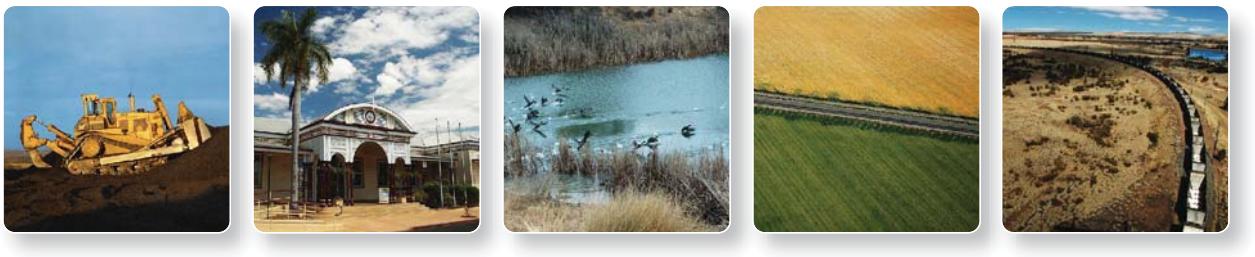


WONGAWILLI COLLIERY

Nebo Area Modification 1
Extension to Mine Life
Public Meeting Response

for

Wollongong Coal Limited

November 2015

Hansen Bailey
ENVIRONMENTAL CONSULTANTS

WONGAWILLI COLLIERY
NEBO AREA MODIFICATION 1
EXTENSION TO MINE LIFE

PAC PUBLIC MEETING RESPONSE

Prepared by:

HANSEN BAILEY
6/127-129 John Street
SINGLETON NSW 2330

10 November 2015

For:

WOLLONGONG COAL LIMITED
7 Princes Highway
Corner Bellambi Lane
CORRIMAL NSW 2530

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF PLATES

LIST OF APPENDICES

WONGAWILLI COLLIERY – NEBO AREA MODIFICATION 1
PAC PUBLIC MEETING RESPONSE

For

Wollongong Coal Limited

1 INTRODUCTION

1.1 BACKGROUND

Wollongong Coal Limited (WCL) operates the Wongawilli Colliery in the Southern Coalfield of NSW. Wongawilli Colliery is located approximately 14 km south-west of Wollongong, on land within the Wollongong and Wingecarribee Local Government Areas. The WCL Wongawilli Colliery consolidates all or parts of the historic Nebo, Wongawilli, Avon, Avondale and Huntley Collieries.

Operations in the Nebo Area are undertaken pursuant to Project Approval (PA) 09_0161, which was granted on 2 November 2011. PA 09_0161, supported by the *NRE Wongawilli Colliery Nebo Area Environmental Assessment* (ERM, 2010a) (Nebo Area EA), allows mining operations in the Nebo Area to be undertaken until 31 December 2015.

WCL made an application for modification to PA 09_0161 under section 75W of the *Environmental Planning & Assessment Act 1979* (EP&A Act) on 19 May 2015 to allow approved mining activities under PA 09_0161 to be undertaken until 31 December 2020 (The Modification).

DP&E placed the application for Modification on public exhibition from 22 June 2015 to 6 July 2015. The 'Response to Submissions' document was prepared by Hansen Bailey on behalf of WCL and responded to the submissions received by DP&E. Expert input was provided by SCT Operations Pty Ltd (SCT) and Biosis Pty Limited (Biosis).

DP&E delivered its Assessment Report on 30 September 2015. The Assessment Report concluded that:

> *'Overall, the Department considers the benefits of the proposed modification substantially outweigh any costs, and hence the application is in the public interest. Accordingly, the Department recommends that the proposed modification should be approved, subject to conditions' (DP&E, 2015).*

The Minister's power under Section 75W of the EP&A Act has been delegated to the Planning Assessment Commission (PAC). The PAC held a public meeting on 29 October 2015.

A total of 15 registered speakers presented to the PAC at the public meeting. The presenters at the public hearing included:

- WCL;
- One Special Interest Group (SIG) in support of the Modification;
- Four SIGs in opposition to the Modification;
- Five individuals in support of the Modification; and
- Four individuals in opposition to the Modification.

1.2 DOCUMENT PURPOSE

This document has been prepared to address the issues raised by the PAC and presenters at the public meeting.

This document has been prepared in reliance upon notes transcribed by WCL representatives at the public meeting. All reasonable efforts have been made to accurately represent the verbal submissions made by the Registered Speakers at the Public meeting.

1.3 DOCUMENT STRUCTURE

Section 2 provides responses to the issues raised by the PAC;

Section 3 provides responses to the issues raised by presenters at the public meeting; and

Section 4 provides a conclusion.

2 RESPONSE TO PAC QUERIES

This section provides a response to queries from the PAC following the public meeting which was received via email on 30 October 2015.

2.1 ECONOMIC ASSESSMENT UPDATE

The PAC requested an update on the 2010 economic assessment reflecting the latest projected workforce numbers, current coal price, exchange rate and impacts on government revenue.

Response

Appendix B provides a Supplementary Economic Assessment by Gillespie Economics. This includes a re-assessment of royalties using current and projected resource prices and exchange rates. The Modification is predicted to generate between $10M and $16M in royalties (present value at a discount rate of 7%).

The Supplementary Economic Assessment also re-assessed the regional economic impacts generated by the Modification. In the peak year of production, the Modification would result in a total regional impact of up to:

- $164M in direct and indirect output;
- $63M in direct and indirect household income; and
- 810 in direct and indirect employment.

2.2 WONGAWILLI DUST SUPPRESSION

The PAC requested information on WCL's dust suppression measures used at the loadout and during rail transport.

Response

Wongawilli Colliery operates in accordance with an approved Air Quality & Greenhouse Gas Management Plan (Gujarat NRE Wonga Pty Ltd, 2013). Dust management measures are outlined in Section 6 of the management plan and include:

- Covering of conveyors;
- Limiting stockpile height to a maximum of 12 m;
- Wetting of coal stockpiles using water sprays;
- Wetting of the spoil storage area using water trucks; and
- Wetting of unsealed roads using water trucks.

WCL maintains an air quality monitoring network consisting of 13 depositional dust gauges and one High Volume Air Sampler (HVAS).

WCL will implement real time air quality monitoring prior to any re-commencement of mining operations.

2.3 DSC CONDITIONS FOR LW N3 (PART)

The PAC requested a copy of the Dams Safety Committee's 2012 conditions for that part of northern longwall LW N3 that crosses into the notification area.

Response

WCL has obtained approval from the Dams Safety Committee (DSC) to extract LW N3, which is partially within the Notification Area for Cordeaux Reservoir. The approval is included in **Appendix C**.

2.4 DSC APPROVAL FOR WESTERN DRIVAGE

The PAC requested clarification on whether DSC approval has been granted for the Western Drivage section that traverses the notification area.

Response

The approved Western Drivage passes through the Notification Area for Avon Reservoir.

To date, WCL has developed approximately 500 m of the 4,990 m long drivage. The completed section of the Western Drivage is located outside of the Notification Area.

WCL will obtain the necessary approvals from the DSC prior to the commencement of mining within the Notification Area.

3 RESPONSE TO PRESENTATIONS

This section provides responses to the issues raised by registered speakers at the public meeting.

3.1 MINING METHOD

3.1.1 Longwall Mining

Various presenters requested clarification as to whether the mining method at Wongawilli Colliery is being sought to be varied as part of MOD1.

Submissions: P5, P7, P10

Response

The proposed method of pillar extraction will result in subsidence less than or equal to the predicted levels of subsidence for the approved longwall mining.

Pillar extraction over the same plan area as a longwall panel is expected to recover a high percentage of the coal. Surface subsidence resulting from pillar extraction is expected to be less than or equal to the subsidence resulting from longwall mining (where all coal is removed from within the panel footprint).

The proposed pillar extraction method is the most effective alternative to longwall mining in terms of maximising coal recovery. By maximising resource recovery within the approved mining footprint, the economic benefits of the Project (e.g. royalties) are optimised.

