteria

- 4 The Applicant must ensure that the blasting on the site does not cause exceedances of the criteria in Table 6.

### Blasting Hours

- 5 The Applicant must only carry out blasting on site between 9am and 5pm Monday to Saturday inclusive. No blasting is allowed on Sundays, public holidays, or at any other time without the **prior written joint approval of the EPA and** Planning Secretary.

This condition does not apply to blasts required to ensure the safety of the mine, its workers or the general public.

### Blasting Frequency

- 6 The Applicant may carry out a maximum of:
  - (a) 2 blasts a day; and
  - (b) 6 blasts a week, at the site.

This condition does not apply to blasts that generate ground vibration of 0.5 mm/s or less at any residence on privately-owned land, blast misfires or blasts required to ensure the safety of the mine, its workers or the general public.

Notes:

- For the purposes of this condition, a blast refers to a single blast event, which may involve a number of individual blasts fired in quick succession in a discrete area of the mine.
- For the avoidance of doubt, should an additional blast be required after a blast misfire, this additional blast and the blast misfire are counted as a single blast.
- In circumstances of recurring unfavourable weather conditions (following planned but not completed blast events), to avoid excess explosive sleep times and minimise any potential environmental impacts, the Applicant may seek agreement from the Planning Secretary for additional blasts to be fired on a given day.

## Property Inspections

7. If the Applicant receives a written request from the owner of any privately-owned land within 3 kilometres of the approved open cut mining pit/s on site for a property inspection to establish the baseline condition of any buildings and/or structures on his/her land, or to have a previous property inspection updated, then within 28 days of receiving this request the Applicant must:
  - commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to establish the baseline condition of any buildings and other structures on the land, or update the previous property inspection report; and
  - give the landowner a copy of the new or updated property inspection report.

If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Applicant or the landowner disagrees with the findings of the property inspection report, either party may refer the matter to the Planning Secretary for resolution within 28 days.

## Property Investigations

8. If any owner of privately-owned land within 3 kilometres of any approved open cut mining pit/s on site, or any other landowner where the Planning Secretary is satisfied an investigation is warranted, claims in writing that buildings and/or structures on his/her land have been damaged because of blasting on the site, then within 28 days of receiving this written claim the Applicant must:
  - (a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to verify the blasting impacts and identify measures that should be implemented to firstly prevent and secondly minimise the potential blasting impacts of the development on these buildings and/or structures; and
  - (b) give the landowner a copy of the property investigation report.

If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Applicant must repair the damage to the satisfaction of the Planning Secretary, within two months from the date of lodgement of the claim.

If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Applicant or the landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Planning Secretary for resolution.

## Operating Conditions

9. During blasting operations on site, the Applicant must:
  - (a) implement reasonable and feasible measures to:
    - protect the safety and wellbeing of people and livestock in the area surrounding

- blasting operations;
    - protect public or private infrastructure/property, heritage items, rock shelters and cultural features in the area surrounding blasting operations; and
    - **prevent** dust and fume emissions from blasting at the site;
  - (b) minimise the frequency and duration of any public road closures required for blasting activities; and
  - (c) operate a suitable system to enable the public to **obtain live** and up-to-date information on the proposed blasting schedule on site; and
  - (d) **conduct monthly** blast monitoring to determine whether the development is complying with the relevant conditions of this consent.
10. The Applicant must not undertake blasting on site within 500 metres of any public road or railway, or any land outside the site not owned by the Applicant, unless the Applicant has:
- (a) a written agreement with the relevant infrastructure owner or landowner to allow blasting to be carried out closer to the infrastructure or land, and the Applicant has advised the Department in writing of the terms of this agreement; or
  - (b) demonstrated to the satisfaction of the Planning Secretary that the blasting can be carried out closer to the infrastructure or land without compromising the safety of people or livestock, or damaging buildings and/or structures; and
  - (c) updated the Blast Management Plan to include the specific measures that would be implemented while blasting is being carried out within 500 metres of the infrastructure or land.

### **Blast Management Plan**

11. Prior to carrying out any development under this consent, unless the Planning **Secretary and the EPA** agrees otherwise, the Applicant must prepare a Blast Management Plan for the development to the **joint satisfaction of the Planning Secretary and the EPA**. This plan must:
- (a) be prepared in consultation **with the local community, the EPA** and the CCC;
  - (b) describe the measures that would be implemented to ensure compliance with the blast criteria and operating conditions of this consent;
  - (c) propose and justify any alternative ground vibration limits for public infrastructure in the vicinity of the site (if relevant);
  - (d) include a road closure management plan for blasting within 500 metres of a public road, that has been prepared in consultation with Council;
  - (e) include a blast fume management protocol and a risk-based blasting permissions protocol;
  - (f) include a monitoring program for evaluating and reporting on compliance with the blasting criteria and operating conditions of this consent; and
  - (g) include site specific blast management plan/s for;
    - heritage items A-Z;
    - any heritage item that is proposed to be affected by blasting above the criteria in Table 6, with the plan to include measures to minimise and rectify any blast-related damage to the item;
    - any rock shelter or cultural feature that is proposed to be affected by blasting above the criteria in Table 6, with the plan/s to include measures to minimise any blast-related damage to the item.
12. The Applicant must implement the approved Blast Management Plan for the development.

## AIR QUALITY

### Odour

13. The Applicant must ensure that no offensive odours are emitted from the site, as defined under the POEO Act.

### Air Quality Criteria

14. The Applicant must implement all reasonable and feasible measures to firstly prevent, then secondly minimise the release of greenhouse gas emissions from the site;
15. The Applicant must ensure that all reasonable and feasible prevention and mitigation measures are employed so that particulate matter emissions generated by the development do not cause exceedances of the criteria on privately owned land.

