19 November 2014

PAC Determination – Russell Vale Colliery
Modification to Preliminary Works Project – Longwall 6 (MP 10_0046 MOD 2)

1. BACKGROUND

The mine subject to this determination (Russell Vale Colliery, formerly known as NRE No. 1 Colliery, prior to February 2014) is located approximately eight kilometres north of Wollongong. Underground mining has been undertaken at this site since the late 1800s in the Bulli and Balgownie Seams. The current owner and operator is Wollongong Coal Pty Ltd (WCL). This modification is concerned with longwall mining in the Wongawilli Seam, the deepest of three seams extracted at the mine.

A range of mining techniques including bord and pillar mining, pillar extraction and longwall mining have been employed at Russell Vale since mining commenced in 1887. The top seam overlying the subject area is the Bulli Seam and was mined using pillar extraction techniques in the early to mid-1900s. The middle seam, being the Balgownie Seam, was extracted over the subject area using longwall mining techniques between 1970 to 1982 and 2001 to 2003. In 2012, longwall mining commenced in the underlying third seam; being the Wongawilli Seam.

On 12 August 2009, Gujarat submitted a Part 3A project application for its proposed Underground Expansion Project (UEP). This project (MP 09_0013) involved a significant expansion of longwall mining across the Wonga East and Wonga West areas, to extract 31 million tonnes (Mt) of ROM coal over a project life of 18 years. The EA supporting the UEP application was exhibited in early 2013.

In response to issues raised in agency and public submissions and an independent expert review of the Environmental Assessment (EA) undertaken for the Department of Planning and Environment (DP&E), Gujarat made significant changes to the original project. These changes are outlined in a Preferred Project Report (PPR), which was submitted in September 2013. Under the PPR, the UEP application has been amended by:

- Reducing the total ROM coal production from 31 Mt to 4.7 Mt;
- Removing all proposed longwall mining (seven panels) from the Wonga West area and removing one panel from the Wonga East area; and
- Reorienting the remaining eight longwall panels in the Wonga East area to minimise impacts to identified significant natural features.

DP&E is currently completing its assessment of the merits of the amened UEP. The Commission was also advised that further study/investigation is being carried out in the Wonga West area.

While the expansion plan is being developed and assessed, an application known as NRE No. 1 Colliery Preliminary Works Project (PWP) was lodged to extract up to 1 million tonnes per annum (Mtpa) of run-of-mine (ROM) coking coal for a period of three years. The proposed coal extraction methodology was first workings and pillar extraction only, from the Bulli and Wongawilli Seams. On 13 October 2011, the Planning Assessment Commission (the Commission) granted project approval to allow extraction and associated works to be carried out (MP07_0103).

On 4 May 2012, Gujarat lodged an application (MOD 1) to modify the PWP approval to:

- Extract coal using longwall mining techniques in the Wongawilli Seam from two panels (Longwalls 4 and 5); and
- Develop the maingates for Longwalls 6, 7 and 8.

During the course of assessing MOD 1, the length of the second panel (Longwall 5) was shortened (from 1,145m to 845m), primarily to reduce the potential impact on upland swamps. On 24 December 2012, the Commission approved the amended MOD 1 application, but excluded approval for the development of the maingates for Longwalls 7 and 8 on the basis that the application lacked an assessment of the subsidence impacts that would be caused by extraction of the longwall blocks.

2. PROJECT MODIFICATION

The current owner, WCL, lodged an application on 11 April 2014, to further modify the Preliminary Works Project approval under section 75W of the *Environmental Planning and Assessment Act 1979* (the Act). The proposed modification (MOD 2) involves:

- Extracting coal using longwall mining techniques for the first 400m of Longwall 6 in the Wongawilli Seam; and
- Extending the existing project approval until 31 December 2015.

The extraction area of the first 400m of Longwall 6 is wholly within the existing approved project area and the panel layout has been designed to minimise the surface and other environmental impacts from subsidence, primarily by providing a significant buffer from the Cataract Reservoir.

The longwall has a narrow panel width (150m), large chain pillars (45m wide) and significant depth of cover (between 320 and 345m). The longwall has a seam thickness of between 2.6 and 2.8m and a maximum cutting height of 2.8m.

The total coal resource within the first 400m of Longwall 6 is 260,000 tonnes, which WCL has estimated would take only 1-2 months to mine. The extraction rate would therefore remain well within the current limit of 1 Mtpa. The proposed modification would also make use of existing facilities and would not involve any vegetation clearing or increased road haulage of coal.

WCL's justification for the mining of the first 400m of Longwall 6 is to provide continuing employment for the approximate 250 employees and provide sufficient capacity and cash flow to allow the mine to remain open until such time as the assessment of the UEP is complete and the project application is determined.

The Commission is advised that if the determination timeframe of the UEP extends beyond early 2015, then it is unlikely that WCL would be in the financial position to continue operating the mine and therefore this modification is a significant financial imperative. The Commission has not independently reviewed the proponent's financial position.

3. DELEGATION TO THE COMMISSION

On 9 September 2014, the project modification (10_0046 MOD2) was referred to the Planning Assessment Commission for determination under Ministerial delegation of 14 September 2011, as more than 25 objections from members of the public were received.

For this determination, Mr Paul Forward, Acting Chair of the Planning Assessment Commission, nominated Garry West and E/Prof Jim Galvin to constitute the Commission for this project. Mr West chaired the Commission.

4. DEPARTMENT'S ASSESSMENT REPORT

The Secretary's Assessment Report provided an assessment of the following key issues:

- Subsidence impacts;
- Potential impacts to Cataract Reservoir;
- Impacts to the upland swamps;
- Surface water impacts; and
- Groundwater impacts.

Other issues considered include biodiversity, Aboriginal and non-Aboriginal heritage, air quality and greenhouse gas emission, waste, noise, terms of Approval and other regulatory and non-compliance issues.

The Department's recommendation is that the Commission approve the application under section 75W of the Act, with conditions.

5. COMMISSION'S MEETINGS

The Commission held a number of meetings with:

- Department of Planning and Environment (DP&E);
- The proponent (WCL);
- The Office of Environment and Heritage (OEH);
- The Sydney Catchment Authority (SCA); and
- Wollongong City Council (Council).

Summaries of the issues discussed in these meeting are attached in **Appendix 1**.

The Commission met with the DP&E on 3 October 2014, to discuss the key elements of this modification; how it relates to the major UEP and DP&E's assessment of the modification application. Also discussed were the history of mine management; the number of applications and modifications made while the UEP is being developed and assessed; ecological impacts from the proposed longwall mining and subsidence impacts. The Commission expressed its concern that this modification application is assessed in isolation of the UEP whilst the assessment of impacts of this application relies on the UEP application documentation.

