

## RAVENSWORTH OPERATIONS PROJECT

### Revised Final Landform Modification (MP 09\_0176 MOD 2)

#### 1 BACKGROUND

Ravensworth Operations Pty Limited (Ravensworth), a wholly owned subsidiary of Glencore Coal Pty Ltd, operates the Ravensworth mine complex, located about 15 kilometres (km) north-west of Singleton in the Upper Hunter Valley (see Figure 1).



Figure 1: Location of the Ravensworth Mine Complex

The Ravensworth mine complex includes both open cut and underground coal mining operations. These activities have occurred on the site for over 60 years, with underground operations commencing in the 1950s, and open cut operations commencing in the 1970s.

Open cut mining and surface activities, known as the Ravensworth Operations Project, are regulated by a 2011 Ministerial approval (MP 09\_0176). Underground mining operations are regulated by a 1996 Ministerial consent (DA 104/96).

Under these approvals, Ravensworth is allowed to extract up to 21 million tonnes (Mt) of run-of-mine (ROM) coal a year from the Ravensworth mine complex, including up to 16 Mt from the open cut operations and up to 7 Mt from the underground operations<sup>1</sup>. Extracted coal is transported to a coal crushing plant prior to being conveyed to neighbouring power generation facilities, or in the case of export coal being conveyed to the Ravensworth Coal Handling and Preparation Plant (CHPP) for further processing prior to being railed to the Port of Newcastle.

Mining at the Ravensworth complex has significantly altered the natural landscape of the site. The area surrounding the site has also been transformed by coal mining and other industrial land uses (see Figure 2).

Despite the dominant presence of mining in the area, there are still a number of privately-owned properties located to the east and south-east of the Ravensworth complex, with the majority located in the Camberwell Village, approximately 2 km east of the approved operations boundary (see Figure 2). There are no residences located immediately to west of the site.

## **2 PROPOSED MODIFICATION**

Since the approval of the Ravensworth Operations Project in 2011, Ravensworth has reviewed the approved final landform design for the complex and has identified areas where the design could be improved.

To this end, Ravensworth proposes to replace the 'flat top' design of the overburden emplacement areas (OEAs) by using 'micro relief' to achieve an undulating and more natural looking landscape, consistent with the surrounding topography.

Detailed overburden emplacement analysis completed by Ravensworth indicates that the only feasible way to achieve this is by increasing the maximum height of the emplacement areas in some locations, and decreasing it in other locations (see Figure 3 and 4).