### Mine-owned Land

16. The Applicant must ensure that all reasonable and feasible prevention and mitigation measures are employed so that particulate matter emissions generated by the development do not cause exceedances of public health criteria.
17. If such criteria are likely to be exceeded and in the view of independent medical experts could cause adverse health impacts, then the Applicant must not permit members of the public to inhabit residences in that zone – either as owner or tenant.
18. The tenant of any land owned by the Applicant in an impacted zone can terminate their tenancy agreement without penalty at any time, subject to giving reasonable notice and cause. Any private landholding so affected must be acquired by the Applicant.

### Operating Conditions

19. The Applicant must:
  - (a) implement all reasonable and feasible measures to firstly prevent, then secondly minimise the off-site odour, fume, diesel particulate, spontaneous combustion and dust emissions of the development;
  - (b) ensure that any item of non-road diesel equipment commissioned into service and operating at the premises after 30 June 2020:
    - i. complies with the US EPA Tier 4 final or equivalent exhaust emission standard; or
    - ii. is otherwise approved, in writing, by the NSW EPA for use on premises;
  - (c) implement reasonable and feasible measures to firstly prevent, then minimise dust emissions from railed coal product, including a water spray or dust suppressant system at the train load-out facility;
  - (d) implement all reasonable and feasible measures to firstly prevent, then secondly minimise the release of greenhouse gas emissions from the site;
  - (e) firstly prevent, then secondly minimise any visible air pollution generated by the development;
  - (f) operate a comprehensive air quality management system that uses a combination of predictive meteorological forecasting and live, real-time air quality monitoring data to guide the day-to-day planning of mining operations and the implementation of both proactive and reactive air quality mitigation measures to ensure compliance with the relevant conditions of this consent;
  - (g) implement all reasonable and feasible measures to firstly prevent, then secondly minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see Note d to Table 7); and

- (h) **conduct monthly** monitoring to determine whether the development is complying with the relevant conditions of this consent.

#### Notes

1. *For the purpose of this condition 'commissioned into service' is defined as the act of using the item of non- road mobile diesel equipment for commercial or industrial activities for the first time in Australia.*
2. *For the purpose of this condition, non-road mobile diesel equipment means:*
  - (i) *equipment fitted with a diesel (compression ignition) engine, that is either self-propelled or portable and transportable as indicated by the presence of wheels, skids, lifting handles/ points, dolly, trailer or platform mounted; and*
  - (ii) *which is primarily designed for off-road use; and*
  - (iii) *is not an eligible vehicle under the NSW Road Transport (Vehicle Registration) Regulation 2007, but may be conditionally registered for the purpose of moving from one off-road work site to another, but does not include:*
    - a. *equipment primarily designed to be operated on public roads for the transportation of freight or passengers;*
    - b. *diesel locomotive; and*
    - c. *diesel generators.*

#### Air Quality Management Plan

20. Prior to carrying out any development under this consent, unless **the EPA and** the Planning Secretary agrees otherwise, the Applicant must prepare an Air Quality Management Plan for the development to the **joint** satisfaction of **the EPA and the** Planning Secretary. This plan must:
- (a) be prepared in consultation with **the local community and the** CCC;
  - (b) describe the measures which would be implemented to ensure compliance with the air quality criteria and operating conditions of this consent, including the preparation of an annual energy efficiency program;
  - (c) describe the air quality management system in detail;
  - (d) include a protocol for notifying affected residents of any exceedance of the air quality criteria;
  - (e) include an air quality monitoring program that:
    - ☐ uses monitors to evaluate the performance of the development against the air quality criteria in the consent;
    - ☐ adequately supports the air quality management system;
    - ☐ evaluates and reports on:
      - the effectiveness of the air quality management system; and
      - compliance with the air quality criteria and operating conditions; and
    - ☐ defines what constitutes an air quality incident, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any air quality incidents; and
  - (f) include a Spontaneous Combustion Management Plan that:
    - ☐ identifies all areas (including stockpiles, waste emplacements, piles, seams, goafs and inter- burden) at risk of spontaneous combustion events;
    - ☐ includes a protocol for ongoing monitoring and management of areas at risk of spontaneous combustion events; and
    - ☐ includes a protocol for the management of on-site heating and spontaneous combustion events.



*Note: The air quality monitoring program may incorporate monitoring from any relevant regional monitoring network endorsed by EPA.*

21. The Applicant must implement the approved Air Quality Management Plan for the development.

## **METEOROLOGICAL MONITORING**

22. Prior to commencement of development under this consent and for the life of the development, the Applicant must ensure that there is a meteorological station **within 5 kilometres** of the site that:
  - (a) complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline; and
  - (b) is capable of continuous real-time measurement of temperature inversions in accordance with the *NSW Industrial Noise Policy*, unless a suitable alternative is **jointly approved by the EPA and the Planning Secretary**.

## **WATER**

### **Water Supply**

23. The Applicant must ensure that it has sufficient water for all stages of the development, and if necessary, **downscale operations to not exceed** its available water supply.

**Note:** *Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain the necessary water licences for the development.*

24. Prior to the commencement of mining operations, the Applicant must demonstrate that it has adequate water access licences to account for the maximum predicted volume of water to be used by the development (and any existing mining areas), to the **joint satisfaction of DoI Water, NSW Water and the Planning Secretary**.