3.1.2 Likely Mining Method

Some queries were raised in relation to what the preferred mining method is likely to be (i.e. longwall mining as current approved or a form of bord and/or pillar mining) and whether will it result in impacts less than or equal to the previously assessed impacts. Presenters queried if an alternate method of mining is to be employed, would this result is less coal extracted than stated.

Submissions: P7, P10

Response

Figure 1 provides a conceptual illustration of the mining method likely to be employed at Wongawilli Colliery for the Modification.

WCL advises that the likely mining method to be employed for the remaining approved extraction voids will be full "pillar extraction" with the aim of full resource recovery.

Generally, a set of main headings are developed (if not already developed) alongside a block of coal similar to a longwall panel. A roadway (known as a “split”) will be driven across the block to form a narrow pillar or fender. The splits will be driven by continuous miners and roof bolts will be implemented to support the split. The fenders are mined from the far end of the split back to the main headings using continuous miners.

This is a very conventional method of underground coal mining practiced throughout the world and Australia. The Mines Inspectorate is required to regulate all operational and safety matters of the system, as they are also required to do so for longwall mining.

3.1.3 Retention of Longwall Miner in old Workings

Some presenters stated that as the previous longwall miner had been buried and was not retrieved, WCL does not hold the technical ability to be 'trusted' with future approvals.

Submissions: P4, P5, P7

Response

During the extraction of LW N2, an extended unplanned maintenance outage occurred on a key underground conveyor whilst the longwall miner was extracting through a particularly complicated geotechnical area within the panel.

As this particular longwall miner was over 25 years old and at the end of its life cycle, WCL advises that the value of the equipment is outweighed by the cost of recovery.

Compared to longwall mining, the "split and lift" pillar extraction method is more flexible and would not be susceptible to the type of issue that caused the loss of the longwall equipment in LW N2.

3.1.4 Geology

Speakers noted the low levels of predicted subsidence (i.e. less than 410 mm) and queried what would happen if the geology was incorrect.

Submissions: P2

Response

The Cordeaux Crinanite is a large igneous sill intruded into the Narrabeen Group and Hawkesbury Sandstone. The Cordeaux Crinanite is the dominant lithology in the Nebo Area. Its thickness generally ranges from 50 to 80 m, but tapers out in the western part of the Nebo Area. The Cordeaux Crinanite is an order of magnitude stronger than the surrounding strata. Due to its high strength, the Cordeaux Crinanite is expected to span across the voids created by mining (ERM, 2010). As a result, the subsidence effects resulting from mining in the Nebo Area are significantly lower than levels experienced at other mines in the Southern Coalfield.

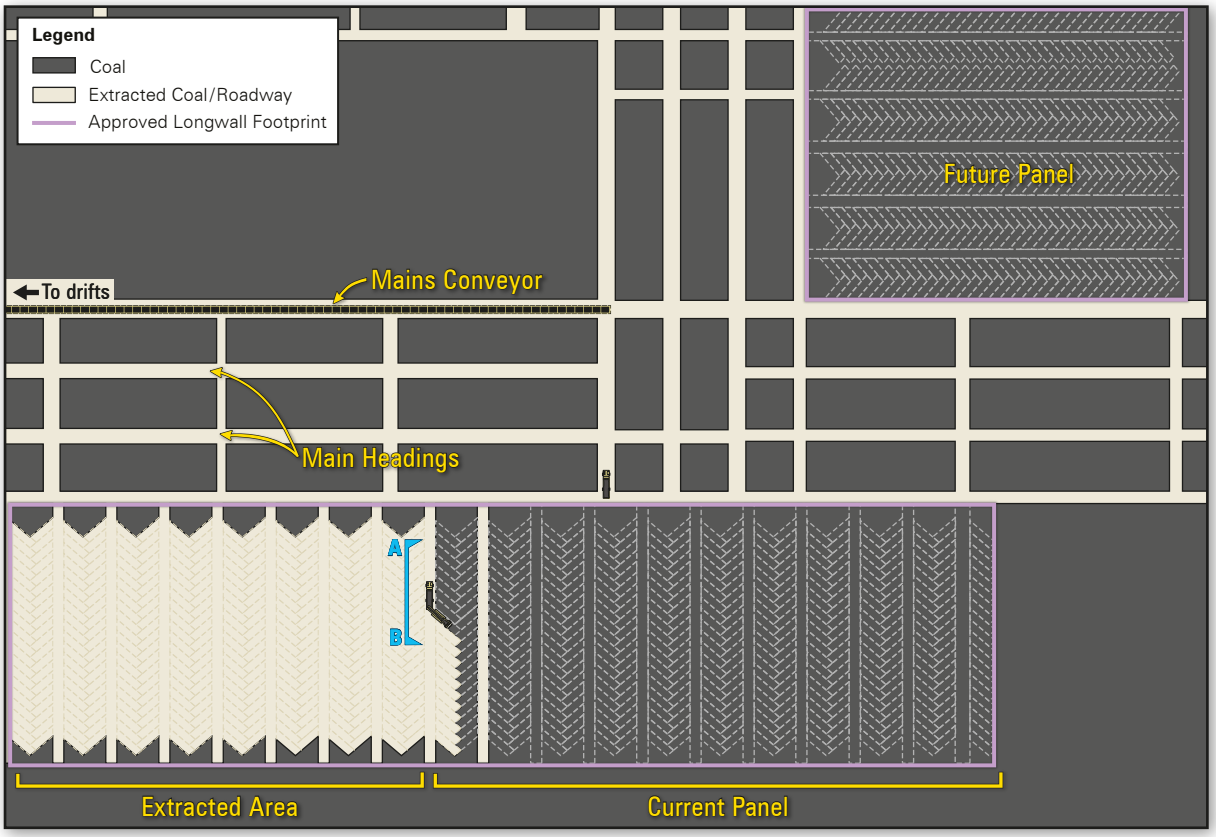
SCT (2010) assessed the spanning capability of the Cordeaux crinanite by conducting subsurface investigations on a previously mined panel located between LWs N4 and N6. SCT found that the Cordeaux crinanite effectively spanned across the 120 m wide goaf with little to no disturbance to the upper part of the crinanite. Based on this investigation, it was concluded that the crinanite possesses sufficient strength to span across the Nebo Area panels.

Subsidence monitoring undertaken during extraction of LW N2 has confirmed that the Cordeaux Crinanite is spanning the goaf as predicted. To date, measured subsidence effects were within the predictions, as shown in **Table 1**.

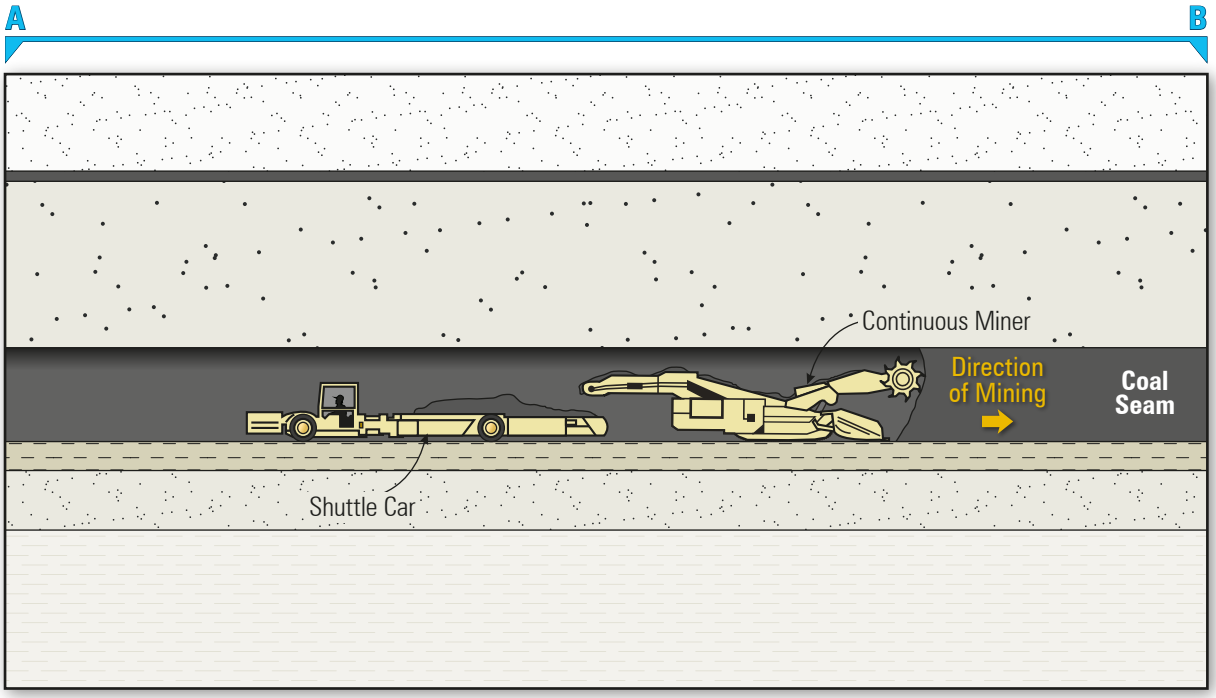
Table 1
Comparison of Predicted and Measured Subsidence Effects

