



# Coalpac

Proprietors of Invincible Colliery  
and Cullen Valley Mine

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Lithgow City Council,  
180 Mort Street,  
Lithgow NSW 2790  
Attention: Andrew Muir (Group Manager Environment & Development)

16<sup>th</sup> January 2013

Dear Andrew,

**Re: Response to letter to Department of Planning & Infrastructure  
dated 14th September 2012 regarding the Coalpac Consolidation Project**

In your letter to the Department of Planning and Infrastructure, dated 14<sup>th</sup> September 2012, you made a number of comments.

Following our extensive consultations with Council over many of the issues raised we now feel that it is appropriate that we formally respond in writing to your letter. Please find our response below against your original comments (in italics);

- 1) *Council previously requested that mining is not to take place within 500 metres of the village, residents residing outside of the village and the cemetery itself.*

In response to Council's concerns, and as noted in the Response To Submissions, we will not approach within 500m of any properties within the village. The only properties where we will approach within 500m are either under an agreement or owned by Coalpac.

A condition survey will be undertaken, to the satisfaction of Council, of all structures in the cemetery prior to any mining activity within 500m of the cemetery.

Mining will not approach within a 250m radius of the cemetery and blasts will be designed to limit vibration and over pressure levels to that which will not cause future damage to structures in the cemetery. We had previously committed to limiting ground vibration to 50mm/second at the cemetery.

In recognition of the importance of the site we will further reduce this level down to 20mm/second. This will ensure that there are no blasting related impacts upon the cemetery.

Moreover no blasting will occur on days when services are scheduled at the Cemetery and no mining or coal haulage within a 1,500 m radius will occur within two hours of formal services at the Cemetery.

There have never been any plans to highwall mine beneath the cemetery and this remains the case.

It is proposed that a detailed Management Plan developed specifically for the cemetery and this will be developed in consultation with Council.

- 2) *Council previously requested that Coalpac be required to lodge a substantial guarantee in a special fund (bond) that will be forfeited in the event that the relevant standards are not met.*

Coalpac has previously noted the fact that the Division of Resources and Energy will hold a substantial (multi-million dollar) bond against the rehabilitation of the mine. Council's position was that this did not specifically address their concern regarding financial penalties applying for non-compliance with Project approval conditions.

Coalpac is already subject to the scrutiny of a number of Government regulators in terms of their performance against approval, licence and mining lease conditions. The scale of the penalties which can be brought to bear are summarised below;

### ***Planning Approval***

A Major Project Application (MPA) 10\_0178 was accepted by the Department of Planning and Infrastructure (DP&I) in October 2010 and is currently being assessed under former Part 3A of the Environmental Planning and Assessment Act 1979 NSW (EP&A Act) for the Coalpac Consolidation Project (CCP). If the CCP is approved the Minister for the Department of Planning and Infrastructure (DP&I) will be the consent authority and will issue the relevant Project Approval (PA) in accordance with the EP&A Act. As such Coalpac will be required to manage its mining activities in accordance with the conditions stipulated in the PA as directed by the Minister.

In the unlikely event that Coalpac does not achieve regulatory compliance under its PA, the Minister has the power, as the Consent Authority, to take regulatory action against Coalpac. This may include penalties under Section 126 and Section 127A of the EP&A Act. Individuals and corporations would be potentially liable for prosecution and fines under Section 284 and schedule 5 of the Environmental Planning and Assessment Regulation 2000. It should be noted that these fines can amount to millions of dollars depending on the severity of the regulatory non-compliance.

### ***Environmental Protection Licence***

Prior to the commencement of any construction or mining activities for the CCP Coalpac will require an Environmental Protection Licence issued by the Environmental Protection Authority (EPA), under the Protection of the Environment Operations Act 1997 (POEO Act). In the event of a regulatory non-compliance the POEO Act identifies a three tier penalty system depending on the severity of the offence. The POEO Act states for tier 1 offences that: A person who is found guilty of an offence under this Part is liable, on conviction:

- (a) *In the case of a corporation – to a penalty not exceeding \$5,000,000 for an offence that is committed wilfully or \$2,000,000 for an offence that is committed negligently, or*
- (b) *In the case of an individual – to a penalty not exceeding \$1,000,000 or 7 years imprisonment, or both, for an offence that is committed wilfully or \$500,000 or 4 years imprisonment, or both, for an offence that is committed negligently.*

### ***Mining Authorities***

Further to the above Coalpac operates in accordance with relevant Mining Leases and Exploration licences issued by the Department of Primary Industries – Division of Resources and Energy (DRE) under the Mining Act 1992 (Mining Act). Coalpac is required to conduct its mining operations in accordance with the conditions of its ML's and EL's. The Minister for DRE has the power to take regulatory action under the Mining Act in the event that regulatory non-compliance is not achieved. The severity of the penalties under schedule 11 of the Mining Regulation 2010 can amount to millions of dollars or imprisonment.

The summary above demonstrates that there are very harsh penalties available at law to ensure that Coalpac complies fully with conditions under any approval, licence and mining lease conditions.

- 3) *Council agrees that Option 1 for the Red Springs Road Crossing is the most appropriate, subject to further discussion and agreement from Country Rail Infrastructure Authority and Roads and Maritime Services. Council notes that all road diversion and re-establishment works are to be at no cost to Council.*

Coalpac notes any crossing over Red Springs Road would require agreement from the relevant agencies. Coalpac agrees to hold Council free from the costs of any diversion and re-establishment works.

- 4) *Council would like to maintain its concerns regarding the impact of an additional 128 trucks per day along the Great Western Highway, particularly between South Bowenfels and Mount Victoria. However, we defer to the knowledge and expertise of the Roads and Maritime Services in relation to this matter.*

In response to Council's concerns regarding additional road transport levels in the wider area beyond current approved levels Coalpac is considering the removal of sand mining from the Project.