**Note:** *The predicted water demand shall be based on updated groundwater and water balance modelling that refines the groundwater inflows and other water use, based on monitoring data.*

### **Compensatory Water Supply**

25. The Applicant must provide a compensatory water supply to the landowner of privately-owned land whose water supply is **adversely and directly impacted** because of the development, to the joint satisfaction of **DoI Water, NSW Water** and the Planning Secretary.

The compensatory water supply measures must provide an alternative supply of water that is equivalent, in quality and volume, to the loss attributable to the development. Equivalent water supply **must** be provided **immediately, and within 5 days of the loss being identified**, unless otherwise agreed with the landowner.

If the Applicant and the landowner cannot agree **within 21 days** 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 Planning Secretary for resolution.

If the Applicant is unable to provide an alternative long-term supply of water, then the Applicant must provide compensation, to the **joint satisfaction of DoI Water, NSW Water and the Planning Secretary**.

However, this condition does not apply if the Applicant has a compensatory water agreement with the

owner/s of the land and the Applicant has advised the Department in writing of the terms of this agreement.

**Notes:**

- The Water Management Plan (see condition 28) is required to include trigger levels for investigating potentially adverse impacts on water supplies.
- The burden of proof that any loss of water supply is not due to mining impacts rests with the Applicant.

**Water Pollution**

26. The Applicant must not discharge any water from the site or irrigate any wastewater on site except as may be expressly provided by an EPL, or in accordance with Section 120 of the POEO Act.

**Water Management Performance Measures**

27. The Applicant must comply with the performance measures in Table 8.

Table 8: Water management performance measures

Feature	Performance Measure
Water Management - General	<p>Prepare surface water and groundwater management plans that give priority to the latest scientifically rigorous climate change predictive modelling and rely much less on historical data</p> <p>Maintain separation between clean, dirty and mine water management systems</p> <p>Minimise the use of clean water on site</p> <p>Design, install, operate and maintain water management systems in a proper and efficient manner</p>
Alluvial Aquifers	<p>No environmental consequences to the alluvial aquifer beyond those predicted in the EIS, including:</p> <ul style="list-style-type: none"> <li>• no adverse change in groundwater levels beyond those predicted;</li> <li>• no adverse change in groundwater quality beyond those predicted; and</li> <li>• no adverse impact to other groundwater users beyond those predicted</li> </ul>
Bylong River, Lee Creek, Dry Creek and Growee River	<p>No adverse environmental consequences to surface water resources beyond those predicted in the EIS, including:</p> <ul style="list-style-type: none"> <li>• in surface water flows beyond those predicted;</li> <li>• in surface water quality beyond those predicted; and</li> <li>• no adverse impact to other surface water users beyond those predicted</li> </ul> <p>Maintain or improve baseline channel stability</p>
Clean water diversion & storage infrastructure	<p>Maximise the diversion of clean water around disturbed areas on site</p>
Sediment dams	<p>Design, install and/or maintain sediment dams to ensure no discharges to surface waters, except in accordance with an EPL or in accordance with Section 120 of the POEO Act</p>

Mine water storages	Design, install and/or maintain mine water storage infrastructure to ensure no discharge of mine water off-site
Flood mitigation measures	Design, install and maintain flood levees, as required, to exclude flood flows into the open cut mining areas and mine infrastructure areas for all flood events up to and including the 1 in 1,000 year ARI flood.
Overburden, CHPP reject materials	Design, install and maintain emplacements to prevent or minimise the migration of pollutants due to seepage
Chemical and hydrocarbon storage	Chemical and hydrocarbon products to be stored in bunded areas in accordance with the relevant Australian Standards

## Water Management Plan

28. Prior to carrying out any development under this consent, unless the Planning Secretary agrees otherwise, the Applicant must prepare a Water Management Plan for the development to the joint satisfaction of the **Planning Secretary, EPA, NSW Water and DoI Water**. This plan must:
- (a) be prepared in consultation with **the local community**, the CCC and by suitably qualified and experienced person/s whose appointment has been jointly approved by **the EPA, NSW Water, DoI Water and Planning Secretary**;
  - (b) include detailed performance criteria and describe measures to ensure that the Applicant complies with the water management performance measures (see Table 8);
  - (c) in addition to the standard requirements for management plans (see condition 4 of Schedule 6), include a:
    - (i) **Site Water Balance** that:
      - includes details of:
        - sources and security of water supply, including contingency planning for future reporting periods;
        - water use and management on site, including details of water sharing between neighbouring mining operations (if applicable);
        - any off-site water transfers and discharges;
        - reporting procedures, including the preparation of a site water balance for each calendar year;
      - includes a program to:
        - validate and peer review the site water balance every **two** years following the commencement of mining operations, including review of stormwater model runoff parameters and groundwater inflows;
        - review the life of mine storage inventories based on the review;
        - identify and implement measures to ensure mine water storage capacity is retained;
      - investigates and implements all reasonable and feasible measures to minimise water use on site;
    - (ii) **Salt Balance** that:
      - includes details of:
        - sources of saline material on the site;
        - saline material and saline water management on site;
        - reporting procedures, including the preparation of a salt balance for each calendar year; and
      - investigates and implements all reasonable and feasible measures to minimise short term and long term discharge of saline water from the site;
    - (iii) **Surface Water Management Plan**, that includes:
      - **Underpinning by the latest, scientifically rigorous climate change modelling**

data, and to a lesser extent baseline data on surface water flows and quality in the watercourses that could potentially be affected by the development;

