

23 December 2015

Planning Officer, Resource Assessments
Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Attention: Ms Genevieve Seed

Dear Ms Seed,

**GREATER RAVENSWORTH AREA TAILINGS PIPELINE MODIFICATION
RESPONSE TO SUBMISSIONS**

1 INTRODUCTION

Ravensworth Operations Pty Limited, Liddell Coal Operations Pty Limited and Mt Owen Pty Limited are seeking approval from the NSW Minister for Planning or his delegate for Modification to their respective development consents being Ravensworth Operations (PA 09_0176), Liddell Coal Operations (DA 305-11-01) and Ravensworth East (DA 52-03-99) (the Modifications). The Modifications are sought under section 75W of the *Environmental Planning and Assessment Act 1979* to provide for:

- Construction of an approximately 11 km tailings pipeline network connecting both the Ravensworth CHPP and Liddell CHPP to the West Pit Void at Ravensworth East;
- Construction of a Flocculant Plant within the vicinity of the West Pit Void at Ravensworth East, to allow flocculants to be mixed with tailings immediately prior to deposition in the emplacement area;
- The staged emplacement of tailings generated from Ravensworth Operations (approximately 12.5 Million cubic metres (Mm³) wet tailings between approximately 2017 – 2021) and Liddell Coal Operations (approximately 2 Mm³ wet tailings between approximately 2018 – 2020) within the West Pit Void at Ravensworth East; and

- Interim utilisation of the Narama Void as a central water storage facility for the Greater Ravensworth Area prior to it being backfilled as per the existing approved Ravensworth Operations final landform.

The Applications for Modification to each of the respective development consents were lodged with the Department of Planning and Environment (DP&E) on Friday 13 November 2015. The Applications were supported by the *Greater Ravensworth Area Tailings Pipeline Modification Environmental Assessment* (Modification EA) (Hansen Bailey, 2015).

The Modification EA was placed on public exhibition from Tuesday 24 November to Tuesday 8 December 2015.

This Response to Submissions document (RTS) has been prepared by Hansen Bailey Environmental Consultants (Hansen Bailey) on behalf of Glencore Coal Pty Limited (Glencore) to address the submissions received from stakeholders during the public exhibition period.

2 SUBMISSIONS RECEIVED

A total of six regulatory submissions were received by DP&E following the public exhibition of the Modification EA. No submissions from the general public, special interest groups or non-government organisations were received.

The following regulatory agencies provided a submission in relation to the Modification EA:

- NSW Environment Protection Authority (EPA);
- NSW Department of Primary Industries (DPI):
 - Water; and
 - Fisheries and Agriculture.
- NSW Office of Environment and Heritage (OEH);
- Roads and Maritime Services (RMS);
- Singleton Shire Council (SSC); and
- Muswellbrook Shire Council (MSC).

All submissions received are included in **Attachment A**.

None of the six submissions received have objected to the Applications for the Modification.

The EPA, RMS and DPI submissions have not requested any additional conditioning associated with the proposed works. DPI has noted that any of the works taking place in, on or under waterfront land, as defined in the *Water Management Act 2000*, are considered controlled activities and that while the *Water Management (General) Regulation 2011* provides an exemption from the requirement to obtain and hold approvals for controlled

activities carried out in relation to an authorisation under the *Mining Act 1992*, such activities should be conducted in accordance with DPI Water's *Guidelines for Controlled Activities*. This point has been noted.

Both SSC and MSC provided no comment in their submissions.

OEH has provided a more extensive response commenting on a number of different issues. **Section 3** below addresses all of the issues identified by the OEH for further consideration by DP&E.

3 OFFICE OF ENVIRONMENT AND HERITAGE

3.1 INTRODUCTION

Following the public exhibition of the Modification EA, OEH provided a submission to DP&E dated 8 December 2015. In their correspondence OEH provided comments in relation to Aboriginal cultural heritage and threatened biodiversity, both of which are discussed below.

3.2 ABORIGINAL CULTURAL HERITAGE ASSESSMENT

In their response OEH noted that they support the assessment findings and provided a consolidated set of recommendations (see below) for consideration.

OEH concluded by noting that they had no additional concerns with respect to Aboriginal cultural heritage and the Modifications proceeding.

Recommendations

- 1. The proponent must consult with and involve all the registered local Aboriginal parties for the project, in the ongoing management of the Aboriginal cultural heritage values. Evidence of this consultation must be collated and provided to the consent authority upon request.*
- 2. The proponent must update the existing Aboriginal Cultural Heritage Management Plan for the project area in consultation with the registered Aboriginal parties to detail procedures for managing all Aboriginal cultural heritage values associated with the project area. This process must be undertaken prior to commencing any ground disturbance or development works subject to the development.*
- 3. In the event that ground disturbance locates previously unidentified Aboriginal object/s within the project area, all works must halt in the immediate area to prevent any further impacts to the object(s). A suitably qualified archaeologist and representatives of the local Aboriginal community must be contacted to determine the nature, extent and significance of the finds. The site is to be registered in the Aboriginal Heritage Information Management System (AHIMS) and the management outcome for the site included in the information provided to AHIMS. The proponent must consult with representatives of the local Aboriginal community, and the*

archaeologist to develop an appropriate management strategy for all objects/sites which complies with the requirements of the National Parks and Wildlife Act 1974.