The Commission met with the WCL for a briefing on 28 October 2014. The briefing consisted of a discussion regarding the key elements of this modification application, how the modification application fits within the broader development of the mine and the proponent's comment on DP&E's assessment report and draft recommended conditions.

On 28 October 2014, the Commission met with the OEH to hear their concerns with this modification application and the proponent's approach to the planning approvals process. OEH's key concerns are the potential impacts to the swamps and the performance measures not including hydrological triggers, which would indicate a potential impact before any ecological impact could be measured.

The Commission met with the SCA on 29 October 2014, to discuss their concerns with the modification application. The discussion centred on offsets required for the swamps (CRUS1 and CCUS4) if impacted negatively, what these offsets should include and when these offsets should be provided. Other topics discussed included SCA's role in the catchment; the potential impacts of the Corrimal Fault and Cataract Reservoir and the proposed mining being within the Dam Safety Committee's Notification Area.

On 29 October 2014, the Commission met with Wollongong Council to hear their concerns regarding the modification application. Council is concerned about the proponent's (and the previous owner's) approach to planning and development process of the mine expansion plan, and would like to see this application withdrawn and assessed as part of the UEP. Council's other concerns include the impact on the upland swamps; the impacts of flooding at the pit top and nearby residents; and the non-compliance of the previous approval requirement to re-align Bellambi Creek.

After meeting with all of the above agencies, the Commission inspected the site on 29 October 2014, which included walking across longwall panels 4 and 5 and down the centre line of the first 400m of Longwall 6. The Commissioners observed both upland swamps which are proposed to be undermined, CCUS4 and CRUS1. A water fall at the water discharge point for CCSU4 was also inspected.

A public meeting was held on the 30 October 2014 at the Corrimal District Library and Community Centre, to hear the views of the public. A total of 32 speakers presented to the Commission. A list of speakers is presented in **Appendix 2**. All those seeking to be heard were heard. Eleven written comments were also received. Three speakers at the public meeting were supportive of the development.

The key issues raised during the public meeting are summarised below and included:

- Swamps
    - The swamps are listed as EECs and are swamps of 'special significance';
    - Impacts caused to the swamps from the loss of the perched watertables;
    - Cumulative subsidence impacts, historical mining subsidence, plus the predicted subsidence from Longwall 6 mining;
    - How can a swamp be offset;
    - The geography of the swamps for offsets is crucial;
    - The attitude of the proponent towards the potential further damage to swamps that have already been undermined.
    - Longwall 5 was reduced in length to avoid impacts on the swamps, so why not Longwall 6;
    - The Independent Expert Scientific Committee's advice to the Commonwealth Department of Environment regarding this modification;
- Surface water and groundwater
    - Potential impacts on surface water and groundwater quality and quantity;
    - The NSW Chief Scientist's report *On measuring the cumulative impacts of all activities which impact ground and surface water in the Sydney Water Catchment* (May 2014)
    - Risk of stored water within Cataract Reservoir leaking into the mine;
- SCA special areas
    - Threats to drinking water supply, quality and quantity from underground mining in the catchment;
    - Potential impact to the Cataract Dam wall;
    - Short term gain for the company versus the longer term impact of the water catchment;
- Planning process
    - Piecemeal approach to planning;
    - Question the proponent's record of compliance of conditions;
    - Cumulative impacts are not assessed in this modification application, they are covered in the Underground Expansion Project (UEP)
    - Differences between the DP&E's assessment report and other agency comments;

    - Condition 11 in Schedule 2, would allow WCL to revise and update management plans and strategies without the need to consult with the relevant agencies;
    - The precautionary principle should be applied when the scientific data is not available;
    - Uncertainty and risk of impacts, the decision should be focused on the risk of the impact, where is the tipping point of the impacts and who should decide what is an 'acceptable risk';
- Wollongong Coal Pty Ltd
    - WCL's economic situation;
    - The modification is of limited economic benefit to WCL;
    - WCL's non-compliance issues, including the re-alignment of Bellambi Creek;
    - Jobs provided by the mine;
- Dust and Noise
    - Particulate pollution on human health;
    - Emplacement area is covered by a Council DA, and dust and water issues relating to the emplacement area are not covered by the modification application;
    - While there is a time limit on WCL for trucks leaving the site with coal, there is no such time constraint for them to queue up along Bellambi Road to enter the site;
    - Noise and dust associated with the haulage of coal in trucks; and
    - There is no 24hr air quality monitoring along the haulage route.

The Commission has had a subsequent meeting with DP&E on 3 November 2014 to discuss the issues that were raised by the agencies and at the public meeting. The notes of this meeting are in **Appendix 1**.

The Commission chair, Mr Garry West met with the proponent on 18 November 2014 to outline the findings of the Commission's consideration of the Department's assessment report and associated documents and the views expressed at meetings with stakeholders including the public meeting. Notes of this meeting are in **Appendix 1**.

6. COMMISSION'S CONSIDERATION

6.1. Strategic Consideration

As described in Section 1 of this report, the Commission noted that Gujarat (the former owner) submitted a project application for the proposed expansion of the underground mining operation (UEP) in 2009. During the assessment process of this UEP, Gujarat submitted a project application to develop some preliminary works within the proposed expansion area following by a modification application to allow extraction from two panels (LW4 and LW5). Both of the applications were approved by the PAC in 2011 and 2012 respectively. In determining these applications, the PAC raised concerns of the piecemeal approval to the planning and assessment of an otherwise significant underground mining project in a sensitive area.

This current application is the second modification application to the 2011 approval. One of the justifications for this application is to maintain employment for existing mine workers until the expansion is determined.

Given the history of the site and the various approvals over the years while the expansion plan is being assessed, it is not a surprise therefore that the piecemeal incremental approach to planning and assessment is a key concern to the Council, some government agencies and objectors.

This Commission is put in a very difficult position. On the one hand, it shares objectors' concerns in regard to the piecemeal approach to gaining planning approval and agrees that ideally this application should not be considered in isolation in the absence of the expansion plan. On the other hand, this application is said to be essential to maintain the operation of the mine and the employment of existing mine workers until the expansion plan is determined.

The Commission notes that this is the third time that the maintenance of employment of existing mine workers is used as a justification to seek incremental approval for a small area in the absence of a comprehensive expansion plan. The credibility of the employment justification is wearing thin. The Commission is of the view that if another incremental modification comes in before the finalisation of the expansion plan, the consent authority will have to carefully consider the weight that it would give to this application when balancing the potential cumulative impacts of underground mining on a sensitive environment in the absence of a full picture of past, present and predicted impacts. It will be to the benefit of all stakeholders that the expansion plan should be assessed and determined expeditiously.