- a comprehensive program to augment and update the climate change and baseline data over the life of the development;
- a detailed description of the water management system onsite, including the:
  - clean water diversion systems;
  - sediment dams and associated infrastructure;
  - mine water management system;
  - flood management;
  - reject emplacement and mine water storage within the eastern open cut final void;
- detailed objectives and performance criteria, including trigger levels for investigating any potentially adverse impacts associated with the development for:
  - downstream surface water quality;
  - stream and riparian health in the XX River to the confluence of the YYRiver, AA Creek and BB Creek;
  - channel stability;
  - design and management for the emplacement of coal reject material and saline, sodic and PAF materials;
  - reinstatement of drainage lines on the rehabilitated areas of the site; and
  - control of any potential water pollution from the rehabilitated areas of the site;
- a comprehensive, detailed program to monitor and report monthly on:
  - the effectiveness of the mine water management system; and
  - surface water flows and quality, channel stability, stream and riparian vegetation health of the Growee River, Bylong River, Lee Creek and Dry Creek;
  - the performance measures listed in Table 8;
  - quantitative and qualitative impacts on water users, including rural landholders, native flora and fauna, including aquatic life, those engaged in aquatic recreational activities
- reporting procedures for the results of the monitoring program; and
- a plan prepared within 14 days to respond to any exceedances of the trigger levels and/or performance criteria and mitigate and/or offset any adverse surface water impacts of the development; including measures to provide compensatory water supply to any affected downstream water user under condition 25 of this Schedule.

(M) Groundwater Management Plan that includes:

- detailed baseline data on groundwater levels, yield and quality in the region that could potentially be affected by the development, including privately-owned groundwater bores and groundwater dependent ecosystems;
- groundwater assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts;
- a program to monitor and report on:
  - groundwater inflows to the open cut pits and underground workings, including allocating inflows to relevant water sources;
  - the seepage/leachate from water storages, emplacements, backfilled voids, and final voids;
  - the impacts of the development on:
    - regional and local (including alluvial) aquifers;
    - groundwater supply of potentially affected landowners;
    - groundwater dependent ecosystems, stygofauna and riparian vegetation; and

- base flow to surface water sources;
- a borefield management plan, that includes a detailed description of the borefield and measures to minimise the impact of the borefield on alluvial aquifers, groundwater users and the environment;
- a program to validate and peer review the groundwater model for the development every 2 years and compare monitoring results with modelled predictions; and
- a plan to respond within 24 hours to any exceedances of the trigger levels and/or performance criteria and mitigate and/or offset any adverse groundwater impacts of the development, including measures to provide compensatory water supply to any affected groundwater users under condition 25 of this Schedule.

29. The Applicant must implement the approved Water Management Plan for the development.

## TRANSPORT

### Monitoring of Coal Transport

30. The Applicant must:
- (a) keep accurate records of the:
    - amount of coal, categorised by both ROM and product, transported from the development, categorised by road and/or rail, in each calendar year (on a monthly basis);
    - number of coal haulage train movements generated by the development (on a daily basis); and
  - (b) include these records in the Annual Review.

### Shift changes and school bus routes

31. The Applicant must:
- (a) schedule construction and production shift changes on site to occur outside of school bus hours; and
  - (b) co-ordinate the production shift changes on site with the production shift changes of the Moolarben, Wilpinjong and Ulan mines to minimise the potential cumulative traffic impacts.

### Roadworks – Upgrades and Safety Measures

32. The Applicant must provide funding towards or implement the road and safety upgrades as specified in Table 15. These measures must be carried out in accordance with the timing specified in the table, unless otherwise agreed by the Planning Secretary.

### Road Maintenance Contributions

33. The Applicant must provide road maintenance contributions to the appropriate roads authority in accordance with Table 16 below.

*Table 16: Road Maintenance Contributions*

<b>Roads Authority</b>	<b>Timing</b>	<b>Amount</b>
Council	<p>Annual payments with the first payment within 3 months of the date of commencement of development and then every 12 months until mining operations have ceased following approval of a closure plan for the mine.</p> <p><i>Note: 50 percent of the annual payment must continue to be made if the mine were to be placed in care and maintenance.</i></p>	<p>\$177,000 (plus GST)</p> <p>CPI indexed annually from the 2017/ 2018 financial year.</p>
MSC	<p>Prepare a pre-dilapidation survey of Bylong Valley Way within the MSC local government area prior to the commencement of any construction or decommissioning works.</p> <p>Prepare a post-dilapidation survey of Bylong Valley Way within the MSC local government area within 1 month of the completion of construction or decommissioning works, or other timing as may be agreed by MSC.</p>	<p>Rehabilitate and/or make good any development-related damage identified in the post-dilapidation survey within 2 months of completing the post-dilapidation survey, or other timing as agreed by MSC, to the satisfaction of MSC.</p> <p>If the construction and/or decommissioning of the development is staged, the obligations apply to each stage.</p> <p>If there is a dispute about the scope of any remedial works or the implementation of the works, then either party may refer the matter to the Planning Secretary for resolution.</p>

### Traffic Management Plan

34. Prior to carrying out any development under this consent, unless otherwise agreed by the Planning Secretary, the Applicant must prepare a Traffic Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:
- (a) be prepared in consultation with the RMS, Council, MSC and relevant school bus services providers;
  - (b) include:
    - detailed plans and implementation schedules for road closures, road re-alignments and road and safety upgrades specified in Table 15;
    - nominated heavy vehicle access routes for construction and operational stages, including details on volumes and nature of heavy, over size and/or over mass vehicles;

