



Our ref: DOC19/1091870

Senders ref: MP 09_0013

Paul Freeman
Team Leader
Resource Assessments
Planning & Assessment
E-mail: paul.freeman@planning.nsw.gov.au

Dear Mr Freeman

Subject: Russell Vale Colliery Modified Underground Expansion Project – Response To Submissions

Thank you for your email of 6 December 2019 requesting comments on the Response To Submissions report. In response, we provide the following:

Biodiversity

The comments we previously raised relating to ongoing monitoring of swamps and streams to confirm the predictions of negligible environmental consequence have been addressed. The report commits Wollongong Coal to continue subsidence monitoring, monitoring of ground water levels, outflow levels and water quality in upland swamps, visual inspections of rockbars at the base of swamps and continued monitoring of surface water levels in Cataract Creek and tributaries.

Wollongong Coal have also committed to consulting with BCD in the review and update of the relevant post-approval management plans, and we look forward to working with the company to finalise robust and reliable monitoring systems.

Aboriginal Cultural Heritage

We reiterate our previous comments dated 30 August 2019 that suggested approval conditions and that baseline recording of Aboriginal heritage sites should be completed before underground mining starts. Notwithstanding that first workings extraction rather than longwall mining is now proposed, without baseline recording it is not possible to assess whether underground mining has caused harm to Aboriginal heritage sites as previously noted. Our previous comments on the contents of the Aboriginal Heritage Management Plan also remain relevant.

We recommend that if approved, the consent conditions should address the following:

- Specify that harm to Aboriginal objects is not permitted (reflecting the applicant's prediction of 'negligible' Aboriginal heritage impacts).
- Require that an updated Aboriginal Heritage Management Plan (AHMP) is prepared before the underground mining commences. The AHMP needs to be prepared and updated in consultation with the Aboriginal community.
- Require Aboriginal community consultation that meets the requirements of the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010, which is available on our website.
- Require baseline recording of all Aboriginal heritage sites as part of the AHMP.

We also note Conclusion 4 of the Subsidence Peer Review that finds areas of '*marginally stable pillars in the Bulli Seam have the potential for increased subsidence, independent of proposed Wongawilli Seam first workings mining*'. We recommend any Aboriginal cultural heritage impacts of this identified risk are addressed in the AHMP (Hebblewhite 2019, p.17).

Water Quality & Flooding

It is understood that WCL is currently seeking approval to undertake the works as detailed in the Engeny (2018) report. However as it stands, none of the major elements of the approach have been implemented. As such the development continues to present a risk to the downstream community and environment as experienced in the August 1998 flood event, which resulted in significant downstream flooding and water quality impacts.

Should the Underground Expansion Project (UEP) be approved, it is recommended that conditions be imposed in such a way that ensures adequate measures are put in place to reduce the impacts the development has on downstream flooding and water quality. The development conditions should include the requirements of Wollongong City Council on flood risk management and the EPA on water quality for suitable stormwater and flood risk management measures that reduces off site impacts.

If you have any questions about this advice, please do not hesitate to contact Mr Calvin Houlison, Senior Conservation Planning Officer, via calvin.houlison@environment.nsw.gov.au or 4224 4179.

Yours sincerely


Michael Saxon 16/12/2019

**Director, South East Branch
Biodiversity & Conservation Division
Environment, Energy and Science**



OUT20/2539

Steve O'Donoghue
Resource Assessments
NSW Department of Planning, Industry and Environment

Stephen.ODonoghue@planning.nsw.gov.au

Dear Mr O'Donoghue

**Russell Vale Colliery Revised Underground Expansion Project (09_0013)
Response to Submissions**

I refer to your email of 4 March 2020 to the Department of Planning, Industry and Environment (DPIE) Water and the Natural Resources Access Regulator (NRAR) about the above matter.

The following recommendations are provided by DPIE Water and NRAR. Please note Crown Lands, the Department of Primary Industries (DPI) – Fisheries and DPI - Agriculture all now provide a separate response directly to you.

Prior to Approval

- The proponent must obtain the appropriate surface Water Access Licences through trade or controlled allocation prior to approval. Surface water take cannot be offset via apportionment from current groundwater entitlements, nor can the predicted surface water take be accounted for under harvestable rights.

Post Approval

- The proponent should assess and model impact to perched swamp features prior to the commencement of any mining activities to better enable development of trigger monitoring criteria for such swamps. Trigger criteria are then to be included in the updated Water Management Plan.
- The proponent should provide the updated Water Management Plan for the Russell Vale Colliery Underground Expansion Project to DPIE-Water for assessment review prior to commencement of activities if the project is approved. This should include: an updated groundwater monitoring plan, trigger action response plan, monitoring trigger criteria and timeframes for assessment of monitoring data including periodic groundwater model comparison reviews to monitoring data.