6.2. Potential Impact of Subsidence

The proposed LW6 panel has already been undermined to various and variable extents by workings in the Bulli Seam (top seam) and the Balgownie Seam (middle seam).

According to the proponent's consultant, AECOM (2014), the "maximum subsidence over LW6 within the Wongawilli Seam is predicted to be up to 2.1 metres, taking into account the conservative additional effects of full extraction of LW6 and the adjacent LW7. Previous mining in the Bulli and Balgownie Seams is estimated to have caused 1.5 metres of subsidence."

The proposed modification involves 'multi-seam' mining, where subsidence impacts from the lower most mining would add to (and probably intensify) the subsidence impacts that previously took place as a result of mining the in two higher seams.

Dr Hebblewhite was commissioned by DP&E to review the Subsidence Assessment report. In June 2014, SCT (the new consultant engaged by the proponent some stage into the UEP process) updated the Subsidence Assessment to address the recommendations that were made in Dr Hebblewhite's review. SCT's updated subsidence predications were principally based on existing monitoring data for the three seams, and included:

- Subsidence profile measurements during the 1990s for extraction in the Bulli Seam, with adjustments made based on surface observations for the Balgownie Seam;
- Measured subsidence data sourced from the mine archives for the Balgownie Seam; and
- Subsidence predictions and measured subsidence profiles for the Wongawilli Seam based on mining in Longwalls 4 and 5.

SCT's predicts additional vertical displacement in the range 1.5 to 2.1m, above the central part of the first 400m of LW6, based on mining all of Longwall 6 and the adjacent Longwall 7.

Both DP&E and Dr Hebblewhite agree that the approach taken by SCT to predict the subsidence impacts is appropriate and valid. DP&E notes *"that the predications are made from a relatively small database of observed data and that there is still scope for localised anomalies due to the multi-seam environment, geological structures and other effects in natural systems which are not fully predictable. Consequently, the Extraction Plan for Longwall 6 would need to include detailed monitoring and validation of SCT's predictions."* The Commission accepts DP&E's assessment, and agrees that the requirement for monitoring and validation of the subsidence predictions is a reasonable approach in the circumstances.

6.3. Potential Impact of Upland Swamps

Upland swamps CRUS1 and CCUS4 partially fall within the footprint of this first 400m of LW6. The EA and associated documentation acknowledges that the impacts of subsidence effects on swamp integrity cannot be predicted with confidence due to the lack of historical information.

The Proponent's Biodiversity Assessment identified swamps CRUS1, CCUS4 and BCUS4 as breeding habitat for the threatened Giant Dragonfly. The Giant Dragonfly requires peat swamps for long periods during the larvae stage of their lifecycle; this can be up to 10 years. The undermining of the two of these swamps, covered by this modification, may dry out the swamps and result in negative impacts to the Giant Dragonfly. The OEH submission to the Commission disagreed with the Department's Assessment Report conclusion that there is unlikely to be any significant impact to biodiversity. Several community submissions also raised this issue.

The Commission notes that only a very small portion of CRUS1 overlies the start of Longwall 6 and is described as a dry swamp and any further subsidence is not expected to have a significant impact on this swamp. The portion of CCUS4 overlying Longwall 6, as noted later, is a wetter swamp but the Commission believes that the extraction proposed under this modification falls short of undermining the watercourse and so is unlikely to have a significant impact. The Commission however, acknowledges this issue will need to be further considered in reviewing the UEP which proposes to extract the remainder of Longwall 6.

6.3.1. Potential Impacts to Upland Swamp CRUS1

A relatively small portion of CRUS1 overlies the start of LW6. The portion of this swamp overlying LW6 is described as a dry swamp, and the proponent reports that further subsidence is not expected to have a significant impact on the swamp.

Biosis' (2012) analysis of CRUS1 shows that this upland swamp supports MU43 Tea-tree Thicket and MU42 Banksia Thicket. Based on the shallow soil profile of the swamp, it is likely that the Banksia Thicket will be located in areas of water accumulation. The swamp response to rainfall is short, with groundwater data indicating a rapid recession following rainfall events. Given the portion of the swamp that will be impacted by this application, is small, it is unlikely to result in any significant changes in the flow accumulation of this swamp. Therefore based on the analysis, Biosis predict that CRUS1 has 'low' risk of negative environmental consequence, as the majority of the swamp will not be impacted by the proposed mining of LW6.

DP&E accepts Biosis' assessment that CRUS1 has a 'low' risk of negative environmental consequence, given the small proportion of the swamp to be undermined. It is of the view that the existing 'negligible environmental consequence' performance measure remains appropriated for the management of CRUS1.

The Commission agrees with the assessment and considers that the amount of predicted subsidence in CRUS1 is unlikely to negatively impact the swamp as a whole, as only a small upstream drier section of the swamp is to be undermined.

6.3.2. Potential Impacts to Upland Swamp CCUS4

A small portion of upland swamp CCUS4 overlies the last 30 – 50m of the modification application area of LW6. The majority of this swamp falls within the footprint of LW6, if LW6 is extracted beyond the 400m limit of this application.

CCUS4 is a 'wetter' swamp and that portion overlying LW6 is transacted with a watercourse that has a waterfall at its discharge point from the swamp. The watercourse is a first order tributary draining

to Cataract Creek and the waterfall comprises an overhang. The EA estimates the flow rate to be 0.01 ML/day. At the time of the inspection by the Commission, the waterfall was only dripping.

There is evidence of subsidence associated with previous mining having caused a portion of the overhang to crack and, perhaps, fall. DP&E's Assessment Report indicates that there is general agreement that additional subsidence associated with fully extracting LW6 (if approved) is likely to cause further impacts in and about CCUS4 that include possible rock falls, cracking of the sandstone bedrock base and changes in swamp hydrology, including water holding capacity.

OEH and SCA have both raised concerns regarding the long term impacts that mining LW6 may have on this swamp, particularly if the sandstone bedrock is cracked. Both agencies are concerned that any impact caused by mining LW6 may not be visible for many years after the mining has ceased, and may only present when the swamp is severely stressed (i.e. during an extended drought). By this time the damage to the swamp is irreversible and the integrity of the swamp would be lost. It was pointed out that to date remediation of swamps impacted by longwall mining has been largely unsuccessful.

OEH and SCA have therefore recommended to DP&E and to the Commission that WCL should be required to monitor the swamp's hydrology to detect any potential changes in the swamp, long before ecological monitoring would detect any changes. Should this monitoring detect hydrological changes (i.e. a loss of water from the perched watertable), then an offset for the swamp should be provided by WCL for the impacted swamp.

