

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	5 July 2012
Project title	CLARENCE COLLIERY EXTENSION, NEW SOUTH WALES (EPBC 2012/6446)
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 referral decision. Specifically, the department seeks the advice of the committee on:</p> <ol style="list-style-type: none"> 1. the likelihood of significant water-related impacts on matters of national environmental significance as a result of the Clarence Colliery's on-going water discharge and subsidence from underground mining activities. <p>The department requests comments for incorporation by 24 July 2012.</p>

Advice

1. Overall, the committee considers that the proponent has provided a thorough assessment of the likely water-related impacts from their mining activities. In particular, the water balance information presented by Clarence Colliery facilitated a good understanding of the site water assets information. The committee considers that regional contextual information would further enhance their risk assessment.
2. The committee considers that the surface water and groundwater monitoring, trigger points, and management actions appear appropriate and adequate to detect and protect the matters of national environmental significance.
3. The committee understands that bord and pillar coal mining method, utilised for numerous years at other coal mines with similar geology to that found at the Clarence Colliery, has resulted in minimal subsidence-related surface damage to date. The committee notes that the design adopted by Clarence Colliery is expected to limit the subsidence to less than 100 mm, with tilts and strains less than 2 mm/m and 1 mm/m respectively, and that to date, no surface cracking has been observed above Clarence Colliery.
4. The committee understands that monitoring in nested piezometer results indicated that aquifers above the aquiclude are not impacted by direct undermining from the bord and pillar extraction method currently used at Clarence Colliery. The committee further notes that the groundwater chemistry investigations indicated no interconnectivity between aquifers separated by the aquiclude. The committee advises that maintaining the integrity of the aquiclude is integral to maintenance of the Temperate Highland Peat Swamps and that appropriate bord and pillar methods, that minimise

impacts on the aquiclude, should continue to be deployed and monitored.

5. The committee notes that Temperate Highland Peat Swamps on Sandstone which are located directly downstream of Main Dam are sensitive to salinity and pH disturbance. The committee notes investigations have however, revealed that the swamps are in very good condition and appear not to be in direct contact with the Wollangambe River, but are dependent on overland surface flows, groundwater seeps and a shallow watertable. The committee considers that the proposed continuation of ongoing water discharge is not likely to have a significant impact on the swamps.
6. The committee considers that there are several risks associated with the proposal which may be mitigated through appropriate monitoring and management actions including:
 - a) potential contaminant released into the environment through overflow of the leachate retention dams during high rainfall events
 - b) potential negative impacts to the downstream swamps through water quality disturbance from the water discharge; and
 - c) potential disturbance of the aquatic habitat directly downstream of the Main Dam spillway.
7. The committee notes that groundwater and surface water monitoring is in accordance with the New South Wales Environment Protection Agency requirements and appears appropriate and adequate. The committee notes that the proponent has committed to undertake further water quality and swamp monitoring downstream of the spillway of Main Dam.

**Date of
advice**

31 July 2012