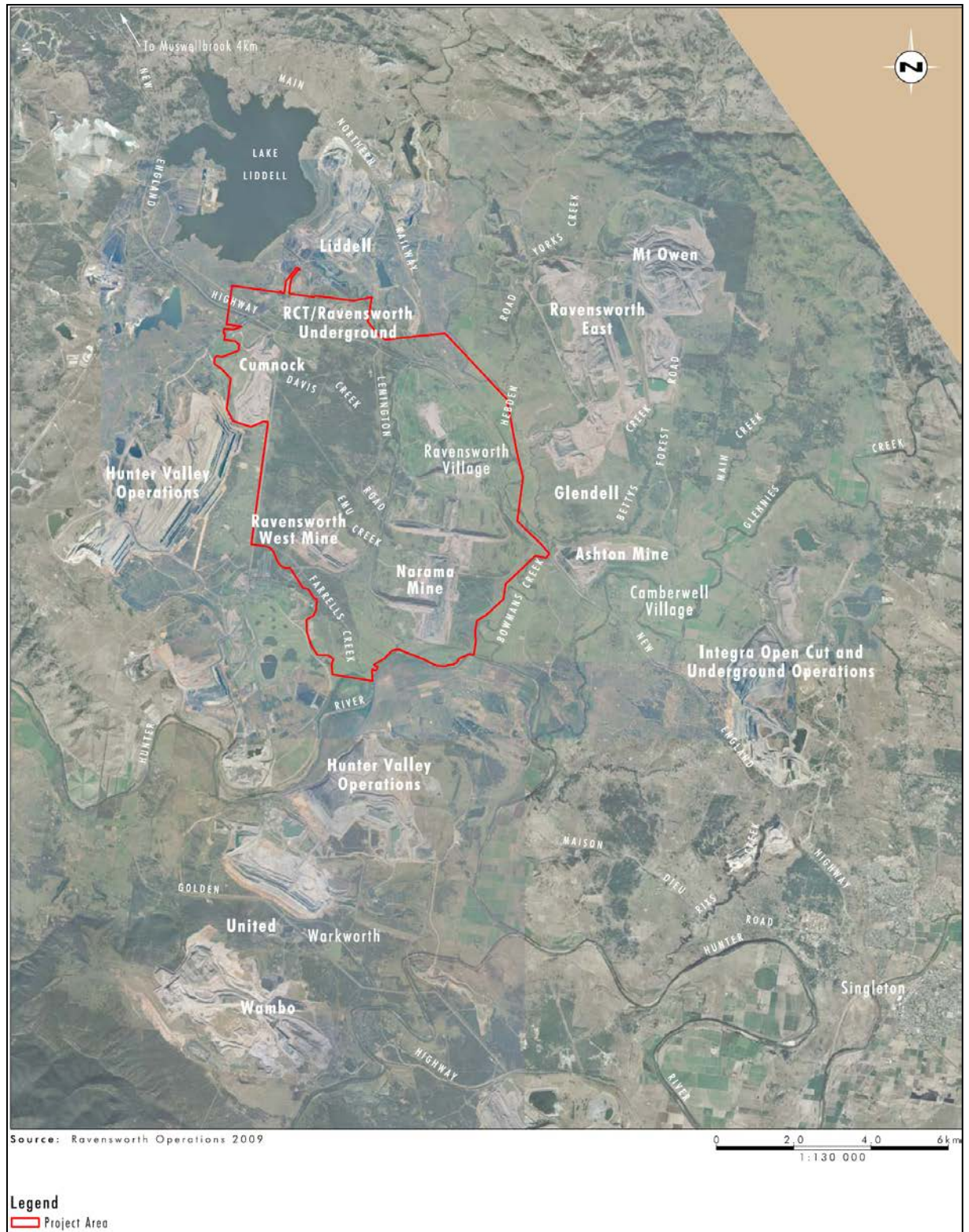
Consequently, under the proposed modification Ravensworth has requested approval to increase the maximum height of the eastern and western emplacement areas by 30 metres (m). The eastern OEA would increase from 160 m Reduced Level (RL) to 190 m RL and the western OEA would increase from 200 m RL to 230 m RL.

This proposal would not result in any other material changes to the Ravensworth Operations Project. Mining would continue to be undertaken in accordance with the approved mining methods and mine plans, and there would be no change to the approved disturbance areas, or the amount of overburden handled at the complex.