Any further referrals to DPIE – NRAR & Water can be sent by email to:
landuse.enquiries@dpi.nsw.gov.au.

Any further referrals to (a) Crown Lands; (b) DPI – Fisheries; and (c) DPI – Agriculture can be sent by email to: (a) lands.ministerials@industry.nsw.gov.au;
(b) ahp.central@dpi.nsw.gov.au; and (c) landuse.ag@dpi.nsw.gov.au respectively.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'M Isaacs', with a stylized, cursive script.

Mitchell Isaacs
Director Office of the Deputy and Strategic Relations
WaterGroup
6 April 2020



DOC19/1105322-01

Paul Freeman
Department of Planning, Industry and Environment
GPO Box 39
SYDNEY NSW 2001

Email: paul.freeman@planning.nsw.gov.au

Dear Mr Freeman

**Russell Vale Mine - Submissions Report - Revised Underground Expansion Project
(09_0013)**

The Environment Protection Authority (EPA) refers to your email of 6 December 2019 requesting comments on the submission report for the revised Preferred Project Report (PPR) for the Russell Vale mine.

Wollongong Coal Limited is seeking a project approval under the *Environmental Planning and Assessment Act 1979* (EP&A Act) to expand its underground mining operations. Wollongong Coal holds Environment Protection Licence number 12040 for the Russell Vale colliery.

The EPA provided comments on the PPR to the Department of Planning, Industry and Environment (DPE) in a letter dated 3 September 2019 (DOC19/645290). The EPA requested further justification and information about aspects of noise and air quality impact assessments.

A revised Noise Impact Assessment was completed to address EPA concerns including installation of noise barriers and source mitigation. The assessment considered changes to barrier and bund configurations. The final arrangement is predicted to result in equivalent or reduced operational noise levels at receivers to the north of the pit top. The number of residences affected by residual 1-2dB night-time noise exceedances has reduced from 27 properties to 15 properties.

The revised air assessment expanded the assessment of meteorological conditions, ambient and source data, and undertook a worst-case scenario analysis.

The EPA considers that the air and noise impact assessments now satisfactorily meet the EPA's guidelines for consideration of environmental impacts from the proposal and can be used in determination of the project.

On a separate issue, the EPA has considered information provided about reject management in Appendix 9 of the Submissions Report. The information was requested to be submitted by WaterNSW (page 78 of the report). While chemical testing of the reject material has been undertaken, the EPA found little description and analysis in the report of the method of reject emplacement underground and potential effects on groundwater. The EPA requests the proponent provide the information outlined in the Attachment to this letter.

Phone 131 555	Fax 02 4224 4110	PO Box 513	Level 3	info@epa.nsw.gov.au
Phone 02 4224 4100	TTY 131 677	WOLLONGONG	84 Crown Street	www.epa.nsw.gov.au
(from outside NSW)	ABN 43 692 285 758	NSW 2520	WOLLONGONG NSW	
			2500 AUSTRALIA	

Should the Department decide to grant approval to the modification, the EPA requests that the draft Approval document be provided to the EPA for review. The EPA wishes to ensure that proposed performance criteria in the Planning Approval may be able to apply as limits in licence conditions for the colliery.

If you have questions regarding the above, please phone Andrew Couldridge on (02) 4224 4100.

Yours sincerely

William Dove 23.12.2019

WILLIAM DOVE
Unit Head Regulation, Metropolitan Branch
Environment Protection Authority

CC: Girja Sharma, girja.sharma@waterNSW.gov.au

Attachment

EPA Comments on Coal Reject Management

As stated in the Submissions Report, the Revised Preferred Project will produce up to 200,000 tonnes of reject material per annum. The reject is to be either emplaced underground in disused workings, marketed for beneficial use or used for rehabilitation of the site.

1) Underground Emplacement of Reject

A sampling and geochemical testing program was undertaken within the existing reject emplacement area. The findings of the program were provided in Appendix 9 of the report.

The results of Acid Base Account (ABA) tests on samples of reject from the emplacement showed the reject is mostly non-acid forming (NAF) and has a high factor of safety with respect to potential acid generation.