Parameter	Predicted value for LWs N2 and N3	Measured value for LW N2
Maximum subsidence (mm)	230	92
Maximum tilt (mm/m)	17	0.5
Maximum tensile strain (mm/m)	0.3 - 0.4	0.2
Maximum compressive strain (mm/m)	0.5	0.2

Source: End of Panel Report for Longwall N2 (Hansen Bailey, 2014)



Plan View of Pillar Extraction Method



Cross Section of Active Pillar Extraction Mining Roadway

WONGAWILLI COLLIERY

WOLLONGONG COAL

Hansen Bailey
ENVIRONMENTAL CONSULTANTS

Conceptual Pillar Extraction Mining Schematic

FIGURE 1

3.2 ECOLOGY

3.2.1 Koalas

One presenter was concerned that the Project would negatively affect local koala populations which might use the vegetated corridor in the vicinity of the operation to breed. The presenter also stated the EA did not monitor koalas at the site and were not included in the EPBC Referral for the Project.

Submissions: P6

Response

The potential for koalas to occur within the Nebo Area was assessed in the Nebo Area EA. An assessment of koala habitat was undertaken in accordance with *State Environmental Planning Policy No. 44 – Koala Habitat Protection* (SEPP 44), as summarised in Section 5.3.3 of the Nebo Area EA. The Nebo Area contains potential koala habitat due to the presence of *Eucalyptus haemastona* as a dominant tree species. Potential habitat for the koala within the Nebo Area occurs in the form of Tall Open Peppermint – Blue Gum Forest.

Although there is potential koala habitat within the Nebo Area, terrestrial ecosystems are generally not sensitive to subsidence (DoP, 2008; PAC, 2009; and PAC, 2010). Due to the strength of the Cordeaux Crinanite (refer to **Section 3.1.4**), ground tilts resulting from mining are predicted to be very low in magnitude. These low levels of tilting are very unlikely to result in tree falls. Therefore, the impacts of subsidence on potential koala habitat are predicted to be negligible.

3.2.2 Upland Swamps

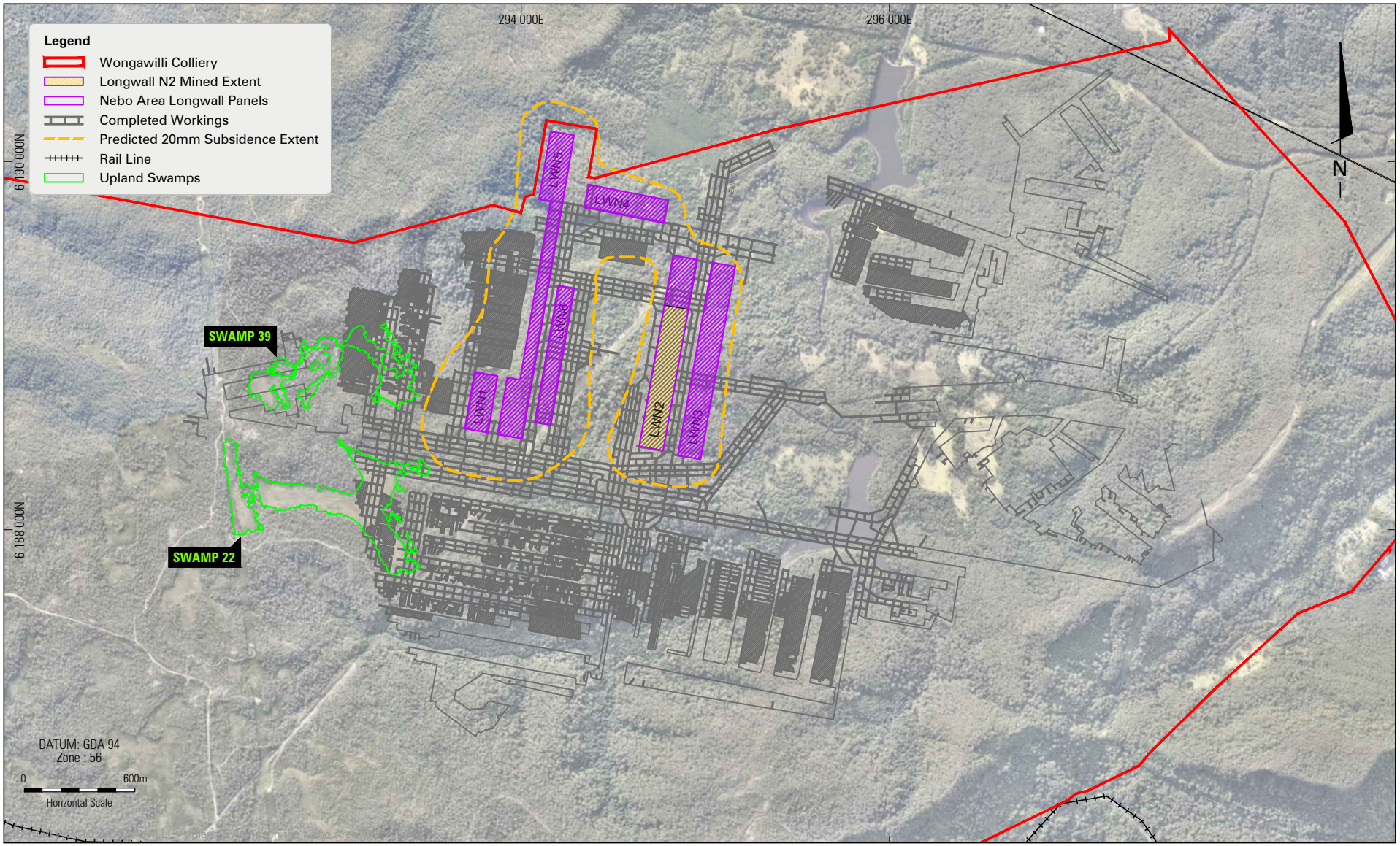
Some presenters were concerned that MOD 1 would impact listed swamps in the vicinity of the operation.

Submissions: P6, P7

Response

Potential impacts to upland swamps were assessed in the Nebo Area EA. The swamps nearest to the Nebo Area are Swamp 22 and Swamp 39. These swamps are located approximately 288 m south-west and 280 m west of Longwall N1, respectively (see **Figure 2**).

Both swamps are located outside the predicted 20 mm subsidence extent. Therefore, the potential for impacts to upland swamps is predicted to be very low (ERM, 2010b).



WONGAWILLI COLLIERY

Upland Swamps in the Nebo Area

FIGURE 2

3.3 WATER RESOURCES

3.3.1 Longwall Mining in Water Catchments

Various submissions objected to longwall mining in water catchments and stated that MOD 1 posed a threat to the drinking water of 4.5 million people in Sydney's drinking water supply.

It was also stated that NSW is the only country in the world that allows mining in its publicly owned drinking water catchments.

