

## **APPENDIX F: AGENCY RESPONSES TO THE IPRP REPORT AND CENTENNIAL'S RESPONSE TO DRE'S RESPONSE**

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Office of  
Environment  
& Heritage

Our Ref. DOC16/365410-1  
Your Ref. SSD 12\_2251

Mr Thomas Watt  
Senior Planning Officer  
Department of Planning and Environment  
GPO Box 39  
SYDNEY NSW 2001

Dear Thomas

**Report of the Independent Review Panel – Airly Mine Extension Project (SSD 12\_5581)**

OEH has received a request from the Park Strategy and Services Branch of the National Parks & Wildlife Service (NPWS) to review the Independent Review Panel (IRP) report for the Airly Mine Extension Project.

The IRP report has been reviewed along with the response to the IRP recommendations by Centennial Coal Company Limited (CCCL).

We note that the IRP is satisfied that the proposed methods of extraction have the potential to avoid significant impacts and minimise residual effects and impacts from subsidence on cliffs, steep slopes and pagodas.

OEH is supportive of the IRP's recommendations and is satisfied by the response to these recommendations provided by Centennial Coal Company Limited (CCCL).

If you have any questions regarding this matter further please contact David Geering on 02 6883 5335 or [david.geering@environment.nsw.gov.au](mailto:david.geering@environment.nsw.gov.au).

Yours sincerely,

**STEVEN COX**  
**Senior Team Leader Planning, North West Region**  
**Regional Operations**

Contact officer: DAVID GEERING  
6883 5335



BN16/6140

Mr Thomas Watt  
Senior Planning Officer  
Resource Assessments  
Department of Planning and Environment  
GPO Box 39  
SYDNEY NSW 2001

Email: [thomas.watt@planning.nsw.gov.au](mailto:thomas.watt@planning.nsw.gov.au)

Dear Mr Watt

**Airly Mine Extension Project  
Independent Pre-determination Review Panel Report (SSD 5581)**

I refer to your email of 11 July 2016 regarding Centennial Airly Pty Limited's (the Proponent) response to the Independent Pre-determination Review report for the Airly Mine Extension Project (the Project).

The NSW Resource Regulator (Resources Regulator) has reviewed the Report by the Independent Review Panel (IPR), dated 1 July 2016 and titled "*Accuracy and Reliability of Mine Subsidence Impacts on Sensitive Features Across the Airly Mine Extension Project Application Area*".

The Resources Regulator is satisfied the review by the IPR has been conducted in accordance with the Terms of Reference, which is attached in Appendix 1 of the IPR's report. It is noted the IPR reviewed a mine layout design, which is different from that proposed in Centennial Coal's Environmental Impact Statement (EIS), dated September 2014 and previously reviewed by the Principal Subsidence Engineer, Resources Regulator. A Minute (the Minute) has been prepared by the Principal Subsidence Engineer, Resources Regulator and is attached for your consideration.

It is noted DRE was asked to review the IPRP report and Centennial's response to the IPR recommendations and advise DPE of any further comments and/or conditions of consent.

In view of the findings by the IPR, the Resources Regulator considers the subsidence risks can be managed through the Extraction Plan process, provided the proponent is required through the development and mining process to adequately address and reflect the recommendations and key findings of the IPR, including the various assumptions and provisos and the iterative process of investigation and validation recommended by the IPR.


In relation to the consent conditions, it is noted that the Centennial proposal does not appear to address all the relevant elements of the IPR and appears to focus only on the elements in the executive summary.

The minute approved by the Resources Regulator has suggested a particular approach to achieving this objective, with suggested inclusions in the conditions of consent. However DRE is satisfied if the objective and outcome in relation to the various assumptions and provisos and the iterative process of investigation and validation recommended by the IPR

is achieved in the consent conditions, rather than strict adherence to the specific drafting suggested. It is recognised that DPE will need to address a range of issues and potentially comments from other agencies in the consent conditions and consent conditions need to be drafted consistently and with legal certainty.

Should you have any enquires regarding this matter please contact Gary Parker, Chief Inspector of Mines on (02) 4931 6621.

Yours sincerely



29.7.16

**Kylie Hargreaves**  
**Deputy Secretary, Resources & Energy**

Attachment: Approved Minute from the Resources Regulator (INT16/88270)

# Minute

**SUBJECT** COMMENTS ON REPORT BY THE INDEPENDENT REVIEW PANEL - AIRLY MINE  
EXTENSION PROJECT, SSD 5581  
**TO** GARY PARKER, CHIEF INSPECTOR OF MINES  
JENNY NASH, DIRECTOR MINE SAFETY OPERATIONS  
**FROM** GANG LI, PRINCIPAL SUBSIDENCE ENGINEER  
RAY RAMAGE, MINING SUBSIDENCE ENGINEER  
**DATE** 22 JULY 2016

## 1. INTRODUCTION

Reference is made to:

- Ref 1 Environmental Impact Statement (EIS), Airly Mine Extension Project State Significant Development 5581, dated September 2014;
- Ref 2 Report by the Independent Review Panel (IRP), dated 1 July 2016 and titled "*Accuracy and Reliability of Mine Subsidence Impacts on Sensitive Features Across the Airly Mine Extension Project Application Area*";
- Ref 3 Letter by Centennial Coal, dated 7 July 2016 and titled "*Re: Airly Mine Extension Project SSD 5581 – Response to IRP Report*", and
- Ref 4 Minute by Gang Li, dated 2 October 2015 and titled "*Airly Mine Extension Project, SSD 5581*".