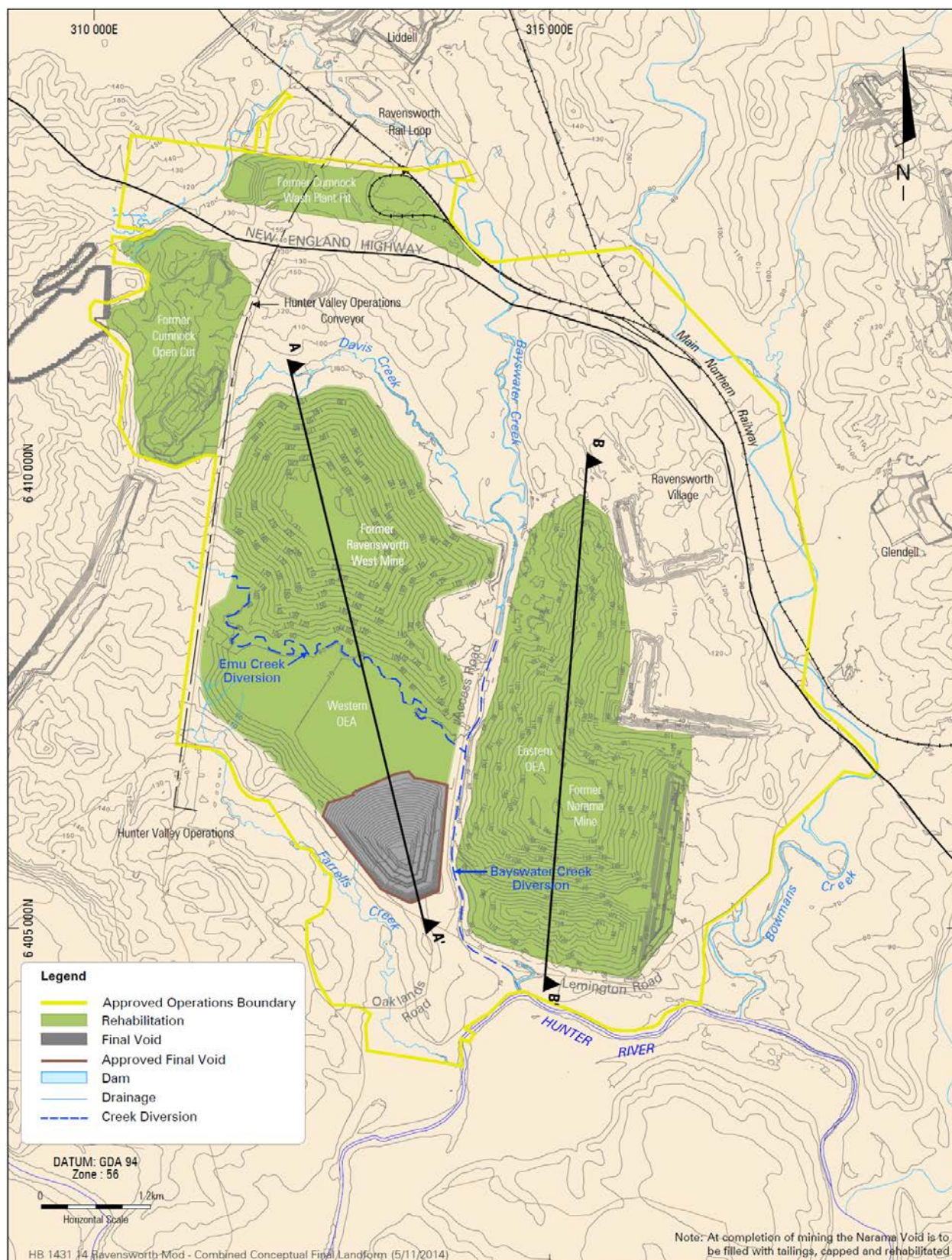
The proposed modification is outlined in Ravensworth's supporting Environmental Assessment (EA), attached in Appendix C.