- measures to **prevent the generation of heavy vehicle traffic** during school bus hours;
  - a code of conduct for drivers of heavy vehicles;
  - performance measures and criteria for transport and fatigue management of employees and contractors;
- (c) describe the measures that would be implemented to:
- minimise the construction and operational traffic impacts of the development, including on school bus routes;
  - manage fatigue and improve road safety for the construction and operational workforce, including driver education training programmes;
  - maintain the pavement of the realigned Upper Bylong Road (East Link) and “right of way” for access to eastern landholdings; and
  - use buses and car-pooling to transport **at a minimum 50% of** the construction and operational workforce to the site.
- (d) include a monitoring program for:
- heavy vehicle traffic movements, including monitoring heavy vehicle access restrictions;
  - vehicle numbers and traffic routes against predictions in the EIS, including providing data for pre and post dilapidation surveys of the Bylong Valley Way within the MSC local government area during construction and decommissioning stages; and
  - utilisation rates of shuttle buses and car-pooling during construction and operations.
35. The Applicant must implement the approved Traffic Management Plan for the development.

## VISUAL AND LIGHTING IMPACTS

### Operating Conditions

36. The Applicant must:
- (a) implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the development, including impacts on the Dark Sky Region with consideration of the good lighting design principles identified in the *NSW Dark Sky Planning Guideline*;
  - (b) establish and maintain **thick and high** roadside vegetative screens along the upgraded Upper Bylong Road;
  - (c) ensure that all external lighting associated with the development complies with *Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting*, or its latest version;
  - (d) monitor and report on the effectiveness of these measures,

Initial works to establish the roadside vegetative screening referred to in sub-condition (b) must be undertaken prior to commissioning of the relocated Upper Bylong Road, in accordance with a tree screening plan that has been prepared in consultation with Council and to the joint satisfaction of the **Observatory Director of the Siding Spring Observatory and** the Planning Secretary.

### Dark Sky Lighting Management Strategy

37. Prior to carrying out any development under this consent the Applicant must prepare a Dark Sky Lighting Management Strategy for the development to the satisfaction of the Planning Secretary. This strategy must:

- (a) be prepared in consultation with the Observatory Director of the Siding Spring Observatory and by a suitably qualified and experienced person whose appointment has been approved by the Planning Secretary;
  - (b) identify measures to minimise the upward spill of light with consideration of the good lighting design principles identified in the *NSW Dark Sky Planning Guideline*; and
  - (c) include a program to monitor and report on the effectiveness of these measures.
38. The Applicant must implement the approved Dark Sky Lighting Management Strategy for the development.

## BUSHFIRE MANAGEMENT

39. The Applicant must:
- (a) ensure that the development is suitably equipped to respond to any fires on site; and
  - (b) assist the RFS and local emergency services immediately if there is a fire in the vicinity of the site.

## WASTE

40. The Applicant must:
- (a) implement all reasonable and feasible measures to maximise the recovery and reuse of solid and liquid resources (including coal rejects) generated by the development;
  - (b) ensure that the waste generated by the development is appropriately stored, handled and disposed of in accordance with the waste hierarchy;
  - (c) manage on-site sewage treatment and disposal in accordance with the requirements of Council and EPA;
  - (d) ensure irrigation of treated wastewater is undertaken in accordance with OEH's *Environmental Guideline for the Utilisation of Treated Effluent*; and
  - (e) monitor and report on the effectiveness of the waste minimisation and management measures implemented on site in the Annual Review.

## REHABILITATION

### Rehabilitation Objectives

41. The Applicant must rehabilitate the site to the satisfaction of DRG. This rehabilitation must be in accord with the proposed rehabilitation activities described in the EIS (and depicted conceptually in Appendix 7) and comply with the objectives in Table 17.

Table 17: Rehabilitation Objectives

<i>Feature</i>	<i>Objective</i>
Mine site (as a whole)	<ul style="list-style-type: none"> <li>• Safe, stable, non-polluting, effective and productive</li> <li>• Final landforms designed to incorporate macro and micro-relief and integrate with surrounding natural landforms</li> <li>• Final landforms maximise geotechnical performance, stability and hydrological function</li> <li>• Constructed landforms maximise surface water drainage to the natural environment</li> <li>• Avoid long term groundwater seepage from the site</li> </ul>



	<ul style="list-style-type: none"> <li>Minimise visual impact of final landforms as far as is reasonable and feasible</li> </ul>
Surface infrastructure	<ul style="list-style-type: none"> <li>To be decommissioned and removed, unless DRG agrees otherwise</li> </ul>
Final Voids	<ul style="list-style-type: none"> <li>No final void and free-draining to the natural drainage system</li> </ul>
Agricultural Land	<ul style="list-style-type: none"> <li>Restore or maintain land capability as described in the EIS and shown conceptually in Appendix 7, including at least 400 hectares of BSAL-equivalent land/ LSC Class 3 land.</li> </ul>
Woodland revegetation	<ul style="list-style-type: none"> <li>Native woodland vegetation to be re-established, with the restoration of at least 65 hectares of native vegetation.</li> </ul>
Community	<ul style="list-style-type: none"> <li>Ensure public safety</li> <li>Rehabilitate the site so the landscape is compatible and in accord with the surrounding environment</li> <li>Minimise the adverse socio-economic effects associated with mine closure</li> <li>Reinstatement of a road connection between the Upper Bylong Road and the Upper Lee Creek Road, if required by Council.</li> </ul>

