

Advice to decision maker on coal mining project

Proposed action: Maules Creek (Aston 2) Coal Mine (2010/5566)

Requesting agency	Department of Sustainability, Environment, Water, Population and Communities
Date of request	29 November 2012
Date request accepted	30 November 2012
Summary of request	<p>The Department of Sustainability, Environment, Water, Population and Communities (the department) is currently assessing the proposed project in accordance with the provisions of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (the EPBC Act).</p> <p>The department advises the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (the committee) of an opportunity to comment on the Environmental Assessment Report for the proposed Maules Creek Coal Project.</p> <p>The department asks the committee to note that taking into account the recent release of the <i>Namoi Catchment Water Study: Independent Expert Final Study Report</i> (July 2012), and the proponent's <i>Environmental Assessment Statement</i>, it is considered that the mine is likely to impact on both quantity and quality of surface water entering the Back Creek catchment area and possibly the larger Namoi River catchment.</p> <p>Specifically, the department seeks the advice of the committee on whether</p> <ol style="list-style-type: none"> Does the committee consider there will be any significant impacts on matters of environmental significance that are dependent on water resources, including as a result of cumulative impacts? <p>Will there be any significant water impacts on matters of national matters of environmental significance from:</p> <p style="padding-left: 40px;">the clearing of white box - yellow box - Blakely's red gum grassy woodland and derived native grassland;</p> <p style="padding-left: 40px;">clearance of foraging habitat for the migratory and threatened species, regent honeyeater, swift parrot and greater long-eared bat (south-eastern form).</p> <ol style="list-style-type: none"> Does the committee believe that the construction of a crossing over the Namoi River will have any impact on matters of national environmental significance?

Advice is being sought on this proposal at the earliest opportunity.

Advice

The committee was referred three coal mining project proposals (Boggabri Coal Mine extension, Maules Creek (Aston 2) Coal Mine, and Tarrawonga Coal Mine extension) in the Namoi region, all affecting the Leard State Forest. This provided the opportunity to consider the cumulative impacts of these three mines. The committee offers the following advice on both the potential cumulative impacts of the three mines and the impacts of the Maules Creek Coal Mine.

Leard Forest Precinct Mines (Boggabri, Maules Creek and Tarrawonga) Cumulative Impacts

1. The committee considers that water-related impacts of the Maules Creek Coal Mine should be reviewed, as far as possible, as part of a cumulative assessment process. The Namoi Catchment Water Study (the Study) is an essential scientific study enabling cumulative impact assessment for the Leard Forest Precinct Mines to be considered on a regional scale. A relevant scenario to the three proposals under consideration predicts drawdown in some areas of the alluvial aquifer up to 2 m. This would represent as much as a 10% reduction in the average saturated thickness of the aquifer in Namoi Groundwater Management Area 4. The Study also indicates that the expected cumulative drawdown in the adjacent hard rock aquifer (Gunnedah Basin Management Area) is predicted to be in excess of 10 m, which may exacerbate the impact on the alluvium by altering the direction of groundwater flow away from the alluvium, which may impact on groundwater dependent ecosystems. The committee considers that the drawdowns outlined in the Study may be significant in terms of the ecology of groundwater dependent or influenced ecological communities.
2. In particular, the committee has concerns about the potential cumulative impact of groundwater drawdown as a result of the three mines and the consequent health of the remnant vegetation (the White box- Yellow box- Blakely's Red Gum Woodland community in the Leard State Forest, Leard State Conservation Area and surrounding areas). Insufficient information is presented on the intersection of the current water table, potential drawdown and the depth of the root zone of the protected ecological communities. The regulator should take the uncertainty of the mining impacts on the remnant vegetation around the mine site into consideration.
3. Consideration of the relationship between drawdown and root zone depth on the these protected communities has prompted the committee to consider the commissioning of a study to review scientific literature to determine the depth of the root zone for optimal deep rooted native hardwoods.
4. On the basis of information provided to the committee it is understood that the Leard Forest precinct mines will result in the direct removal of a large area (in excess of 3,000 ha) of the vegetation communities listed under the EPBC Act which may impact on matters of national environmental significance in the region and have implications for dryland salinity. Recognising that the ecological impact of the vegetation removal is a matter for the Regulator to consider, in relation to water matters, the committee suggests that the potential for dryland salinity be taken into consideration in the selection of any biodiversity offset areas.
5. Should more than one mining proposal of the three under consideration be approved, the committee recommends a collaborative approach to ongoing monitoring of quality and quantity of both surface and groundwater to validate the groundwater monitoring and provide an indication of critical impacts on threatened ecological communities. This should provide a better understanding of the cumulative impacts which could aid further regulation of development as needed.
6. The Namoi Water Study showed that there is the potential for the types of impacts

seen in the three project proposals to occur. The committee has provided their advice separately. The committee considers the consequential effects highlighted in the Study to be quite real. To be able to properly manage cumulative impacts, the committee recommends that comprehensive baseline information on surface water and groundwater quantity and quality be collected as a priority.

Maules Creek Mine

7. The committee considers that the Maules Creek mine will have surface water impacts through the placement of a portion of the Back Creek catchment within the internal mine water management system. This will permanently reduce inflows into Maules Creek and the Namoi River. Although the volume concerned is relatively small it represents a further loss of water to an already highly optimised river system.
8. Although the proponent is still determining the need for an additional rail crossing of the Namoi River and construction of an additional rail loop across the floodplain, the committee would like to reinforce that, in the event of this infrastructure being required, it will be important that flood modelling is included as part of the design to minimise any floodplain ecological impacts.
9. The committee supports the need for development of a Water Management Plan covering both surface and groundwater as required by the New South Wales Government approval conditions for the project.

To ensure that significant impact on matters of national environmental significance that are dependent on water resources does not occur, the Committee recommends that the department strengthen the condition relating to the water management plan by:

- a. Ensuring the Water Management Plan is in accordance with the National Water Quality Management Strategy; and
 - b. Including a collaborative approach with the proposed extensions to Tarrawonga and Boggabri mines.
10. The committee considers that, as a general principle, backfilling of mining voids is environmental best practice. The committee notes that the New South Wales Project Approval includes a condition which requires the final mine void to remain open and contain a pit lake.

Date of advice	20 December 2012
-----------------------	------------------