4. If any human remains are located, all works must halt in the immediate area to prevent any further impacts to the remains. The NSW Police are to be contacted immediately. No action is to be undertaken until the NSW Police provide written notification to the proponent. If the skeletal remains are identified as Aboriginal, the proponent must contact OEH's Environment Line on 131 555 and representatives of the local Aboriginal community. No works are to continue until OEH provides written notification to the proponent.

5. All Aboriginal sites impacted by the project must have an Aboriginal Site Impact Recording form completed and be submitted to OEH's AHIMS Register within three months of being impacted.

6. An Aboriginal Cultural Education Induction Program must be developed for the induction of all personnel and contractors involved in the construction activities on site. Records are to be kept of which staff/contractors were inducted and when for the duration of the project. The program should be developed and implemented in collaboration with the registered Aboriginal parties.

7. That the Modification may proceed without further archaeological investigation following that:

a) No impacts from the Modification should occur outside of the areas assessed for this project; and that;

b) No impacts from the Modification should occur within Sensitive Areas 1 and 2. To ensure that there are no inadvertent impacts to these areas, temporary fencing should be erected during construction at the following locations; along the northern and southern boundaries of the Modification for the length of Sensitive Area 1; and along the northern boundary of the Modification for the length of Sensitive Area 2.

8. That sites Nardell N2 (37-3-0491) and Nardell N4 (37-3-0492) should be protected by taking the following precautions:

a) Existing fencing at the sites should be visible and intact;

b) Signage should be erected at regular intervals along the fencing of these sites to clearly identify that these areas are not to be entered; and

c) The workforce should be inducted with the information that these areas are not to be entered.

Response

The works proposed as part of the Modification all fall within the boundaries of either PA 09_0176, DA 305-11-01 or DA 52-03-99. Ravensworth and Liddell Coal Operations each

have an Aboriginal Cultural Heritage Management Plan (ACHMP) which foreshadows the types of works proposed by this Modification. As such, the processes described above are already largely included in these two ACHMP's. The Mt Owen Complex is currently developing an ACHMP which will cover the Ravensworth East area of the works.

A review of the relevant documentation will occur prior to the commencement of any relevant works to ensure that the intent of Dot Points One to Six above is followed.

In regard to Dot Points Seven and Eight above, these commitments are included in the Tailings Pipeline Modification Environmental Assessment document and will be put in place once the Modification is approved.

3.3 THREATENED BIODIVERSITY ASSESSMENT

3.3.1 OEH Impact Assessment

As reflected in their submission, OEH were of the view that the Modification would require the disturbance of a 10 m corridor associated with the construction of the tailings pipelines. As a result, OEH conducted their own additional analysis of the impacts that it anticipated would occur as a result of the Modification.

Results from their analysis indicated that a 10 m corridor would result in a development footprint of 14.3 ha, including the disturbance to 2.7 ha of Central Hunter Box – Ironbark Woodland Endangered Ecological Community (EEC). As a result, OEH concluded that the Modification would result in a residual impact to vegetation and habitat for threatened species and would require an offsetting obligation. This was subsequently acknowledged by OEH to be a misunderstanding.

The following section provides additional information associated with the Modification description and impacts in order to resolve OEH's concerns.

3.3.2 Additional Clarification of Modification Description and Impacts

The Modification EA primarily involves the transportation of tailings from the Liddell CHPP and Ravensworth CHPP to the West Pit Void at Ravensworth East. This transportation of tailings will be conducted via pipelines largely located on the ground surface for the majority of the route along existing infrastructure corridors.

The pipelines will be suspended across named creeks utilising existing suspension bridges and buried under other drainage lines, roadways and railway lines. Locations for crossing will be sited to avoid as much vegetation clearing as possible.

The Modification EA Ecological Assessment (Modification EA, Appendix B) found the tailings pipeline route traverses a highly modified landscape with limited ecological value. The original character of the land which the tailings pipelines will traverse has been greatly altered as a result of historical and current land uses including former grazing and disturbance as part of approved mining operations (existing haul roads, conveyor easements, etc.).

An indicative photograph extracted from the Ecological Assessment Report is presented on **Plate 1**, depicting Derived Grassland along the existing conveyor belt where the Modification EA tailings pipeline will be situated.

The tailings pipeline branch from the Liddell CHPP to the main tailings pipeline corridor is located entirely within an approved (and offset) disturbance boundary associated with Liddell Coal Operations DA 305-11-01. The remaining portion of tailings pipeline is located along the existing approved and constructed Ravensworth East conveyor corridor.

The siting of the flocculation plant (both options) assessed in the Modification EA are within the existing approved Ravensworth East DA Boundary under DA 52-03-99. It is reiterated that only one flocculation plant will be constructed at the single preferred location. This location will be determined following the completion of the final engineering design considering site specific aspects such as geotechnical investigations, should approval for the Modification be granted.

No flora or fauna species currently listed as rare or threatened under the *Environment Protection and Biodiversity Conservation Act 1999* or *Threatened Species Conservation Act 1995* were recorded along the tailings pipeline route. Further, derived grassland habitats were deemed unlikely to support viable populations of *Diuris tricolor* given the extent of exotic grass species dominance.