The proponent has advised, in their Response to Public Meeting (2014) that *"extraction of the first 400m of LW6 is consistent with extraction of LW6 as part of the UEP. As such, assessments undertaken for the UEP have been relied on for the purpose of MOD 2 to the extent that they are relevant to the first 400m of LW6……. The MOD 2 EA therefore presents a conservative assessment, as it is based on the impact assessment and finding of the technical specialist studies prepared for the UEP."*

The Commission recognises the uncertainty regarding the potential impacts to CCUS4 and the risks associated with those impacts, from mining beneath this swamp. Any previous impacts to the swamp's integrity are unknown, and as a result the risk of reaching the swamp's tipping point, (i.e. the point where the swamp can no longer function effectively as a swamp) is high.

In the circumstances, the Commission considers a cautious approach should be adopted. That is to limit extraction of LW6 to the western edge of CCUS4 to allow monitoring and data collection of any changes in the swamp. Monitoring should include hydrological changes. The monitoring results would provide empirical information for the assessment and prediction of the extent of changes to CCUS4 and formulation of adaptive management plan if mining is to proceed through the whole of LW6.

A second reason for the setback is the Commission notes that the 400m retreat point for LW6 is some 40m short of undermining the watercourse draining CCUS4. This equates to an angle of draw of around 7 degrees and is claimed by the proponent to result in less than 100mm incremental vertical displacement of the watercourse (as compared to a nominal value of 20mm associated with an angle of draw of 26.5 degrees often used to safeguard critical surface infrastructure). In addition the 400m retreat point for LW6 does not align with a cut-through (c/t) in Maingate 6. Hence, the longwall could not be recovered from this location if further longwall mining is not permitted beyond this point, unless a new cut-through is driven through the pillar between 9 and 10 c/t in Maingate 6. The closest existing cut-through from which to recover the longwall is 10 c/t, some 35m

before the 400m mark. The angle of draw to the swamp, associated with stopping the longwall at around the 365m mark (10 c/t) is of the order of 13 degrees.

The Commission finds the setback of 35m will allow the retrieval of the longwall if full extraction is not recommended or approved in the UEP.

6.3.3. Monitoring and Offsets for Upland Swamps

The proponent, in its Response to Public Meeting (2014), advised the Commission that *"an adaptive management plan will be developed to use the monitoring program to detect the need for adjustment to future mining operations so that the subsidence predictions are not exceeded and subsidence impacts creating a risk of negative environmental consequences in uplands swamps are minimised."*

The Commission acknowledges that this application of adaptive management is not consistent with typical real time responsive management to deviations from planned behaviour. However, given the time lag associated with detecting negative impacts on swamps, this may be acceptable if the monitoring programs include mitigation measures and offsets for any negative environmental consequences.

The proponent proposes to provide offsets and that these offsets are proportional to the degree of impact. DP&E agrees with the proponent that a total offset (i.e. hectare for hectare) is not appropriate in this case of partial impacts, which are considered typical with underground mining. Therefore, DP&E recommends *"a trigger (rather than a performance measure) which requires a proportional offset for impacts on CCUS4, where those impacts are greater than 'minor' environmental consequences."*

OEH do not support the offsetting requirements recommended by DP&E, that offsets are only applied for any impact to CCUS4 of greater than 'minor' impacts. OEH recommend that any impact above 'negligible' should be offset, in line with the government's Biodiversity Offset Policy.

The Commission notes OEH's recommendation that the performance criteria should remain 'negligible', rather than 'minor' as adopted by DP&E. However, due to the small scale of this modification and the Commission's determination that LW6 should be cut back to 365m, the Commission agrees that the offsets required by DP&E for this modification (listed in Table 1, Schedule 3), are adequate. The Commission finds that by pulling back LW6 to the edge of the CCUS4, this should minimise any potential impact to the swamp, and should address OEH's concerns.

The Commission recognises that an offset for swamps is a significant issue which requires further consideration from DP&E, OEH and SCA. The Commission acknowledges that WCL is investing in monitoring of the swamps and proposing to offset any swamps if required, as part of this modification and the UEP. The Commission recommends that the Department gives careful consideration to when, where, and what (size and nature) offsets are required as part of the UEP assessment process, and the comments provided by OEH an SCA.

6.4. Report of the Independent Expert Scientific Committee

Several community presentations referred to the advice in the report of the Independent Expert Scientific Committee (IESC).

The Australian Government and State regulators sought advice from the Independent Expert Scientific Committee (IESC) on the potential water-related impacts, for the UEP. The Australian Government sought further advice from IESC specifically for the Longwall 6 modification. The IESC

Advice to decision maker on coal mining project IESC 2014-058: Russell Vale Colliery Longwall 6 Project (EPBC 2014/7259) noted the key potential impacts as a result of mining Longwall 6 included:

- Irreversible localised impacts to structural integrity of overlying and adjacent swamps and associated impacts to dependent species.
- Cumulative impacts to water resources and associated ecological communities when considered in conjunction with the proposed Russell Vale Expansion project at Wonga East and further proposed mining at Wonga West.

The Commission notes the proponent has responded in detail to all the issues raised by the IESC with input from key specialists, including Biosis, SCT, WRM Water & Environment and Geo Terra.

6.5. Potential Impact to Surface Water and Groundwater

DP&E considers that the potential impacts to surface waters in the vicinity of LW6 would predominantly result from:

- Valley closure and stream bed cracking altering stream hydrology in Cataract Creek and the 1st order tributary near the mining area; and
- Increased connectivity between the surface and groundwater systems resulting in loss of baseflow to creeks and tributaries.

The proponent's consultant, SCT (2014), states that given the undulating topography in the area of LW6 it is unlikely to have significant valley closure impacts along Cataract Creek. Any baseflow losses are predicted to be negligible (< 3ML/year) and are in line with minor mining impacts.

The community in the public meeting referred to damage caused to the Waratah Rivulet in another mine area and compared this to potential impacts to Cataract Creek. If mining was proposed to occur under Cataract Creek these concerns would require very careful consideration but as the application area does not approach within 400m of Cataract Creek or any other significant watercourse, the Commission concurs that these watercourse are unlikely to be impacted by the proposed mining.

There are two types of groundwater systems in the area of LW6, being broadly defined as either shallow aquifers or deep aquifers. Both of these systems are recharged by rainfall and runoff over time.

Groundwater modelling was undertaken by Geo Terra and GES in 2012, and a supplementary assessment by SCT (2014) as part of the EA for the UEP. Due to criticisms received from several government agencies that the modelling provided was lacking in specific information for this modification, Geo Terra were engaged to update the original groundwater assessment.