Submissions: P2, P4, P5, P6, P7, P8, P9

Response

The merits of the Project were assessed in the original Project Application (MP 09_0161). The Nebo Area EA assessed the potential impacts to Cordeaux Reservoir and Avon Reservoir. The only mining proposed in the vicinity of Avon Reservoir will be the development of the Western Drivage, which passes beneath an arm of the reservoir. The Western Drivage constitutes first workings and therefore does not result in subsidence (see **Section 3.3.2**).

The proposed mining in the Nebo Area will occur in the vicinity of Cordeaux Reservoir. Part of LW N3 is located within the Notification Area for Cordeaux Reservoir. The DSC endorsed the mining of LW N3 on 4 September 2012 (see **Section 2.3**)

A number of submissions commented that longwall mining is not permitted within a publicly owned drinking water catchment in any other part of the world. This statement is based on a report from the NSW Chief Scientist titled "*Measuring the cumulative impacts of all activities which impact ground and surface water in the Sydney Water Catchment*" (2014). The NSW Chief Scientist states:

"It was noted that there are no international examples of longwall mining operating in publicly owned drinking water catchments but there are examples of it occurring under streams and aquifers connected to privately owned wells in the Appalachians of the U.S.A".

However, this statement made by the Chief Scientist has been taken out of context. The submissions have suggested that the lack of comparable examples is an indication that longwall mining is not acceptable within a drinking water catchment. The Chief Scientist does not draw any conclusion to this effect. In fact, the Chief Scientist concludes that:

"The current cautionary approach by the Dams Safety Committee and other government agencies seems to be preventing development that could cause obvious disastrous cumulative impacts, and therefore there is no reason to stop longwall mining immediately. However, there is still significant uncertainty around cumulative impacts on water quantity and the recommendations above, if implemented, should help address this matter" (p. 33).

The purpose of the Chief Scientist's report was to recommend measures for the Government to implement in order to improve the understanding of cumulative impacts on water catchments. The Chief Scientist's article did not purport to assess the acceptability of mining in a drinking water catchment.

3.3.2 Western Drivage Impacts to Avon Dam Storage

Some presenters stated that the Western Drivage would cause hydraulic connection to Avon Reservoir.

Submissions: P2, P6, P8

Response

Condition 6 under Schedule 3 of MP 09_0161 requires that 'first workings are designed to remain long-term stable and non-subsiding'. To satisfy this condition, the Western Drivage has been designed so that the pillars have width to height ratios and factors of safety that exceed the minimum statutory requirements and design guidelines for mining within Dam Notification Areas and beneath stored waters. Consequently, the Western Drivage is not expected to result in any subsidence (ERM, 2010a).

WCL will obtain the approval of the DSC prior to mining within the Notification Area of Avon Reservoir.

3.4 ECONOMICS

3.4.1 Royalty Calculations

Some submissions questioned the estimated $47M in royalties that will be payable over the life of the Project. Specifically, the currency of the calculation was questioned in relation to recent falls in coal prices (i.e. one statement that coking coal has decreased by 74%).

Submissions: P2, P6, P7, P8, P10

Response

Wongawilli Colliery produces coking coal and thermal coal. Although all coal produced by the colliery is exported, royalties are payable for all coal mined in NSW.

A re-estimation of royalties is provided in the Supplementary Economic Assessment (**Appendix B**). If current coal prices continue for the duration of the Modification, total royalties are estimated to be between $11M and $14M ($10M to $12M present value at 7% discount rate) depending on the exchange rate.

Using projected coal prices (based on August 2015 Consensus Pricing), total royalties from the Modification are predicted to range between $15M and $19M ($13M to $16M present value at 7% discount rate).

3.4.2 Benefit Cost Analysis

Some presenters queried whether a cost benefit analysis has been completed for the project and if so, due to coal prices reductions in recent years, whether it remains adequate.

Submissions: P2, P6, P7, P8, P10

Response

In the context of mining projects, Benefit Cost Analysis (BCA) of mining projects invariably involves a trade-off between:

- The net production benefits of a project; and
- The environmental, social and cultural impacts.

Royalties provide a minimum estimate of the net production benefits of the Modification to NSW and hence a minimum threshold value against which the environmental, social and cultural costs of the Modification can be compared.

For the Modification to be questionable from an economic efficiency perspective, the incremental residual environmental, social and cultural impacts would need to be valued by the community at greater than $10M to $16M, present value. The Supplementary Economic Assessment is provided in **Appendix B**.

3.4.3 Project Employment

A submission stated that WCL's lease under the Mining Act 1992 required that 128 persons be employed.

Submissions: P10

Response

All mining activities associated with the Modification will occur within ML 1596, which is valid until 7 October 2029. Condition 9 of ML 1596 states that:

The lease holder must:

a) Ensure that at least 443 component people are efficiently employed in relation to the mining process or mining operations on the lease area

OR

b) Expend on operations carried out in the course of prospecting or mining the lease area, an amount of not less than $7,752,500 per annum whilst the lease is in force.

Compliance with this condition can be achieved by either meeting the employment requirement or the expenditure requirement. WCL advises that annual expenditure at Wongawilli Colliery during care and maintenance is at least $8 million. The annual expenditure will be significantly higher during active operations.

3.4.4 Care and Maintenance

A presenter asserted that since Wongawilli Colliery is under care and maintenance, refusal of the Modification would not result in any loss of economic or employment benefits.

Submissions: P8

The workforce is currently below normal operating levels. The Modification is necessary to allow active mining operations to re-commence. Once coal production re-commences, the workforce will return to normal operating levels and royalties will accrue to NSW. Therefore, refusal of the Modification would result in forfeiture of the royalties and employment benefits that the Project would provide.

The economic benefits of the Modification are discussed in **Section 3.4.1** and **Section 3.4.2**.

3.5 AMENITY IMPACTS

3.5.1 New Dapto Subdivisions

Some submissions stated that various rural sub-divisions have been proposed since the 2011 approval and have not been considered in relation to the Project's impacts. It was also stated that these potential owners did not know about Wongawilli Colliery.

Submissions: P7

Response

The *Wollongong Development Control Plan 2009* (DCP) outlines planning controls for the city. It is publicly available on the Wollongong Council website and sets out specific controls and parameters that apply to development proposals.

The DCP has various references to the Wongawilli Colliery including (but not limited to):

- *'Part B – Land Use Based Controls Chapter B6: Development in the Illawarra Escarpment'* page 25 states:
  - "The landscape within the West Dapto Bowl precinct has varying capacity to visually absorb development. Clearings within the escarpment associated with the Wongawilli colliery development are indistinct in the landscape in this area therefore the area has a high visual absorption capacity and a high Development Opportunity Envelope potential."
- *'Part D – Locality Based DCPs / Precinct Plans Chapter D16: West Dapto Release Area'* Wongawilli Mine spur rail line page 62 states:
  - "It is anticipated that the Wongawilli Mine will continue to operate for the next 30 years, or longer. Coal is transported from the mine to Port Kembla via the rail network. Future urban development should be designed to recognise the continued use of the rail spur line and include measure to mitigate noise and other potential impacts. Division 15 of SEPP Infrastructure 2007, applies to development near the spur line."

- Objectives: to facilitate the transport of coal from Wongawilli Mine to Port Kembla by rail transport; and to minimise rail noise, vibration and other impacts on dwellings near the rail spur line.
- Controls:

  1. The Neighbourhood Plan, development applications for subdivision and dwelling houses within the rail buffer area, are to include sound attenuation measures that achieve a maximum of 35dBA within the dwelling.

  2. The Neighbourhood Plan, development applications for subdivision and dwelling houses within the rail buffer area, are to include consider vibration impacts and include mitigation measures.

  3. The development applications must satisfy the requirements of SEPP Infrastructure Division 15.'

- Figure 6.14 also shows the Wongawilli rail noise area.

Any new landholders would be able to access this publicly available information in relation to the long-term intention of WCL to operate Wongawilli Colliery.

Plate 1 illustrates the approach to the West Dapto residential area along West Dapto Road (before the turnoff to Smiths Lane (the main access road to the residential area). **Plate 2** immediately precedes this intersection adjacent West Dapto Road. As such, signage for Wongawilli Colliery is clearly visible.

