



## Office of Water

10 December 2010

Mining and Industry Projects  
Department of Planning  
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Our ref : ER20567  
Your ref: DA 128-5-2005 Mod 2

**Attention: Kane Winwood**

Dear Mr Winwood

**Subject: Proposed Modification to Lynwood Hard Rock Quarry – DA 128-5-2005  
Mod 2.**

NSW Office of Water (NOW) has completed its review of the Environmental Assessment (EA) for the proposed modification to the Lynwood Hard Rock Quarry.

The Greater Metropolitan Region Unregulated River and Groundwater Source Water Sharing Plan is due to come into effect early in 2011 and this may have implications related to availability of additional water supply. As the modification is heavily reliant on the access to additional water for increase dust suppression requirements, NOW requires more specific detail regarding the volume and source of the additional water.

The EA refers numerous times to the Lynwood Quarry Water Management Plan (WMP), while it states this plan was approved by DoP (Section 6.4.7.1), NOW Major Projects and Assessment Division have no record of approving this plan. Therefore as the management of the modification proposed relies heavily on the existing Water Management Plan and its expected modification, NOW requires that the WMP be submitted for review prior to any construction commencing.

As the operation and proposed modifications are located near a number of water courses, NOW advises that the proponent must ensure that all construction in vicinity of riparian corridors must comply with NOW controlled activities guidelines (August 2010), as outlined in Attachment A.

NOW provides comments in Attachment A and conditions for consideration in Attachment B.

Please contact Jennifer Gerrard on 4904 2516 if you require any further information regarding this matter

Yours sincerely

**Mark Mignanelli**  
**Manager Major Projects and Assessment**

**NOW COMMENTS ON ENVIRONMENTAL ASSESSMENT  
HOLCIM PROPOSED LYNWOOD QUARRY MODIFICATION (DA 128-5-2005 Mod 2)**

**LEGISLATION**

***Water Management Act 2000 and the Water Sharing Plans***

The *Water Management Act 2000 (WMA)* allows for sustainable and integrated management of water sources of the State. While the Environmental Assessment (EA) for the proposed Holcim (Australia) Pty Ltd Lynwood quarry modification states in section 6.4.3 that they have secured additional water from an external source, the *Greater Metropolitan Region Unregulated River and Groundwater Source Water Sharing Plan* is due to come into effect in early 2011 and this will have implications for licensing the take of groundwater and unregulated surface water in the project area. The proponent needs to clarify that the external water source secured meets the requirements under NSW water legislation in the project area. A condition has been recommended to address this issue.

**Riparian Protection**

Riparian corridors form a transition zone between terrestrial and aquatic environments and perform a range of important environmental functions. The protection or restoration of vegetated riparian areas is important to maintain or improve the geomorphic form and ecological functions of watercourses through a range of hydrologic conditions.

Although Part 3A Major Projects are exempt from requiring a controlled activity approval (s75U of the EPAA 1979) the proponent is required to take into account the objects and water management principles of the *WMA 2000* and the *Guidelines for Controlled Activities (August 2010)*. The guidelines recommend the following minimum Core Riparian Zone (CRZ) widths:

- a) **CRZ of 10 metres** (on both sides of the watercourse) for:
  - o Any first order watercourse where there is a defined channel where water flows intermittently;
- b) **CRZ of 20 metres** (on both sides of the watercourse) for:
  - o Any permanently flowing first order watercourse, or
  - o Any second order watercourse where there is a defined channel where water flows intermittently or permanently;
- c) **CRZ of 20 - 40 metres** (on both sides of the watercourse) for:
  - o Any third order or greater watercourse where there is a defined channel where water flows intermittently or permanently. Includes estuaries, wetlands and any parts of rivers influenced by tidal waters – (merit assessment based).

In addition to the above recommended CRZ widths an additional **vegetated buffer of 10 metres** should be provided on both sides of the watercourse measured from the outer edge of the CRZ to allow for edge effects.

The asset protection zone is not to form part of the CRZ or vegetated buffer.

The EA states in section 6.4.4.2 that there will be some changes as part of the proposed modification that will increase peak flow rates and peak water levels in some areas and decrease channel velocities in Joarimin Creek. Proposed works need to undertaken in

line with NOW *Guidelines for Controlled Activities (August 2010)*. NOW has recommended conditions to ensure impacts to riparian corridors and water courses are minimised.

### **Site Water Supply and Balance**

The EA states in section 6.4.3.1 "The deficit will need to be met from water sourced externally from the site. Holcim has obtained a water allocation for an external water source to address this predicted water deficit" As the modification is heavily reliant on the access to additional water for increase dust suppression requirements, NOW requires more specific detail regarding the volume and source of the additional water. Additionally as identified by the EA Holcim will need to ensure that all surface water and groundwater license requirements are met in accordance with the provision of the *Water Management Act 2000* and the *Water Act 1912*.

Section 6.4.3.2 of the EA outlines the impact of the proposed modification on the site water balance, due to increased areas of stockpile requiring dust suppression. While the site water balance for dry, average and wet years has been detailed in a table 6.6, the EA does not provide a detailed water balance for the inflows, onsite usage and outflows. A condition has been recommended to address this.

**End Attachment A  
10 December 2010**

**NOW RECOMMENDED CONDITIONS OF PROJECT APPROVAL  
HOLCIM PROPOSED LYNWOOD QUARRY MODIFICATION (DA 128-5-2005 Mod 2)**

**General**

1. That all statements of commitments are adopted as project approval conditions except where NOW specific conditions require an earlier timeframe or more detailed assessment.

**Protection of Watercourses**

2. The Proponent shall ensure mining operations do not interfere with the geomorphic stability of the Joarimin Creek, Lockyersleigh Creek and Marulan Creek, and creek lines located outside the area of mining operations.
3. The Proponent shall ensure all construction in regards to waterways is undertaken utilising the *Guidelines for Controlled Activities (August 2010)*.

**Water Management Plan**

4. The Proponent shall review and amend their site Water Management Plan to the satisfaction of the Director-General. This Plan must:
  - a) be reviewed in consultation with NOW by a suitable qualified expert whose appointment has been approved by the Director –General;
  - b) be submitted to the Director-General for approval within 6 months of this approval and prior to any construction of modified works or otherwise agreed by the Director General; and
  - c) include:
    - I. an amended site water balance, which includes but is not limited to details of water sources and security of water supply, site water use and management, off site water transfers, measures to minimise water use and maximises reuse of saline and contaminated waters.
    - II. A program for review of groundwater modelling annually (unless triggered earlier by exceedences of set trigger levels for aquifers) that includes assessment of the short and long-term changes to groundwater levels and groundwater quality;
    - III. A surface water monitoring program that includes:
      - Detailing ongoing monitoring of surface water flows and water quality in the watercourses that could be affected by the project and associated baseline data,
      - Surface water impact assessment criteria, including trigger levels for investigating potentially adverse surface water impacts of the project; and
    - IV. A groundwater monitoring program that includes:
      - Detailing ongoing monitoring of groundwater levels and quality in the aquifers that could be affected by the project and associated baseline data.
      - Groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts of the project; and
      - A program to monitor:

- Groundwater inflows to the open cut mining operations; and
  - Impacts of the project on the region's aquifers, any groundwater bores, and surrounding watercourses, and
- V. A surface and groundwater response plan which describes the measures and/or procedures that would be implemented to:
- Respond to any exceedences of the surface and groundwater assessment criteria;
  - account for any unpredicted adverse impacts on groundwater and surface water resources caused by the mining operations.

**End Attachment B  
10 December 2010**