WCL has indicated to the Commission, in a response to questions raised during the briefing that *"all groundwater bores required for LW6 have been installed and data is being gathered. WCL has installed three monitoring bores (RV17, RV18, RV19) between LW6 and Cataract Reservoir, in accordance with approval D2014/49983 from the SCA."*

A number of speakers and agencies referred to the NSW Chief Scientist's report *On measuring the cumulative impacts of all activities which impact ground and surface water in the Sydney Water Catchment* (May 2014). The Commission notes that this report does not recommend prohibition of longwall mining within the Sydney Water Catchment. The report acknowledges that there are

uncertainties surrounding the impact of longwall mining, and that further data will assist in the assessment of cumulative impacts of longwall mining within the catchment.

The NSW Chief Scientist's review concludes:

> *Current approaches to managing for cumulative impacts are limited, especially for complex entities such as the Catchment which involve multiple industries, uses and activities and the potential for multiple impacts. A more quantitative approach is required, but at present there is insufficient data available in a coherent form to provide a deep and reliable understanding of cumulative impacts in the Catchment. This finding is supported by experts in a range of relevant disciplines who were asked by the Review to examine the core question of measuring cumulative impact of activities in the Catchment. With more data, models can be built to provide a framework for examining predictions of cumulative impact and a mechanism for explaining measured impacts and attributing them to the most likely causes.*
>
> *The Review looked in detail at two significant matters that could be cumulatively impacted, namely water quality and water quantity. It found that the current multi-barrier process for protecting water quality is sufficient, by and large, to protect water quality no matter the type of adverse impact, though special provision for produced water is desirable before CSG extraction is permitted in the Catchment. Water quantity is much harder to assess and manage. 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.*

DP&E is satisfied LW6 can be managed such that it would not result in any significant impacts to groundwater resources. The Commission is satisfied that the issue has been adequately addressed in the DP&E's assessment. It also notes that the Department's recommended monitoring requirements will provide the information that the Chief Scientist's Report identified as required to assist in assessment of cumulative impacts of longwall mining within the catchment.

6.6. Potential Impact to Cataract Reservoir

The application area is located within the Dam Safety Committee's Notification Area for Cataract Reservoir. However, it is located outside a 35 degree angle of draw for the full water level of the reservoir. WCL in their Response to Public Meeting document quote Geo Terra/GES (2014) that *"the reduction in storage in Cataract Reservoir due to MOD 2 is predicted to be approximately 2.57 ML/year through reduced stream baseflow to the reservoir, and 0.33 ML/year through depressurisation affecting the reservoir."*

The Corrimal Fault is the only known significant geological structure located in the vicinity of LW6 that could influence potential hydraulic connectivity between the mine workings and the reservoir. The proponent has indicated that the Corrimal Fault tapers out and does not extend anywhere near the reservoir. SCT also advised that there has been no historic record of water entering the Bulli Seam workings through this fault. Based on subsidence measurements over LW4 and LW5 and geological studies, the Commission therefore concurs with conclusions that incremental subsidence effects associated with the extraction of the LW6 are unlikely to impact on the stored waters of the Cataract Reservoir.

As the application area is located more than 10km from the dam wall of Cataract Reservoir, the Commission is of the view that LW6 is extremely unlikely to have any impact on the dam wall.

6.7. Socio-Economic Factors

The Commission was advised that the longwall mining equipment is already installed at the start of Longwall Panel 6 (LW6) in the Wongawilli seam. The application to extract the first 400m of LW6 is required to generate cash flow and maintain existing jobs.

The community representatives in their presentations to the Commission drew attention to the acknowledged difficult financial position of the proponent and their concern that the proponent may not be able to meet their environmental and regulatory obligations. The community raised similar sentiment with the PAC in 2012 in relation to the then proponent (Gujarat). They pointed out that the Russell Vale positions accounted for only 0.14% of jobs in the Illawarra region.

The Commission notes that employment is a relevant consideration and there are 254 jobs directly dependent on the future of the operations. There have already been reductions associated with the sister colliery (Wongawilli) being placed in care and maintenance. The Commission is cognisant that the UEP is expected to be referred to the PAC for review and determination in the near future; therefore continuity of employment during this period is desirable. As mentioned in early part of this report, the continuation of employment for existing workers, though a valid justification for an application, should not be exploited to the extent that its creditability is questioned.

6.8. Other Issues

Some of the other issues that were raised at the Public Meeting and in submissions to DP&E and the Commission include:

- The emplacement area at the Russell Vale pit top
- The re-alignment of Bellambi Creek, which is yet to be undertaken;
- The water quality in the Hicks Street gully/drain, which drains the emplacement area;
- Noise and dust generated from the pit top, including traffic generated noise and dust; and
- The DRE bond on WCL and its current review of the value of this bond.

These issues should be considered as part of the UEP assessment process.

The Commission considers DP&E's assessment of the other issues listed in the assessment report as adequate, and it is therefore satisfied with DP&E assessment.

7. Commission's Findings and Determination

The Commission has carefully considered the application and associated documents, the Secretary's Assessment Report and submissions, the discussions held with the Council, agencies and the proponent, the presentations made at the public meeting, the Independent Expert Scientific Committee's (IESC) *Advice to decision maker on coal mining project IESC 2014-058: Russell Vale Colliery Longwall 6 Project (EPBC 2014/7259)*, the proponent's response to IESC and the proponent's response to PAC questions and issues raised at the public meeting.

The Commission acknowledges that the previous mining has caused subsidence in the area around LW6, and that the extent of impact is unknown. The Commission finds that the cumulative impacts of three seam mining are a risk that requires monitoring.

The potential impact to the upland swamp CCUS4 is a significant issue of concern to the community and some government agencies and council. The Commission finds a cautious approach should be adopted given the uncertainty of integrity of the swamps from previous mining impacts and the risk of reaching the swamp's tipping point. The Commission has determined that Longwall 6 should be reduced by approximately 35m, stopping prior to the waterfall outflow of CCUS4. This will allow

monitoring and data collection of any changes in the swamp and the monitoring results would provide empirical information for the assessment and prediction of the potential changes to CCUS4 and formulation of adaptive management plan if mining is to proceed through the whole of LW6.

This finishing position also aligns with 10 c/t on Maingate 6, which would allow the retrieval of the longwall if further mining of Longwall 6 is not recommended or approved in the assessment of the UEP.