Plate 1
Example of Derived Grassland along the Existing Conveyor Belt

Isolated trees and small regenerating patches of *Eucalyptus crebra* and *Eucalyptus moluccana* conforming to the Central Hunter Grey Box – Ironbark Woodland TEC was identified in the vicinity of the tailings pipeline corridor. These small patches of regrowth are unlikely to be disturbed during the laying of the pipeline, as the route will generally follow an already established easement and there will be no excavation required in the vicinity of these trees. These identified regenerating patches of woodland will be avoided when laying the tailings pipelines on the ground surface.

3.3.3 Compensatory Plantings of River Oak Casuarina

Given the limited ecological impacts and in particular no impacts to EEC proposed by the Modification, no additional ecological offset obligation was identified and therefore the issue was not discussed in the Modification EA.

There is a commitment in Section 9 of the Modification EA that if any River Oak Casuarina *cunninghamiana* subsp. *cunninghamiana* trees are removed as a result of the Modification, compensatory plantings will be undertaken along the Bowmans Creek bank.

In OEH's submission a nominated replacement ratio of 10:1 was suggested for this species. Glencore have now estimated that approximately 10 semi-mature River Oak Casuarinas may be impacted as a result of the Modification and as a result commit to the replanting of 100 individuals of this species in a location on Bowmans Creek deemed suitable by an appropriately qualified ecologist.

3.3.4 Additional Consultation with OEH

On 18 December 2015 the Modification EA Project Team had a phone discussion with Robert Gibson (Regional Biodiversity Conservation Officer, Regional Operations Group) of OEH in regard to their submission. The objective of the discussion was to provide additional information to assist in clarifying the activities associated with the Modification EA.

Subsequent to the provision of the additional information and clarification during the meeting OEH noted that they were satisfied with the Modification description and anticipated impacts. It was further acknowledged that due to the clarified scope of the Modification the need for an additional offset obligation would be deemed 'very unlikely'. See email correspondence dated 18 December 2015 from Robert Gibson in **Attachment B**.

CONCLUSION

Following the public exhibition of the Modification EA no submissions were received from the general public, special interest groups or non-government organisations. A total of six regulatory submissions were received in respect of the proposal, and none of these objected to it.

Glencore have reviewed all of the submissions received and have addressed the residual matters. This has included further consultation with OEH on 18 December 2015 to provide additional clarification which has resulted in OEH confirming its original submission was based on a misunderstanding of the extent of on-ground disturbance and that an ecological offset for EEC would be deemed 'very unlikely'.

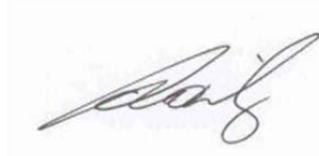
Given the relatively small scale and nature of the Modification, Ravensworth Operations Pty Limited, Liddell Coal Operations Pty Limited and Ravensworth East Pty Limited will be capable of conducting the activities proposed under this Modification in accordance with the existing conditions of PA 09_0176 (as modified), DA 305-11-01 (as modified) and DA 52-03-99 (as modified) and the respective management plans currently approved and implemented under each of these approvals, including ACHMPs. The relevant site Mining Operations Plans will be updated in consultation with the relevant agencies to incorporate this Modification, if approved.

Following the receipt of submissions over the Modification applications it remains arguable that this Modification will result in a net environmental improvement, and is in the public interest and should be approved.

Should you have any queries in relation to this letter, please do not hesitate to contact me on 02 6575 2000.

Yours faithfully

HANSEN BAILEY



James Bailey
Director

Attachments:

Attachment A Regulatory Submissions Received over the Modification Applications

Attachment B Email correspondence from OEH dated 18 December 2015

ATTACHMENT A
Regulatory Submissions Received

Jason Martin

From: genevieve.seed@planning.nsw.gov.au
Sent: Tuesday, 15 December 2015 10:31 AM
To: Jason Martin
Cc: Jessie.Evans@planning.nsw.gov.au
Subject: Greater Ravensworth Area Modification - Submissions

Hi Jason,

The Department has received six submissions from agencies for Greater Ravensworth Area Modification. The Department has previously provided comments from EPA, OEH, DPI and RMS. Singleton and Muswellbrook Councils has advised the Department that they have no comments. No public or special interest group submissions were received. The submissions are available on the Department's website. Could you please provide a response to the agencies comments, where appropriate.

Thanks

Kind regards,

Genevieve Seed

Planning Officer

Resource Assessments

NSW Department of Planning & Environment

Level 3, Room 305, 23-33 Bridge Street

Sydney NSW 2000 Australia

T +61 2 9228 6489

E genevieve.seed@planning.nsw.gov.au





Your reference: Applications 305-11-01 Mod 6; 09_0176 Mod 3; 52-03-99 Mod 7
Our reference: DOC15/502583 EF13/3223; EF13/3485; EF13/4479
Contact: Michael Howat (02) 4908 6819
Electronic correspondence to: hunter.region@epa.nsw.gov.au

Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Attention: Ms Genevieve Seed

genevieve.seed@planning.nsw.gov.au

Dear Ms Seed

**Greater Ravensworth Area Tailings Pipeline –
Liddell Colliery, Ravensworth East Mine, and Ravensworth Complex
Recommended Conditions of Consent**

Reference is made to your email to the Environment Protection Authority (EPA), dated 18 November 2015 seeking the EPA's comments on the Greater Ravensworth Area Tailing Pipeline project. This project involves three modification applications, being Liddell Colliery (305-11-01 Mod 6), Ravensworth East Mine (52-03-99 Mod 7) and Ravensworth Complex (09_0176 Mod 3).