Plate 1
Wongawilli Road &Shone Avenue Intersection Signage

Plate 2
Wongawilli Colliery Rail Line Notification Sign

3.5.2 Real Time Noise and Air Quality

Some speakers stated that Wongawilli Colliery does not have real time noise and air quality monitoring in place (including $PM_{2.5}$ monitoring) particularly in relation to the Dapto land release.

Submissions: P8, P10

Response

Given that Wongawilli Colliery is currently under care and maintenance, WCL sought approval to defer the installation of real time monitoring systems until 2016.

In its letter dated 23 July 2015, DP&E approved the deferment of real time air quality and noise monitoring. WCL will install real time monitoring systems prior to 30 June 2016 or the re-commencement of mining operations (whichever occurs earlier).

3.5.3 Greenhouse Gas Emissions

A speaker noted that greenhouse gas emissions had been ignored.

Submissions: P8

Response

The Nebo Area EA assessed the potential greenhouse gas emissions that would be generated by the Project. The Project was approved by the Planning Assessment Commission (PAC) on 2 November 2011.

The Modification will not result in any change to the predicted greenhouse gas emissions over the life of the Project.

3.5.4 Health Impacts

A speaker noted that the health of nearby residents had not been considered for the Project.

Submissions: P7, P8, P9

Response

Risks to human health are related to the dust and noise emissions generated by a mining project. The Nebo Area EA assessed the air quality and noise impacts resulting from the Project. The Project was approved by the Planning Assessment Commission (PAC) on 2 November 2011.

The Modification will not result in any changes to the surface operations at Wongawilli Colliery. Therefore, the predicted air quality and noise impacts of the Project will not change as a result of the Modification.

3.6 LAND ISSUES

3.6.1 Rehabilitation

A presenter queried whether adequate rehabilitation would be undertaken at the mine if the company 'went broke'. Whether bonds are in place should this eventuate, was also queried.

Submissions: P4, P6,

Response

Condition 19 of ML 1596 requires the lease holder to hold a security bond. WCL advises that a security of $40 million is maintained with the Minister for Resources and Energy for Wongawilli Colliery.

3.7 GENERAL ISSUES

3.7.1 Contemporary Information

Presenters queried that even though the Project itself was not to be modified, whether the information presented in the EA remained contemporary to the five year extension requested in the application or new studies should be completed in light of revised community expectations.

Submissions: P5

Response

The EA for the Project was completed in 2010. Although these technical assessments were completed over five years ago, the outcomes of most of these assessments are not affected by the passing of time. The exception may be the assessment of economic impacts, which is dependent on the economic conditions (e.g. resource prices) at the time of the assessment. Accordingly, the economic benefits of the Project have been reconsidered to reflect the changes in economic conditions since the EA. The Supplementary Economic Assessment is provided in **Appendix B**.

Background levels with respect to air quality, noise and traffic may have changed since 2010. However, given that the Modification does not involve any changes to the surface activities or workforce size, the incremental impacts of the Project will remain comparable to that originally assessed.

3.7.2 Financial Viability of WCL

It was stated by some speakers that WCL has significant financial issues and has not fulfilled its financial responsibilities and as such MOD 1 should not be granted.

Submissions: P2, P4, P10

Response

The proponent was formerly known as Gujarat NRE FCGL Pty Limited and on 15 November 2013, there was a change in the company's principal shareholder and an ensuing change in management.

WCL advises that with the full support of the principal shareholder, it will meet all requirements in the future.

3.7.3 Future Mining

One presenter stated that WCL is yet to submit an application for mining in the area west of Avon Reservoir.

Submissions: P10

Response

WCL is currently investigating the feasibility of mining in the western area. If these investigations determine that mining can be undertaken in an economically and environmentally acceptable manner, WCL will seek the necessary approvals.

3.7.4 Fit & Proper Person

Some presenters stated that WCL was not a 'fit and proper' person under Section 380A of the Mining Act 1992.

Submissions: P4, P6, P8, P10

Response

WCL advises that this query is outside the scope of the PAC's terms of reference. A project approval runs with the land and is not personal and therefore these submissions are irrelevant.

Section 380A of the *Mining Act 1992* is administered by the New South Wales Minister for Industry, Resources and Energy. Whether WCL is a 'fit and proper person' within the meaning of section 380A is not a lawful consideration under Part 3A of the EP&A Act.

3.7.5 Alleged Corruption

A presenter made various, unsubstantiated statements in relation to potential corruption in relation to mining and the government in NSW.

Submissions: P9

Response

WCL notes that these submissions are rejected and are outside the scope of the PAC's terms of reference.

3.8 CONSULTATION

3.8.1 Regulatory Submissions

A presenter asserted that the Response to Submissions incorrectly stated that no regulators objected to MOD 1. Another presenter asserted that the Response to Submissions had incorrectly stated that National Parks Association Illawarra did not oppose the Modification.

Submissions: P5, P6, P8

Response

The Response to Submissions (RTS) stated that there were five submissions from regulatory authorities. The RTS also stated that 'Wollongong City Council and the Office of Environment and Heritage made submissions advising that they do not object to the Modification' (Hansen Bailey, 2015).

The issues raised by the NSW Office of Water, WaterNSW and the Environmental Protection Authority were outlined and addressed in Section 3 of the RTS.

The RTS also states that the seven submissions received from special interest groups, including National Parks Association Illawarra, were in opposition to the Modification.

3.8.2 Community Consultation

Some presenters stated that wider consultation with the local community should have been undertaken in relation to MOD 1. It was also stated WCL does not contribute to the community as the previous owners do.

Submissions: P6, P8

Response

The Modification does not involve any changes to the operational activities at Wongawilli Colliery, except for a change from longwall extraction to pillar extraction. The proposed pillar extraction will result in lower or similar levels of subsidence as the approved longwall mining voids. The surface operations at Wongawilli Colliery will remain as approved. Given that the Modification is not expected to result in increased impacts, the consultation undertaken was considered sufficient.

The Community Consultative Committee was notified of the Modification on 23 June 2015.

3.9 SUBMISSIONS IN SUPPORT

3.9.1 Socio-economic Benefits

Presentations in support cited the recommencement of operations at the mine would lead to 110 direct jobs, $47 M in royalties, and the flow-on benefits from this and benefits to the community from WCL's contributions. Further, these submissions noted a need for new jobs that the Project will generate considering the unemployment rate (compared to the rest of NSW), along with the many redundancies in the mining and related-industry sectors in recent times.

Submissions: P1, P3, P11, P12, P13, P14, P15

Response

WCL agrees with these submissions. The Modification will ensure continuity of employment for the existing workforce. This is significant given that the Wollongong Local Government Area has a high unemployment rate (7.0%) relative to the state average of 5.9% (2011 census).

4 CONCLUSION

This Response to the Public Meeting has addressed all relevant issues raised in the presentations at the public meeting. We trust that this document assists the PAC in its determination of the Modification.

If you require any further information, please feel free to contact Dianne Munro on (02) 6575 2000.