To test leachate formation, the soil samples were extracted in water and the water tested for physical and chemical stressors, and dissolved metals. The results were compared to relevant guideline criteria for both freshwater (ANZECC, 2000 – Trigger Value for Freshwater (95% and 80% and Irrigation)) and groundwater (NEPC, 2013 – Groundwater Investigation Level – Fresh Water).

The results showed that all water samples had high pH levels (pH 9) and relatively low conductivity (85 uS/cm to 214 uS/cm).

For dissolved metals (except boron and manganese), the EPA noted that analytical method used levels of detection that were above the default levels for 95 % species protection levels in the ANZECC Guidelines. Consequently while levels were generally low, comparison could not be accurately made with the guidelines for many of the metals.

The EPA also noted that average concentrations of arsenic (0.25 mg/L) and aluminium (0.3 mg/L) were found to be above the respective default ANZECC guideline values of 0.013 mg/L and 0.055 mg/L. The elevated average value for arsenic was due to high readings in a small number of samples of sandstone taken from the emplacement. The shale/claystone samples contained arsenic below levels of detection.

In general, very little description and analysis was provided in the report of the method of reject emplacement underground and potential effect on groundwater.

Recommendation

The EPA makes the following recommendations in relation to the environmental assessment of underground reject management.

- The geochemical testing of extracted water from coal wash reject be repeated using analytical methods having limits of detection suitable for comparison to 95% default guideline values for ANZG (2018). It is recommended that individual and composited soil samples be tested.
- The results be compared with ANZECC values and Wongawilli coal seam water quality to determine whether there is likely to be impact to surface or groundwater.
- As the principal source of arsenic is from sandstone, analysis be provided of the likely amount of sandstone in the reject. The report notes that the floor of the mine will be Kembla sandstone but the roof will be coal in order to manage geotechnical and safety constraints.
- A description of the proposed underground emplacement be given including details of the possible impact of the emplacement on groundwater including:

- The underground location & whether the area is dry or will be affected by groundwater in the short or long term.
- How the reject will be emplaced: conveyed, trucked or pumped.
- The form of material to be emplaced such as fines, coarse or paste.
- Whether the reject will need to be treated for it to be emplaced underground. For example, does it need to be stabilised with cementitious material for stability or flocculants for flow if being pumped.
- Whether there is enough underground area available that is safely accessible for emplacement.
- If applicable, how the emplaced material will interact with groundwater including geochemical interactions and possible groundwater flow.
- If there is a groundwater interaction, what is the likely fate of any pollutants leaching from the emplacement.

2) Beneficial Re-use of Reject

As stated in the Submissions Report, the NSW EPA has two Resource Recovery Orders and Exemptions under the *Protection of the Environment Operations (Waste) Regulation 2014* that govern coal washery reject management and beneficial reuse. These are:

- Coal Washery Rejects Order 2014 and Coal Washery Rejects Exemption 2014; and
- Coal Washery Rejects (Coal Mine Void) Order 2014 and Coal Washery Rejects (Coal Mine Void) Exemption 2014.

The first (general) Order requires that sampling and chemical testing needs to be conducted before the material can be used for beneficial use.

The proponent undertook sampling and the results of a characterisation test is given in table 10 of Appendix 9.

The EPA reviewed the report and noted that arsenic is the only elevated element. The maximum average concentration (10.9 mg/kg) of arsenic marginally exceeds the characterisation acceptance criteria of 10 mg/kg in the Order.

The source of the high levels of arsenic is again sandstone samples taken from the existing emplacement. The report is unclear whether the sandstone is from the Kembla sandstone group or other strata which may contain different concentrations of arsenic.

Recommendation

The EPA recommends the following.

- As the principal source of arsenic is from sandstone of an unknown origin in the REA, sampling and chemical characterisation of Kembla sandstone be undertaken to determine the actual level of arsenic likely to come from reject extracted under the project. An analysis should be made of the likely amount of Kembla sandstone from the floor of the mine.
- The EPA agrees with the report's recommendation that if approval is granted, the rejects generated on site be tested in accordance with the EPA's Coal Washery Reject Order 2014 before marketing the reject material for beneficial reuse applications.



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Ref: DOC19/1068488

Paul Freeman
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Via email: Paul.Freeman@planning.nsw.gov.au

Dear Mr Murphy

RE: Heritage comments on Submissions Report for Russell Vale Colliery Underground Expansion Project.

I refer to your email dated 6 December 2019 requesting comments on the Submissions Report for the Russell Vale Colliery Underground Expansion Project submitted by Wollongong Coal. Heritage NSW provided the comments on the EIS submitted in August 2019.