The Commissions finds that the proposed longwall is at a sufficient distance from Cataract Dam wall and the proposed mining is extremely unlikely to have any impact on the dam wall. Further, the application area is located outside a 35 degree angle of draw for the full water level in the Cataract Reservoir. The Commission considers that due to the distant from Cataract Creek, and that the Cataract Creek itself will not be undermined, the potential loss of surface water and groundwater is unlikely to be significant.

The Commission has not considered the suitability of any further extraction of coal in the area (beyond the proposed extraction required as part of the first 400m of Longwall 6). The Commission emphasises that approval of this application in no way provides any form of endorsement of any proposal to extend mining operations at the colliery.

The Commission acknowledges that continuity of jobs is desirable, though the credibility of the employment justification for the modification is wearing thin. If another incremental application is submitted before the determination of the UEP, the consent authority will have to carefully consider the weight that it would give to the employment justification when balancing the potential cumulative impacts on a sensitive environment in the absence of a full picture of past, present and predicted impacts.

The Commission determines to accept the recommendation that approval be given to the modification application subject to conditions as amended by the Commission.

Condition 5 in Schedule2 has been amended to allow mining operations to be extended to December 2015. Condition 5 now reads:

5. *The Proponent may carry out mining operations on site until 31 December 2015.*
   Note: Under this Approval, the Proponent is required to rehabilitate the site to the satisfaction of the Executive Director Mineral Resources. Consequently this approval will continue to apply in all other respects other than the right conduct mining operations until the site has been rehabilitated to a satisfactory standard.

A new condition 5A is to be inserted to restrict LW6 to 365 metres. Condition 5A reads:

5A. *The Proponent shall not extract more than the first 365 metres of Longwall 6.*
   Note: This limit on the extraction of Longwall 6 aligns with the number 10 cut-through in Maingate 6, which is shown in Figure 2 of Appendix 2.

The Commission has also modified Condition 11 in Schedule 2, based on the criticism received from other government agencies, and the wider community. Condition 11 has been amended to ensure that only minor revisions are allowed to be updated by the proponent without the need for consultation with other agencies. Any revisions that are not minor will require the proponent to consult with all relevant government agencies. Condition 11 now reads:

11. *To ensure that strategies, plans and programs required under this approval are updated on a regular basis, and that they incorporated any appropriate additional measures to improve the environmental performance of the project, the Proponent may at any time submit revised strategies, plans or programs for the approval of the Secretary. With the agreement of the Secretary, the Proponent may also submit any strategy, plan or program required by this approval on a staged basis.*

    *With the agreement of the Secretary, the Proponent may prepare a **minor** revision of or a stage of a strategy, plan or program without undertaking consultation with all parties nominated under the application condition in this approval.*

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

    See also condition 5 of Schedule 5.

Garry West
Chair of the Commission

E/Prof Jim Galvin
Member of the Commission

Appendix 1

Notes of meeting with the Department of Planning & Environment (3 October 2014)

The purpose of the meeting is to discuss the Department's Assessment Report, the proposal and how it fits with the larger underground expansion project

Mine management

- the quality of the mine plan prepared by the company
- mine management and operations including cash-flow issues and the loss of a longwall machine in a longwall due to a roof collapse
- the adjacent Wongawilli Mine is in care and maintenance, staff numbers have already been reduced

Planning Process

- Fragmented development application process and the need for modification applications to keep the mine operational, while the Underground Expansion Plan (UEP) application is being developed and assessed
- Timing of the UEP and consideration of a segment of the mine plan in isolation without the Environmental Assessment for the UEP, whether this application should be dealt with as part of the UEP
- The UEP is expected to be referred to the PAC in the near future, and this Modification is a bridging application prior to the UEP being determined
- The western section (Wonga West) has been removed from the UEP in response to issues raised in submissions
- The issue of mining under the upland swamps and close to the Cataract Creek

Ecological impacts

- There are 39 swamps under the original proposed extension (being Wonga West and Wonga East)
- With the removal of Wonga West, there are only 13 swamps that are being assessed for potential impacts by the proposed mine expansion plan
- CCUS4 and CRUS1 are two of the 13 identified swamps have been assessed for risk of damage
    - CCUS4 – assessed as having a high risk
    - CRUS1 – assessed as having a low risk
- Questioned whether LW6 should start further to the east to avoid CCUS4
- OEH have guidelines on 'special significance' for swamps, if the swamps meets 3 of the 4 criteria, then it would be classified as of 'special significance'
- The swamps are listed as an EEC
- Therefore the Offsets policies apply, and they should be treated the same as any other EEC
- The proponent has already acquired some swamps for the offsets if CCSU4 (high risk swamp) is damaged during mining operation
- An EPBC controlled action approval is required for both this Modification and the UEP. Mining is unlikely to commence before EPBC approval is granted

Subsidence

- The evidence indicates that there are two mined seams above this proposal. There is insufficient information available about the previous mine layout and the extent of subsidence particularly in relation to the Bulli seam
- This longwall mining will create additional subsidence.
- Given the lack of previous subsidence records, the current predicted subsidence level is a ball park figure.
- Issue of cumulative subsidence impact
- Previous subsidence impact on swamps is not clear, it is therefore difficult to be certain the tolerance level of the swamps before irreversible damage
- the significance of the level/order of the streams that flow through/from the swamps
- the proximity of the proposed LW6 to the dam

- SCA have a policy/guideline of no longwall mining within the Dam Safety Commission notification areas

Documents tabled at meeting/to be provided: A list of current supporting documents and associated timelines (as a number have been superseded), and the full EA for the Underground Expansion Project.

Notes of briefing with the Proponent (28 October 2014)

The purpose of the briefing is to get an overview of the Modification application and how it relates to current operations and the proposed Underground Expansion Project.

Strategic Approach

- The approach to seek piecemeal and incremental development approval to mine a small part of the expansion area
- several approvals are required by 31/12/14 before mining of LW6 can commence in January 2015
    - EPBC 'controlled action' from the Commonwealth Department of Environment
    - Dam Safety Committee approval to mine in the Dam Notification Area
    - Determination under the EP&A Act
- Modification 2 will extract 260,000 tonnes of ROM coal, which will preserve 254 jobs
- Underground Expansion Project (UEP) has been amended to avoid 4 swamps, being CCUS10; CCUS5; CRUS1 and CCUS1
- UEP is now just in the Wonga East area, and will be used to raise capital to allow the mine to get into the Wonga West area

Swamps – and the potential impacts

- More complex nature of the swamps with respect to subsidence than originally thought
- WC is undertaking holistic monitoring of the swamps, including monitoring
    - Rainfall
    - Inflow
    - Outflow from the swamps
    - Perched watertable and groundwater levels
    - Flow into Cataract Creek
- CCUS4 contains some of the deeper peatier soils and has a perched watertable. It has been subsided before and is still functioning as an upland swamp
- By undermining CCUS4, it will provide quantifiable data to the models with regard to the impact on the swamp. It is acknowledged that by the time the impacts are notices, it will be too late to mitigate any damage. Therefore, the proponent is prepared to offset the damage if required.
- The assessment concluded that there is a moderate risk on impact to CCUS4 and the Giant Dragonfly, which requires the swamps for breeding habitat
- CRUS1 is classified as a swamp due to the vegetation communities present, as it is a drier swamp and does not support a perched watertable. Assessment concluded impacts will be low.