All three modification applications relate to the one tailings transfer pipeline project. The three sites involved all currently have an Environment Protection Licence (EPL) issued by the EPA.. This response to Department of Planning and Environment applies for all three modifications as the EPA does not propose to provide separate submissions for each modification.

The EPA has reviewed the project as detailed in the report titled '*Greater Ravensworth Area Tailings Pipeline Modification – Environmental Assessment, November 2015*' (EA), prepared by Hansen Bailey for Ravensworth Operations Pty Limited, Liddell Coal Operations Pty Limited and Mt Owen Pty Limited.

The project involves the following:

- Construction of an 11 kilometre tailings pipeline network connecting the Ravensworth Coal Handling and Preparation Plant (CHPP) and the Liddell CHPP to the West Pit Void at the Ravensworth East premises;
- Construction of a flocculation plant at the Ravensworth East premises;
- Emplacement of tailings from Ravensworth Operations and Liddell Colliery at the West Pit Void at Ravensworth East; and
- Interim use of the existing Narama Void at Ravensworth Operations premises as water storage.

As noted in the EA no modifications to the currently approved production levels, life of mining, or premises boundaries at any of the three premises involved are proposed as part of the project.

Section 5.1.3 of the EA states "*All land which is the subject of the Modification application is owned by Glencore-controlled companies, AGL Macquarie or is ARTC rail corridor. Ravensworth Operations either has arrangements in place to facilitate the use of this land or is in advanced consultation for such access.*"

PO Box 488G Newcastle NSW 2300
Email: hunter.region@epa.nsw.gov.au
117 Bull Street, Newcastle West NSW 2302
Tel: (02) 4908 6800 Fax: (02) 4908 6810
ABN 43 692 285 758
www.epa.nsw.gov.au

Based on the information in the EA it appears the transfer pipeline project will interact between the three premises subject to environment protection licenses (EPL's), being EPL 2652, EPL 10860, and EPL 2094. The EA notes the infrastructure associated with the tailing transfer pipeline will be managed by way of a formal agreement between the parties involved in the Greater Ravensworth Area.

Given the nature of works associated with the project it is not anticipated that the construction or the operation of the tailings transfer pipeline will require any additional conditions or requirements above current licence conditions on EPL's 10860, 2094 and 2652. The EPA does not have any recommended conditions of approval for this project. The EPA will continue to regulate environmental impacts in accordance with existing EPL conditions.

If you require any further information regarding this matter please contact Michael Howat on 4908 6819.

Yours sincerely



- 8 DEC 2015

MARK HARTWELL
Head Regional Operations Unit – Hunter
Environment Protection Authority



Department of Primary Industries

OUT15/35151

Ms Genevieve MacDonald-Seed
Resource Assessments
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Genevieve.Macdonald-Seed@planning.nsw.gov.au

Dear Ms MacDonald-Seed,

Greater Ravensworth Tailings Pipeline Response to exhibition of Environmental Assessment

I refer to your email dated 18 November 2015 requesting advice from the Department of Primary Industries (DPI) in respect to the above matter.

Comment has been sought from DPI Water, Fisheries, Agriculture & Lands. Any further referrals to DPI can be sent by email to landuse.enquiries@dpi.nsw.gov.au. DPI Fisheries and Agriculture have advised no issues with the project. Comment by DPI Water is provided below.

Comment by DPI Water

DPI Water has reviewed the Environmental Assessment for the proposed Greater Ravensworth Area Tailings Pipeline Modifications and provides the following comments for consideration in assessment of the proposal.

Works on waterfront land

All works taking place in, on or under waterfront land, as defined in the Water Management Act 2000, are considered controlled activities. While the *Water Management (General) Regulation 2011* provides an exemption from the requirement to obtain and hold approvals for controlled activities carried out in relation to an authorisation under the *Mining Act 1992*, such activities should be conducted in accordance with DPI Water's Guidelines for Controlled Activities, available at www.water.nsw.gov.au/water-licensing/approvals/controlled-activity.

Should you require further information please contact Rohan Macdonald, Water Regulation Officer on 4904 2642.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'M Isaacs'.

Mitchell Isaacs
Director, Planning Policy & Assessment Advice
11/12/2015



Ms Genevieve Seed
Planning Officer, Resource Assessments
Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Dear Ms Seed

RE: GREATER RAVENSWORTH AREA TAILINGS PIPELINE MODIFICATION ENVIRONMENTAL ASSESSMENT

I refer to your email dated 18 November 2015 seeking comments on the Environmental Assessment (EA) for the Greater Ravensworth Area Tailings Pipeline. The Office of Environment and Heritage (OEH) understands that project occurs on three separate projects: Ravensworth East Mine (DA 53-03-99 MOD 7), Ravensworth Operations Project (MP 09_0176 MOD 3), and Liddell Mine (DA 305-11-01 MOD 6).

The project is for the construction of 11 kilometres of tailings pipeline to connect the Ravensworth Complex and Liddell Colliery coal handing and preparation plants, with the West Pit Void at Ravensworth East. It includes the construction of a flocculent plant near the West Pit Void, and interim storage of mine water for the Greater Ravensworth Area in the Narama Mine void.