* * *

For
HANSEN BAILEY

Andrew Wu
Environmental Engineer

Dianne Munro
Principal

APPENDIX A

SUMMARY OF ISSUES RAISED AT THE PUBLIC MEETING

Ref	Stakeholder	Supports	Does not Support	Issue
P1	Rhys Brett	✓		• Economic and social benefits of project • DP&E report recommends approval
P2	Greg Walker		✓	• No presentation. • Opposed to mining in water catchment areas • Socio economic costs are deficient; minimal benefits and no costs shown and not substantiated. • Using WCL own data on Uni of Wollongong – 110 proposed only represents 1% of jobs – not a substantial mining operation or mining benefit. • Questioned the $45 m benefit of proposal. • Stated royalties are a gross figure and asks what is the actual net gain to the government. • Questioned the net benefit and that cost benefit analysis not done. • Financial accounts of WCL. • Potential risk to water supply which is critical to the region's future. • Small coal mine. • Stated that subsidence is negligible and what if geology is wrong. • Closely look at financial report – not same company as in 2011. Referred to an audit report which stated 'company is in great stress'. • Subsidence and leakage is said may occur but said to be negligible. • Urge PAC to look at financial reports of WCL – specifically the auditors report: 'significant concern whether company will be an ongoing concern.'
P3	Debra Murphy	✓		• Illawarra Business Chamber • 124 member companies – voice of business. • Mining has a significant flow on effect. 12% multiplier effect of mining in the region. • Economic impact assessment by Uni of Wollongong dated October 2014. Have distilled key messages from report. Nearly 10% of Illawarra jobs depend on mining. There have been direct job losses out of manufacturing, Blue scope, Pentair. • Mining has direct employment 1,738 in mining but significant flow on effect. • There have been 100s of direct job losses from manufacturing. • High youth unemployment and decrease participation rate (compared to NSW). Illawarra has higher unemployment figures when compared to rest of NSW. 14% youth unemployment and non participation rate 5%. • Mining companies direct spend is $1.5 billion in the geographical area. Mining adds 114.4% ($3 billion) to the economy. • 611 businesses in Illawarra directly service mining industry.
P4	Daniel Robins		✓	• No presentation. • Spoke on behalf of Lock the Gate Alliance. • Two main concerns expressed were whether the activities conducted by WCL have been 'fit and proper' and whether their financial capacity fits that. Referenced a letter to DMR. • In relation to the Mining Act1992, stated that WCL's existing mining rights should be reconsidered. In terms of the matters the Minister should take into consideration – two are technical competence and also the

Ref	Stakeholder	Supports	Does not Support	Issue
				financial capacity to comply with obligations under Mining Act 1992. • Should not operate in drinking water catchment where 4.5 m people get their water. • Considers the letter provides evidence that WCL is not financially viable. Refers to Tim Buckley (Director of the Institute for Energy Economics and Financial Analysis Australasia) says that 'it is hard to find a company less worthy of being listed... no revenue, no profit.' • Stated WCL had a $664 million dollar shortfall in March 2015. • Not just financial capacity – whether activities are safe. How treated its workforce at Russell Vale – not of good repute or character. • Notes failure to lodge preliminary report 31 March 2015.
P5	Judith Walker		✓	• No presentation. • Spoke as private citizen. • Stated that DP&E report is inadequate and effectively 'rubber stamped' the application. • On pg 4 under heading 'agency submissions' it says that none of the agencies object to MOD1. Albeit directly below NSW Water reiterated its objections. The assessment document does not list all of the previous NSW Water objections, such as increases in temperatures and rapid growth projections in Sydney. • Assessment rejects these objections by saying that WCL provided a response to them. However there is no assessment of the quality of WCL's response. No attempt made by DP&E to seek out studies of issues that have been undertaken in the last 5 years since last approval. • DP&E's assessment report does not state that the application for further approval is made by another company (as not the same as applied for 2011 approval). • Dept's assessment does not deal with suspension of mining due to mine collapse. • Notes that 'extended unplanned maintenance outage' was the explanation by WCL of the close down of the mine. No explanation of safety implications. • Stated that going from LW mining to bord and pillar will reduce the economic benefit of the operation. • Risk to Sydney's water supply not assessed.
P6	Ann Brown		✓	• Represents National Parks Association Illawarra. • Presentation. • Described future impacts to grandchildren, plants, animals, no water. • Mining large leases around the Illawarra. • Describes decreased in metallurgical coal to $85 US, halved from $150. • Stated that all coal is shipped to India. • Stated mine is not economic. • Notified of MOD 1 on 19 October as a CCC member. • RTS falsely claimed that they are not opposed to MOD1. Clarified that they do oppose MOD 1. • At least 140 Koalas that have been tagged to the north (Campbelltown) and also in the Mittagong area there is another large population. • Koalas can travel 50 km in one night for mating purposes. • Stated that project may reduce the population and wants an assessment of population in area. • There has been a decline in koala numbers since 1995. Koalas are now listed as vulnerable species 'to

Ref	Stakeholder	Supports	Does not Support	Issue
				extinction' in 2012. Area proposed for mining is in likely movement path of koalas. • Koala heard in original EA and recorded. • Table in EA where recorded a koala to be present and provided a diagram of where it was – near in the Nebo LWs. However in the ERM final report – the koala diagram was left out. • The only fauna that was monitored was frogs and tadpoles. • There is land there / mapping that is likely to support a koala habitat. There is a likelihood that they are a number of koalas there. • Koala not considered in Commonwealth (ERM) application. Did not monitor for koalas. • Western drivage – that due to previous mining presumes must have been subject to water loss. • Independent audit shows a number of non-compliances. • Agrees that mining important part of economy. • No rehabilitation plan has been provided. Is there a bond? • Suggests that PAC look at WCL's Annual Report. • Jindal were going to sell South African and Australian operations. • Risk damage to catchment and potential loss of species or say enough is enough?
P7	Kaye Osborn		✓	• Concerns relate to preservation of water catchment, economic basis of proposal and health implications. • Sydney's water catchment protected for future generations: fails to consider cumulative impacts • Economics and health implications not considered. • Not anti-mining: Objects to LW mining in catchment areas. • Confusion in proposal in relation to method of mining. Requested clarification. • 4.6 million people in Sydney relay on water source that is at risk from MOD1. Cracking and desiccation of swamps, contamination of drinking water. • Only publically owned catchment area that allows mining in world. • If mining does take place it needs to be undertaken by those that are technically competent. Reference to burying the continuous miner. • Costs of project have been externalised and therefore not properly costed. • Economic justification not adequately made due to falling coal prices. • Needs jobs but they should not be in cyclical industries. • Lives near Russell Vale. Costs externalised for this project (PM) • Dapto rural residential release – significant properties in immediate vicinity) whiuch do not know the mine is there.
P8	Holly Creenaune		✓	• Did not attend. Marina spoke instead representing 'Our Land, Our Future' group. • Strongly objects. • Impacts on water catchments: potential for hydraulic connection with the western drivage and Avon Dam as mentioned by Water NSW. • 4.2 million people depend on the water in this water catchment. • GHG emissions ignored • There is no real time monitoring of particulate matter. • Noise factor needs to be addressed. One of the most complained about factor of the mine.

Ref	Stakeholder	Supports	Does not Support	Issue
				• Stated that the community consultation strategy is lacking and that this application has been treated as administrative application. • Economic factors in the Nebo application have not been reconsidered in light of changes and should be updated. • WCL as public company has been suspended from trading under ASX. • EA says 300 jobs will be created – this is grossly inflated. In truth only 181 staff are only required to operate it. This figure is now reduced with the mine being now in care and maintenance. • As mine in care and maintenance if application not approved would be no impact on employment / local economy.
P9	Andrew Frazer		✓	• No presentation. • Is completing a 'Masters of Public Policy' at UNSW. • Discussed at length, although not necessary relevant to MOD1, large, legal donations of great concern which 'buy influence' for favourable decisions contrary to public interest. • Says that these allegations in the studies should make the PAC mindful of the spectre of corruption. • That no other country in the world allows mining in water catchments – that this specifically may give the appearance of Government corruption. • Stated that coal is highly toxic to human health. • How was a licence to mine in Sydney water catchment ever granted in the first place. No responsible pubic official would grant this.
P10	Gavin Workman		✓	• Representing Illawarra Residents for Responsible Mining. • More changed: global economic climate, vicinity of mine, attitudes to mining. • Suggests there are two changes to MOD1 sought, one is time consideration and other is mining method. • Wants reassessment of economic benefits or justify assessment. • Stated the EA states MOD 1 has a $62 m direct capital investment, 300 direct jobs, 2500 direct and indirect jobs. • Requested justification of royalties. • Stated staff numbers of 300 jobs needs confirming. • Coal licence states company is required to employ 128 competent people. • There are other things that have changed (i.e. GFC, the vicinity of mine and the general tolerance to mining). • Coal prices plummeting – thermal coal 46%, coking 74%. • Economic benefits put together in 2011 when coal price was better. • $5.1 million dollars to community. WCL need to justify all the figures that have been previously stated as they say nothing else has changed however royalties have dramatically reduced - were 50% now 47%. • Will not get the same coal volumes under bord and pillar that would have got under the LW method – this has not been reflected in the projected economic outcomes. • Proponent of the mine has changed – Gujarat were seen as a good corporate citizen – they sponsored groups. WCL do not do that. • WCL suspended from trading on ASX for 5 months – because cannot justify their financial situation. • Dapto land release - residential area to east of mine – total release will have 17,000 dwellings. 20,600 people

