

**From:** Thomas Watt  
**Sent:** Wednesday, 21 December 2016 10:54 AM  
**To:** Garry Bailey; Murphy, Simon  
**Cc:** Gen Seed; Megan Dawson; Howard Reed  
**Subject:** Rixs Creek Extension Project (SSD 6300) - request for additional information

Hi Garry,

We have reviewed the RTS received on 21 October 2016 and consulted with relevant government agencies (agency submissions on the RTS are available from our website [here](#)). As discussed earlier this morning, we require additional information in relation to several aspects in order to finalise our assessment.

### 1. Air Quality and Blasting

There are a number of receivers that appear to experience exceedances to air quality criteria but have not been assessed in the EIS or RTS (see EPA's submission on the RTS dated 15 November 2016). The Department requests additional impact assessment that quantifies the air quality impact to these receivers, considers all feasible and reasonable mitigation measures to minimise impacts and an assessment against the NSW Voluntary Land Acquisition and Mitigation Policy (VLAMP) for any residual impacts.

In addition, the Department requires the following additional information to finalise its assessment, including:

- a) identify the mines (and their respective development consents) under which acquisition and/or mitigation rights have been applied to receivers 170-177 and any privately owned land (ie. > 25 %) and also the reason for these rights being applied (ie. incremental or cumulative exceedances);
- b) a response to all other comments made in the EPA's submission (dated 15 November 2016), in which several of the conclusions made in the RTS have not been agreed (eg. that the change to estimated PM2.5 emissions is greater than the uncertainty of modelling and that not all diesel emissions have been estimated);
- c) a description of the air quality monitoring network that would be implemented to monitor air quality over the life of the mine; and
- d) clarification of whether blasting is proposed to occur over the life of the extension project near the northern boundary of the mine lease as depicted in Figure 12-5 of the EIS.

### 2. Groundwater

The Department requested the following additional information by email (22 March 2016), but this does not appear to have been addressed in the RTS. It is requested that you please address these issues, including:

- a) the Groundwater impact assessment (GIA) is based on limited water quality data, which appears to have been obtained from sampling over two months in 2011 only (Table 5.3). More recent water quality monitoring data is requested to be provided together with a discussion of any observed trends since 2011 and any implications for the conclusions made in the EIS. This discussion may draw from any investigations triggered under the Water Management Plan.
- b) on page 50 of the GIA report, the following statement is made: "The groundwater contribution from hard-rock (HSU Zone 1 in Figure 8.29) to the Hunter River Alluvium (HSU Zone 4 in Figure 8.29) is predicted to be 244 m3/d at the end of the recovery simulation. This demonstrates a minimal groundwater contribution to the Hunter River alluvium". It is unclear from this statement and the preceding statement in the GIA report, which refers to the void, whether this is describing the predicted discharge (seepage) of saline water from the final void to the Hunter River alluvium, via the hard rock groundwater source, or some other water source. Additionally, it is unclear how this has been determined to be a minimal impact to the Hunter River alluvium and a more detailed explanation as to

how this conclusion was reached is requested. Please provide any estimated water quantities in ML/day or /year.

- c) The GIA states on page 53 that cumulative drawdown in the uppermost water table propagates to the north and would not have an impact. This statement needs to be supported by analysis and discussion.

### 3. Surface Water

The Department requests the following additional information in respect of surface water, including:

- a) an update to the EIS of any changes to the project as a result of Rixs Creek North coming online, including integration of the water management system and revisions to estimated water import requirements (if any) now that the production profile has decreased;
- b) runoff from overburden areas is proposed to be managed in sediment dams, which would discharge under high rainfall events. Has the geochemical composition of the overburden/interburden been considered and suitable treatment and/or management regime proposed to manage risks to the environment?
- c) update Table 20 in the Surface Water Impact Assessment to include comparison of catchment changes between the currently approved final landform and the proposed final landform;
- d) provide a table that shows the catchment change for each year over the mining period including the annual loss of runoff for each catchment and a discussion that considers natural variation in seasonal and annual flow regimes for affected tributaries;
- e) Bloomfield's response to JP Environmental's recommendation to further investigate exceedances of aluminium levels at the West Pit and in Deadman's Creek;
- f) confirm there are no other potentially affected downstream water users to those considered in JP Environmental's report in the RTS.

### 4. Final landform and Rehabilitation

The Department previously advised by email 3 May 2016 that the proposal to retain an underground portal in the North Pit and any surface infrastructure is not supported. The RTS does not reflect this advice. The Department requests revised concept rehabilitation figure that remove any reference to the underground portal and proposes a comprehensive rehabilitation strategy for the site.

In relation to the final void, the following information is requested, including:

- a) quantify (in hectares) the change in area from the two approved final voids to the single final void proposed in the project.
- b) a revised Figure 6-1 (from the RTS) that more accurately depicts the final void, in particular, the expected presence of a water body, as predicted.

### 5. Visual impact mitigation

Please provide a consolidated drawing that identifies proposed screening to those areas (such as along the western side of the New England Highway and to the two impacted receivers located to the south of the site) that are predicted to be affected by visual impacts.

### 6. Economic assessment

The Department suggests that Bloomfield considers providing a more explicit response to the key conclusions made by The CIE in its peer review report (June 2016). For example, The CIE has advised the Department that the results from the CGE modelling significantly overestimate the regional and State level impact (benefits) however there is no direct response to this in the RTS. It is recommended that you provide a response that addresses each of the key conclusions that have not already been addressed in the RTS.

In addition, the Department requests the following additional information in order to finalise its assessment of the economic implications of the project, including:

- a) the assumed CO<sub>2</sub> emissions profile (ie. tonnes emitted in each year over the life of the project) in order to verify the estimated cost of CO<sub>2</sub> emissions made in the EA and RTS;

- b) an estimation of the cost of unmitigated air quality impacts to residents and receivers in and around the mine; and
- c) an analysis and discussion of the implications of additional impact assessments (required in 1 above) and also the addendum RTS on the EA and cost benefit analysis (CBA).

In relation to b) and c) above, some analysis is required in support of the conclusion that these impacts would be immaterial to the overall conclusion of the CBA.

I note that you are intending to submit an addendum RTS to us later today. If any of the above are addressed in the addendum RTS, please highlight this to us. Alternatively, it would be appreciated if you could please prepare a consolidated response to the above requests and submit to us in the New Year.

Our office will be closed 26/12 – 6/1. I'll be on leave from tomorrow and returning 9 January.

Feel free to contact me with any queries.

Regards,

**Thomas Watt**

Senior Planning Officer

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