Groundwater

- The groundwater model took longer to construct than expected, which is the sole reason that the UEP took longer to finalise
- WC currently have a licence to discharge 365 ML/yr under their EPL and will apply for an additional licence to cover the UEP
- There is no connection between the perched watertables and the deeper aquifers

Corrimal fault

- Dam Safety Committee are not concerned about this fault for LW6, though they may be interested in it for LW7, which is closer to the reservoir (in the UEP application)

Questions from the PAC

- Cumulative impacts of subsidence – historic and the current proposal
    - The historical subsidence along this 400m section is 0.8m
    - Predicted subsidence from this longwall mining is approximately 2.1m
- What is the impact of the horizontal movement in addition to the impact of the vertical subsidence?
    - For CCUS4 the predicted subsidence is in the hundreds of mm range, not the approx. 2m
- Where is the tipping point for the swamps?
    - The risk impact assessment is based on likelihood and consequence
- Monitoring and adaptive management of the swamps?

    - Issue with adaptive management and monitoring of the swamps due to the ecological lag time response between the mining and any impacts
    - Adaptive management may not work for a single swamp, however it will provide information for the management of other swamps in the area
- Undermining of first and second order streams are generally considered to be acceptable, as they are generally ephemeral and only contribute small volumes of base flow. However, this 1st order stream is a permanent stream coming from the upland swamp CCUS4. What is the volume of water flowing from the swamp, and what is the quality of this water?
    - A very small weir has been constructed to measure the flow out of the swamp
    - The water quality is monitored in this stream at the outflow from the swamp
    - A 2nd weir further downstream has also been constructed, but above Cataract Creek, to measure flows re-entering the stream (which may be been diverted into the substrate) and WC have also installed a 2nd water quality station to monitoring the water quality further downstream
- What are the V panels referred to in a number of submissions?
    - V main panels, provide access through No. 4 shaft in the western section (Wonga west), they have approval for these panels to be mined if they wanted to

Documents tabled at meeting/to be provided: WC provided the PAC with its response to the IESC report, and undertook to provide the PAC with its response to the DSC submission.

Notes of meeting with the Office of Environment and Heritage (28 October 2014)

The purpose of the meeting is to discuss OEH residual concerns with the Modification 2 application

A summary of the topics discussed are outlined below.

- The piecemeal application process, assessing a small section in isolation
- Greatest concern is the upland swamp CCUS4, as Wollongong Coal (WC) have not demonstrated the avoidance policy for CCUS4 for this application or the UEP, as WC did for LW4 and LW5
- It is very hard to put a monetary value on ecosystem function

Swamps – and the potential impact

- the ecological outcome for the swamps when it is drained and the timeframe for the ecological impacts – change is gradual in the vegetation stands, but noticeable after a significant event (prolonged drought, fire) though this may be years after the mining has ceased
- Giant Dragonfly requires peat swamps for long periods during the larvae stage of their lifecycle (this may be up to 10 years), and they have only been found in CRUS1, CCUS4 and BCUS 4. CRUS1 and CCUS4 are going to be impacted by longwall mining under this application
- Mining will have an impact both hydrologically and ecologically on the swamps
- Groundwater monitoring will pick up changes in hydrology, before ecological monitoring may show any changes
- Measuring groundwater is the single most important element supporting the swamp – changes in groundwater will lead to other changes in vegetation
- The benefits of TARPS for swamps and the uncertainty in providing an offset for a Giant Dragonfly or a swamp:
    - Under the bio-banking policy, an additional swamp could be managed to cover for the loss
    - There is also a financial contribution option, when no 'like-for-like' offsets can be found

Performance Measures

- The performance measures in DP&E's assessment report do not cover/include hydrological triggers
- The measures in the assessment report are secondary impacts, which are hard to measure and the timeframes are large between mining and noticeable impacts
- No performance measure in the assessment report for CCUS4
- Each swamp that is undermined needs to have performance measures
- Only impact that are greater than 'minor' are to be offset; OEH is concerned as there is no definition of 'minor' in the assessment report or the draft conditions of consent, and 'minor' is unmeasurable and unenforceable. It would be easier and clearer to condition that if there is a hydrological impact, an offset for the swamp should be provided without the need to monitor for ecological changes
- OEH note that for Dendrobium the offset package for any predicted impacts on minor and above, monitor and further offsets as required. The recommended condition in relation to offsets is inconsistent with the Dendrobium condition.

Documents tabled at meeting/to be provided: NIL

Notes of meeting with the Sydney Catchment Authority (29 October 2014)

The purpose of the meeting is to discuss Sydney Catchment Authority's concerns with the Modification 2 application

A summary of the topics discussed are outlined below.

SCA's role

- SCA's role is to look after the ecological integrity of the catchment
    - Includes the quality and quantity of water in the catchment
    - Special areas are not covered in DP&E's assessment report
- Whole of the area is important, not just the swamps

Offsets

- Offsets should be provided from a negligible impact, and not just a 'minor' impact
- Can offset ecologically, but what about hydrologically and in the catchment?
- Ecological change is in the medium to longer term, the hydrological change becomes apparent in the shorter term, though there are longer term impacts
- SCA note that some of the swamps have been already undermined and are in good condition, though they are treated differently in different parts of DP&E's assessment report
- There is no long-term baseline data of outflow from the swamps – it has not be monitored
- What is the consequence of the subsidence on the swamps?
- Where is the tipping point for the swamps and water flow?
- The swamps cannot be remediated
- It is an on/off switch for the swamps, though it may only manifest when the swamps are stressed, which may be years after the mining has ceased
- TARPs only trigger monitoring and nothing else

Corrimal Fault

- Is it really a risk or not?
- SCA have different information than the WC, and SCA are concerned about the logic WC used to reach their conclusions
- Risk is in the level of confidence in the logic used
- Concerned about if the mine goes ahead and there is an impact from the fault, what happens next, further monitoring?