### Progressive Rehabilitation

42. The Applicant must rehabilitate the site **immediately and progressively** following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time. **Effective** interim rehabilitation **measures must be adopted immediately** when areas prone to dust generation cannot yet 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.*

### Rehabilitation Management Plan

43. Prior to carrying out any development under this consent, unless otherwise agreed by the Planning Secretary, the Applicant must prepare a Rehabilitation Management Plan for the development to the satisfaction of DRG. This plan must:
- be prepared in consultation with the **local community**, DoI Water, DPI Agriculture, OEH, Council and the CCC;
  - be prepared in accordance with any relevant NSW Government mining rehabilitation guidelines;
  - include a detailed soil balance for the development;
  - include a detailed plan for reinstatement and review of the proposed:
    - agricultural land capability across the site, including a protocol for periodic trials to demonstrate that the land capability is being achieved;
    - BSAL, including a protocol for verification of the land as BSAL-equivalent land; and
    - woodland areas;

- (e) optimise the design of the final landform to incorporate macro and micro-relief features to improve visual integration with the existing landscape and rehabilitation to meet BSAL-equivalent land and LSC Class 3 and Class 4 land.
- (f) include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, and triggering remedial action (if necessary);
- (g) include a final void management strategy including:
  - identifying the capacity required for reject emplacement and water storage;
  - details on the separation of reject and water storages within the final void;
  - inventory and management of fill and capping materials;
  - actions to prioritise storage of underground mine water within the goaf; and
  - annual review of reject and water storage estimates to optimise the final void size required prior to cessation of open cut mining operations;
- (h) describe the measures that **will** be implemented to ensure compliance with the relevant conditions of this consent, and address all aspects of rehabilitation including mine closure, final landform, final land use and post mining social impacts;
- (i) describe the rehabilitation methodologies that will be implemented to achieve the rehabilitation performance measures;
- (j) describe a process for managing minor delays or changes to progressive rehabilitation forecasts;
- (k) include interim rehabilitation **on areas exposed for dust generation to prevent dust from this source**;
- (l) include a program to monitor, independently audit and report on the effectiveness of the measures, and progress against the detailed performance and completion criteria; and
- (m) build to the maximum extent practicable on the other management plans required under this consent.

*Notes:*

- *The Mining Operations Plan (MOP) or equivalent requirement under the Mining Lease may be used to address the requirements of the Rehabilitation Management Plan required under this condition. However, the MOP must clearly document how the requirements of this condition have been met.*

44. The Applicant must implement the approved Rehabilitation Management Plan for the development.

**AGRICULTURE**

45. The Applicant must take all reasonable and feasible measures to ensure that the agricultural productivity and production on its landholdings on the land identified in Figure 1, Appendix 9 as “land available for agriculture”, “retained for agricultural use” and “temporary removal from agriculture”, is maintained or enhanced, in accordance with its commitments in the EIS.
46. The Applicant must take all reasonable and feasible measures to maintain or enhance the soil hydrology farming techniques on the Tarwyn Park property and make reasonable access to the property available for external study by applicable scientific organisations (such as CSIRO, universities and government authorities) upon request.

**SOCIAL IMPACT MANAGEMENT PLAN**

47. Prior to carrying out any development under this consent the Applicant must prepare a Social Impact Management Plan to the satisfaction of the Planning Secretary. This plan must:

- (a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Planning Secretary;
- (b) be prepared in **extensive and close** consultation with Council, the CCC and the local community of ~~XXX~~;
- (c) identify negative and positive social impacts resulting from the project during construction, operations and following closure in both a local and regional context;
- (d) include a construction workforce accommodation strategy to manage the social impacts associated with the construction stage(s) of the project;
- (e) include a management program to **prevent**, minimise and/or mitigate negative social impacts during construction, operations and following closure;
- (f) include a detailed description of the measures that **will** be implemented to:
  - maintain and manage land and assets owned by the Applicant in Bylong Village;
  - assist in maintaining services for the local community; and
  - minimise the adverse social impacts associated with mine closure;
- (g) include a program to monitor, review and report on the effectiveness of these measures, including updating the plan 3 years prior to mine closure.

48. The Applicant must implement the approved Social Impact Management Plan for the development.

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## SCHEDULE 5 ADDITIONAL PROCEDURES

### NOTIFICATION OF LANDOWNERS/ TENANTS

Based on experience, in our view VLAMP does not provide appropriate safeguards for Landholders. It is skewed towards protecting the Applicant, to the detriment of fairness and justice for Landholders. Am happy to discuss if you wish.

1. Prior to carrying out any development under this consent, the Applicant must:
  - (a) notify in writing the owners of:
    - (AFFECTATION ZONE - VLAMP): any residence on the land listed in Table 3 of Schedule 4 that they have the right to request the Applicant install additional noise and dust mitigation measures at their residence at any stage during the development; and
    - any privately-owned land within 3 kilometres of the approved open cut mining pit/s that they are entitled to request an inspection to establish the baseline condition of any buildings or structures on their land, or to have a previous property inspection report updated;
  - (b) notify the tenants of any mine-owned land of their rights under this consent; and
  - (c) send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the owners and/or existing tenants of any land (including mine-owned land) where the predictions in the EIS identify that dust emissions generated by the development are likely to be greater than the relevant air quality criteria in Schedule 4 at any time during the life of the development. **IF FAIR AND REASONABLE NOISE/DUST MODELS – SUBJECT TO INDEPENDENT SCRUTINY - PREDICT EXCEEDANCES LIKELY TO CAUSE ADVERSE HEALTH/LIVED EXPERIENCES, OUTCOMES THEN NO-ONE SHOULD BE ALLOWED TO LIVE IN SUCH A ZONE.**
2. 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:
  - (a) advise the prospective tenants of the potential health and amenity impacts associated with living on the land, and give them a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time); and
  - (b) advise the prospective tenants of the rights they would have under this consent, to the satisfaction of the Planning Secretary.
3. **Immediately and within 7 days** after obtaining monitoring results showing:
  - (a) an exceedance of any relevant criteria in Schedule 4, the Applicant must notify affected landowners in writing of the exceedance, and provide **real time, live** monitoring results to each affected landowner until the development is again complying with the relevant criteria; and
  - (b) an exceedance of the relevant air quality criteria in Schedule 4, the Applicant must send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and/or existing tenants of the land (including the tenants of any mine- owned land).

