



## ASSESSMENT REPORT

### Section 96(1A) Modification – Lynwood Quarry, Marulan

#### BACKGROUND

CEMEX Australia Pty Ltd (CEMEX), formerly Readymix, has consent for the development of the Lynwood Quarry, located west of Marulan in the Southern Highlands (see Figure 1).

Consent for the quarry was granted on 21 December 2005 (DA-128-5-2005) by the Minister for Planning, however construction of the quarry is yet to commence.



Figure 1: Location of the Lynwood Quarry

Geotechnical investigations conducted as part of the detailed design for the quarry have identified a fault line along the western edge of the approved 30 year quarry footprint. This fault has the ability to result in long term stability issues for the western wall of the quarry pit, and consequently CEMEX is proposing to alter the quarry footprint to address this issue.

### PROPOSED MODIFICATIONS

On 23 March 2009, CEMEX lodged a modification application under section 96(1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act). Primarily, the proposed modification involves a reduction in the western extent of the approved quarry footprint and modifying the layout of site infrastructure, including the crushing and screening plant (see Figure 2).

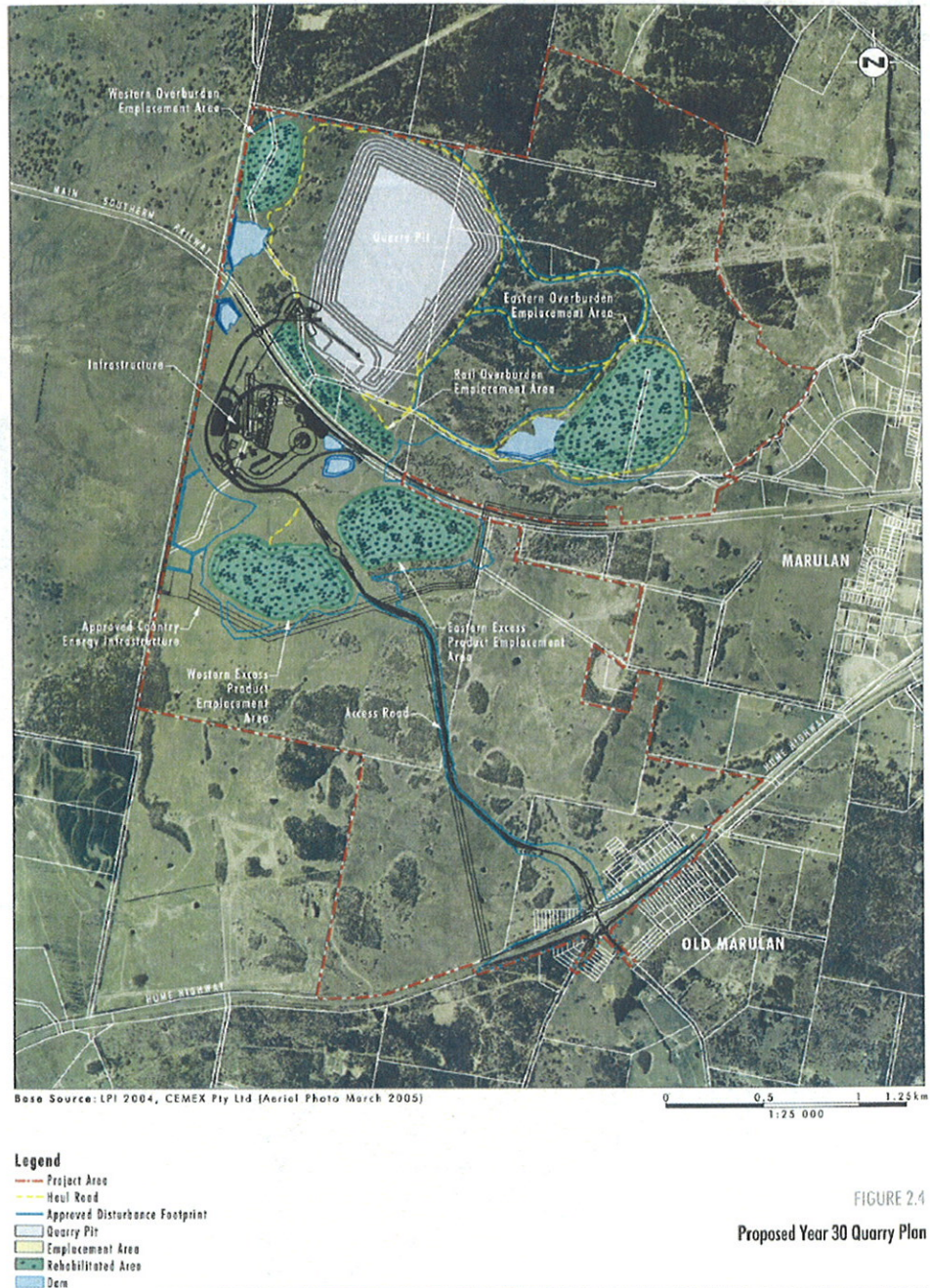


FIGURE 2.4  
Proposed Year 30 Quarry Plan

Figure 2: Proposed modifications to the approved Lynwood Quarry

- The proposed changes to the approved development comprise:
- moving the western extent of the quarry pit 200m to the east;
  - revisions to staged plans for years 5, 10, 20 and 30;

- use of up to two mobile in-pit crushers in the early stages of the development, before replacement by a fixed in-pit primary crusher, as opposed to the previously-approved fixed out-of-pit primary crusher;
- modifications to the layout of the crushing and screening plant to reflect the change in location of the primary crusher;
- allowing the transport of quarry products by road (within the existing limit of 1.5 million tonnes per annum (Mtpa)) to all markets; and
- relocating one of the water storage dams to the south of the Main Southern Railway.

The proposed modification does **not** include:

- extending the approved life of the quarry;
- increasing the approved depth of the open pit;
- increasing the approved methodology, rates or volumes of hard rock extraction or processing;
- changes to the amount of hard rock transported by road or the production level at which rail transport must commence; or
- changes to the water supply.