Ref	Stakeholder	Supports	Does not Support	Issue
				will reside there. Says that 500 m from Wongawilli mine and the Port Kembla rail link. • Speaker lives 500 m to Russell Vale and says he is impacted at that set back. • Do not have real time monitoring for noise or particulate matter. • The previous application in 2011 was a short term approval. • The larger application for western drivage that was foreshadowed has not been completed. Nothing has been done. WCL said the reason for there being no work on the expansion of Wongawilli was because of expanding Russell Vale. • That underlying motive is to obtain an approval at any cost so that Jindal can sell the mines to recoup cost. • Jindal have made it clear they want to digest non-profit making assets and have specifically referred to Aus. • Jindal steel shares have plummeted 89%. • Jindal steel the guarantee company for WCL.
P11	Stephen Hamilton	✓		• Live locally, 30 years at colliery and Dad. Partners worked at Wonga. Have built near the colliery and land donated, want to see it produce coal.
P12	Dominic Tier	✓		• 'Our mine' one of many, ran materials, prosperity, broad range of engineering.
P13	Greg Connolly	✓		• Supports. • RTEMS being stalled for AQ and noise. • No major environmental incidents.
P14	Michael Johnson	✓		• Small landscape company contractor who cleans subsidence lines for four 4 years with WCL. • 11 man days a week supporting 2 apprentices. • Bush work and weeding. Lawn mowing. • Maintains koala feed trees at Russell vale for symbiosis.
P15	Kristen Lee	✓		• Environmental Monitoring Manager. • 3 years at WCL. • Graduated from Wollongong Uni • Has three Uni Wollongong Student (Part time) and does voluntary studies on quolls. • Also undertakes voluntary climate change (red cedars) study. • Uni NSW (chlorophyll levels) in swamps.

APPENDIX B

SUPPLEMENTARY ECONOMIC ASSESSMENT

Wongawilli Colliery - Modification 1
Supplementary Economic Assessment

Prepared

for

Wollongong Coal Limited

By

Gillespie Economics
Tel: (02) 9804 8562
Email: gillecon@bigpond.net.au

November 2015

TABLE OF CONTENTS

1 INTRODUCTION

This report updates the royalty and employment estimates from the 2010 Economic Assessment to reflect the revised scope of the Modification and current and forecast economic conditions over the life of the Modification. The analysis has been prepared by Gillespie Economics based on information provided by Wollongong Coal Limited (WCL) on production and employment and updated coal price and exchange rate scenarios.

2 REVISED ROYALTY ESTIMATES

The Modification will extend the approved duration of mining to allow the approved coal resource to be extracted.

An indicative production schedule is provided in Table 1.

Table 1 - Indicative Production Schedule

Year	ROM Coal (Mt)
1	0.4
2	1.5
3	0.7
4	0.2
Total	**2.8**

Source: WCL

The ROM coal produced is crushed and screened but remains unwashed and hence is sold at a discount to the benchmark hard coking coal price i.e. 55% of the benchmark price.

A significant benefit of the Modification is the royalties it will generate for the NSW Government. Since the preparation of the Environmental Assessment (ERM, 2010) and associated Economic Assessment for the Wongawilli Colliery in 2010, the global market for coal has declined due to a reduction in global demand, particularly from China, and oversupply.

However, the International Energy Agency (2015)[1] predicts a tripling in demand for coal from South East Asia (Australia's major coal export market) over the next 25 years and growth in energy demand from the iron/steel sub-sector of South East Asia of 5.6% per year on average. Consequently, metallurgical coal prices are forecast to rebound (e.g. August 2015 Consensus Pricing of Financial Institutions, NAB September 2015 Minerals & Energy Commodities Update).

Royalties for coal are Ad Valorem i.e. charged as a percentage of the Australian dollar (AUD) value of production (total revenue less allowable deductions). For underground coal mining (apart from deep underground mining at greater than 400m depth) the royalty rate is 7.2%. Since coal prices are quoted in United States Dollars (USD), estimation of royalties requires forecast of:

- coal prices in USD; and
- the AUD/USD exchange rate.

[1] South East Asia Outlook 2015.

Some minor deductions are subtracted from the AUD coal revenue prior to application of the royalty rate. These make only a minor difference to the royalty calculations. However, for completeness the royalty estimated below incorporate deductions. Allowable deductions include:

- Beneficiation costs at a rate of:
  - $3.50 per tonne for coal which has been subject to a full cycle of washing;
  - $2.00 per tonne for coal which has been subject to a simple washing process such as wet jigging;
  - $0.50 per tonne for coal which has been crushed and screened but not subject to a washing process.
- Levies
  - Coal research levy;
  - Mine Subsidence Levy;
  - Mines Rescue Levy; and
  - Commonwealth Levy for Long Service Leave

There is inherent uncertainty around both the USD price of hard coking coal over the life of the Modification and the AUD/USD exchange rate. Consequently, royalties from the Modification are calculated for a number of scenarios:

- continuation of the current metallurgical coal price - around USD82;
- forecast metallurgical coal price from August 2015 Consensus Pricing of 24 financial institutions - USD105 in 2016, USD113 in 2017, USD116 in 2018 and USD 122 in 2019;
- exchange rates of 0.65, 0.7, 0.75 and 0.8 - the current exchange rate is around 0.72, the NAB and CBA forecast the AUD/USD exchange rate in 2016 between 0.65 and 0.87, August 2015 Consensus Pricing of 11 financial institutions forecast exchange rates over the Modification life of between 0.73 and 0.77.

Based on these scenarios a range of royalty estimates for the Modification are provided in Table 2.

Table 2 - Modification Royalty Estimates

Coal Price	Exchange Rate	Total Royalties (M)	Present Value of Royalties at Various Discount Rates (M)		
			4%	7%	10%
Current Coal Price	0.65	$14	$13	$12	$11
	0.70	$13	$12	$11	$10
	0.75	$12	$11	$10	$10
	0.80	$11	$10	$10	$9
Consensus Coal Price Forecast	0.65	$19	$17	$16	$15
	0.70	$18	$16	$15	$14
	0.75	$16	$15	$14	$13
	0.80	$15	$14	$13	$12

Assuming the continuation of current coal prices, total royalties from the Modification range between $11M and $14M dollars ($10M to $12M present value at 7% discount rate), depending on the exchange rate. At coal prices based on August 2015 Consensus Pricing, total royalties from the Modification range between $15M and $19M dollars ($13M to $16M present value at 7% discount rate).

3 THRESHOLD VALUE ANALYSIS

Benefit Cost Analysis (BCA) is the primary way that economists evaluate the net benefits of projects and policies. BCA of mining projects invariably involves a trade-off between:

- The net production benefits of a project; and
- The environmental, social and cultural impacts.

In the BCA framework, provided the present value of the net production benefits of a project exceed the present value of environmental, social and cultural, the project is considered to improve the well-being of society and hence is desirable from an economic efficiency perspective.

Royalties provide a minimum estimate of the net production benefits of the Modification[2] to NSW and hence a minimum threshold value against which the environmental, social and cultural costs of the Modification (after mitigation, offsetting and compensation) can be compared.

For the Modification to be questionable from an economic efficiency perspective, any incremental residual environmental, social and cultural impacts from the Modification, to NSW[3] (after mitigation, offsetting and compensation), would need to be valued by the community at greater than $10M to $16M, present value.

4 EMPLOYMENT AND REGIONAL ECONOMIC IMPACTS

The Modification will provide increased economic activity to the regional, state and national economies for the duration of the Modification.

The Modification will directly provide:

- annual output of up to a peak of between $96M and $143M (depending on price and exchange rate forecasts);
- direct employment at peak production of 155 (comprising 110 underground miners/supervisors, 30 surface/rail personnel and 15 WCL management/monitoring positions). In addition, 30 underground construction personnel will be required from time to time; and
- direct wages of up to $20M annually at peak production[4] (not including underground construction personnel).

