



Cleary Bros Albion Park Quarry

Independent Environmental Audit
FINAL

For Cleary Bros (Bombo) Pty Ltd

December 2014

0267375

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Cleary Bros Albion Park Quarry

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Independent Environmental Audit

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Environmental Resources Management Australia Pty Ltd Quality System

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Cleary Bros (Bombo) Pty Ltd

Cleary Bros Albion Park
Quarry Independent
Environmental Audit
Final

December 2014

Reference: 0267375

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Abbreviations

AEMR	Annual Environmental Monitoring Report
CB	Cleary Bros
CoC	Condition(s) of Consent
DA	Development Application
DEC	NSW Department of Environment and Conservation (now EPA)
DECCW	NSW Department of Environment and Climate Change and Water (now EPA)
DoPE	NSW Department of Planning and Environment
DoPI	NSW Department of Planning and Infrastructure (now DoPE)
DP	Deposited Plan
DWE	Department of Water and Energy
EIS	Environmental Impact Statement
EMS	Environmental Management System
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence
ERM	Environmental Resources Management Australia Pty Ltd
g/m ² /month	grams per metre squared per month
HVAS	High Volume Air Sampler
IEA	Independent Environmental Audit
kg	kilogram
L	litre
mg	milligram
OEH	NSW Office of Environment and Heritage (former EPA)
POEO	Protection of the Environment Operations Act 1997
QEMP	Quarry Environmental Management Plan

1 INTRODUCTION

1.1 BACKGROUND

Environmental Resources Management Australia Pty Ltd (ERM) was engaged by Cleary Bros (Bombo) Pty Ltd (CB) to undertake an independent environmental audit of the Albion Park Quarry near Shellharbour, New South Wales (NSW). The purpose of the audit was to satisfy requirements of the NSW Department of Planning and Environment (DoPE) pursuant to the relevant Development Consent.

This report sets out the audit purpose, methodology, summary findings and detailed assessment. The audit was conducted on 18 November, 2014 and included extensive document review and a site visit.

1.2 AUDIT OBJECTIVES

The objectives of ERM's audit were to:

- satisfy Schedule 6, Condition 6 of the Project Approval (DA466-11-2003) by conducting an Independent Environmental Audit (IEA);
- assess the various aspects of the environmental performance of Cleary Bros Albion Park Quarry ('the site'), and its effects on the surrounding environment;
- verify compliance with the relevant condition, standards, performance measures and statutory requirements;
- review the adequacy of Cleary Bros Quarry Environmental Management Plan (QEMP) under DA466-11-2003; and
- recommend measures or actions to improve the environmental performance of the quarry or QEMP to meet the conditions of the development consent.

1.3 DEPARTMENT OF PLANNING ORDER

As part of Cleary Bros 10839 Conditions of Consent (CoC) for operation, an independent environmental audit is to be conducted of the Albion Park quarry every three years after the initial Independent Audit (within two years of consent).

Schedule 6, Condition 6 of the DA466-11-2003, which summarises the audit requirements is provided below:

6. Within 2 years of the date of this consent, and every 3 years thereafter, unless the Director General directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:

- a) be conducted by suitably qualified, experienced and independent expert/s whose appointment has been endorsed by the Director-General;*
- b) be consistent with ISO 19011:2002 – Guidelines for Quality and/or Environmental Systems Auditing, or updated versions of this guideline;*
- c) assess the environmental performance of the development, and its effects on the surrounding environment;*
- d) assess whether the development is complying with the relevant standards, performance measures and statutory requirements;*
- e) review the adequacy of the Applicant’s Environmental Management Strategy and Environmental Monitoring Program; and, if necessary, any strategy/plan/program required under this approval; and, if necessary;*
- f) recommend measures or actions to improve the environmental performance of the development, and/or the environmental management and monitoring systems.*

This report constitutes outcomes of the Independent Environmental Audit to comply with Schedule 6, Condition 6 of the Conditions of Consent.

1.4 SCOPE OF WORKS

The audit applies to the active quarry, the haul road to the quarry and any other infrastructure specifically referenced in the Conditions of Consent. ERM assessed the environmental compliance status for the following subject areas contained within the Development Consent:

- Obligation to Minimise Harm to the Environment;
- Scope of Development;
- Period of Approval;
- Limits on Approval;
- Buffer;
- Noise;
- Blasting and Vibration;

- Air Quality
- Meteorological Monitoring;
- Surface and Groundwater;
- Flora and Fauna;
- Rehabilitation;
- Traffic and Transport;
- Heritage;
- Visual Impact;
- Waste Management;
- Emergency and Hazards Management;
- Bushfire Management;
- Environmental Management Strategy;
- Environmental Monitoring Program;
- Annual Reporting;
- Community Consultative Committee; and
- Access to Information.