CEMEX has also requested minor changes to consent conditions concerning heritage and updating the schedule of affected lands.

## **STATUTORY CONTEXT**

### ***Consent Authority***

The Minister for Planning was the consent authority for the original development application, and is consequently the consent authority for this modification application. However, the Director, Major Development Assessment may determine the application under the Minister's delegation of 4 March 2009.

### ***Section 96***

Under section 96(1A) of the EP&A Act, a consent authority may modify a development consent if:

- a) *it is satisfied that the proposed modification is of minimal environmental impact, and*
- b) *it is satisfied that the development to which the consent as modified relates is substantially the same development for which consent was originally granted and before that consent as originally granted was modified (if at all); and*
- c) *it has notified the application in accordance with:*
  - (i) *the regulations, if the regulations so require, or*
  - (ii) *a development control plan, if the consent authority is a council that has made a development control plan that requires the notification or advertising of applications for modification of a development consent, and*
- d) *it has considered any submissions made concerning the proposed modification within any period prescribed by the regulations or provided by the development control plan, as the case may be.*

The Department has assessed the merits of the application and is satisfied that it would have minimal environmental impact (see "Consideration of Issues" below). The Department is also satisfied that the consent as modified would be "substantially the same" as the development approved in the original consent. The Department is therefore satisfied that the modification application can reasonably be considered and determined under section 96(1A).

## **CONSULTATION**

The Department is not required to publicly consult regarding this modification. However, due to the potential for change in licence conditions, the Department consulted the Department of Environment and Climate Change (DECC) and Department of Water and Energy (DWE) in regard to the proposal. Both DECC and DWE had no objections or concerns with the proposed modification.

## CONSIDERATION OF ISSUES

The Department has assessed the application, Statement of Environmental Effects (SEE) and submissions on the proposal in accordance with the relevant requirements of the EP&A Act. The key issues for each component of the proposed modification are discussed below.