OEH has reviewed the EA for this project in relation to Aboriginal cultural heritage and threatened biodiversity. The EA included sufficient detail on Aboriginal cultural heritage matters but did include a complete assessment of impacts on threatened biodiversity, specifically by omitting any reference to biodiversity offsetting policy and offsetting requirements. OEH has therefore assessed this proposal using the 'OEH principles for the use of biodiversity offsets in NSW' which was in effect when the original consents or subsequent modifications, or both, were issued. OEH's assessment is that this project will require a biodiversity offset. Further details and recommended conditions of approval are provided in **Attachment 1**.

If you require any further information regarding this matter, please contact Robert Gibson, Regional Biodiversity Conservation Officer, on 4927 3154.

Yours sincerely



8 DEC 2015

RICHARD BATH
Senior Team Leader Planning, Hunter Central Coast Region
Regional Operations

Enclosure: Attachment 1

ATTACHMENT 1: REVIEW OF THE ENVIRONMENTAL ASSESSMENT FOR THE GREATER RAVENSWORTH AREA TAILING PIPELINE MODIFICATION (DA 53-03-99 MOD 7, MP 09 0176 MOD 3 & DA 305-11-01 MOD 6) WITH RECOMMENDED CONDITIONS OF APPROVAL

OEH has undertaken a review of the report 'Greater Ravensworth Area Tailings Pipeline Modification Environmental Assessment for Glencore Coal Pty Limited, November 2015', prepared by Hansen Bailey Environmental Consultants. The review of the EA was in relation to possible impacts of the proposed development on Aboriginal cultural heritage and threatened biodiversity. OEH's comments and recommended conditions of consent are provided below:

ABORIGINAL CULTURAL HERITAGE ASSESSMENT

OEH has reviewed the 'Aboriginal Due Diligence Assessment, Greater Ravensworth Tailings Pipeline, Singleton Local Government Area, November 2015, prepared by OzArk Environmental & Heritage Management Pty Ltd, prepared for Ravensworth Operations (Glencore)'. This review was undertaken with respect to Aboriginal cultural heritage that may be impacted by the proposed development modifications to; Ravensworth Operations (PA 09-0176), Liddell Coal Operations (DA 305-11-01) and Ravensworth East (DA 52-03-99) planning approvals. OEH makes the following comments and recommendations.

OEH notes that a field inspection of the Study Area took place on 9 July 2015 by an archaeologist from OzArk. No new sites of Aboriginal heritage were recorded and two areas of archaeological sensitivity were identified. OEH further notes Section 2 of the Study Area was assessed at a desktop level only.

OEH supports the report's recommendations, which are included with the standard recommended conditions of approval for Aboriginal cultural heritage (see below). OEH further supports the recommendation in the EA that should unexpected finds occur then the current Aboriginal Cultural Heritage Management Plan is to be followed. OEH has no additional concerns with respect to Aboriginal cultural heritage and the development modifications proceeding.

Recommended Conditions of Approval for Aboriginal Cultural Heritage:

1. The proponent must consult with and involve all the registered local Aboriginal parties for the project, in the ongoing management of the Aboriginal cultural heritage values. Evidence of this consultation must be collated and provided to the consent authority upon request.
2. The proponent must update the existing Aboriginal Cultural Heritage Management Plan for the project area in consultation with the registered Aboriginal parties to detail procedures for managing all Aboriginal cultural heritage values associated with the project area. This process must be undertaken prior to commencing any ground disturbance or development works subject to the development.
3. In the event that ground disturbance locates previously unidentified Aboriginal object/s within the project area, all works must halt in the immediate area to prevent any further impacts to the object(s). A suitably qualified archaeologist and representatives of the local Aboriginal community must be contacted to determine the nature, extent and significance of the finds. The site is to be registered in the Aboriginal Heritage Information Management System (AHIMS) and the management outcome for the site included in the information provided to AHIMS. The proponent must consult with representatives of the local Aboriginal community, and the archaeologist to develop an appropriate management strategy for all objects/sites which complies with the requirements of the *National Parks and Wildlife Act 1974*.
4. If any human remains are located, all works must halt in the immediate area to prevent any further impacts to the remains. The NSW Police are to be contacted immediately. No action is to be undertaken until the NSW Police provide written notification to the proponent. If the skeletal remains are identified as Aboriginal, the proponent must contact OEH's Environment Line on 131 555 and representatives of the local Aboriginal community. No works are to continue until OEH provides written notification to the proponent.
5. All Aboriginal sites impacted by the project must have an Aboriginal Site Impact Recording form completed and be submitted to OEH's AHIMS Register within three months of being impacted.
6. An Aboriginal Cultural Education Induction Program must be developed for the induction of all personnel and contractors involved in the construction activities on site. Records are to be kept of which

staff/contractors were inducted and when for the duration of the project. The program should be developed and implemented in collaboration with the registered Aboriginal parties.

7. That the Modification may proceed without further archaeological investigation following that:
 - a) No impacts from the Modification should occur outside of the areas assessed for this project; and that;
 - b) No impacts from the Modification should occur within Sensitive Areas 1 and 2. To ensure that there are no inadvertent impacts to these areas, temporary fencing should be erected during construction at the following locations; along the northern and southern boundaries of the Modification for the length of Sensitive Area 1; and along the northern boundary of the Modification for the length of Sensitive Area 2.
8. That sites Nardell N2 (37-3-0491) and Nardell N4 (37-3-0492) should be protected by taking the following precautions:
 - a) Existing fencing at the sites should be visible and intact;
 - b) Signage should be erected at regular intervals along the fencing of these sites to clearly identify that these areas are not to be entered; and
 - c) The workforce should be inducted with the information that these areas are not to be entered.