For each Condition of Consent audited, ERM undertook the following:

- Evaluated relevant data and reports to substantiate whether the condition has been met;
- Identified any data gaps, inconsistencies, errors, uncertainties and non-compliances;
- Assessed the reliability and quality of information provided;
- Conducted interviews with selected CB employees;
- Assessed environmental management performance; and
- Completed a summary of findings and recommendations.

It is noted that the IEA was required for the Conditions of Consent only, and as such the Environmental Protection Licence conditions were not specifically audited as part of this scope of work. Issues relating to health and safety are also outside the scope of the audit, except where they are directly related to environmental issues, such as closure planning.

Where management plans had not been produced, environmental operations were reviewed in a general manner during the site inspection. The site visit concentrated on assessment of the effectiveness of environmental management and adequacy of performance.

Where actions had been previously assessed by a statutory authority, ERM relied on the findings of the authority and did not reassess the relevant sections of the condition (e.g. if a CoC required approval of a management plan by a statutory authority, ERM relied on the approval letter from the statutory authority that the plan was prepared in accordance with the detailed requirements of the CoC).

The review of environmental monitoring data has generally been limited to data collected between November 2011 and November 2014 (the most recent data available at the time of the site audit).

1.5 PERSONNEL AND TIMING

Mr. Robert Smith was approved by the DoPE to conduct the audit (refer to correspondence from the Department of Planning and Environment in *Annex A*).

Mr. Robert Smith undertook the site visit in attendance with Ms. Natalie O'Hanlon, an appropriately qualified and experienced environmental consultant. Mr. Mike Atkinson (the ERM Partner in Charge of the Project) assisted with the peer review of the Report.

The environmental audit was conducted on 18 November 2014.

The following CB personnel were interviewed during the course of the audit:

- **Ms. Helen Nicolaidis** - Senior Civil Engineer and Environment Officer;
and
- **Mr. Geoff Robinson** - Quarry Production Manager.

1.6

LIMITATIONS

This disclaimer, together with any limitations specified in the report, applies to this report and its use.

This report was prepared in accordance with the contracted scope of services for the specific purpose stated and subject to the applicable cost, time and other constraints. In preparing this report, ERM relied on: (a) client/third party information which was not verified by ERM except to the extent required by the scope of services, and ERM does not accept responsibility for omissions or inaccuracies in the client/third party information; and (b) information taken at or under the particular times and conditions specified, and ERM does not accept responsibility for any subsequent changes. This report has been prepared solely for use by, and is confidential to, the client and ERM accepts no responsibility for its use by other persons. This report is subject to copyright protection and the copyright owner reserves its rights. This report does not constitute legal or financial advice.

AUDIT PROCESS

The independent audit was conducted against each Condition of Consent (CoC). The independent audit process at CB included:

- Off-site planning for the site audit;
- Collection of relevant background documentation;
- An opening meeting;
- Collecting audit evidence through information gathering, observations and interviews;
- Site inspections;
- A close out meeting;
- Evaluating audit documentation; and
- Compiling this audit report.

2.1

AUDIT TERMINOLOGY

The hierarchy of terminology to be used for any non-conformances will be as follows:

- **High** – for current non-compliance;
- **Medium** – for potential non-compliance; and
- **Low** – for an observation or recommendation relating to improvements to existing compliance management practices.

A summary of the 'high' and 'medium' risk findings is provided in *Table 4.1* in this report. The low risk findings, which do not comprise non-conformances are summarised in *Table 4.2*.

2.2

OPENING MEETING

The opening meeting was held at the Albion Park site office on 18 November 2014. The opening meeting was attended by Mr. Robert Smith (Lead Auditor), Ms. Natalie O'Hanlon (ERM Environmental Scientist) and CB personnel Ms. Helen Nicolaidis and Mr. Geoff Robinson.