- 5) *Council previously requested that Coalpac include a Commitment indicating trucking of sand will not commence prior to the completion of the Castlereagh Highway overpass.*

Coalpac confirm that trucking of sand would not commence prior to the completion of the Castlereagh Highway overpass.

- 6) *Council notes the information provided in relation to the real-time monitoring system. However, it is still considered that in the interest of transparency and ongoing compliance, that the response to real-time monitoring should be reportable on a yearly basis. Such information would be valuable when examining the cause of any potential exceedances.*

Coalpac propose to report on the performance of the real-time monitoring system in the Annual Environmental Management Report and will also report to the Community Consultative Committee regarding issues arising and improvements and changes made to operations in response to the experience gained with the real-time monitoring system.

- 7) *Council acknowledges that no changes are proposed in relation to the adopted background noise levels. Council maintains its concern with this issue however, we defer to the knowledge and expertise of the Environment Protection Authority in relation to this matter.*

Coalpac notes Council's concerns and will continue to work closely with the Government regulators in this area to set appropriate noise levels.

- 8) *Council acknowledges that Coalpac have indicated that they will provide Council and the Department of Planning and Infrastructure with copies of all formalised landholder agreements (without commercially in-confidence information). However, as the Environment Protection Authority is the regulatory authority for licence issues, it is considered they should also be provided with the relevant information. Also Council still considers it may be appropriate for such issues to be addressed as part of any required reporting process.*

Coalpac notes Council's concerns and has no problem with copies of all formalised landholder agreements (without commercially in-confidence information) being made available to the relevant authorities. We would need to seek the agreement of the landowner in question before disclosing the details of any agreement.

Coalpac considers that the requirement to report performance under any landholder agreement would only arise where there is a point of dispute between the parties. If this situation should arise it would be best addressed via the proposed dispute resolution mechanism outlined under the next point rather than reporting.

- 9) *Council previously raised the issue of a dispute resolution mechanism in the event that communication breaks down between Coalpac and Landowner in relation to compliance with landholder agreements. Council maintains its concern that this matter has not been adequately addressed, and requests that this issue is addressed by a condition of the Project Approval should the project be approved.*

Our current landholder agreements contain a dispute resolution clause as follows;

#### **Dispute Resolution**

1. The parties must seek for twenty-one (21) days to resolve any dispute by discussions in good faith.
2. If a dispute is not resolved under clause 1 the dispute must be referred to the Australian Commercial Disputes Centre for binding resolution by it by such processes as it determines.
3. If the dispute is not resolved under clause 2 within sixty (60) days either party may commence legal proceedings.
4. This clause does not prejudice the right of a party to institute court proceedings to seek urgent injunctive or declaratory relief in relation to any matter arising under this agreement nor for an order for specific performance as provided in this agreement.

We believe that this should provide landholders with a clear, fair and independent dispute resolution process.

In addition any trigger of compulsory acquisition would be governed by the State resolution process which we have attempted to summarise below.

“Where the proponent and the landholder are unable to resolve an issue arising under a landholder agreement it is proposed that either party may refer the matter to the Director - General of DP&I. Upon receiving such a request, the Director-General shall appoint an independent arbitrator to assess the circumstances surrounding the issue and identify the terms upon which the matter is to be resolved. The independent arbitrator is to:

- Consider submissions from both parties;
- Determine a fair and reasonable resolution and/or terms upon which the matter is to be resolved;
- Prepare a detailed report setting out the reasons for any determination; and
- Provide a copy of the report to both parties.

Within 14 days of receiving the independent arbitrators report, the proponent will make a binding written offer to the landowner to resolve the matter based on the terms of independent arbitrators report.

However, if either party disputes the independent arbitrator’s terms, then within 14 days of receiving the independent arbitrators report, they may refer the matter to the Director-General for review. Following consultation with the independent arbitrator and both parties the Director-General will determine fair and reasonable terms to resolve the matter.

Within 14 days of this determination, the proponent will make a binding written offer to the landowner to resolve the matter based on the Director-Generals determination.

If the landowner refuses to accept the proponent’s binding written offer under this condition within six months of the offer being made, then the proponent’s obligation to resolve the matter shall cease, unless the Director-General determines otherwise.”

- 10) *The Response to Submissions indicates that the Department of Planning and Infrastructure will likely include conditions on any Project Approval confirming those landholders with the right to request that their property be acquired by Coalpac at “Market Value”. Council would like to maintain its concern is that the project may devalue some properties, thereby decreasing “market value”, and therefore decreasing the compensation. Accordingly, it is requested that this matter be fully considered by the department of Planning and Infrastructure.*

Coalpac notes that there is a property valuation process which is followed to protect the landholder in the event of any acquisition rights being triggered. Coalpac notes Council’s concerns and will continue to work closely with the Government regulators on this issue.

- 11) *Council acknowledges that the Response to Submissions indicates that the Department of Planning and Infrastructure will identify who is entitled to compulsory acquisition. However, Council maintains its concern that some properties will potentially endure an increase of over 10dBA at night time, and because of the Adopted Intrusive Noise Criteria, would not be considered within the EA as actually be experiencing an exceedance. Accordingly, it is requested that this matter is fully considered by the Department of Planning and Infrastructure.*

The Project EA was prepared in line with Government guidelines and policy regarding noise levels. Coalpac notes Council's concerns and will continue to work closely with the Government regulators on this issue.