<i>Issue</i>	<i>Consideration</i>
<i>Noise</i>	<p>The proposed modification has the potential to increase the noise impacts of the development, through alterations to the layout of infrastructure from the south side of the quarry railway to the north side. The SEE included a specialist noise assessment undertaken by Heggies Pty Ltd, which considered the potential noise impacts of the modification against the previous consent for the quarry and against the <i>NSW Industrial Noise Policy</i> criteria.</p> <p>Heggies' assessment considered the proposed changes, including the use of two mobile in-pit crushers (which would be in use in the early years of the quarry) and their replacement with a fixed in-pit crusher, as well as other minor changes to infrastructure. The noise assessment found that there would be no perceived increase in noise levels at surrounding receivers, over those previously stated in the Environmental Impact Statement (EIS). Mitigation methods and controls will remain the same as outlined in the consent. These are considered to be acceptable in reducing noise impacts for the proposed modification. Further, the maximum rail and road haulage limits would remain unchanged and therefore it is expected that there would be no increase in the level of traffic noise associated with the proposed transportation of quarry product. The cumulative noise impact of the Lynwood Quarry in conjunction with other industrial developments in the area also would not change as a result of the modification.</p> <p>The Department is satisfied that the potential noise impacts of the proposed modification would be negligible.</p>
<i>Water Resources</i>	<p>The quarry's rate of extraction and processing would not increase as a result of the proposed modification, nor would the quarry's life be increased. No increase in the depth of the pit or of groundwater extraction rates is proposed. The overall design of the water management systems and the majority of water management controls therefore remain unchanged.</p> <p>The EIS for the approved development outlined the impacts that the quarry would have on Lockyersleigh Creek, due to a creek diversion reducing downstream flows and velocity. The proposed modification would lessen impacts on Lockyersleigh Creek, by reducing the extent of the required creek diversion. Also the proposed drainage design associated with the Lockyersleigh Creek diversion would not increase peak flow rates, velocities or flood levels downstream of the site.</p> <p>The existing consent also allows for the realignment of Joarimin Creek. The proposed changes to infrastructure layout would result in less disturbance of this creek, with the previously-approved removal of secondary flow channels no longer required. The number of roads crossing the main channel of the creek would be reduced from two to one, further limiting environmental impacts.</p> <p>The proposed modification does not include any significant changes to the proposed infrastructure and therefore would not result in any changes to surface water impacts. The relocation of 'Supply Dam 1' to south of the railway line (see Figure 2) is not considered to have any significant impacts on the surrounding area or the water management system for the quarry. It is proposed that the relocated dam would still supply water to the quarry infrastructure and be fed by the same water supplies as outlined in the EIS. The new location for the dam is wholly within the previously established area of disturbance as outlined in the consent.</p> <p>The Department is satisfied that the proposed modifications would provide an improved environmental outcome and not result in any significant impacts to water flows or quality.</p>