An explanation of the independent audit process was provided and it was emphasised that the audit used a compliance sampling methodology whereby adherence to the approval conditions was audited. One implication of using this approach to auditing is that neither all compliances, nor all non-compliances, will be identified during the process. The audit methodology does, however, provide a statistically valid level of confidence for CB's operations.

It was also stated that the audit report would be based on objective evidence.

2.3 *AUDIT*

Interviews and discussions were held in accordance with the agreed audit schedule.

Site inspection was undertaken by Mr. Robert Smith, Ms. Natalie O'Hanlon, Ms. Helen Nicolaidis and Mr. Geoff Robinson on 18 November 2014 and included observations of the following areas:

- The active quarry;
- A drive through of the materials storage area;
- A demountable building associated with the active quarry;
- Groundwater sampling areas;
- Rehabilitation areas;
- Surface water sampling areas;
- Stormwater storage dam; and
- Stormwater discharge point.

Ms. Helen Nicolaidis and Mr. Geoff Robinson provided assistance with collecting audit evidence by providing ERM with documentation for each approval condition.

2.4 *CLOSING MEETING*

The closing meeting was conducted on 26 November, 2014 via phone conference and included a discussion of preliminary audit findings. Mr. Robert Smith and Ms. Natalie O'Hanlon of ERM and Ms. Helen Nicolaidis of CB attended the meeting.

2.5

AUDIT REPORT

A summary of audit non-compliances or potential non-compliances, and ERM recommendations arising as a result of the audit, are included in **Section 4** of this report.

CB is required to submit a copy of this independent audit report to the Director-General (NSW DoPE), together with its response to any recommendations contained in the independent audit report within three months of the audit being undertaken.

SITE DESCRIPTION

The subject property is located in an industrial area of Shellharbour Local Government Area, in Albion Park New South Wales, Australia. The subject property consists of two lots of land identified as Lot 1 DP 8582445 and Lot 23 DP 1039967. On Lot 23 DP 1039967 only the area covered by the haul road to the quarry is included in the scope of this audit.

The quarry operates from Monday to Friday, 9am to 5 pm, and Saturdays 9am to 1pm.

3.1

CURRENT OPERATIONS

The site is a hard rock quarry which utilises controlled blasting and earthmoving equipment to extract the rock. The quarry produces a wide range of construction aggregates, including blue metal aggregates, road bases of various grades and blended specialty products made to specification. These products are transported from the site via truck.

The quarry comprises a six stage development. The Development Consent, which is the subject of this audit, covers stages one to four. Schedule 3, Item 6 states that "Under Section 80(5) of the Act, Stages 5 and 6 must be the subject of another development consent. A consent granted in accordance with condition 6 does not require a further development application under section 78A of the Act." Quarrying has previously been undertaken in Stages 1 and 3 and has now progressed into Stage 2 and 4. The Development Consent additionally approved the construction of a new haul road and included details as to the maximum permitted extraction per annum (currently 600,000 tonnes). Ancillary activities include:

- Groundwater monitoring wells;
- Surface water monitoring flow meters;
- High Volume Air Sampler (HVAS) monitoring point;
- Meteorological station;
- Stormwater collection infrastructure;
- Various pumps for discharge of stormwater.

Areas which comprise part of the quarry as a whole, but were not subject to the Development Consent and are therefore excluded from the scope of this assessment include:

- Rock crushers;
- Supertreat effluent treatment plant (with on-site irrigation);
- Various oil/water separators;
- Recycled water system for concrete batch plant;
- Above ground storage tank farm;
- Three underground storage tanks (two operational);
- Two fuel filling areas;
- Maintenance workshop;
- Vehicle washing bay;
- Vehicle washing yard;
- Compressed gas storage;
- Drummed storage of oils, coolants, grease etc.;
- Parts washers (non-solvent based); and
- Shredded wood waste storage (for revegetation soil stabilisation purposes).

The facility also includes a non-operational quarry (used for storage of overburden), a materials sales area and a concrete batch plant. These areas were not included in the scope of the audit.

4.1 COMPLIANCE WITH CONDITIONS OF CONSENT

The conditions of Development Consent granted to CB by the DoPE were reviewed as part of the audit. Non-conformances with the site's Conditions of Consent identified during the audit were primarily due to missing information. Set out below in *Table 4.1* are findings where complete compliance could not be demonstrated.

4.2 ENVIRONMENTAL PROTECTION LICENCE

A review of CB's annual returns for 2011, 2012 and 2013 was undertaken as part of this audit.