The Submissions Report indicates that the Revised Preferred Project substantially reduces the risk of subsidence related impacts to surface features including the Cataract Dam, Illawarra Escarpment, the Colliery and other items of potential heritage significance. The Submission report states that the Historical Heritage Assessment is still relevant to the proposed design and will not be updated.

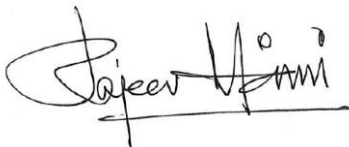
The Submissions Report provides a map that indicates the extent of works in relation to the Cataract Dam SHR curtilage. We note that a section of the existing mines lies within 1km of the reservoir and that the proposed works are significantly more proximate to the curtilage of the listed item. Heritage NSW comments during EIS stage recommended that no extraction should take place beneath or within 1km of the SHR Curtilage. We would reiterate this recommendation based on the following contentions:

- While it is noted that the proposal has been amended to “first workings” only, it is understood that for most mines it is uneconomical to operate within first workings only. Additional methods of mining (known as second workings or pillar extraction) are later incorporated into the project to remove large blocks of coal reserves from areas between first workings. Generally, after extraction the areas are allowed to collapse into the cavity formed. This collapse may have a similar affect when compared with the subsidence related to long wall mining.
- If additional methods of extraction are likely to be employed after first workings have been completed, it is recommended the extent of subsidence, that might occur in the long term and its potential impacts upon the significance of the SHR listed Cataract Dam and its curtilage, is considered at that stage. The applicant should be advised that based on the potential impact, approval may not be granted for such additional extraction and that any financial viability decisions on part of the applicant must not be made on the basis that such approval will be granted.

- Subsidence and its associated fracturing of the overlying rocks potentially cause damage to infrastructure and losses from water storages and streams. They are also associated to differential far field horizontal movements. These are particularly relevant to the Cataract Dam, significant not only for its monumental Tudor style architectural character but equally for the surrounding gardens, bushlands and public parklands.
- Any losses or impacts to the significant values associated to the reservoir, dam walls, its outbuildings, natural surroundings and other listed items in the vicinity as a consequence of the mining operations would require careful consideration and additional documentation prior to approval. This includes updated Heritage Impact Assessments, Conservation Management Plans and long-term Subsidence Monitoring Policies.
- In addition to locating the extraction area to 1km beyond the SHR curtilage, it is recommended that regular monitoring and modelling shall be undertaken by the applicant. If vibration and subsidence is detected within the SHR curtilage, extraction activity in the surrounding area must stop immediately. This should be followed by urgent rehabilitation of the area and a report submitted to Heritage NSW outlining the actions taken.
- At the EIS stage Heritage NSW requested clarification around the impact to the locally listed item 'NRE No 1 Colliery', which is an identified 'archaeological site' in the Wollongong Local Environmental Plan 2009. The RTS has not explained how it has addressed this request and states the item will not be affected. This requirement has not been satisfied. However, the item is locally listed. The Applicant should liaise directly with Wollongong Council around the item's management, where this is relevant.

If you have any questions regarding the above advice, please contact Mariyam Nizam, Senior Heritage Assessment Officer at Heritage NSW, Community Engagement, Department of Premier and Cabinet, on 88376375 or [Mariyam.Nizam@environment.nsw.gov.au](mailto:Mariam.Nizam@environment.nsw.gov.au).

Yours sincerely



Rajeev Maini
Senior Team Leader
Regional Heritage Assessments South
Heritage NSW, Community Engagement
Department of Premier and Cabinet

As Delegate of the Heritage Council of NSW
20 December 2019

Department of Planning, Industry and Environment
GPO Box 39
Sydney NSW 2001
Attn: Stephen O'Donoghue

Dear Stephen O'Donoghue

Russell Vale Colliery (Underground Expansion Project (09_0013)): Response to Submissions

I refer to the correspondence dated 17 March 2020 inviting the Resources Regulator to review the *'Wollongong Coal Limited, Russell Vale Colliery, Underground Expansion Project, Rehabilitation and Post Closure Commitments, February 2020'* for Project Russell Vale Colliery Underground Expansion Project (09_0013).

Development Details

The Russell Vale Colliery is located approximately 8 kilometres north of Wollongong, NSW.

The Russell Vale Colliery Underground Expansion Project proposes to maintain coal production at 1 million tonnes per annum and have a projected mine life of 5 years.