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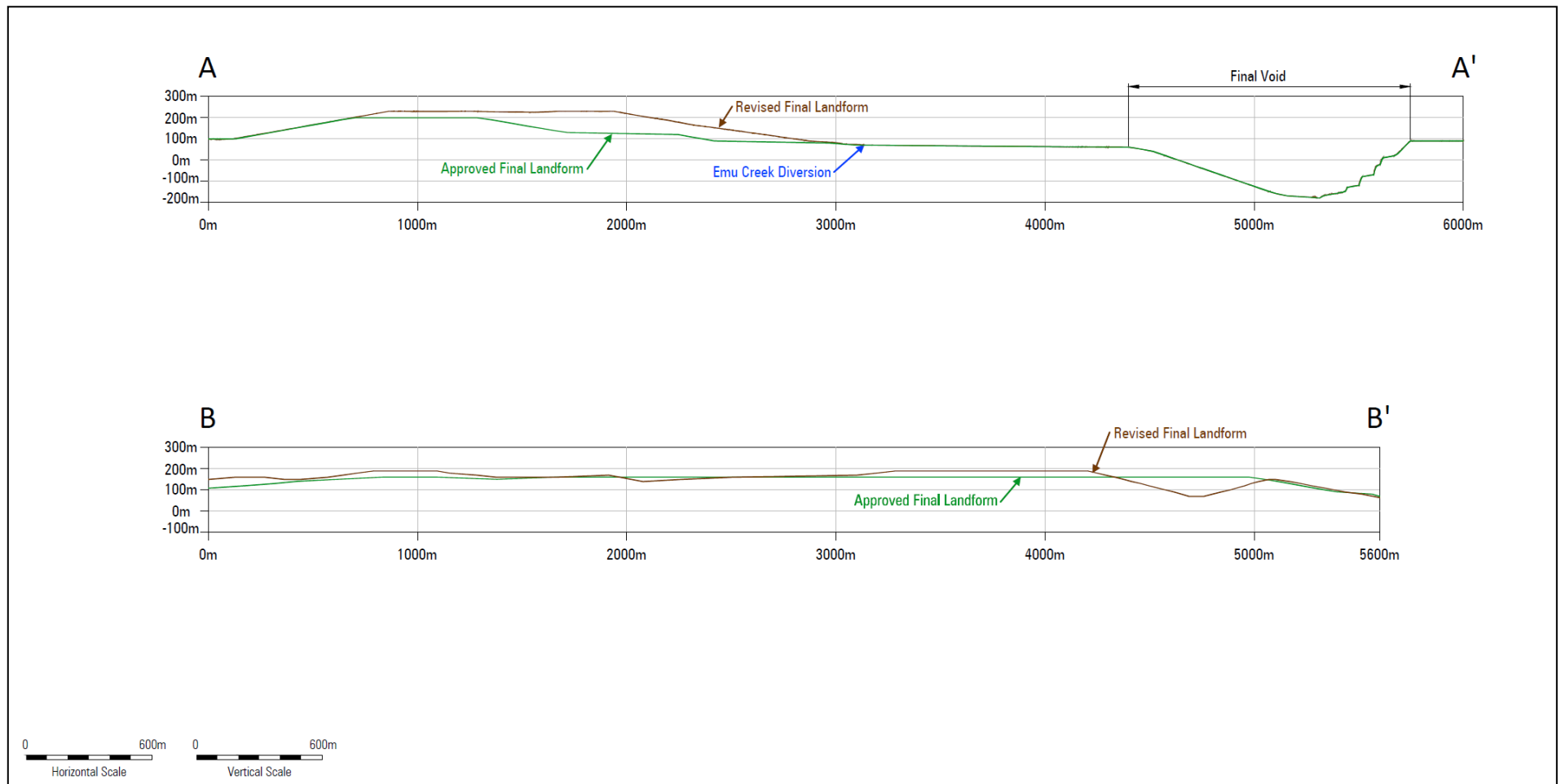
<sup>1</sup> The open cut and underground operations must be managed to keep total extraction below the 21 Mt mine complex maximum.



**Figure 2: Ravensworth Mine Complex and Surrounds**



**Figure 3: Proposed Final Landform**



**Figure 4: Proposed Final Landform (sections)**

### 3 STATUTORY CONTEXT

Under Schedule 6A of the *Environmental Planning and Assessment Act 1979* (EP&A Act), the Ravensworth Operations Project (MP 09\_0176) is classified as a “transitional Part 3A project” and can be modified under the former Section 75W of the EP&A Act.

The Department is satisfied that the proposal should be characterised as a modification to the existing approval as it involves a minor change to the design of the final landform for the complex, which can be achieved with minimal environmental impact (see Section 5).

The Minister for Planning is the approval authority for the application. However, the Executive Director Resource Assessments may determine the application under the Minister’s delegation of 10 November 2014, as Ravensworth has not made any reportable political donations, Singleton Shire Council does not object to the proposal, and there were no public objections.

### 4 CONSULTATION

The Department made the application publically available on its website on 13 October 2014 and referred the application to key government agencies.