This Minute provides our comments on the report (i.e. Ref 2 above) by the Independent Review Panel (IRP) in relation to the proposed Airly Mine Extension SSD 5581 (i.e. Ref 1 above).

## 2. COMMENTS AND RECOMMENDATIONS

The IRP reviewed a mine layout design, which is different from what is proposed in the Centennial Coal's EIS (i.e. Ref 1 above) and reviewed by the Principal Subsidence Engineer (i.e. Ref 4 above). The previously proposed pillar lifting operations have now been replaced with pillar splitting-and-quartering operations.

As a result of the latest change in the mine layout design, it is expected that the proposed pillar splitting-and-quartering may now take place in areas broader than previously proposed in the EIS (i.e. Ref 1 above). This situation requires attention considering the highest level of uncertainties associated with pillar splitting-and-quartering (as compared with the other proposed mining operations) in relation to long term stability (refer to Ref. 4 above).

The review by the IRP has been conducted in accordance with the Terms of Reference, which is attached in Appendix 1 of the IRP's report (i.e. Ref. 2 above): In view of the findings by the IRP (Ref. 2 above), we consider it appropriate to manage the risks through the Extraction Plan process, provided that the approving authority consider the use of the following suggested conditions of consent, which have been developed based on the report by the IRP (i.e. Ref 2 above).

**Note** - In the following suggested conditions of consent, the term "IRP's Report" refers to the Independent Review Panel's Report, which is listed as Ref 2 in Section 1 of this Minute.

1. It is understood from the Centennial Coal's letter (i.e. Ref 3 above) that there is a draft Condition 6 of the consent that requires the continual engagement of the Independent Review Panel during the Extraction Plan process. This condition of consent is very important.

Accordingly, we recommend that the following additional sub-conditions be included in Condition 6.

By engaging the Independent Review Panel during the Extraction Plan process, the Applicant must ensure that:

- (1) All recommendations made by the Independent Review Panel, as documented in the IRP's Report, are adequately implemented;
- (2) All assumptions made by the Independent Review Panel in developing their findings and conclusions, as documented in the IRP's Report, are appraised and validated. The Applicant must develop and implement a procedure in consultation with the Independent Review Panel to ensure:
  - i) Regular appraisal and validation of the said assumptions, and
  - ii) Timely reporting of any significant deviations from the said assumptions and proposed risk controls to manage such deviations, to the satisfaction of the Secretary.

**Note** – Appraisal and validation of the "provisos" stated on pages 23 and 24 of the IRP's Report in relation to the dimension of the cliff protection zone are particularly important.

- (3) All findings and conclusions by the Independent Review Panel, as documented in the IRP's Report, are regularly reviewed and validated based on the monitoring information to ensure that the Applicant has a current and correct understanding of the subsidence risks.

**Note** – The IRP's Report states that "A 30 m wide protection zone is expected to be sufficient to protect many of the cliff formations provided the subsidence above panel and pillar mining areas is less than 125mm, ...". Note that this important conclusion is made by reference only to subsidence above the panel and pillar mining areas. Being located on the other side of the cliff lines, the potential effects of the pillar splitting-and-quartering operations in relation to the dimension of the cliff protection zone need to be considered on the basis of the subsidence monitoring results. This important aspect does not appear to have been considered in the IRP's Report (i.e. Ref 2 above).

2. Certain restrictions (refer to page 13 of the IRP's Report) stated by the IRP should be enforced via the conditions of the development consent as these restrictions may critically determine the outcomes of risk management in relation to the stability of the cliff formations at the subject site.

Accordingly, we recommend the following conditions of consent.

The Applicant must:

- (1) Ensure that there will be no pillar splitting-and-quartering undertaken under the cliff lines;
- (2) Ensure that there will be no splitting-and-quartering within a minimum horizontal offset of 30m from the base of any defined cliffs or a maximum of 110m depth whichever comes first;
- (3) Ensure that no splitting-and-quartering will be conducted where a fault >0.5m in vertical throw or combination of faults adds to >0.5m are present;
- (4) Develop and implement a procedure in consultation with the Independent Review Panel to determine "the base of any defined cliffs", "110m depth" (as stated in draft condition (2) above) and any other relevant factors that are required for the determination of the cliff protection zone dimension, and
- (5) The proposed mining operations must be conducted in accordance with the design parameters used by the Independent Review Panel in their stability assessments for each of the proposed mining operations.

3. We note the following comments made by the IRP:

- A 30m wide cliff protection zone is considered reasonable provided that "Subsidence over the first three or four mini walls is confirmed as being less than 125mm ..." (page 23 of the IRP's Report), and

- "The minimum factor of safety of these pillars (i.e. pillars within the splitting-and-quartering zones) is estimated to be 2.2 for loading expected at 110m of overburden depth in flat terrain conditions" (page 12 of the IRP's Report). It is further noted that the loading conditions for the pillars under cliff lines (i.e. pillars outside the flat terrains) are currently not clear. The IRP has recommended that the Applicant undertake investigations into such loading conditions for the pillars under cliff lines.

Accordingly, we recommend that:

*A cliff protection zone, defined based on a 26.5 degree angle of draw from the base of the cliff lines, be required until:*

- (1) *Subsidence over the first three or four mini walls has been confirmed as being less than 125mm, and*
- (2) *The recommended investigations into the pillar loading conditions under the cliff lines have been completed and produced results supporting a reduced cliff protection zone.*



Gang Li  
Principal Subsidence Engineer



Ray Ramage  
Mining Subsidence Engineer

Gary Parker  
Chief Inspector of Mines

Jenny Nash  
Director Mine Safety Operations