

Advice to decision maker on coal mining project

Proposed action: Coal Mine

Requesting agency	Department of Sustainability, Environment, Water, Population and Communities
Date of request	13 June 2012
Project title	MIDDLEMOUNT COAL PROJECT STAGE 2, MIDDLEMOUNT, QUEENSLAND (EPBC 2010/5394)
Summary of request	<p>The Department of Sustainability, Environment, Water, Population and Communities (the department) has assessed proposed projects in accordance with the provisions of the <i>Environment Protection and Biodiversity Conservation Act 1999</i>.</p> <p>The department advises the Interim Independent Expert Scientific Committee on Coal Seam Gas and Coal Mining (the committee) of an opportunity to comment on a draft environmental impact statement and proposed approval conditions. Specifically, the department seeks the advice of the committee on whether:</p> <ol style="list-style-type: none"> 1. there are likely to be significant water-related impacts on matters of national environmental significance (MNES) species - Ornamental Snake (<i>Denisonia maculate</i>), Squatter Pigeon (<i>Geophaps scripta scripta</i>) and threatened ecological community Brigalow (<i>Acacia harpophylla</i>); and 2. the proposal includes sufficient measures to mitigate potential impacts to MNES, including downstream of the action. <p>An approval decision is expected by early August 2012 and the department has provided the committee with proposed approval conditions (Attachment A to the department's request for advice). The department's assessment clock stopped in July to seek additional information from the proponent on details of proposed offsets, impacts on habitat and management measures for threatened EPBC species – vulnerable listed Ornamental Snake (<i>Denisonia maculate</i>), Squatter Pigeon (<i>Geophaps scripta scripta</i>) and threatened ecological community Brigalow (<i>Acacia harpophylla</i>). However, this additional information had not been received in the time of preparing the committee's advice.</p> <p>The department requests advice by 30 July 2012.</p>

Advice

1. The committee advises that matters of national environmental significance may be impacted by the project.
2. The committee notes that the draft conditions provide for an offset Management Plan for the Ornamental Snake (*Denisonia maculate*) and restrictions to the clearance of suitable habitat for the Ornamental Snake; restrictions to the clearance of suitable habitat for the Squatter Pigeon (*Geophaps scripta scripta*), the Brigalow endangered ecological community (*Acacia harpophylla* dominant and co-dominant), and Natural Grasslands of the Queensland Central Highlands and the

northern Fitzroy Basin ecological community. The committee also notes that the department has stopped the assessment clock to seek additional information from the proponent on details of proposed offsets, impacts on habitat and management measures for the species.

3. The committee advises that the cumulative impacts on downstream water quality are not sufficiently understood as the information provided was inadequate. A more thorough assessment of the cumulative impacts should be undertaken. An ongoing water quality monitoring program and management responses to water quality issues, including consideration of water run-off from the final landform consistent with Managing Acid and Metalliferous Drainage guidelines should be considered as part of the Environmental Management Plan for the project.
4. The committee advises that the groundwater impacts are also not sufficiently understood as the information provided was inadequate, particularly in relation to the connectivity of surface water to groundwater, groundwater flow directions and connectivity between aquifers. The committee recommends a comprehensive monitoring program of surface water and groundwater impacts should be an important condition of any approval, and if necessary, the project's water management strategy include comprehensive details on how the proponent will address these water impacts during, and post, mining operations.
5. The committee notes that the modelled flooding impact along the western boundary of the project area is proposed to be mitigated by the installation of a nominal 600 mm pipe which will allow the area to drain within 24 hours. The committee advises that this mitigation measure appears adequate, but requires ongoing monitoring to ensure effectiveness.
6. The committee notes that diversion of multiple streams is proposed in the project, and advises that each of these diversions should undergo detailed engineering design to ensure potential erosion is minimised. In particular, the committee notes erosion from adjacent mines may contribute to sediment loads in the Fitzroy catchment.
7. The committee suggests that any Environmental Management Plan for the project include information relating to an assessment of regional cumulative impacts (covering a site and regional water balance and solute balance).
8. The committee suggests that the risks posed by the project including surface water, groundwater, acid water drainage, geomorphological, hydrological and ecological impacts be assessed and mitigation measures be implemented.
9. In summary, the committee notes the scale of the proposed Middlemount mine extension and other operating mines in the region. As such, the committee recommends that a risk-based assessment of impacts to water resources be undertaken at both the site and regional scale as a matter of priority. The risk based assessment should include, but not be limited to:
 - a) details of the measured hydrogeological data, and model parameters, uncertainties, and confidence/ reliability
 - b) a site and regional water balance which provides basin and catchment scale context for the proposed action
 - c) surface water and groundwater quantity and quality fluxes, including impacts of the proposal on the water resource, water balance and solute balance
 - d) regional cumulative impacts (covering surface water, groundwater, geomorphological, hydrological and ecological impacts); and
 - e) mitigation and management measures to appropriately address these identified risks.

Any proposed models should also be peer reviewed and publicly released.

**Date of
advice**

31 July 2012