[2] It is a minimum estimate since net production benefits to NSW also includes a component of company tax collected at the Commonwealth level but partly redistributed back to NSW. No estimate of company tax was available for this analysis.
[3] Consistent with the approach to considering net production benefits, environmental impacts that occur outside Australia would be excluded from the analysis. This is mainly relevant to the consideration of greenhouse gas impacts.
[4] Based on the average wage in the coal mining sector reported in the 2012-13 National Input-Output Table.

Flow-on economic activity will also arise from:

- Production expenditure in the course of the operation of the mine (production-induced effects); and
- Expenditure of employees (consumption-induced effects).

The level of this flow-on effect will depend on:

- The expenditure pattern of the Modification and the ability of the region to manufacture and provide the goods and services required by the Modification. Because of the long history of coal mining in the Wollongong and Illawarra region and high concentration of manufacturing in these areas relative to NSW, strong economic linkages and hence production-induced flow-ons are likely to occur; and
- The residential location of workers. As shown in Table 3, 100% of previous workers at the mine resided in the region comprising the local government areas (LGAs) of Wollongong, Shellharbour, Kiama and Wollondilly and hence this area is likely to capture a considerable proportion of employee expenditure.

Table 3 - Employee Residence Locations

Location	% of workforce
Wollongong	73%
Shellharbour	18%
Kiama	5%
Wollondilly	3%

Source: As reported in the 2010 Environmental Assessment.
Note: total has a minor discrepancy due to rounding.

An indication of the economic impact of the Modification at a regional level can be obtained by using multipliers generated for the Bulli Seam Operations for the combined Illawarra Statistical Division and the Outer South Western Sydney Statistical Subdivision (Gillespie Economics, 2009).

Table 4 shows regional economic impacts from the peak year of the Modification.

Table 4 - Peak Regional Economic Impacts of the Modification

Indicators	Direct	Production-induced flow-ons	Consumption-induced flow-ons	Total flow-ons	Total Impact
Output ($000)	113,500	36,774	14,074	50,848	164,348
Type 11A Ratio	1.00	0.32	0.12	0.45	1.45
Income ($000)	20,000	29,840	13,260	43,100	63,100
Type 11A Ratio	1.00	1.49	0.66	2.16	3.16
Employment (no.)	155	409	246	655	810
Type 11A Ratio	1.00	2.64	1.58	4.22	5.22

Source: Multipliers are from Gillespie Economics (2009).

In the peak year of production the Modification would have a total regional impact of up to:

- $164M in direct and indirect output;
- $63M in direct and indirect household income; and

- 810 in direct and indirect employment.

Type 11A ratio multipliers used in the analysis range from 1.45 for output to 5.22 for employment. The high ratio multiplier for employment and income reflect the relatively capital intensive nature of mining projects. Capital intensive industries tend to have a high level of linkages with other sectors in an economy thus contributing substantial flow-on employment and income while at the same time only having a lower level of direct employment and income. This tends to lead to high ratio multipliers for indicators that are related to employment (employment and income). A contributing factor to the high ratio multipliers is that the economy being examined is relatively large and with a long history of coal mining. Hence leakages from the economy are more limited than would be the case for a smaller or less specialised economy.

The level of multipliers are project specific and depend on, among other things, the ratios of employment to output of a project, the profitability of a project, the expenditure profile of a project and how much is spent in the region, the residential location of the workforce, the size and structure of the region within which a project is located. There is no "universal" set of multipliers for coal mining projects. An analysis of the Metropolitan Coal Project (Gillespie Economics 2008) estimated an employment multiplier of 3.52. Studies in the Hunter Valley (BAE 2014; Economic Consulting Services 2012 and Hunter Valley Research Foundation 2009) suggest employment multipliers of between 1.49 and 4.79. Based on this range, total employment impacts of the Modification would be between 231 and 742.

The economic impacts of Modification on the NSW and Australian economy would be larger than they are on regional economies because larger economies are able to capture more of the incremental expenditure and have greater intersectoral linkages.

Economic activity impacts discussed above represent the gross or positive economic activity associated with the Modification. Where employed and unemployed labour resources in the region are limited and the mobility of in-migrating or commuting labour from outside the region is restricted there may be competition for regional labour resources that drives up regional wages. In these situations, there may be some ‘crowding out’ of economic activity in other sectors of the regional economy.

‘Crowding out’ would be most prevalent if the regional economy was at full employment and it was a closed economy with no potential to use labour and other resources that currently reside outside the region. However, the regional economy is not at full employment[5] and it has access to external labour resources. Consequently, little ‘crowding out’ of economic activity in other sectors in the region would be expected as a result of the Modification. Crowding out would be expected to be greater at the NSW and national levels.

However, even where there is some ‘crowding out’ of other economic activities, this does not indicate losses of jobs but the shifting of labour resources to higher valued economic activities. This reflects the operation of the market system where scarce resources are reallocated to where they are most highly valued and where society would benefit the most from them. This reallocation of resources is therefore considered a positive outcome for the economy not a negative.

[5] Unemployment level in Wollongong LGA in September 2015 was 6.9% (Department of Employment (2015) Small Area Labour Markets)

5 CONCLUSION

The Modification is estimated to generate between $11M and $19M in total royalties ($10M to $16M present value at 7% discount rate) based on a range of forecast coal prices and exchange rates. This represents a minimum estimate of the net production benefits of the Modification[6] to NSW and hence a minimum threshold value against which the environmental, social and cultural costs of the Modification, after mitigation, offsetting and compensation, can be compared.

Provided the environmental, social and cultural costs of the Modification, after mitigation, offsetting and compensation, are considered to be valued at less than $10M to $16M, present value, then the Modification can be considered to result in an improvement in the economic welfare of NSW.

The Modification would also provide direct and indirect economic activity to the local, regional, State and national economies for the duration of the Modification. Flow-on economic activity would arise from production expenditure in the course of the operation of the mine and expenditure of employees who would mainly reside within the region.

[6] It is a minimum estimate since net production benefits to NSW also includes a component of company tax collected at the Commonwealth level but partly redistributed back to NSW. No estimate of company tax was available for this analysis.

APPENDIX C

DSC APPROVAL

Dams Safety Committee
NEW SOUTH WALES
ABN 55 079 703 705

04 September, 2012

Rob Regan
Chief Inspector of Coal Mines
Department of Primary Industries
PO Box 344,
Hunter Region Mail Centre NSW 2310

Our ref: 10.123.116
Your ref:

Dear Rob,

NRE Wongawilli application to conduct extraction of LW3 which lies partially within the Cordeaux Notification Area: DSC designation NRE_WONGAWILLI_1

The Dams Safety Committee (DSC) endorsed NRE Wongawilli's application to extract LW3 which lies partially within the Cordeaux Notification Area at their meeting on the 9th May 2012. The Committee designated the application NRE_Wongawilli_1.

This letter contains the Dam Safety Committee's recommendations in respect of the NRE_Wongawilli_1 application. The application is for extraction of LW3 which falls partially within the notification area of Cordeaux dam and its reservoir. The extraction is >500m from the FSL of the reservoir and no complications are anticipated.

Recommendations

These, then, are the Committee's recommendation to the Minister in respect to extraction of LW3 which lies partially within the Cordeaux notification area.

1. That approval to conduct partial extraction within the notification area as depicted on the attached plan, WA0-01-0448 dated 12/06/2012 and delineated in blue hatching, be approved subject to conditions 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, and 24 of the attached Annexure D, and conditions 1, 2, 3, and 4 Annexure D1.

Annexures B & E (attached) are referenced by various conditions in Annexure D.

If you have further enquiries regarding this matter please contact Heather Middleton on 9895 7353.

Yours faithfully,

for

Steve Knight
Executive Engineer

Postal: NSW Dams Safety Committee
PO Box 3720
Parramatta NSW 2124
Australia

Address: Level 3
10 Valentine Avenue
Parramatta NSW 2150
Australia

Phone: +61 (02) 9895 7363
Fax: +61 (02) 9895 7354
http: www.damsafety.nsw.gov.au
email: dsc@damsafety.nsw.gov.au