The revised preferred project would involve:

- first workings mining of the Wongawilli seam in the "Wonga East" area only;
- retrieving the current longwall mining equipment for sale;
- constructing and operating a coal processing plant;
- redesigning the pit top layout to reduce amenity impacts; and
- continued road haulage of coal to Port Kembla Coal Terminal for export.

Previous Advice

The Resources Regulator has previously provided the following advice:

Additional information is required to demonstrate that sustainable rehabilitation outcomes can be achieved as the result of the project.

The required additional information is as follows:

1. An updated version of the "Rehabilitation" Section included in the initial Preferred Project Report (as Section 2.1.2) to be submitted for consideration prior to Project Approval.

Environment and Rehabilitation

The Mining Act Inspectorate within the Resources Regulator has responsibility for providing strategic advice for environment issues pertaining to the proposed project in so far as they relate to or affect rehabilitation.

The Resources Regulator advises the Department of Planning, Industry and Environment – Resources Assessments that outstanding SEARs relating to rehabilitation have been adequately addressed in the *'Wollongong Coal Limited, Russell Vale Colliery, 2 Underground Expansion Project, Rehabilitation and Post Closure Commitments, February 2020'* for Project Russell Vale Colliery, dated 17 March 2020.

It should be noted that the Resources Regulator's does not provide any endorsement of the proposed rehabilitation methodologies presented in the EIS. Under the conditions of a mining authority granted under the Mining Act 1992, the Resources Regulator requires an authority holder to adopt a risk-based approach to achieving the required rehabilitation outcomes. The applicability of the controls to achieve effective and sustainable rehabilitation is to be determined based on the site specific risk assessments conducted by an authority holder. An authority holder may also be directed by the Resources Regulator to implement further risk control measures that may be required to achieve effective rehabilitation outcomes.

The Resources Regulator requests a review of the draft development consent conditions prior to finalisation and any granting of development consent.

Mine Safety

Mine Safety Operations within the Resource Regulator is responsible for ensuring that mine operators manage the risk to worker health and safety through compliance with the Work Health and Safety (Mines and Petroleum Sites) Act 2013 and the subordinate mining legislation. In particular this requires the effective management of risk associated with the principal hazards specified in the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014.

Mine Safety Operations have not identified any risk that would require further comment in relation to this matter.

If you require additional information, please contact the Resources Regulator on 1300 814 609 (Option 2, then 5), or via email at nswresourcesregulator@service-now.com.

Yours sincerely,

Catherine Lewis
Manager Compliance
Mining Act Inspectorate
Resources Regulator
NSW Department of Planning, Industry & Environment

27 March 2020

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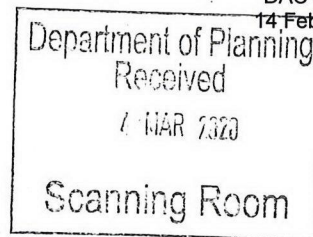
Mr Paul Freeman
NSW Department of Planning Industry & Environment
GPO Box 39
SYDNEY NSW 2001



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Our Ref:
File:
Date:

Z20/31470
DAC-910.01.006
14 February 2020



Dear Paul

RUSSELL VALE COLLIERY UNDERGROUND EXPANSION PROJECT

Council notes that Wollongong Coal has revised its mine plan based on a non-caving first workings mining system in order to reduce potential subsidence related impacts. However, Council still maintains that the project should be referred to the Independent Expert Panel for Mining in the Catchment (or alternate peer review experts) before any approval recommendation is made by the Department to the Independent Planning Commission. This is due to the fact that the Bulli and Balgownie coal seams have already been extracted above the subject Wongawilli coal seam, and there is a higher potential risk that the water losses may be greater than predicted from the mining proposal. This peer review should consider the proposal's potential impact upon the quantity and quality of water available in the catchment for drinking water supplies and for upland swamps. Further, the panel is requested to consider the cumulative impacts of the proposal and other coal mines have on drinking water supplies and the health of upland swamps in the Greater Sydney Water Catchment Special Areas.

Council acknowledges that Wollongong Coal has concurred with previous comments in relation to noise management, coal reject material, and traffic and transport issues. Accordingly, Council requests that the Department provide appropriate draft conditions of consent which reflect these requirements (in the event that the proposal is ultimately supported).

Should you have any enquiries or wish to discuss this matter further, please contact Mr Ron Zwicker, Special Projects and Planning Support Manager on telephone (02) 4227 7639 or via email rzwicker@wollongong.nsw.gov.au .

Please contact me should you require further information.

This letter is authorised by

Mark Riordan
Manager Development Assessment + Certification
Wollongong City Council
Telephone (02) 4227 7111