- 12) *Council would like to maintain its concern regarding the level of detail provided in relation to the proposed bunds. It is considered that should the project be approved that the proponent be required to prepare a detailed plan which addresses the proposed rehabilitation and slope of bunding, particularly for bunding adjacent to the Castlereagh Highway. It is requested that Council be consulted prior to the approval of this plan to enable consideration of the visual impact such bunds will have on users of the Castlereagh Highway.*

Coalpac notes Council's concerns and will add a commitment to its statement of commitments to this effect.

- 13) *Council previously raised the issue of the potential for subsurface heating to be exacerbated by new mining and notes that the Department Resources and Energy has suggested a limit of mining within 1km of the subsurface heating area. Council supports the Department Resources and Energy's recommendations on this issue and notes that Coalpac has not committed to altering their proposal to rectify this matter.*

The Division of Resources and Energy recommended "Extinguishment of all subsurface combustion in overburden emplacements and underground mine working before mining is conducted within 1km of these areas." This also noted that the mine plan did not require operations to approach within 1km until year 12 of the Project. They noted that "...this gives the proponent sufficient time to ensure all heating is permanently extinguished before mining operations are impacted."

Coalpac is working closely with the Division of Resources and Energy to finalise an agreed plan of works to address the subsurface heating issues at Cullen Valley Mine and are confident that a long term solution to the issues can be developed and implemented as part of the Project.

Coalpac strongly believes that the Project, once approved, will provide enormous benefit to the local community and understands that Council need to see that the appropriate controls are put in place to provide the confidence that the community and environment will be afforded the protection they deserve.

We trust that our responses outlined above will provide greater clarity on our proposed actions to address Council's concerns.

Should you require any further explanation or additional detail please do not hesitate to contact me.



Ian Follington  
Chief Executive Officer

16<sup>th</sup> January 2013

## Executive Summary

The Coalpac Consolidation Project proposes open-cut mining and highwall mining of the Illawarra Coal Measures in Ben Bullen State Forest in the Lithgow Local Government Area. The Proponent Coalpac Pty Ltd (Coalpac) seeks approval to consolidate the operations and management of the existing Cullen Valley and Invincible Colliery mines, expand the project area and increase production to 3.5 million tonnes of coal a year over 21 years.

The Minister for Planning and Infrastructure requested the Planning Assessment Commission to review the Coalpac Consolidation Project and to conduct public hearings as part of this process. The Minister requested the review assess the merits of the project as a whole, with particular consideration of impacts on biodiversity, water resources and local health and amenity noting the site's proximity to Cullen Bullen village. The Commission members appointed for the review were Dr Neil Shepherd AM (chair), Mr Garry Payne AM and Mr Joe Woodward PSM. Professor David Cliff provided expert advice on risks associated with underground combustion.

The Commission examined the Proponent's Environmental Assessment, submissions made on the Environmental Assessment, the Proponent's Response to Submissions and other documents submitted by the Proponent. The Commission also received submissions, held public hearings, inspected the site and surrounds and met with representatives of the Proponent, the Department of Planning and Infrastructure, Lithgow City Council, the Office of Environment and Heritage, Energy Australia (formerly TRUenergy), NSW Health, Division of Resources and Energy in the NSW Department of Trade and Investment and Professor Cliff.

The Commission held public hearings on Wednesday 19 September 2012 at the Lithgow & Districts Workmen's Club and on Thursday 20 September 2012 at the Cullen Bullen Progress Association Hall. The Commission heard submissions from 27 and 11 people in Lithgow and Cullen Bullen respectively. Written submissions and correspondence were also received during the review.

The Commission has found that, when the merits of the project are considered as a whole, the benefits of the project are substantially outweighed by the breadth and potential magnitude of the impacts. The Commission therefore recommends that the project should not be approved.

The benefits claimed for the project are principally in the areas of employment (120 positions in total with 30 of these additional); engagement of contractors; wealth generation (claimed net benefits of \$1,519 million); provision of a cheap source of coal for Mount Piper Power Station with flow-on benefits for electricity prices; reduced traffic impacts in the local area (i.e. Cullen Bullen); and supply of building sand to western Sydney.

The claimed benefits of the project are largely distributed away from the population bearing most of the impacts of the project. Of the existing mine employees, only 3% come from Cullen Bullen and it is not anticipated that the project will generate significant demand for housing or facilities in the area. The Commission has also found that claims associated with some of the benefits do not appear robust when examined closely. For example, the claimed \$1,519 million net benefit is very sensitive to coal price fluctuations. A 20% decrease in the price at which the benefits were calculated decreases the net benefit by 42% to \$881 million. The claimed net benefit was calculated using world parity prices (an accepted analytical approach), but the poor quality coal produced by the project is largely (70%) unsuitable for export and could never achieve the world parity price. In fact

the long-term contracted price for the coal produced by the project is well below the export parity price.

The claimed potential increases in wholesale and retail electricity prices if project coal is not supplied to Mount Piper Power Station (35% and 13% respectively) were examined carefully by the Commission including two sets of confidential supporting documentation provided by Energy Australia. The Commission found that, whilst there may be some (limited) impact on wholesale prices in the short-medium term, there was no credible evidence to support a causal relationship between increases in retail prices of the magnitude described and changes in part of the fuel supply to a single NSW power station. The modelling also failed to account for the majority of factors that would influence electricity prices over the period 2013-2022.

In relation to the extraction of sand as part of the project, the Commission has found that there is insufficient information provided by the Proponent to enable a proper assessment of this part of the proposal. Potential issues with acid mine drainage, road transport of the product and washery water management have been identified for further investigation.

The impacts of the project are substantial and occur across a range of domains. The terms of reference specifically direct the Commission to three areas (health and amenity impacts on residents, impacts on biodiversity and impacts on water resources) and to consider any other matters raised in submissions or at public hearings.

The Commission has substantial concerns about impacts arising from dust, noise and blasting on the health and amenity of residents of Cullen Bullen and the surrounding district.