No non-compliances were reported for the review period. Based on the observations made during the Site inspection, ERM did not note any non-compliances with the conditions of the EPL, within the scope of this audit (i.e. during the current reporting period for Annual Returns). No historical issues relating to operations in the area included in the scope of this audit, which should have been reported in Annual Returns to the EPA between 2011 and 2013 were identified. Complaints Summary

The annual returns completed for the site were reviewed against the Annual Environmental Management Report for complaints and follow up actions. These complaints are summarised as follows:

- 2011/12 - Six complaints - one for dust and five for noise.

Noise complaints related to blast vibration and work outside permissible hours. All complaints were investigated and no exceedances of blast vibration limits, or outside of hours work were identified. Following the dust complaint, jaw crusher sprays were inspected to ensure that they were operational.

- 2012/2013 - Four complaints - one for dust and three for noise.

Complaints largely related to blast vibration, however no exceedances of the permitted levels in the Site's EPL and CoC were reported in the blast monitoring undertaken. One complaint also related to dust levels on site. Site conditions were assessed following the complaint. The assessment confirmed that dust mitigation measures were being properly implemented at the site (i.e. water cart and stockpile sprinklers were fully operational). No further action was taken.

- 2013/2014 – Two complaints – both for noise.

One complaint related to blast vibration, however the monitoring data was found to comply with the adopted levels. The second complaint related to activities undertaken by the Police Rescue Division carried out in the quarry. These activities were unforeseen, and police advised the resident of the circumstances. No further action was undertaken.

4.3 *PREVIOUS INDEPENDENT AUDIT*

Condition 13 of Schedule 3 of the DA466-11-2003 states '*Prior to commencement of operations, the Applicant shall commission an independent person(s) or organisation(s), approved by the Director-General, to certify in writing to the satisfaction of the Director-General, that the Applicant has complied with all conditions of this consent applicable prior to that event*'. CB commissioned ERM Australia Pty Ltd to undertake this Audit in November 2011. The findings of this report were reviewed and considered during the development of this report.

4.3.1 *Review of Previous Issues*

The previous environmental audit identified several issues and non-compliances as summarised below:

- Schedule 3, Condition 8 (High Significance) – Production exceedances were reported for the audit period;
- Schedule 3, Condition 11 and Schedule 4, Condition 30 (Medium Significance) – Malfunction of the former water flow meters installed at the site meant that flow data had not been collected. Replacement of these flow meters was recommended so that flow data could be collected in accordance with the Surface Water Monitoring Program;
- Schedule 4, Condition 33 (Medium Significance) – A monitoring well targeting the deeper aquifer (MW3D) had not been replaced after it was destroyed during the quarrying process. ERM recommended that CB seek formal approval from DoPE to not replace the deeper well;
- Schedule 4, Condition 4 (Low Significance) – Elevated noise levels were reported at the nearby Belmont residence. The site is not required to monitor at this location as part of the Development Consent, and ERM recommended a Memorandum of Understanding between CB and the resident of Belmont as a risk minimisation measure;

- Schedule 3, Condition 11 (Low Significance) – The Dunster premises was included on the development consent with specified limits, however development had not been undertaken on these premises and associated approval for development had lapsed. Hence ERM recommended that this condition be removed;
- Schedule 4, Condition 13 (Low Significance) – The number for the blasting hotline was located under the ‘sales enquiries’ section of the website and ERM recommended moving the hotline number to somewhere more prominent;
- Schedule 4, Condition 25 (Low Significance) – No issues regarding the capacity of the quarry to contain a 1:10 year storm event however adequate documentation was not available on site. ERM recommended that evidence of approximate dam capacities are maintained on site and that the QEMP is amended so that stormwater from the haul road is pumped out within 5 days following high rain events;
- Schedule 4, Condition 29 (Low Significance) – The Soil and Erosion Control Plan did not contain the capacity of the control structures, however this was provided in the water balance study. ERM therefore recommended that this information be included in the Soil and Erosion Control Plan; and
- Schedule 4, Condition 43 (Low Significance) – The rehabilitation and conservation bond was submitted to DoPE in November 2008, however a response from DoPE regarding suitability of the calculation method had not been received.

4.3.2 *Close Out of Low Priority Findings*

An action plan in response to the issues outlined above was prepared by CB and provided to DoPE on 4 May, 2012. The action plan included proposed completion dates for each item raised. ERM reviewed the CB action plan and considers all of the low risk findings from the previous IEA to be closed.