Four agencies commented on the proposal, including Singleton Shire Council, the Environment Protection Authority (EPA), and the NSW Office of Water (NOW) and the Division of Resources and Energy (DRE) within the Department of Trade and Investment, Regional Infrastructure and Services.

None of the agencies raised objections, and Singleton Shire Council and the EPA raised no concerns about the proposal. NOW gave general advice about water licencing and the function of the final void, and DRE raised general concerns and requested further information to justify the proposed height increase of the emplacements and Ravensworth’s initial proposal to increase the size of the final void.

In response, Ravensworth provided additional information to the satisfaction of DRE, and has revised its proposal to ensure that there would be no increase in the size and function of the final void.

DRE also recommended a range of rehabilitation objectives and standards to ensure that Ravensworth achieves the best rehabilitation outcomes for the site. The Department has considered DRE’s recommendations and has updated the recommended conditions of approval accordingly (see Appendix A).

A full copy of agency comments, and Ravensworth’s response to the issues raised in submissions, is included in Appendices D and E.

### 5 ASSESSMENT

The Department has assessed the merits of the application in accordance with the requirements of the EP&A Act, and summarised the findings of this assessment in Table 1 below.

Based on its assessment, the Department is satisfied that all potential impacts resulting from the modification would be minor and could be appropriately managed under the conditions of approval.

**Table 1: Assessment of Key Issues**

<b>Issue</b>	<b>Consideration</b>	<b>Recommendation</b>
<i>Visual</i>	<ul style="list-style-type: none"><li>• The visual impact assessment undertaken for the Ravensworth Operations Project (ROP) EA (Umwelt, 2010) concluded that the top 10 m of the approved eastern OEA would be visible from the elevated areas in Camberwell Village. The western OEA would not be visible.</li><li>• However, the assessment concluded that due to the distance (i.e. 5 km between the nearest private properties with views towards the eastern OEA) and intervening topography, the project would only have a moderate visual impact during the construction of the OEAs, and a minor visual impact once the emplacements are rehabilitated.</li></ul>	No additional conditions or amendments necessary.

<i>Issue</i>	<i>Consideration</i>	<i>Recommendation</i>
	<ul style="list-style-type: none"> <li>While the proposed modification would increase the height of the OEAs by 30 m RL in some areas, it would also increase the undulation and topographical diversity of these areas. Consequently, Ravensworth expects the modification to improve the visual amenity of the area.</li> <li>The Department agrees with Ravensworth, and is satisfied that any increase in visual impact on surrounding residences during construction of the higher overburden emplacements would be negligible, principally because of the distance between these residences and the overburden emplacements.</li> <li>Under its existing approval Ravensworth is required to implement a range of visual mitigation measures which would minimise the impact of the proposed modification.</li> </ul>	
<i>Air Quality</i>	<ul style="list-style-type: none"> <li>The EA includes a qualitative air quality impact assessment undertaken by Pacific Environment Limited, with reference to the air quality assessment undertaken as part of the ROP EA.</li> <li>Dust dispersion modelling for the 2010 EA concluded that there would be no exceedances of the relevant air quality criteria at any privately-owned residence (except one residence that has since been acquired by Ravensworth).</li> <li>Given that the proposed modification: <ul style="list-style-type: none"> <li>would not result in the movement of additional overburden;</li> <li>would not increase the total OEA footprints; and</li> <li>would not include the development of any new haul roads;</li> </ul> Pacific Environment Limited concluded that the proposed modification would be unlikely to result in any exceedances of the criteria for PM<sub>10</sub>, TSP or deposited dust at any privately owned properties.</li> <li>To manage air quality at the mine complex, Ravensworth's existing approval requires the implementation of a range of dust suppression measures (i.e. application of water on active OEAs and haul routes, and progressive rehabilitation) and air quality monitoring around the complex, including meteorological forecasting and real-time dust monitoring.</li> <li>Additionally, the EPA advised that Ravensworth's existing Environment Protection License (EPL) could accommodate the proposed modification.</li> <li>Consequently, the Department considers the potential air quality impacts of the proposed modification to be negligible.</li> </ul>	No additional conditions or amendments necessary.
<i>Noise</i>	<ul style="list-style-type: none"> <li>The EA includes a qualitative noise impact assessment undertaken by Bridges Acoustic, with reference to the noise impact assessment in the 2010 ROP EA. Bridges Acoustic also considered Ravensworth's annual review for 2012 and 2013, which showed compliance with the noise criteria at all sensitive receivers.</li> <li>The assessment concluded that the proposed modification would not appreciably increase noise emissions from the site, further, the modification may result in a reduction to overall noise from the complex because noise emissions from the majority of mining activities would be shielded to a greater extent by the increased height of the eastern OEA.</li> <li>To manage noise emissions from the site, Ravensworth is required to implement all reasonable and feasible noise mitigation measures.</li> <li>Both the Department and the EPA are satisfied that the potential noise impacts of the proposed modification are likely to be negligible.</li> </ul>	No additional conditions or amendments necessary.
<i>Water Resources</i>	<ul style="list-style-type: none"> <li>To ensure that the final landform drains effectively, Ravensworth proposes to use the latest micro-relief software to develop slopes and drainage densities that replicate the landforms found in the surrounding natural environment. The assessment concludes that this would result in a reduced requirement for the use of contour drains and drop structures, and would ultimately result in improved surface water management outcomes.</li> <li>The proposed modification would not alter the requirement for Ravensworth to reinstate Emu Creek and re-establish Bayswater Creek within the rehabilitated landscape.</li> </ul>	No additional conditions or amendments necessary.