THREATENED BIODIVERSITY ASSESSMENT

OEH has reviewed the EA in relation likely impacts on threatened biodiversity by this project, particularly the flora and fauna assessment which were presented in Appendix B of the EA (Forest Fauna Surveys Pty Ltd & Eastcoast Flora Survey, 2015). It is acknowledged that the development footprint for the proposed pipeline and flocculation plant is small. OEH estimates that this project will clear about 14 hectares (ha) of vegetation, including some areas of remnant woody vegetation, and involve some soil disturbance.

The EA was primarily based on a site inspection undertaken on 4 August 2015, consideration of previous environmental reports for the area, and running the seven-part assessment of significance (DEC, 2007) on available data. From this the EA recommended mitigation measures to ensure that the pipeline does not form a barrier to fauna in key areas both during construction and during operation. The site inspection identified areas of endangered ecological community (EEC) vegetation and threatened species habitat, however, the EA found the impact on threatened biodiversity would not be significant and thus recommended no biodiversity offsets. There was no discussion of biodiversity offsetting policy nor the offer of any offsets despite this being part of previous consents for the three component projects (see Table 1, below).

Table 1. Component project dates of consent and use of biodiversity offsetting policy.

Project	DA	Consent Granted	Biodiversity Offset Policy applied to project, including previous MODs
Ravensworth East Mine	DA 53-03-99	2 July 2000	13 offsetting principles applied to (withdrawn) MOD 5
Ravensworth Operations Project	MP 09-0176	11 Feb 2011	13 Biodiversity Offsetting Principles applied to initial consent
Liddell Mine	DA 305-11-01	20 Nov 2002	13 Biodiversity Offsetting Principles applied to MOD 5.

For consistency with previous consents for this proposal, OEH considered the current modification application in light of the 'OEH principles for the use of biodiversity offsets in NSW' (OEH, 2014a), including running a BioBanking Credit Calculator assessment (OEH, 2014b) to quantify any likely offsetting obligation. These are discussed further below.

Potential impact on threatened biodiversity

The EA contained few details on local threatened flora, fauna, populations or vegetation communities. However, some additional details were provided by Eastcoast Flora Survey (Dr Stephen Bell, pers. comm., 30 November 2015). A desk top analysis was conducted of available spatial data using Arc GIS using a 10

metre buffer width of disturbance for the pipeline. This generated a development footprint of about 14.3 ha from which mapped vegetation layers (Ravensworth East to Ravensworth Coal Handling and Processing Plant (CHPP) – provided by Eastcoast Flora, and Peake (2006) for the pipeline branch to the Liddell CHPP) were clipped to 14.3 ha pipeline disturbance area polygon. The results are shown in Table 2 (below). The proposed flocculation plant would be constructed in derived native grassland which does not include any vegetation communities in the impact area that could be considered to be EECs, and so was not considered further for this part of the assessment.

Table 2. Mapped vegetation communities within 5 metres of the proposed pipeline.

Vegetation Community (and PCT)	Area Within Pipeline Disturbance Area (ha)	BioBanking Ecosystem Credits
Central Hunter Box – Ironbark Woodland (EEC)*	1.6	124
Central Hunter Ironbark – Spotted Gum – Grey Box Forest (EEC)*	0.8	78
Derived Grassland	6.0	358
Disturbed Ground (non-native vegetation)	3.7	0
Planted Vegetation (non-native vegetation)	0.2	0
Central Hunter Box - Ironbark Woodland - Regrowth (EEC)	0.3	
Riparian River Oak Forest (HU714) GW	0.03	0
Riparian Swamp Oak Forest	0.11	0
TOTAL	12.74	560

* from Peake (2006) mapping, all else from Eastcoast Flora Survey.

The pipeline area includes about 2.7 ha of EEC vegetation. This comprises about 1.9 ha of Central Hunter Grey Box – Ironbark Woodland in the New South Wales North Coast and Sydney Basins Bioregions EEC vegetation and about 0.8 ha of Central Hunter Ironbark – Spotted Gum – Grey Box Forest in the New South Wales North Coast and Sydney Basins Bioregions EEC.

The EA (Table 3 in Appendix B) considered impacts of the proposed development on habitat for 16 locally-recorded or potentially-occurring threatened fauna species. Of these the proposed development appears likely to directly impact on ten of them: Spotted Harrier (*Circus assimilis*), Little Eagle (*Hieraaetus morphnoides*), Eastern Grass Owl (*Tyto longimembris*), Speckled Warbler (*Chthonicola sagittata*), Grey-crowned Babbler (*Pomatostomus temporalis temporalis*), Spotted-tailed Quoll (*Dasyurus maculatus*), Grey-headed Flying-fox (*Pteropus poliocephalus*), Eastern Freetail-bat (*Mormopterus norfolkensis*), Eastern Bentwing-bat (*Miniopterus schreibersii oceansis*), and Greater Broad-nosed Bat (*Scoteanax rueppellii*). The site inspection occurred in August when the Vulnerable Pine Donkey Orchid (*Diuris tricolor*) is not flowering. While the survey would not have been able to detect plants of this species, based on previous studies for the area it appears that this orchid is not present here.