For dust, NSW Health provided the Commission with unequivocal advice that the predicted significant increases in PM<sub>10</sub> levels from the project will lead to increased morbidity and mortality in the Cullen Bullen community from respiratory and cardiovascular disease. It is the increase, not the final level of PM<sub>10</sub>, that produces this outcome. NSW Health also emphasised the relatively poor health and socio-economic status of this community compared to NSW averages.

The project cannot meet NSW air quality criteria at all residences and is close to the limit at many others. It is therefore at the limit of acceptability for air quality impacts. This situation already assumes that all controls are in place and operating effectively and that the predictions are accurate. The results are that: there is no room for new entrants into the impacted airshed (i.e. no additional impacts can occur); there are potential long-term restrictions on project operations; and further property acquisitions may be necessary. The Commission considers this to be a high-risk situation.

For noise impacts, the project cannot meet the accepted NSW criteria at all residences. Acquisition is required for some residences and mitigation treatments for others. There are also a substantial number of residences close to the limit at which mitigation treatments for noise impacts would be required. The Proponent has modelled the noise impacts with all controls in place and operating effectively. There is no room for error in either the predictions or in operation of the controls. The potential consequences of failure to deliver predicted outcomes are that operating hours will remain restricted or a significant number of additional residences will need to be treated and/or acquired, causing further social disruption to the village and surrounding district.

The project cannot meet the blasting impact guidelines at some locations without a significant increase in the number of blasts above the national criteria for blast frequency. This project seeks up to 40 blasts per week, which is approximately a seven-fold increase above the criteria. Increased frequency may be acceptable where the residential impact is significantly lower for each blast but,

for this project, although the charges would be smaller, the impact at the residences would remain close to or at the maximum allowable level. The Commission considers the proposed level of impact from blasting to be unacceptable for these residents.

Biodiversity impacts are divided into those affecting the pagoda landform and those affecting other aspects of the ecology of the project area. The pagodas are considered to be internationally significant geological features some 250 million years old and worthy of total protection. No mining-induced damage should be permitted to these features. The Commission recommends that highwall mining in the vicinity of the pagodas be prohibited and that the minimum setback for mitigating blasting risk to the pagodas be increased significantly from the proposed 50m. Risks to flora and fauna of the pagoda landform are also significant, particularly for fauna species that utilise the various parts of the landform for shelter, breeding sites and feeding areas on either a daily or seasonal basis. Some of these are listed as threatened species under the relevant NSW and Commonwealth Acts. The proposal to mine up to within 50m of the pagodas and escarpments will have an unacceptable impact on the foraging ability of these species. The Commission considers that a setback of 300m would provide 70-75% of the foraging area required and should be adopted as an absolute minimum.

The project will clear 957.98ha of vegetation – mostly in Ben Bullen State Forest. There is sufficient doubt over the accuracy of the biodiversity assessment for there to be uncertainty about levels of impact, the significance of impacts and the suitability of proposed offsets. Edge effects, have not generally been factored into the impacts. Given the very fragmented nature of the project site this will mean that the real impact of the project on native vegetation will be much greater than the area to be directly impacted by clearing.

The project area contains numerous species listed under the State and Commonwealth threatened species legislation and potential exists for many others to be present. However, the real value of the area from a biodiversity perspective is that it contains a wide diversity of vegetation associations and a very high species richness. Despite low intensity forestry in the past the vegetation is generally in good condition and there is a full range of habitat features available such as tree hollows. It adjoins areas of similar status such as the rest of the Ben Bullen State Forest and Wolgan State Forest and the Gardens of Stone National Park is immediately to the north of the Ben Bullen State Forest.

The Proponent has placed substantial emphasis on rehabilitation as a mitigation strategy for impacts on biodiversity. There is considerable uncertainty about the validity of the claims. Some issues are: rehabilitated areas cannot be returned to their pre-existing landforms across the project area; rehabilitated areas cannot replicate the existing biodiversity characteristics (they will inevitably be less diverse and less species rich); there is no guarantee that mature woodland can develop on rehabilitated areas (there is no example of rehabilitated mature woodland on an open-cut mine in NSW); even if woodland could reach maturity, development of the full range of habitat features is over 100 years away; and there is a direct conflict between the management of rehabilitation and the management of the underground combustion which is present in the project area.

Rehabilitation issues are particularly significant in this project. The impacts are occurring in an area already proposed for inclusion in the conservation reserve system, the Proponent is claiming that rehabilitation will make the area suitable for inclusion in the reserve system in due course, and the visual impacts of the project are very substantial and rehabilitation is essential to provide cover for highly visible areas of scarring. The Commission concluded that the project and reservation of Gardens of Stone Stage II are incompatible if reservation is intended to include Ben Bullen State Forest, either now or in the foreseeable future.

For this project to proceed, adequate biodiversity offsets must be secured to compensate for the impacts. At this stage the offset package is best described as 'a work in progress', and cannot be considered adequate. The Commission's conclusion on the offset package is that it is designed to exchange a number of fragmented areas that in some instances require extensive rehabilitation and are not considered suitable for reservation, for a single area of high quality habitat that is already proposed for reservation and which adjoins like areas of high quality habitat.

Potential impacts on water resources were identified for both surface waters and groundwater, but the Commission considers that these could be managed with appropriate conditions.

Other issues of significance arising during the review include cumulative impacts from this project, other existing mining projects and two known potential open-cut mining projects (Pine Dale Stage 2 Extension and Neubeck). The EA does not deal with the potential cumulative impacts from either Pine Dale Stage 2 Extension or Neubeck. The Commission strongly recommends that the Department consider the implications of all existing and proposed mines in this airshed with a view to making considered recommendations to the Determining Authority that ensure air quality impacts remain compatible with sound long-term health and amenity outcomes for the residents. The cumulative impacts on biodiversity are also of concern since the Pine Dale Stage 2 Extension also impacts directly on the Ben Bullen State Forest. The Commission considers that the assessment must cover the total impact from the two proposals before a comprehensive understanding of biodiversity impacts is possible.