4.3.3 *Close Out of Medium and High Priority Findings*

Production Exceedance

In regards to the production exceedance, an application has been lodged with DoPE to increase permitted production limits. Site management reported that this application was being processed at the time of this review.

Water Management Plan

Golder Associates Pty Ltd (Golder) was engaged by CB to review the water management plan and provide recommendations of variations and amendments to the existing plan. The findings of Golder's assessment are provided in Water Management Plan Review (dated 18 January, 2013). In their report, Golder acknowledges the challenges associated with installation and operation of continuous loggers. However it was concluded that there was insufficient data to provide baseline water levels and flows for Watercourse 1 and 2, in accordance with Section 4 of the Water Management Plan. Upgrades to existing weirs at Watercourse 1 and 2 and a revised methodology for volumetric and manual flow gauging was presented in a Technical Memorandum prepared by Golder (dated 13 March, 2013). Surface water flow data, created using the methodology presented in the Technical Memorandum was observed by ERM. This methodology has been submitted to DoPE and approval is awaited.

The Water Management Plan Review (dated 18 January, 2013) also recommended that there was no imperative to replace monitoring well MW3D, unless data from monitoring wells MW1 and MW2 indicated deteriorating conditions. Amendments to the analytical suite were also recommended. Based on a review of groundwater data provided in the Annual Environmental Management Reports, it was concluded that groundwater parameters were generally consistent with historic ranges. No significant deterioration was observed in the groundwater data collected during the audit period.

The recommendations provided in the Golder report (dated 18 January, 2013) were provided to DoPE on 31 January, 2013. In their letter to DoPE, CB advised of their intention to commence with the revised monitoring program at the next sampling round.

4.4 *SUMMARY OF FINDINGS*

Table 4.1 below provides a summary of the findings identified during ERM's audit. Where a CoC is not referenced in the Table below, no non-compliance with that Condition was identified during the Audit.

Table 4.2 provides a summary of the 'Low' risk findings which do not comprise a non-compliance with the CoC.

Table 4.1 *Summary of High and Medium Risk Findings*

Condition Number	Description of Condition	Comment	Significance	Recommendation
Schedule 3, Condition 8	The production of quarry products from the quarry shall not exceed 400,000 tonnes per annum.	A letter received from the Department of Planning (dated 28 July, 2009) confirmed that the annual permitted production at the site could be increased to 600,000 tonnes. Production figures for 2012-2013 (615,190 tonnes) were reported above the allowable limit (600,000 tonnes).	High	The production exceedance is less than 2.6 % of the total approved production. Whilst the 2012-2013 production represents a technical breach of this CoC the exceedance is unlikely to have had any material additional environmental effect. Site management reported that an application has been submitted to the Department of Planning and Environment to increase the permitted production limit to 900,000 tonnes. This application was under consideration at the time of this audit.
Schedule 4, Condition 21	The applicant shall establish a permanent meteorological station at a location approved by the DEC and to the satisfaction of the Director-General, to monitor the parameters specified in Table 9, using the specified units of measure, averaging period, frequency and sampling method.	The weather station was observed on site, however a review of an output summary from the weather station identified that the following parameters were not being collected: <ul style="list-style-type: none"> • Temperature at 2 m; • Sigma Theta at 10 m; • Total solar radiation at 10 m 	High	CB has engaged PAE Holmes to remotely re-programme the weather station so that the temperature at 2m and Sigma Theta are included in the output and this is expected to be carried out by end December 2014. Site personnel have also contacted the equipment supplier to repair the total solar radiation sensor. No further actions were deemed necessary, however CB should continue to scrutinise the meteorological data output to ensure that all meteorological data is being collected.
Schedule 4, Condition 16	The applicant shall ensure that the air pollution generated by the development does not cause exceedances of the ambient air quality standards and goals listed in Tables 5, 6 and 7 at any sensitive receiver or residence on privately-owned land	Dust deposition gauge data is collected monthly from four locations surrounding the Site. Monthly data is then used to calculate an annual average, which is compared to the maximum total deposited dust level 4 g/m ² /month, as per Table 7 of CoC 16. Based on discussions with site personnel, dust deposition data is reviewed	Medium	The monthly criterion adopted by CB of 10 g/m ² /month is not provided in the Conditions of Consent, the Quarry Environmental Management Plan (QEMP; Perram and Partners, 2008) or the Albion Park Quarry Extension Management Plan (Heggies, 2005). This criterion is significantly higher than the levels presented in the CoCs and should not