<b>Issue</b>	<b>Consideration</b>
<i>Air Quality</i>	<p>The SEE includes an air quality impact assessment undertaken by Holmes Air Sciences, which compared potential air quality impacts of the modification against the approved development. The SEE found that the modification would only result in minor changes in previously-predicted dust levels. For most residential receivers, the predicted dust levels would be reduced, primarily due to reduced haulage of primary crusher feed with the proposed use of the in-pit crusher.</p> <p>The maximum 24-hour average PM<sub>10</sub> concentration is predicted to be below the applicable criteria of 50µg/m<sup>3</sup> at all residences, while annual average PM<sub>10</sub> concentrations remain below 30µg/m<sup>3</sup>. Further, predicted dust deposition levels would remain below the monthly criteria at all residences. A number of measures are proposed to monitor and control any air quality impacts that may arise from quarrying and production on site.</p> <p>The Department is satisfied that impacts on air quality as a result of the proposed modification would be minimal.</p>
<i>Transport</i>	<p>The current consent allows for the transport of up to 5.0 Mtpa of quarry products from the site, including 1.5 Mtpa by road. Any production in excess of this latter amount must be transported to market by rail (on the Main Southern Railway). The approved development includes the proposed establishment of a balloon rail loop and rail loading facility so that trains are able to leave and enter the Lynwood Quarry site without blocking the main line.</p> <p>The modification application does not propose to increase the limit of product transported by road. However, due to the reduction in market demand, the quarry proposes to temporarily limit production to 1.5 Mtpa and to solely utilise road haulage for product delivery until market conditions improve. This could restrict the construction of the new rail infrastructure for several years. Construction of the rail loading facility and rail loop at a later date, when market conditions permit, would remain consistent with the development consent.</p> <p>The EIS also contained a statement that road-based deliveries would be restricted to local markets (Goulburn/Southern Highlands) and regional markets (ACT/southern Sydney outskirts). The applicant is seeking approval to deliver up to 1.5 Mtpa of quarry products by road to any market, including CEMEX's facilities in the Sydney region and beyond. The proposed modification would have essentially the same impact on local and regional roads as the current consent. The main traffic impact would arise when haul trucks pass the southern outskirts of Sydney. However, the impact of the proposed increase in quarry trucks though Sydney to suburban and other markets is considered to be low. Such trucks are likely to substitute for other road-based deliveries from another source.</p> <p>The Department is satisfied that that proposed transport of quarry products would be substantially the same as the current consent and that the transportation of up to 1.5 Mtpa of quarry product by road (as approved under the consent, but now to be extended to additional markets) remains acceptable.</p>
<i>Greenhouse Gas Emissions</i>	<p>The SEE includes a greenhouse gas and energy assessment, undertaken by SEE Sustainability. The assessment found that predicted 'Scope 3' emissions are expected to increase from the transport of quarry product by road. Onsite energy consumption is also expected to change due to alterations in infrastructure and the level of production and extraction of quarry products. It is predicted that while electricity consumption from quarry equipment would remain the same, onsite diesel consumption would decrease by 7.5% under the proposed modification. This is due to the use of in-pit crushing, which leads to a reduction in haulage distance for primary raw feed.</p> <p>Overall greenhouse gas emissions associated with the modification are predicted to increase from 84.4 kilotonnes of carbon dioxide equivalent (ktCO<sub>2</sub>-e) to 88.6 ktCO<sub>2</sub>-e, when assessed at the maximum production rate of 5 Mtpa (including road transport of 1.5 Mtpa). The predicted increase is very small. Factors which have changed since the original greenhouse assessment include: haul distance for primary crusher feed has reduced, emissions from future rail transport have reduced slightly due to a change in emission factors, and potential road haulage distance for quarry products has increased. The small increase predicted is a worst-case scenario for the modified road haulage proposed, because future haulage of quarry products by road would be market driven and there is the consequent potential that the total 1.5 Mtpa may not be delivered every year, especially in the early stages of the project.</p> <p>The Department is satisfied that there would be no significant increase in greenhouse gas emissions.</p>