<b>Issue</b>	<b>Consideration</b>	<b>Recommendation</b>
	<ul style="list-style-type: none"> <li>In regard to the final void, Ravensworth has confirmed that the proposed modification would not change the size, location or function of the approved final void.</li> <li>The Department is therefore satisfied that the potential impacts on post-mining water resources can continue to be managed under the existing conditions of approval.</li> </ul>	
<i>Biodiversity</i>	<ul style="list-style-type: none"> <li>Under the existing project approval, and in accordance with Ravensworth's Biodiversity Offset Strategy, the company is required to establish a total of 1,767 ha of woodland vegetation over the rehabilitated mine site.</li> <li>The modification would not result in any change to the existing offset commitment.</li> </ul>	No additional conditions or amendments necessary.

## 6 RECOMMENDED CONDITIONS

The Department has drafted a recommended notice of modification (see Appendix A) for the proposed modification as well as a consolidated version of the project approval as modified (see Appendix B). In summary, these conditions allow Ravensworth to construct the eastern and western overburden emplacements to a maximum height of 190 m RL and 230 m RL respectively.

The Department has also taken this opportunity to incorporate a contemporary condition detailing the rehabilitation objectives for the complex, and has updated agency's names in the project approval.

## 7 CONCLUSION

The Department considers the proposal to have merit as it would result in a more natural looking final landform for the complex, consistent with the surrounding topography. Furthermore, with the implementation of existing environmental management measures, the proposed modification would not result in any significant additional environmental impacts.


Consequently, the Department recommends that the application be approved.

## 8 RECOMMENDATION

It is recommended that the Executive Director Resource Assessments as delegate of the Minister:

- considers** the findings and recommendations of this report;
- determines** that the modification is within the scope of section 75W of the EP&A Act;
- approves** the modification application under section 75W, subject to conditions; and
- signs** the attached notice of modification (**Appendix A**).

 19/12/2014  
 Elle Donnelley  
 Planner  
 Mining Projects

 19/12/2014  
 David Kitto  
 Executive Director  
 Resource Assessments

## **APPENDIX A: NOTICE OF MODIFICATION**

## **APPENDIX B: CONSOLIDATED PROJECT APPROVAL**

## **APPENDIX C: ENVIRONMENTAL ASSESSMENT**

## **APPENDIX D: SUBMISSIONS**

## **APPENDIX E: RESPONSE TO SUBMISSIONS**