Condition Number	Description of Condition	Comment	Significance	Recommendation
		<p>against a monthly criterion of 10 g/m²/month.</p> <p>Whilst data is compared to the maximum total deposited dust level on an annual basis (4 g/m²/month), data is not compared to the maximum increase in deposited dust level (2 g/m²/month), as per Table 7 of CoC 16. ERM understands that the maximum increase in deposited dust level related to the maximum allowable limit above background.</p> <p>Cleary Bros advised that the Air Monitoring Program and the Dust Management Plan have been approved by the DoPE and dust monitoring to date has been carried out in accordance with the above Program and Plan.</p> <p>Correspondence relating to the application of dust criteria, prepared by SLR Consulting Pty Ltd (dated 27 November, 2014) was provided to ERM by CB. The letter prepared by SLR Consulting Pty Ltd recommended that the maximum increase in deposited dust level (2 g/m²/month) was not relevant to the project, given that quantification of true background conditions was impractical due to surrounding land uses (including other hard rock quarries), which would influence ambient dust levels.</p>		<p>be used for assessing compliance.</p> <p>Whilst it is acknowledged that additional sources of ambient dust are present in the form of surrounding land uses, the site is still required to compare data against both the maximum increase in deposited dust level and maximum total deposited dust level, in accordance with Table 7 of CoC 16.</p> <p>ERM recommends that the Site liaise with the DoPE to determine whether they consider SLR's advice to be satisfactory to comply with this condition of consent.</p> <p>If the DoPE requires that the Site complies with 2g/m²/month increase in dust emissions against background conditions, then several options for establishing baseline conditions are available to CB including:</p> <ul style="list-style-type: none"> • establishing a background dust deposition gauge location at least 2 km from the site to determine background dust concentrations; or • assessment of prevailing wind direction using a windrose (as this data is already being collected via CB's meteorological station) and using the 'up-wind' existing CB dust monitoring location, to determine background dust levels on a monthly basis.

Table 4.2 *Summary of Low Risk Findings*

Condition Number	Description of Condition	Comment	Significance	Recommendation
Schedule 4, Condition 14	<p>Prior to the commencement of operations in each stage of the development after Stage 1, the Applicant shall prepare, and subsequently implement, a Blast Management Plan for the development in consultation with the landowner(s) of Fig Tree Hill Land and to the satisfaction of the Director-General and DEC. This Plan must:</p> <ol style="list-style-type: none"> a) Include a summary of monitoring results for the previous quarry stage; b) Describe the objectives for noise and blasting at that stage; c) Describe the proposed blasting design for that stage, and demonstrate that the design will meet the blast criteria listed in Tables 3 and 4; and d) Describe the measures that would be implemented to; <ol style="list-style-type: none"> (i) meet the blast criteria referred to in this consent, and additional blast criteria at the boundary of the site; (ii) avoid and/or minimise any blasting impacts, including flyrock, of the development on The Fig Tree Hill Land, or the continued rural use of that land; (iii) monitor the blasting impacts of the development on The Fig Tree Hill Land; and (iv) mitigate, remediate or compensate for any blasting impacts of the development on the residences on The Fig Tree Hill Land or the use of that land. 	The revised Blast Management Plan (SLR, 2013) was considered to meet the requirements of the CoC. The revised Blast Management Plan (SLR, 2013) was submitted to DoPE on 19 July, 2013. However DoPE approval of the revised plan was not observed by ERM during the audit.	Low	Request documentation that confirms the DoPE is satisfied with the amendments to the revised Blast Management Plan.