There are other impacts associated with visual scarring in the vicinity of the pagodas and escarpments and significantly increased heavy vehicle traffic on the Great Western Highway. There are also significant risks to Aboriginal rock shelters and for increases in underground combustion if the proposed management strategies do not work. The Commission also identified many heavily qualified statements in the Environmental Assessment and Response to Submissions by the consultants preparing reports and also heavily qualified commitments by the Proponent on key issues. In many cases there is no certainty that important outcomes can be delivered or that commitments will be met. The Commission is sufficiently concerned about the extent of this problem to recommend that any further assessment process require the stripping away of the caveats and qualifications so that the decision maker is presented with unequivocal statements as to what will or will not be achieved and also provided with unambiguously enforceable conditions and commitments to consider.

The Commission has provided a suite of recommendations under the individual sections of this review, and a summary list is provided in section 9.5. These recommendations were prepared as each individual issue was considered and before the Commission determined its position on the merits of the project as a whole, which is that the project should not be approved (Term of Reference 1(b)). The recommendations therefore represent the minimum requirements or limitations that the Commission considers necessary to deal with the individual impacts identified. The fact that these individual recommendations have been provided should not be interpreted as modifying the Commission's conclusion and recommendation on the project as a whole. Their existence responds to the Minister's request to '*recommend appropriate measures to avoid, minimise and/or offset these impacts*' (Term of Reference 1(c)) and also recognises that this review is only one step in the assessment and determination process for this project.

## Air Quality (Section 5.1)

**Recommendation 1:** The Commission recommends that the emission estimate predictions should be updated and reconfirmed using the most relevant emission variables as recommended by the EPA prior to any determination of the project.

**Recommendation 2:** The Commission recommends the current acquisition criterion for PM<sub>10S</sub>, 150 µg/m<sup>3</sup> 24-hour average from all sources, should be reviewed from a health perspective given the NEPC criteria of 50 µg/m<sup>3</sup> and more recent advice from NSW Health about mortality and morbidity impacts. This should be done in consultation with NSW Health and the EPA prior to any final approval for the Coalpac project.

**Recommendation 3:** The Commission recommends the NSW long-term acquisition criterion for annual average particulate matter less than 10 microns (PM<sub>10</sub>) of 30 µg/m<sup>3</sup> should be reviewed against the WHO goal of 20 µg/m<sup>3</sup> for this parameter.

**Recommendation 4:** The Commission recommends that any approval for the project should include the relevant condition from the Ashton South East Open Cut Coal Project determination relating to air quality exceedences at mine owned residences. These conditions relate to adequate notification of the tenant, termination of the tenancy without penalty, air mitigation measures and ongoing monitoring information and notification of the owners of the land with an option for acquisition.

**Recommendation 5:** The Commission recommends that blasting should only be conducted when the wind will transport fumes away from the Cullen Bullen school, Cullen Bullen village and any residences.

**Recommendation 6:** The Commission recommends the proposed Air Quality Management Plan (AQMP) should include key performance indicators and outcomes across the full range of potential sources of air emissions. The AQMP should be developed in consultation with the EPA and be approved by the Director-General of the Department prior to commencement of works associated with the development. Specific attention should be given to the performance outcomes to achieve the air quality criteria.

**Recommendation 7:** The Commission recommends that the total area of active mining and un-rehabilitated dumps should not exceed 180 hectares at any one time.

**Recommendation 8:** The Commission recommends that operational conditions are sufficiently rigorous to ensure the Real Time Air Quality Management System is used predictively and that failure to do this amounts to non-compliance.

**Recommendation 9:** The Commission recommends that auditing requirements are imposed to assess compliance and to assess whether additional management responses are required. It is also necessary to ensure long-term commitment to effective use of the Real Time Air Quality Management System.

**Recommendation 10:** The Commission recommends that shutting down of operations should be adopted as a management response in this airshed to ensure the air quality criteria are met.

**Recommendation 11:** The Commission recommends restriction of hours as well as production limits to be included if the Real Time Air Quality Management System doesn't deliver all required outcomes.

**Recommendation 12:** The Commission recommends that an evaluation should be conducted of Real Time Air Quality Management Systems (RTAQMS) including their effectiveness in controlling emissions from open-cut mines. This should include investigation of the relationship between suppression of peak emission levels and the effect (if any) on annual average emission levels from open-cut mines in NSW.

## **Noise (Section 5.2)**

**Recommendation 13:** The Commission recommends the proposed review of the Industrial Noise Policy include a review of the minimum default background noise level of 30dBA.

**Recommendation 14:** The Commission recommends the cumulative noise, including the project and ambient noise, at the Cullen Bullen school should not exceed 45 LAeq(1hr) at any time during a school day.

**Recommendation 15:** The Commission recommends that the proposed exemptions for the highwall miner from some of the management zone recommendations should be justified before any final determination of the project.

**Recommendation 16:** The Commission recommends the Proponent should stop or modify operations under certain weather conditions where noise criteria are predicted to be exceeded and should stop noise generating operations if acceptable noise criteria are exceeded. In addition the Proponent's performance should also be independently audited.

**Recommendation 17:** The Commission recommends that once the conveyor is completed, road haulage of coal to MPPS should only occur for a minimal period in emergency situations where there are no other reasonable options and only with written approval from the Department. Haulage should be restricted to 0700 to 2100, and none on Sundays or Public Holidays.

