NSW GOVERNMENT | Industry & Investment

OUT10/15673
7 October 2010

Mr Colin Phillips
Senior Planner, Mining
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Attention: Paul Freeman

Dear Mr Phillips

West Wallsend Coal Project (09_0203)
Environmental Assessment
Mine Subsidence Review

I refer to your letter dated 20 July 2010 requesting submissions for the Environmental Assessment (EA) for the above project and our letter dated 7 September 2010.

Industry & Investment NSW Mineral Resources (I&I NSW MR) subsidence officers have reviewed the *West Wallsend Colliery Continued Operations Project Environmental Assessment* dated June 2010 and provide the following comments which are directed at specific areas of I&I NSW responsibility.

I&I NSW MR consider that the key issues identified in the EA in relation to the proposed mining can be considered in three categories:

Steep Slopes and Cliff Lines of the Sugarloaf Range
The proposed mining may affect the stability of steep slopes and cliff lines of part of the Sugarloaf Range which is readily visible from parts of the F3 Freeway and Newcastle/Lake Macquarie area.

The EA includes assessments of the potential impact of subsidence to the stability of cliff lines and steep slopes. The stability assessments are based on predicted subsidence and a range of input parameters to describe the nature and geotechnical conditions of the cliff lines and slopes.

The relevant findings of the EA in relation to cliff lines and steep slopes are:

i. Large scale slope/cliff failure is unlikely, and;

ii. Potential for smaller scale slope instability in adverse conditions, particularly for deeper soil horizons and where cracking occurs.

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Notwithstanding the these findings, it is generally not possible to assess the likely extent of the aforementioned slope stability impacts due to the large area involved and the variation of slope conditions across the site.

The proponent's subsidence impact assessment in the EA proposes a range of impact management strategies which are largely related to managing public safety and remediation of cracking. It is not clear as to whether the proposed management strategies can effectively manage the risk of slope stability impacts visible to the public.

I&I NSW MR understands that some other underground mining operations in similar topographic environments have adopted partial pillar extraction methods to manage the risk of slope instability that may be caused by subsidence and where visibility is an issue.

The feasibility of the proposed mine layout in areas of steep topography needs to be considered at the planning approval stage.

Areas of Low Depth of Cover

The proponent indicates that mining will be restricted to depths of cover of greater than 70m to manage surface impacts, particularly in relation to alluvial groundwater aquifers. Based on the current state of knowledge, hydraulic connection between mine workings and surface aquifers can occur at depths of cover greater than 70m.

The proponent has assessed that there is potential for hydraulically connected fracturing to the surface for depths of cover less than 120m.

Any alluvial aquifers and/or watercourses located in areas where the depth of cover is less than the critical limits for hydraulic connection need to be identified and assessed in consultation with the Office of Water.

Infrastructure

Infrastructure that may be affected by subsidence due to the proposed mining has been identified by the proponent to include:-

- F3 Freeway;
- Wakefield Road;
- Power lines;
- Major fuel and gas pipelines in the freeway corridor;
- Major fibre optical cables also in the freeway corridor;
- A number of telecommunication towers.

Most of the above infrastructure is subject to subsidence management activities in relation to previous and current mining approvals. It is important that the subsidence management strategies being employed by the proponent continue.

This is particularly the case for major infrastructure in the F3 Freeway corridor. Although this corridor is outside the angle of draw there must be strategies in place to manage abnormal subsidence movements beyond the angle of draw which have been observed at the site previously.

Should you have any enquires regarding this matter please contact Julie Moloney, Principal Adviser, Industry Coordination on (02) 4931 6549.

Yours sincerely

William Hughes
Director
Industry Coordination

7/10/10