



DOC18/662068-1
DA 231-07-2000

Ms Melanie Hollis
Senior Planning Officer - Resource Assessments
Planning Services
Department of Planning & Environment
melanie.hollis@planning.nsw.gov.au

Dear Melanie

Dartbrook Coal Mine Modification 7 (DA 231-07-2000) - Response to Submissions

On 7 September 2018 the Department of Planning and Environment invited the Office of Environment and Heritage (OEH) to comment on the Response to Submissions (RTS) report for the proposed modification 7 for the Dartbrook Coal Mine.

OEH provided advice on the exhibited Environmental Assessment for this proposed modification in a letter dated 16 August 2018 (our reference DOC18/ 533870-1). OEH was satisfied with the biodiversity assessment for this project and recommended some additional considerations for Aboriginal cultural heritage and the flooding and flood risk for the project. More information is requested in relation to the lack of Aboriginal cultural heritage assessment of the haul road, and the lack of discussion of 1% Annual Exceedance Probability (AEP) and Probable Maximum Flood (PMF) flood events.

OEH's recommendations are provided in **Attachment A** and detailed comments are provided in **Attachment B**. If you require any further information regarding this matter, please contact Steven Cox, Senior Team Leader Planning, on 4927 3150.

Yours sincerely

3 October 2018

SHARON MOLLOY
Director Hunter Central Coast Branch
Regional Operations Division

Contact officer: STEVEN COX
02 4927 3150

Enclosure: Attachments A and B

OEH's recommendations

Dartbrook Coal Mine – Modification 7 (DA 231-07-2000) – Response to Submissions

1. OEH recommends that an Aboriginal cultural heritage assessment is undertaken along the unsealed section of the western access road.
2. OEH is satisfied that a protocol for the management of unanticipated finds will be included in the Aboriginal Heritage Management Plan.
3. OEH is satisfied with the use of the Aberdeen Flood Study (WMAwater, 2013) to define the floodplain used on the assessment for this development.
4. The risk to life from the PMF flood or floods larger than the 1% AEP flood event cannot be adequately managed by emergency procedures. It is recommended that the shaft be relocated outside of the PMF extent.
5. The risk of floodwaters entering the shaft and Hunter Tunnel has not been adequately addressed. The risk of floodwaters entering the shaft and Hunter Tunnel cannot be adequately managed by construction of a low levee or bund. It is recommended that the shaft is relocated outside of the PMF extent or alternate methods of coal transfer be devised.
6. OEH acknowledges that the proponent will develop an emergency evacuation procedure for floods up to the Probable Maximum Flood event.

OEH's detailed comments

Dartbrook Coal Mine – Modification 7 (DA 231-07-2000) – Response to Submissions

Aboriginal Cultural Heritage

1. Assessment of the alternative coal clearance system should be undertaken

OEH has considered the response to submissions and understands that the proposed truck haulage route consists entirely of roads that have already been formed. The applicant has clarified that the process of sealing the western portion of the haul road will not require widening or re-alignment of the road, and states that:

“the upgrade of the unsealed road will not require any additional surface disturbance and therefore does not have the potential to encounter any Aboriginal heritage sites”

(Hansen Bailey RTS 2018:36).

OEH does not agree with this position and remains concerned by the lack of Aboriginal cultural heritage assessment in relation to this aspect of Modification 7.

OEH notes that Aboriginal sites have been recorded in a range of contexts in the local area, including on roads, and several sites are registered in the vicinity of the haul road. OEH understands that limited use of this road was previously approved until 2004 under an earlier modification. However, OEH is not aware that an Aboriginal cultural heritage assessment was previously undertaken as part of this earlier approval. Irrespective of former or current uses of this road, OEH is not satisfied that adequate consideration has been given to potential Aboriginal cultural heritage impacts of the proposed upgrade of the unsealed section of the western access road.

Recommendation 1

OEH recommends that an Aboriginal cultural heritage assessment is undertaken along the unsealed section of the western access road.

2. A protocol for the management of unanticipated finds is required

OEH understands that a protocol for the management of previously unrecorded Aboriginal objects (unanticipated finds) will be included in the Aboriginal Heritage Management Plan (as outlined in Section 8.7.4 of the Environmental Assessment).

Recommendation 2

OEH is satisfied that a protocol for the management of unanticipated finds will be included in the Aboriginal Heritage Management Plan.

Flooding and Flood Risk

3. OEH is satisfied with how the floodplain has been defined for this project

OEH accepts that the Aberdeen Flood Study, completed by WMAwater (2013) on behalf of Upper Hunter Shire Council, and part-funded by OEH, is the most up-to-date publicly available flood information for this area. It is sufficient for use in this development application.