**Recommendation 18:** The Commission recommends that road haulage of export coal to Port Kembla should not be permitted once the rail facility has been constructed.

**Recommendation 19:** The Commission recommends that road haulage of export coal to Port Kembla before the rail facility is operational should be not be permitted without further assessment of the traffic impacts.

**Recommendation 20:** The Commission recommends the Proponent should cooperate with rail managers and train operators, in consultation with the EPA, to develop a regional train noise study.

**Recommendation 21:** The Commission recommends operational noise from the rail loading facility should not cause or contribute to exceedence of the relevant noise criteria at any time.

**Recommendation 22:** The Commission recommends the Proponent should demonstrate compliance with the predicted noise levels from the rail loading facility within six months of its commencement of operation.

**Recommendation 23:** The Commission recommends if evening or night time noise criteria are exceeded then loading should not occur in evenings or at night until rectification is complete and the noise criteria can be met.

**Recommendation 24:** The Commission recommends all new mining equipment should be independently tested by an acoustic engineer against predicted sound power levels prior to delivery and should not be put into operation until it meets the predicted level.

**Recommendation 25:** The Commission recommends that operating hours should be limited to the following times **until** all noise mitigation measures have been implemented and demonstrated to be effective and certified by an independent acoustic expert that they meet the noise criteria. These noise mitigation measures include; the noise sound suppression on mobile plant and stationary equipment, earthen bund walls, conveyor, bridge over the Castlereagh Highway, location of infrastructure within the project footprint and the real time monitoring and management system.

- Monday to Saturday
  - 7.00 am to 6.00 pm – for mining coal processing activities;
  - 7.00 am to 9.30 pm – for haulage and transportation from Invincible Colliery exit;
  - 7.00 am to 5.30 pm Monday to Friday and 7.00 am to 5.00 pm on no more than 30 Saturdays annually – Coal haulage from Cullen Valley Mine, Hillcroft and East Tyldesley.
  - 10.00 pm to 7.00 am – non-audible equipment maintenance activities.
  - 9.00 am to 5.00 pm - blasting.
- Sunday
  - 8.00 am to 6.00 pm – for mining and all associated activities;
  - 6.00 pm to 7.00 am – non-audible equipment maintenance activities.
  - No blasting
- And at no time on public holidays.

Note: these times may be further restricted by specific recommendations, for example near the Cullen Bullen cemetery.

**Recommendation 26:** The Commission recommends that operating hours should be limited to the following times **after** all noise mitigation measures have been implemented and certified by an independent acoustic expert that they meet the predicted noise outcomes. These noise mitigation measures include; the noise sound suppression on mobile plant and stationary equipment, earthen bund walls, conveyor, bridge over the Castlereagh Highway, location of infrastructure within the project footprint and the real time monitoring and management system.

- Monday to Saturday
  - 24-hours – for mining (other than blasting) and coal processing;
  - 7.00 am to 9.30 pm – for haulage and transportation from Invincible Colliery exit;
  - Coal haulage from Cullen Valley Mine, Hillcroft and East Tyldesley only in emergencies with written approval from DOPI.
  - 10.00 pm to 7.00 am – non-audible equipment maintenance activities.
  - 9.00 am to 5.00 pm - blasting.
- Sunday
  - 24-hours – for mining (other than blasting) and coal processing;
  - No road haulage;
  - No blasting
- And at no time on public holidays.

Notes:

- Temporary night time operation should be permitted only after an initial compliance certification following three months operation. This should be repeated and reconfirmed following twelve months of operation before longer term night time operation is permitted.
- Where mining is carried out in different sectors and some sectors show compliance and others show non compliance then the above night operating times should be permitted for those sectors only where there is full compliance with the noise criteria.

- these times may be further restricted by specific recommendations, for example the cemetery.

**Recommendation 27:** The Commission recommends a NSW policy for acquisition of properties subjected to excessive noise or air emissions by new developments should be completed as soon as practical.

**Recommendation 28:** The Commission recommends the Proponent should be required to implement negotiated agreements, additional at-receiver noise mitigation measures or property acquisition consistent with the criteria in Table 5-11.

**Recommendation 29:** The Commission recommends the responses to real time monitoring that show an exceedence or potential exceedence of noise requirements should be included in an annual report made available to Council, relevant agencies and the public.

**Recommendation 30:** The Commission recommends there should be no increase in production until the Real Time Noise Management System is established and demonstrated to be operating effectively under all weather conditions, including temperature inversions.

**Recommendation 31:** The Commission recommends a comprehensive evaluation of the effectiveness of real time monitoring and proactive and reactive management systems used for air and noise management in mines in NSW.

**Recommendation 32:** The Commission recommends an independent audit should be conducted at the end of 12 months and then every three years to investigate and report on the effectiveness of the Real Time Noise Management System in maintaining noise levels within the relevant criteria. This should include measures taken in all meteorological conditions. The audit should report on any additional measures available to mitigate impacts.

**Recommendation 33:** The Commission recommends any approval for the project should include a condition that the mining only proceed in stages until it demonstrates compliance with the noise criteria.

### **Blasting (Section 5.3)**

**Recommendation 34:** The Commission recommends ground vibration criteria for Aboriginal heritage rock shelters should not be greater than the criteria set out by the Proponent, that is half the recommended ground vibration criteria and 3dB below the overpressure criteria. The Blast Management Plan should demonstrate how blasting can occur with negligible mining-induced damage of the Aboriginal rock shelter RCK2-10.

**Recommendation 35:** The Commission recommends no mining-induced damage is to be caused to any grave or gravestones at the Cullen Bullen cemetery. The Blast Management Plan must demonstrate how this would be achieved.

**Recommendation 36:** The Commission recommends no mining or coal haulage occurs within a 1.5km radius of the Cullen Bullen cemetery on any Saturday, Sunday or Public Holiday.