Cataract Reservoir

- Full 400m of LW6 under this application is within the Dam Safety Committee's notification area, the policy position is no longwall mining in the notification area

Water quality – Question from the PAC

- 1st order stream coming from the swamp CCUS4 has a permanent flow, is there a water quality issue if the swamp is undermined?
- Water quality has not been a large part of the internal discussions regarding this project.

Documents tabled at meeting/to be provided: Further submissions that were provided to DP&E will be provided to the PAC after the meeting.

Notes of meeting with the Wollongong City Council (29 October 2014)

The purpose of the meeting is to discuss Wollongong Council's concerns with the Modification 2 application

Strategic assessment

- Council would like to see the application either pulled by the proponent or start the mining on the other side of the swamp CCUS4, shorten the longwall
- Prefer to assess impacts of the mine as a whole, through the UEP, rather than an increase in the mine through a series of small modifications.

Swamps

- Council would prefer to leave the sensitive wetlands alone, instead of mining underneath them
- Subsidence has the potential to crack the swamp, which will impact on the flows and aquifers etc

Flooding

- Flooding impacts at the pit top site – works were required under approval of Mod 1 have not been completed even though the date of completion had been extended
- Adequacy of the Flood Study and question the study's methodology, it did not consider Council's blockage policy, which has been upheld in a court case
-

Other issues

- Bellambi Creek gully, runs through the pit top area – water quality issue
- Dust/noise issues – not really for this Modification
- Council is generally supportive of mines in the area, though they want to see the precautionary principles given greater consideration

Documents tabled at meeting/to be provided: Wollongong Council provided the PAC with two supplementary submissions which Council had already provided to DP&E.

Notes of meeting with the Department of Planning & Environment (3 November 2014)

The purpose of the meeting was to seek clarification and further discussion on key issues raised during meetings with other agencies and the public meeting.

Swamps

- The reason for choosing 400m length of LW6 as the proposal will impact on CCUS 4.
- Mining in the southern coalfields is likely to result in certain impact on the upland swamps due to the extent of swamps in the region (over 5000 swamps). However, the percentage of swamps that may be impacted is estimated to be low.
- Difficult to find offsets for the swamps, even though they are listed as an EEC

Site Surface

- Noise and dust conditions – no changes to the existing conditions
- Potentially changes to these conditions in the UEP assessment
- The reason for a different consent for the emplacement area with no monitoring requirements

Modification 3

- Modification 3 was not advertised. It was not required to be advertised, as it was deemed to be a minor change.

Financial bond

- DRE requires a bond as part of the mining lease. Therefore DP&E does not require a bond.
- Two cases where DP&E requested a bond
    - For quarries, which are not covered by a mining lease, DP&E requested a rehabilitation bond
    - Responsibilities of the proponent under the Biodiversity offsets/conservation bonds – to ensure rehabilitation/remediation works can be undertaken
- DRE has a bond of $5.657 M currently for Russell Vale, though this is under review and may potentially increase to $7.715M – this is for responsibilities under the Mining Act, to cover rehabilitation costs

Schedule 2 Condition 11

- Raised by a number of agencies and at the public meeting that Condition 11 of Schedule 2 would allow the Proponent to "*With the agreement of the Secretary, the Proponent may prepare a revision of or a stage if a strategy, plan or program* ***without undertaking consultation*** *with all parties nominated under the application condition in this approval."*
- The intent is that this would only be for minor reviews or changes in management plans/strategies, so that these do not have to be sent and assessed by the agencies
- Major reviews or changes to the management plans/strategies would still go to the agencies for consultation
- The Secretary's agreement is required to make the proposed changes
- DP&E agreed to amend the recommended condition to include the word "minor" before revision, for clarity of the intent of the condition

Bellambi Creek gully diversion

- This Condition is breached because the works have not been carried out as required.
- The proponent argued that it should not be responsible for these works, as the 1998 flood was due to a blocked culvert
- Modelling undertaken for the proponent, showed that the flooding would have happened regardless if the culvert was blocked or not
- The issue will be fully assessed as part of UEP assessment

Documents tabled at meeting/to be provided: 1990 Wollongong City Council consent for the emplacement area

Notes of meeting with the Proponent (18 November 2014)

The purpose of the meeting was for the Commission to outline its findings of its consideration of the Department's assessment report and associated documents and views expressed in meetings with stakeholders including the public meeting.

- Community's concern about the number of small applications being considered and approved without the expansion plan.
- The Dam Safety Committee and the Commonwealth raised no further issues of concern in relation to this application.
- The reason for the selection of 400m length for LW6
- The reasons for limiting the extraction of LW6 to 365m
    - To allow monitoring of changes to CCUS4 to provide empirical data for future assessment and formulation of adaptive management plan for the UEP
    - To allow retrieval of the longwall machine if full extraction of LW6 is not recommended or approved in the UEP
- Given the distance between LW6 and the dam wall of Cataract Reservoir, extraction of this part of LW6 is unlikely to have any impact on the dam wall.
- Other issues raised are not relevant consideration for this application.
- A new condition 5A to limit LW6 to 365m and a small amendment to recommended condition 11 by inserting the word "minor".

Documents tabled at meeting/to be provided: Nil

Appendix 2
List of Speakers

Planning Assessment Commission Meeting
Russell Vale Colliery, Modification 2, Corrimal

Date & Time: Thursday 30 October 2014, 9:30am
Place: Corrimal District Library & Community Centre, 15 Short Street, Corrimal

1. Peter Turner, National Parks Association Illawarra branch & the Northern Illawarra Sustainability Alliance
2. Ann Young
3. Graham Heath
4. Chris Williams
5. Ann Brown
6. Gavin Workman
7. Kaye Osborn
8. Kaye Osborn, Illawarra Residents for Responsible Mining Inc
9. Richard Knappett
10. Irene Tognttti, Wollongong Transport Coalition
11. Desmond Jacobs
12. Robyn Crowe
13. Jeff Brown
14. Graham Lalchere, Oatley Flora & Fauna Conservation Society Inc
15. Deidre Stuart
16. Kim Wagstaff
17. Councillor Jill Merrin, Illawarra Greens
18. Holly Creenaune, Our Land Our Water Our Future
19. Neha Madhok, Nature Conservation Council
20. Isabel McIntosh, Protect Sydney's Water Alliance
21. Anne Wagstaff
22. Melissa Haswell, Public Health Association
23. Anthony Lewis
24. Julie Sheppard, National Parks Association Macarthur branch
25. Anne O'Brien, Western Sydney Environment Network
26. Nick Karakolevski
27. Shirley Gladding
28. Vicki Colling
29. Andy Honeysett, CFMEU
30. Melina Amerasinghe
31. Caroline Graham, Rivers SOS
32. Sharyn Cullis, Georges River Environmental Alliance