<b>Issue</b>	<b>Consideration</b>
<i>Non-Aboriginal Heritage</i>	<p>The only listed non-Aboriginal heritage item of relevance is the listing of the Old Marulan Township on the State Heritage Register. The proposed modification would not alter the development's relationship to this site. The Department is satisfied that there would be no impacts on non-Aboriginal heritage as a result of the proposed modification.</p> <p>However, CEMEX has also requested a minor change to its consent conditions concerning heritage. These conditions require detailed archaeological investigations in the part of the Township area where the construction of a new grade-separated interchange with the Hume Highway is required as part of the development consent. These investigations have proceeded under a section 60 permit and a section 57 exemption issued by the NSW Heritage Council. The investigations have found a number of artefacts in a section of the former Lot 1 DP 210885, located within the existing Hume Highway Road Reserve. The investigations have recommended salvage of the artefacts, but condition 4(a) of the consent requires that the development must have "no impact" on these remains. CEMEX has therefore requested an amendment to condition 41(a) to provide the NSW Heritage Council with the flexibility to issue permits for this area to be further investigated and salvaged. The proposed change to the consent would mean that the "no impact" requirement for these (and all other heritage items in the Township area) would continue to apply, except with the approval of the Heritage Council. The Department supports this change and has proposed a modified condition accordingly.</p>
<i>Aboriginal Heritage</i>	<p>The proposed modifications would not disturb areas outside the existing quarry footprint. A comprehensive archaeological assessment was undertaken in the previous EIS, outlining the potential impacts to the large number of Aboriginal archaeological sites within the development. The previous assessment found that there would be a number of sites which would be destroyed or relocated due to quarrying operations. Due to the fact that the modified development would not exceed the previously approved area of disturbance, there would be no increased disturbance to the sites of Aboriginal archaeological significance previously recorded and assessed. The Department is satisfied that additional impacts on Aboriginal cultural heritage as a result of the modification are unlikely, due to the reduction in footprint of the pit.</p>
<i>Flora and Fauna</i>	<p>A substantial portion of the northern part of the site is covered with woodland, with the majority of the remainder being cleared grazing land with scattered patches of remnant vegetation. The approved development involves the removal of approximately 103 ha of native vegetation. The proposed modifications would not result in any change to the approved disturbance footprint.</p> <p>The Department is therefore satisfied that the impact of the proposed modifications on ecology would not change from that currently approved.</p>
<i>Rehabilitation</i>	<p>On 31 August 2006, the Director-General approved the Rehabilitation and Landscape Management Plan (RLMP) for the development, in accordance with conditions of consent.</p> <p>The only aspect of the proposed modification which has the potential to affect the rehabilitation strategy outlined in the RLMP is the reduction in size of the quarrying pit. The strategies outlined in the RLMP would be applied to the modified pit and the surrounding landform. The Department is satisfied that only minor amendments to the RLMP would need to be made, and that the final landform would be substantially the same as that which was approved. The Department has recommended a condition that would enable it to require the Applicant to prepare a revision of any strategy, plan or program (including the RLMP), to the satisfaction of the Director-General.</p>
<i>Visual</i>	<p>The proposed modification would not significantly alter visual impacts associated with the approved development. The only aspect of the modification that has the potential to alter the visibility of the development is the relocation of some items of infrastructure. It is considered that the alterations to infrastructure would not have a significant or detrimental impact upon the outlook of neighbouring properties, or the visibility of the development as a whole.</p> <p>The Department has considered the visual assessment outlined in the SEE and is satisfied that the visual impacts of the proposed modification would be minimal.</p>
<i>Socio-Economic</i>	<p>The proposed modification would have substantially the same effect on the community and the economy as the previously approved development. The quarry would provide a long-term supply of construction materials to Sydney and regional markets as well as direct employment for 115 people and economic benefits in the form of capital expenditure and wages. The proposed modification would not result in any changes to the socio-economic benefits outlined in the EIS.</p> <p>The Department is satisfied that maintaining the workforce on site and the supply of construction materials to Sydney and regional markets would be a positive outcome for the local economy and NSW as a whole.</p>

## **SECTION 79C CONSIDERATION**

Section 96 of the EP&A Act requires a consent authority to give consideration to the matters listed under Section 79C when it determines a modification application.

The Department has assessed the proposal against these matters, and is satisfied that:

- the proposal is consistent with the provisions of the relevant planning instruments;
- the potential impacts of the proposal can be minimised, mitigated and/or managed;
- the site is suitable for the development as previously approved; and
- the proposal is in the public interest.

### **RECOMMENDED CONDITIONS**

The Department is satisfied that the existing conditions of consent for the Lynwood Quarry are generally adequate to manage the development as modified by the application. The Department has recommended additional conditions, including a requirement to update any strategies, plans or programs necessary to encompass the proposed modification, as well as administrative updates of certain other conditions, including the schedule of affected lands. The Applicant does not object to the proposed conditions.

### **CONCLUSION**

The Department has assessed the application, the SEE and correspondence regarding the proposed modification. Overall, the Department is satisfied that the proposed modification would have minimal environmental impact. The key reasons for this are that:

- the proposed modifications to the open cut pit and site infrastructure would take place fully within the existing approved area of disturbance;
- the proposed changes are a minor modification of the existing approved operations;
- any consequential impacts would be of the same nature as existing impacts and of such small extent that they would be difficult to discern from existing impacts; and
- the proposed modification would not increase the impacts or demand on local and regional water resources.

The Department is satisfied that the existing conditions of consent generally provide a comprehensive framework for regulating the development as modified.

The Department is further satisfied that the development as modified would be substantially the same as the originally-approved development, and that the proposal is in the public interest. Consequently, the Department believes the proposed modification should be approved, subject to it being carried out in accordance with the SEE and other minor administrative modifications to the consent.

### **RECOMMENDATION**

It is recommended that the Director, Major Development Assessment, as delegate of the Minister:

- consider the findings and recommendations of this report;
- determine that the proposed modification is of minimal environmental impact;
- determine that the development to which the consent, as modified, relates is substantially the same development for which consent was originally granted;
- approve the proposed modification under Section 96(1A) of the EP&A Act; and
- sign the attached notice of modification (Tab A)

*Howard Reed*

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7