**Recommendation 37:** The Commission recommends that the Proponent's approach to controlling noise and vibration from blasting at residences by reducing the MIC and increasing the number of blasts to be rejected as imposing an unreasonable impact on the residents. Any exceedence of the

ANZEC guideline for blasting frequency should be strictly limited, particularly when the expected noise or vibration levels are likely to be at or close to the limits.

**Recommendation 38:** The Commission recommends that there should be no impacts to the pagodas and cliff lines from blasting. The Commission does not accept that a 50m buffer will guarantee this outcome, but is unable to determine a satisfactory buffer distance from the available information. To accommodate this situation the Commission recommends that no blasting occur within 300m of the pagodas or cliff lines without an independent geotechnical surveyor certifying that the blasting proposed will not cause impact to the pagodas or cliff lines. In any event a minimum stand-off distance of 100m must be maintained for blasting from all pagodas, cliffs and other rocky outcrops.

**Recommendation 39:** The Commission recommends that strict monitoring requirements which allow detection of any blasting-induced impacts to pagodas, cliff lines or rocky outcrops be required in the event that the project proceeds.

**Recommendation 40:** The Commission recommends that the Department review the mechanism used to assess complaints of blast damage to private property with a view to providing the residents with confidence that their claims are being assessed by a qualified person who is transparently independent from the Proponent.

#### **Visual Impact (Section 5.4)**

**Recommendation 41:** The Commission recommends that the Proponent should provide the Department with the construction schedule for the noise and visual mitigation bunds as well as specifications and other technical details prior to construction.

**Recommendation 42:** The Commission recommends that the onsite treatments outlined in the EA, Volume 1, Section 8, pp.151-152 be developed as conditions of approval.

**Recommendation 43:** The Commission recommends that the Proponent be required to report to the Department and the local community on a regular basis on the implementation of rehabilitation and mitigation measures, with the frequency and the extent of reporting to be determined by the Department.

**Recommendation 44:** The Commission recommends that the construction hours of operation should form a condition of any approval, in part to alleviate light pollution impacts on residents and other users of the area.

#### **Pagodas and Associated Environments (Section 6.2)**

**Recommendation 45:** The Commission recommends that the pagodas and the associated escarpments be considered natural features of special significance and that they be fully protected from any mine-induced impacts.

**Recommendation 46:** The Commission recommends that highwall mining not be permitted under the pagodas or escarpments in the project area.

**Recommendation 47:** The Commission recommends that to provide adequate protection for threatened species and other fauna that use the pagoda landform, a minimum setback distance of 300m be maintained from the open-cut highwall to the pagodas and the escarpments.

**Recommendation 48:** The Commission recommends that, given the significance and sensitivity of the pagodas and the pagoda landform environment, before the project is submitted for determination the uncertainties in the Proponent's supporting information identified in section 6.2 are resolved and the caveats and qualifications on the various commitments are removed so that the Determining Authority has an unequivocal understanding of what the outcomes will be and the risks associated with them.

### **Terrestrial Ecology (Section 6.3)**

**Recommendation 49:** The Commission recommends that concerns about the adequacy of the flora assessment and identification of the vegetation associations present in the project area be resolved to the satisfaction of OEH prior to approval of any extension to open-cut mining in the project area and prior to any assessment of adequacy or otherwise of the biodiversity offset package.

**Recommendation 50:** The Commission recommends that, given the acknowledged high quality and species richness of the native vegetation present in the project area, the assessment focus should be on the overall quality of the habitat under threat and its biodiversity value rather than just on the threatened species component which is the focus of the EA.

**Recommendation 51:** The Commission recommends that calculation of edge effects be required to the satisfaction of OEH before the project is submitted for determination.

**Recommendation 52:** The Commission recommends that the cumulative impacts on the biodiversity values of Ben Bullen State Forest and the region of this project, together with the proposed Pine Dale Stage 2 Extension, be considered before any assessment of this project is finalised.

**Recommendation 53:** The Commission recommends that the following three principles be accepted as underpinning assessment of biodiversity impacts for this project:

- rehabilitation cannot restore the existing vegetation associations or ecological balance of the area;
- rehabilitation to mature woodland is unproven for open-cut mines in NSW; and
- the impacts on biodiversity from this project are incompatible with reservation proposals for Gardens of Stone Stage II.

**Recommendation 54:** The Commission recommends that, given the considerable uncertainties concerning the likelihood of rehabilitation on this project area being capable of delivering a satisfactory biodiversity outcome, rehabilitation not be given credence as a mitigation strategy in the assessment.

**Recommendation 55:** The Commission recommends that, until the baseline biodiversity characteristics of the site have been resolved to the satisfaction of OEH, assessment of the adequacy or otherwise of the revised offset package should not proceed. The Commission also recommends that particular attention be given in the assessment to the essential nature of the trade-off being proposed, i.e. it is a proposal designed to exchange a number of fragmented areas that generally require extensive rehabilitation work and are currently not considered suitable for reservation, for a single area of high quality habitat that adjoins other areas of high quality habitat and is already proposed for reservation.

### **Water (Section 7)**

**Recommendation 56:** The Commission recommends the discharge from Invincible Colliery, Licensed Discharge LDPO01, should be discontinued.

**Recommendation 57:** The Commission recommends the Water Quality Management Plan should incorporate management of impacts from the construction and operation of the conveyor to the MPPS.

**Recommendation 58:** The Commission recommends the Proponent should reassess predicted depressurisation and groundwater inflows, in consultation with NOW to provide a greater level of confidence that problems will not arise with groundwater or surface water resources. If this cannot be achieved because of insufficient monitoring then production should not be increased for two years while additional monitoring and modelling is carried out to confirm the predictions in the EA.