### INDEPENDENT REVIEW

4. If an owner of privately-owned land considers the development to be exceeding the relevant criteria in Schedule 4, then he/she may ask the Planning Secretary in writing for an independent review of the impacts of the development on his/her land. **THE SAME ARRANGEMENT SHOULD BE PROVIDED FOR ANY LANDHOLDER.**

Within 28 days of the date of the landholder's request, the Planning Secretary will determine if an independent review is warranted. If the Planning Secretary decides that such a review is warranted, within 28 days of that decision:

- (a) the Applicant, jointly with the landholder, must select a suitably qualified, experienced and independent person to undertake the review. That appointment is to be approved by the Planning Secretary.
- (b) Once the independent party is selected the Applicant must:
  - consult with the landowner to comprehensively determine his/her concerns;
  - conduct additional monitoring and investigations over a relevant time period and similar weather patterns to determine whether the development is complying with the relevant criteria in Schedule 4; and
  - if the development is not complying with these criteria, or there are reasonable grounds to believe that it may not be complying, then identify the measures that should be implemented to ensure total compliance with the relevant criteria; and
- (c) provide the Planning Secretary and landowner a copy of the independent review.

*Note: Where the independent review finds that the development is not complying with applicable criteria, the Department may take enforcement action under the EP&A Act to ensure compliance with the consent.*

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**SCHEDULE 6**  
**ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING**

**ENVIRONMENTAL MANAGEMENT**

**Environmental Management Strategy**

1. Prior to carrying out any development under this consent, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Planning Secretary. This strategy must:
  - (a) be submitted to the Planning Secretary for approval;
  - (b) provide the strategic framework for environmental management of the development;
  - (c) identify the statutory approvals that apply to the development;
  - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
  - (e) describe the procedures that **will** be implemented to:
    - keep the local community and relevant agencies **fully** informed about the operation and environmental **and social** performance of the mine;
    - receive, handle, respond to, and record complaints;
    - resolve any disputes that may arise during the course of the development;
    - respond to any non-compliance;
    - respond to emergencies; and
  - (f) include:
    - copies of any strategies, plans and programs approved under the conditions of this consent; and
    - a clear plan depicting all the monitoring to be carried out in relation to the development.
  
2. The Applicant must implement the approved Environmental Management Strategy for the development.

**Adaptive Management**

3. The Applicant must **constantly and diligently** assess and manage development-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedules 3 and 4. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedance of these criteria and/or performance measures has occurred, the Applicant must **within 24 hours, report it to the relevant authorities, the CCC and the community. Then, within 7 days the Applicant must:**

- (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur;
- (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report (**within 14 days**) to the Department describing those options and any preferred remediation measures or other course of action;

- and
- (c) implement reasonable remediation measures as directed by the Planning Secretary.

### **Management Plan Requirements**

- 4. The Applicant must ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines, and include:
  - (a) detailed baseline data **and climate change modelling data**;
  - (b) a description of:
    - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
    - any relevant limits or performance measures/criteria;
    - the specific performance indicators or triggers that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;
  - (c) a description of the measures that **will** be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
  - (d) a program to monitor and report on the:
    - impacts and environmental performance of the development;
    - effectiveness of any management measures (see c above);
  - (e) a contingency plan to manage any unpredicted impacts and their consequences;
  - (f) a program to investigate and implement ways to improve the environmental performance of the development over time;
  - (g) a protocol for managing and reporting any:
    - incidents;
    - complaints;
    - non-compliances with statutory requirements; and
    - exceedances of the impact assessment criteria and/or performance criteria; and
  - (h) a protocol for periodic review of the plan.

### **Revision of Strategies, Plans and Programs**

- 5. Within 3 months, unless otherwise agreed with the Planning Secretary, of:
  - (a) the submission of an incident report under condition 9 below;
  - (b) the submission of an annual review under condition 11 below;
  - (c) the submission of an audit under condition 13 below; and
  - (d) the approval of any modification to the conditions of this consent; or
  - (e) a direction of the Planning Secretary under condition 4 of Schedule 2;the Applicant must review, and if necessary, revise, the strategies, plans, and programs required under this consent to the satisfaction of the Planning Secretary.

Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted to the Planning Secretary for approval, unless otherwise agreed with the Planning Secretary.

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

development.

### Updating & Staging of Strategies, Plans or Programs

6. To ensure the strategies, plans and programs are updated every two years, and incorporate any recommended measures to improve the environmental performance of the development, the Applicant may submit revised strategies, plans or programs required under this consent at any time. With the agreement of the Planning Secretary and other relevant authorities such as the EPA, NSW Water or DoI Water, the Applicant may also submit any strategy, plan or program required by this consent on a staged basis.