The project therefore appears to have an offsetting obligation based on approximately 2.7 ha of EEC vegetation in the development footprint and vegetation that provides habitat for at least ten threatened fauna species.

The Statement of Commitments in the EA includes a commitment to replace any River Oak cleared by this project. OEH can see the benefit of this strategy, particularly given knowledge of how drainage lines form movement corridors for threatened fauna, particularly the Spotted-tailed Quoll. OEH recommends that any replanting is done on a known ratio. Ideally any such replanting is done to adjacent to other revegetation projects to increase the effectiveness of all such works.

BioBanking Assessment

In order to inform the size and nature of any biodiversity offset required for this project OEH ran the BioBanking Credit calculator (version 4.0) on available data. No vegetation quadrats were conducted for this project, so assumptions were made that ten site value scores for woody remnant vegetation zones were within the benchmark range, and that for derived native grasslands that site value scores for woody components were primarily below benchmark values. The assessment generated 560 ecosystem credits to be retired, but no threatened species credits (shown in Table 2, above).

Biodiversity Offset Obligation

This project has a biodiversity offsetting requirement as per the biodiversity offsets policy in place for earlier consents issued for each of the three component projects. Commensurate with the scale of the proposed development this offset obligation is not large. The biodiversity offsetting package would need to be prepared in accordance with OEH's 13 biodiversity offsetting principles (OEH, 2014b).

OEH considers that this project may be approved provided it includes a biodiversity offsetting package. Recommended conditions for approval are provided below and include the provision of a 10:1 replacement ratio for any River Oaks cleared. The EA proposed the replacement of River Oaks without specify a quantum.

Recommended Conditions of Approval for Threatened Biodiversity:

1. That the proponent provide a biodiversity offset package that meets the requirements of the 'OEH principles for the use of biodiversity offsets in NSW' (OEH, 2014a); and
2. That the proponent plants ten River Oak (*Casuarina cunninghamiana* subsp. *cunninghamiana*) trees along the bank of Bowmans Creek for each River Oak plant removed during construction of the tailings pipeline.

References:

DEC (2007) *Threatened species assessment guidelines: The assessment of significance*. NSW Department of Environment and Conservation, Sydney. www.environment.nsw.gov.au/resources/threatenedspecies/tsaguide07393.pdf

Forest Fauna Surveys Pty Ltd & Eastcoast Flora Survey (2015) *Ravensworth Operations: Ecological Assessment Tailings Pipeline: Ravensworth Operations to Mt Owen Complex. Report to Ravensworth Operations Pty Limited. 10 November 2015*. Forest Fauna Surveys Pty Ltd & Eastcoast Flora Survey, Adamstown Heights & Kotara. http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7393

OEH (2014a) *OEH principles for the use of biodiversity offsets in NSW*. 8 September 2014. NSW Office of Environment and Heritage, Sydney. www.environment.nsw.gov.au/biodivoffsets/oehoffsetprincip.htm

OEH (2014b) *BioBanking Assessment Tool*. 9 December 2014. NSW Office of Environment and Heritage, Sydney. www.environment.nsw.gov.au/biobanking/tools.htm

Peake, T.C. (2006) *The Vegetation of the central Hunter Valley, New South Wales. A report on the findings of the Hunter Remnant Vegetation Project*. Hunter-Central Rivers Catchment Management Authority, Paterson

OEH – DECEMBER 2015



9 December 2015

SF2012/012709
CR2015/005554
DC

NSW Department of Planning & Environment
Resource Assessments
GPO Box 39
SYDNEY NSW 2001

Dear Genevieve Seed,

NEW ENGLAND HIGHWAY (A15): PROPOSED MODIFICATIONS TO LIDDELL COLLIERY (305-11-01 MOD 6), RAVENSWORTH OPERATIONS (09_0176 MOD 3) AND RAVENSWORTH EAST MINE (52-03-99 MOD 7) GREATER RAVENSWORTH AREA TAILINGS PIPELINE, RAVENSWORTH

Reference is made to your email dated 18 November 2015, regarding the abovementioned Section 75W modifications referred to Roads and Maritime Services (Roads and Maritime) for comment.

Roads and Maritime understands the proposed modification involves:

- constructing approximately 11 kilometres of tailings pipeline connecting both the Ravensworth Complex and Liddell Colliery Coal Handling and Preparation Plants to the West Pit Void Ravensworth East;
- constructing a flocculant plant near the West Pit Void at Ravensworth East.
- staged emplacement of tailings generated from Ravensworth and Liddell within the Ravensworth East – West Pit Void; and
- interim utilisation of the Narama Void as a central water storage facility for the Greater Ravensworth Area.

Roads and Maritime Response

Roads and Maritime has reviewed the information provided and raises no objection to the proposed modification as it is considered there will be no significant impact on the nearby classified (State) road network.

On the Ministers determination of this matter, please forward a copy of the Project approval to Roads and Maritime for record and / or action purposes. Should you require further information please contact David Collaguazo 4924 0334 or by email at development.hunter@rms.nsw.gov.au

Yours sincerely,



Kellee McGilvray
Manager Land Use Assessment
Hunter Region

Jason Martin

From: genevieve.seed@planning.nsw.gov.au
Sent: Thursday, 10 December 2015 8:54 AM
To: Jason Martin
Subject: FW: Greater Ravensworth Area Tailings Pipeline Modification

Hi Jason

Please see response from Muswellbrook Council.