Recommendation 3

OEH is satisfied with the use of the Aberdeen Flood Study (WMAwater, 2013) to define the floodplain used on the assessment for this development.

4. Risk to life for floods up to the Probable Maximum Flood (PMF)

Section 2.12.4 of the Response to Submissions (RTS) report refers to the Aberdeen Flood Study, WMAWater (2013) and flood depths of less than 400 millimetres in the 1% Annual Exceedance Probability (AEP) flood event at the proposed shaft site. The depth of flooding in the Probable Maximum Flood (PMF) event is not provided, although the proposed shaft site is within the PMF flood extent.

Insufficient detail has been provided regarding the risk to personnel on the site as a result of flooding at the proposed shaft site. The depth, velocity or rate of rise of floods greater than the 1% AEP flood event have not been considered in the RTS report, and these could pose a high flood risk to personnel as a result of entry of floodwaters into the shaft. Floods greater than the 1% AEP have occurred several times in the past couple of years within the Hunter Valley area.

Flood mapping in the Aberdeen Flood Study (Figure 28, Aberdeen Flood Study, (WMAwater, 2013) indicates that the PMF will have flood depths in excess of 5 metres in the vicinity of the shaft location. Flood depth in excess of the height of any proposed protection works and/or failure of protection works would result in floodwater entering the shaft and the connected Hunter Tunnel and poses a significant risk to life and infrastructure. Relocation of the shaft out of the floodplain would remove any flood risk to the shaft; this option has not been considered in documentation provided for review.

Recommendation 4

The risk to life from the PMF flood or floods larger than the 1% AEP flood event cannot be adequately managed by emergency procedures. It is recommended that the shaft be relocated outside of the PMF extent.

5. Protection of infrastructure up to the Probable Maximum Flood (PMF)

Section 2.12.4 of the RTS report refers to the Aberdeen Flood Study (WMAWater, 2013) and flood depths of less than 400 millimetres in the 1% Annual Exceedance Probability (AEP) flood event at the proposed shaft site. The possibility of constructing an earthen mound or a levee to protect the proposed shaft during the 1% AEP flood is included in the RTS.

However, there is no indication of the depth of flooding in floods greater than the 1% AEP flood event, and what infrastructure would be required to protect the shaft entry point in floods greater than the 1% AEP event. Flood planning levels are generally a minimum of 500 millimetres above the 1% AEP flood event level in recognition of the uncertainty of the flood modelling process, allowances for some climate change and wind or wave impacts. Protection works built to the 1% AEP flood event level, or greater, are likely to be inadequate to prevent entry of flood waters into the shaft.

Insufficient detail has been considered regarding the risk to infrastructure as a result of flooding at the proposed shaft site. Relocation of the shaft out of the floodplain would remove any flood risk to the shaft, but this option is not discussed in the documents provided for review. The RTS lists two potential options to manage this flood risk: a levee, or an earthen bund. However, OEH has concerns that neither of these would be technically feasible, given the constraints and structural requirements to manage vehicular loads.

Protection of the mine infrastructure is the responsibility of the mine operator. Any works proposed to manage the flood risk to mine infrastructure must not impact others outside of the mine-owned land. The proponent must ensure there are adequate risk management procedures in place to manage the risk to infrastructure from all floods up to and including the PMF event.

Recommendation 5

The risk of floodwaters entering the shaft and Hunter Tunnel has not been adequately addressed. The risk of floodwaters entering the shaft and Hunter Tunnel cannot be adequately

managed by construction of a low levee or bund. It is recommended that the shaft is relocated outside of the PMF extent or alternate methods of coal transfer be devised.

6. Access during a flood event (flood emergency procedures)

Protection of the mine personnel is the responsibility of the mine operator. Section 2.12.4 of the RTS report states that the proprietor, AQC Dartbrook Management Pty Limited, will develop an emergency evacuation procedure for a PMF flood event in consultation with the NSW emergency authorities. The proponent must ensure there are adequate risk management procedures in place to manage the risk to life from all floods, up to and including the PMF event. Reliance on the State Emergency Service as part of the flood emergency response plan for this site is not an appropriate option.

Recommendation 6

OEH acknowledges that the proponent will develop an emergency evacuation procedure for floods up to the Probable Maximum Flood event.

Reference:

WMAwater (2013) Aberdeen Flood Study. 10 July 2013. WMAwater, Sydney.

http://upperhunter.nsw.gov.au/f.ashx/documents/OurServices/Aberdeen_Flood_Study_July_13.pdf