The Planning Secretary, together with other relevant authorities may approve a revised strategy, plan or program required under this consent, or the staged submission of any of these documents, at any time. With the agreement of the Planning Secretary and other relevant authorities, the Applicant may prepare the revised or staged strategy, plan or program without undertaking consultation with all parties nominated under the applicable condition in this consent.

Notes:

- While any strategy, plan or program may be submitted on a progressive basis, the Applicant will need to ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times.
- If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.

### Relationships between Management Plans

7. The Water, Biodiversity and Heritage Management Plans required under Schedule 4 are to be prepared in respect of all parts of the development that are not covered by an Extraction Plan approved under condition 6 of Schedule 3. In particular, those management plans should address all areas subject to existing or proposed surface disturbance associated with the development.

### COMMUNITY CONSULTATIVE COMMITTEE

8. The Applicant must establish and operate a Community Consultative Committee (CCC) for the development to the satisfaction of the Planning Secretary. This CCC must be established and operated in accordance with the *Community Consultative Committee Guidelines, State Significant Projects* (Department of Planning, November 2016) or its latest version.

Notes:

- The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Applicant complies with this consent.
- In accordance with the guideline, the Committee should be comprised of an independent chair and appropriate representation from the Applicant, Council,



*local community representatives and stakeholder groups.*

## REPORTING

### Incident Reporting

9. The Applicant must immediately (**within 24 hours**) notify the Planning Secretary and any other relevant agencies of any incident. Within 7 days of the date of the incident, the Applicant must provide the Planning Secretary and any relevant agencies with a detailed report on the incident and such further reports as may be requested.

### Regular Reporting

10. The Applicant must provide **at least monthly** reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent. **More frequent reporting is required if there are current environmental/social issues at foot and/or the community is seeking information on matters of concern or interest to it.**
11. **PROVISION OF REAL TIME, LIVE ENVIRONMENTAL MONITORING DATA – NOISE, DUST, BLASTING, S/WATER, G/WATER. AVAILABLE ON INTERNET TO ALL INCLUDING ENVIRO REGULATORS**

### Annual Review

12. By the end of March each year, the Applicant must submit a review of the environmental performance of the development for the previous calendar year, to the **joint** satisfaction of the **EPA, DoI Water, NSW Water and the** Planning Secretary. This review must:
  - (a) describe the development (including any rehabilitation) that was carried out in the past year, and the development that is proposed to be carried out over the next year;
  - (b) include a comprehensive review of the monitoring results and complaints records of the development over the past year, which includes a comparison of these results against the:
    - relevant statutory requirements, limits or performance measures/criteria;
    - monitoring results of previous years; and
    - relevant predictions in the EIS;
  - (c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance **in the future**;
  - (d) identify any trends in the monitoring data over the life of the development;
  - (e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any discrepancies;
  - (f) **report on the topics and issues canvassed at the CCC and with the local Councils; and**
  - (g) describe what measures will be implemented over the next year to improve

the environmental performance of the development.

*Note: The “Post Approval Requirements for State Significant Developments - Annual Review Guideline 2015, NSW Government, October 2015” (or its latest version) provides a reporting framework to integrate the reporting requirements of the Annual Review required by the Department under the development consent and the Annual Environment Management Report (AEMR) required under the Mining Lease.*

## **INDEPENDENT ENVIRONMENTAL AUDIT**

### **Independent Environmental Audit**

13. Within one year of the date of commencement of development and every **two** years thereafter, unless the Planning Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:
  - (a) be conducted by a suitably qualified lead auditor and suitably qualified, experienced and independent team of experts in any field specified by the Planning Secretary, whose appointment has been endorsed by the Planning Secretary;
  - (b) include consultation with the relevant agencies;
  - (c) assess the environmental performance of the development and assess whether it is complying with the requirements in this consent, and any relevant EPL or Mining Lease/s (including any assessment, plan or program required under these approvals);
  - (d) **assess and report on the standing of the Applicant’s social licence, the effectiveness of the CCC, the relationship with the relevant local councils, etc;**
  - (e) review the adequacy of any strategies, plans or programs required under the abovementioned approvals; and
  - (f) recommend appropriate measures or actions to improve the environmental **and social** performance of the development, and/or any strategy, plan or program required under the abovementioned approvals; and
  - (g) be conducted and reported to the satisfaction of the Planning Secretary.

*Note: The “Post Approval Requirements for State Significant Developments - Independent Audit Guideline, NSW Government, October 2015” (or its latest version) provides an audit and reporting framework for the independent audit that will guide compliance with this condition.*

14. Within 12 weeks of commissioning this audit, or as otherwise agreed by the Planning Secretary, the Applicant must submit a copy of the audit report to the Planning Secretary, together with its response to any recommendations contained in the audit report and a timetable for the implementation of these recommendations as required.
15. The Applicant must implement these recommendations **in accordance with the timetable**, to the satisfaction of the Planning Secretary.

## **ACCESS TO INFORMATION**

16. From the commencement of development under this consent, the Applicant shall:
- (a) Make copies of the following information publicly available on its website:
- Live, real time monitoring data on noise, dust, blasting, surface water and groundwater
  - the EIS;
  - current statutory approvals for the development;
  - approved strategies, plans or programs required 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 complaints, which is to be updated monthly;
  - minutes of CCC meetings;
  - the last five annual reviews;
  - any independent environmental audit, and the Applicant's response to the recommendations in any audit;
  - any other matter required by the Planning Secretary; and
- (b) keep this information updated, refreshed monthly (unless live monitoring data)

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**END**