Kind regards,

Gen

From: Trina Holmes [mailto:Trina.Holmes@muswellbrook.nsw.gov.au]
Sent: Wednesday, 9 December 2015 5:09 PM
To: Gen Seed
Subject: RE: Greater Ravensworth Area Tailings Pipeline Modification

Hi Genevieve,

Please note that Muswellbrook Shire Council will not be preparing a submission.

Regards

Trina Holmes
Senior Project Officer - Improvement

Phone: 02 6549 3788
Mobile: 0407 759 520



www.muswellbrook.nsw.gov.au

From: genevieve.seed@planning.nsw.gov.au [mailto:genevieve.seed@planning.nsw.gov.au]
Sent: Wednesday, 9 December 2015 1:22 PM
To: Records
Subject: FW: Greater Ravensworth Area Tailings Pipeline Modification

Dear all

The exhibition for the Greater Ravensworth Tailings Pipeline finished yesterday (8 December 2015).

We have not yet received a submission from your agency.

Could you please advise if you intend to lodge a submission for this application at your earliest convenience.

Kind regards,

Gen

Genevieve Seed

Planning Officer

Resource Assessments

NSW Department of Planning & Environment

Level 3, Room 305, 23-33 Bridge Street

Sydney NSW 2000 Australia

T +61 2 9228 6489

E genevieve.seed@planning.nsw.gov.au



**Planning &
Environment**

From: Gen Seed

Sent: Wednesday, 18 November 2015 9:40 AM

To: development.hunter@rms.nsw.gov.au; Planning Matters Mailbox; Karen Marler; EPA RSD Hunter Region Mailbox; adrian.delany@industry.nsw.gov.au; Landuse.enquiries@dpi.nsw.gov.au; water.referrals@dpi.nsw.gov.au; ruth.burton@dpi.nsw.gov.au; admin.hunter@lls.nsw.gov.au; Wayne Jones

Cc: Jessie Evans

Subject: Greater Ravensworth Area Tailings Pipeline Modification

Greater Ravensworth Area Tailings Pipeline

Three modification applications have been submitted to the Department for the Greater Ravensworth Area Tailings Pipeline. The applications propose modifications to the Liddell Colliery (305-11-01 MOD 6), Ravenworth Complex (09_0176 MOD 3) and the Ravensworth East Mine (52-03-99 MOD 7). These sites are located in the Singleton and Muswellbrook local government areas.

The proposal involves:

- constructing approximately 11 kilometres of tailings pipeline connecting both the Ravensworth Complex and Liddell Colliery Coal Handling and Preparation Plants to the West Pit Void Ravensworth East;
- constructing a flocculant plant near the West Pit Void at Ravensworth East.
- staged emplacement of tailings generated from Ravensworth and Liddell within the Ravensworth East – West Pit Void; and
- interim utilisation of the Narama Void as a central water storage facility for the Greater Ravensworth Area.

The Environmental Assessment (EA) will be on public exhibition from **Tuesday 24 November** until **Tuesday 8 December 2015**. These documents may be accessed from the Department's website (www.majorprojects.planning.nsw.gov.au).

You are invited to comment on the proposed modification and include advice on recommended conditions of consent by **Tuesday 8 December 2015**.

If you have any enquiries about this matter, please contact me.

Yours sincerely

Genevieve Seed

Planning Officer

Resource Assessments

NSW Department of Planning & Environment

Level 3, Room 305, 23-33 Bridge Street

Sydney NSW 2000 Australia

T +61 2 9228 6489

E genevieve.seed@planning.nsw.gov.au



Planning &
Environment

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ATTACHMENT B
Email Correspondence from OEH

Jason Martin

From: Robert Gibson <Robert.Gibson@environment.nsw.gov.au>
Sent: Friday, 18 December 2015 4:20 PM
To: Jason Martin
Subject: RE: OEH's submission to the proposed GRA Tailings Pipeline Modification EA

Dear Jason,

Thank you for the opportunity to participate in a discussion this afternoon with Glencore and Hansen Bailey about OEH's submission to the Greater Ravensworth Area Tailings Pipeline Modification Environmental Assessment. OEH's submission was provided in a letter dated 8 December 2015 to Department of Planning and Environment (DOC15/470480-2).

OEH's response to this project in relation to the likely need for a biodiversity offset for this project was based on a misunderstanding of the extent of on-ground disturbance and did not fully take into account existing consents that already allow for the clearing of native vegetation. OEH now understands that the proposal involves the laying of up to 3 pipes largely on the ground rather than being buried (with some ground disturbance in relation to road or railway crossings), and that the exact location of these pipes can be varied in order to avoid clearing remnant native woody vegetation. Therefore, OEH wishes to amend its advice to the Department of Planning and Environment by acknowledging that a biodiversity offset for this project is now very unlikely to be required.

OEH's recommended condition of consent for offsetting the clearance of any mature River Oak trees for this project are offset by planting 10 trees for every one cleared in the Bowmans Creek catchment still stands.

If you have any questions about this then please call me on 4927 3154.

Kind regards,

Robert

Robert Gibson
Regional Biodiversity Conservation Officer
Regional Operations Group
Office of Environment and Heritage
Locked Bag 1002 Dangar NSW 2309
(Level 4/26 Honeysuckle Drive Newcastle)
T: 4927 3154
W: www.environment.nsw.gov.au

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