**Recommendation 59:** The Commission recommends the Proponent should be required to conduct ongoing monitoring of bores and provide compensation to private bore holders in the event of any water loss.

**Recommendation 60:** The Commission recommends two years of baseline monthly monitoring should be conducted in Cullen and Dulhuntys Creeks for the following parameters.

- Physical/chemical - pH, temperature, electrical conductivity, turbidity, dissolved oxygen, total suspended solids, oil and grease, major cations and anions, and
- Dissolved metals - iron, manganese, nickel, cobalt and zinc.

**Recommendation 61:** The Commission recommends trigger levels should be developed based on ANZECC guidelines.

**Recommendation 62:** The Commission recommends the Proponent should collaborate with other surrounding operations to develop and implement a coordinated monitoring program and report exceedences of trigger levels.

**Recommendation 63:** The Commission recommends the predicted changes in weather due to climate change in NSW should be included in the water balance modeling for the life of the project unless it can be demonstrated the modelling to date has been conservative enough to account for this.

**Recommendation 64:** The Commission recommends that the acid generating material located at the existing Invincible Colliery Tailings Drying Area should be remediated, in consultation with DRE within three years and in accordance with the approved Rehabilitation Management Plan.

**Recommendation 65:** The Commission recommends that all washery rejects are treated as potential acid forming material and managed separately from general overburden emplacement in accordance with the Rehabilitation Management Plan.

### **Underground Combustion (Section 8.1)**

**Recommendation 66:** The Commission recommends that the Proponent's Plan of Management dated 27 September 2012 forms part of any approval, subject to:

- inclusion of monitoring and auditing requirements;
- targets such as those set out by Professor Cliff in his report dated 6 December 2012;
- odour management controls;

- bushfire management controls; and
- DRE's approval.

**Recommendation 67:** The Commission recommends endorsement of DRE's requirement for extinguishment of all subsurface combustion in overburden emplacement areas and underground mine workings to occur before mining is conducted within 1 km of these areas.

### **Traffic and Transport (Section 8.2)**

**Recommendation 68:** The Commission recommends that the concerns about the proposed 13% increase in heavy vehicle movements on the Great Western Highway raised by Blue Mountains City Council and Lithgow City Council be referred to the RMS for advice as part of any further assessment of the project.

**Recommendation 69:** The Commission recommends that until the conveyor to MPPS is operational, the current truck movement limits are retained.

**Recommendation 70:** The Commission recommends that during any periods of unavailability of the conveyor to MPPS after it has been commissioned, truck movement to MPPS remain within the current limits.

**Recommendation 71:** The Commission recommends that the Proponent satisfies the Department that transport of sand cannot be undertaken by rail in whole or in part.

**Recommendation 72:** The Commission recommends that no export coal is permitted to be carried by road to Port Kembla without further assessment of the potential traffic impacts.

**Recommendation 73:** The Commission recommends that approved hours for the transport of coal and/or sand by road be restricted to between 0700 and 2130 hours Monday to Saturday with no transport on Sundays or Public Holidays.

**Recommendation 74:** The Commission recommends that tyre washing is implemented for trucks leaving the project site to travel on public roads.

**Recommendation 75:** The Commission recommends that all trucks leaving the project site have their loads covered so as to prevent the spillage of coal and emission of coal dust.

### **Aboriginal Cultural Heritage (Section 8.3)**

**Recommendation 76:** The Commission supports AECOM's recommendation that a detailed assessment of identified rock shelters is required prior to commencement of any mining operations within 500m of each identified rock shelter.

**Recommendation 77:** The Commission recommends that Aboriginal rock shelters in the project area should not be exposed to mining-induced impacts that could produce more than negligible consequences for the rock shelters. The Aboriginal Cultural Heritage Plan and the Blast Management Plan must contain measures to ensure that this outcome is achieved. Failure to achieve this outcome should be clearly identified as a breach of the approval and operations in the vicinity should cease until the project is compliant.

**Recommendation 78:** The Commission recommends that a monitoring regime is required that establishes the current condition of the rock shelters, that is capable of detecting any mining-induced impacts and that includes comprehensive reporting requirements.

**Recommendation 79:** The Commission recommends that prior to any approval of the project application that the Proponent provides OEH and the Department with an assessment of the scientific significance and structural stability of the recent Aboriginal cave discovery within the project area. Any associated management recommendations should be incorporated into the Aboriginal Cultural Heritage Management Plan in accordance with OEH's directions in its letter dated 4 December 2012.

**Recommendation 80:** The Commission recommends that if the Department recommends approval an Aboriginal Cultural Heritage Management Plan (ACHMP) should be required by way of a recommended condition to protect ACH sites and artefacts including the rock shelters. The ACHMP should include elements set out by AECOM (2011), address matters raised by the OEH in relation to the scope of the ACHMP in its submission dated 4 June 2012 and also address relevant matters set out in OEH's letter dated 4 December 2012 including retrieval of information from the rock shelters.

#### **Non-Aboriginal Cultural Heritage (Section 8.4)**

**Recommendation 81:** The Commission recommends that the standard for blasting to be applied to both the Carleon Coach House and the Cullen Bullen General Cemetery is for 'negligible impact', and this standard and the method to achieve it should be included in any conditions of approval and the relevant management plan(s).

**Recommendation 82:** The Commission recommends that the sandstone footings are fenced prior to construction of the conveyor, and this should be addressed in any conditions of approval and relevant management plan(s).

#### **Greenhouse Gas Emissions (Section 8.7)**

**Recommendation 83:** The Commission recommends that in the event of an approval appropriate conditions are included requiring compliance with the Proponent's Statement of Commitment 13 and for Coalpac to minimise its Scope 1 greenhouse gas emissions.