Condition Number	Description of Condition	Comment	Significance	Recommendation
Schedule 4, Condition 22	Except as may be expressly provided by an Environment Protection Licence, the Applicant shall comply with section 120 of the <i>Protection of the Environment Operations Act 1997</i> during the carrying out of the development.	Staining was observed associated with refuelling of the diesel water pumps located in the active quarry area. No evidence of spillage into the stormwater dam was observed.	Low	Staining appeared to be limited to the immediate vicinity of the pump and was not observed to be migrating to the surface water. Spill management procedures, including use of adsorbent media, are recommended during refuelling activities. Based on follow up discussions with site personnel, these measures have been implemented at the site.
Schedule 4 Condition 30	The Surface Water Monitoring Program shall include: a) Detailed baseline data on surface water flows and quality; b) Surface water impact assessment criteria; c) A program to monitor surface water flows and quality; d) A program to manage water releases from the site; e) A program to monitor bank and bed stability; f) A protocol for the investigation, notification and mitigation of identified exceedances of the surface water impact assessment criteria; and g) A program to monitor the effectiveness of the Erosion and Sediment Control Plan.	The surface water monitoring program requires CB to measure flow at the main watercourses on site. ERM understands that installation of continuous flow loggers on site had been problematic. In their report, Golder recommended upgrades to existing weirs at Watercourse 1 and 2 so that discharge and flow can be estimated under a revised surface water monitoring program. Following a review of the findings presented in the Water Management Plan Review (Golder, 2013), ERM considers the proposed approach to be suitable in estimating surface water flow in lieu of continuous loggers. However DoPE approval of the proposed approach was not observed by ERM during the audit.	Low	Request documentation that confirms the DoPE is satisfied with the amendments to the surface water monitoring program.

Condition Number	Description of Condition	Comment	Significance	Recommendation
Schedule 4 Condition 33	Prior to the commencement of works, the Applicant shall: a) Review the water management plan; b) Update each sub plan; c) Report the results of this review in the AEMR, including; d) The results of monitoring, e) review of each sub plan; f) Amendments to the sub plans; and g) Details of the measures undertaken/proposed to address any identified issues.	A review of the Water Management Plan was completed by Golder (dated 18 January, 2013), which included the groundwater monitoring program on site. This review recommended that there was no imperative to replace monitoring well MW3D, unless data from monitoring wells MW1 and MW2 indicated deteriorating conditions. Amendments to the analytical suite monitoring frequency were also recommended. The findings of the Water Management Plan Review were provided to DoPE by CB in a letter dated 31 January, 2013. Approval of the amendments to the groundwater monitoring program is awaited from the DoPE at the time of writing this audit.	Low	Obtain documentation that confirms the DoPE is satisfied with the amendments to the groundwater monitoring program. It is noted that no significant deterioration was observed in the groundwater data collected during the audit period.
Schedule 4, Condition 41	Within 5 years of providing the Rehabilitation Management Plan to the Director-General, and every 5 years thereafter, the Applicant shall review and update the plan to the satisfaction of the Director-General.	A review of the Rehabilitation Management Plan was undertaken in October 2014. Preparation of the Rehabilitation Management Plan included consultation with the Shellharbour City Council. The updated Rehabilitation Management Plan was submitted to DoPE on 22 October, 2014. Approval from the DoPE is still awaited at the time of writing this audit.	Low	Request documentation that confirms the DoPE is satisfied with the updated Rehabilitation Management Plan.

Condition Number	Description of Condition	Comment	Significance	Recommendation
Schedule 4 Condition 43	<p>Within 3 years of lodging the rehabilitation and conservation bond with the Director-General, and every 3 years thereafter, unless the Director-General directs otherwise, the Applicant shall review, and if necessary revise, the sum of the rehabilitation bond to the satisfaction of the Director-General. This review must consider:</p> <ul style="list-style-type: none"> a) the effects of inflation; b) Any changes to the total area of disturbance; and c) The performance of the revegetation area. 	<p>The bond was submitted in November 2011. Cleary Bros carried out a review of this bond on 8 October, 2014. According to the calculations undertaken by CB, there is there is nil effect on the value of the previously submitted rehabilitation bond (includes annual inflation rate of 2%, changes to the total area of disturbance and the performance of the revegetation areas). ERM notes that based on information provided by the Reserve Bank of Australia, the mean rate of inflation between 2011 and 2014 was 2.4%. Approval from the DoPE is still awaited at the time of writing this audit.</p>	Low	<p>As administrative best practice, CB should, review the Reserve Bank of Australia's website to determine what the rate of inflation is. Request documentation that confirms the DoPE is satisfied with the calculation method used to determine that the bond value remains unchanged.</p>

CONCLUSIONS

Operations at the Site were considered by ERM to be well managed from an environmental perspective. Documentation and quality control was strong, with all requested information during the audit immediately available for review. The findings identified during ERM's Independent Environmental Audit were typically administrative in nature, due to malfunctioning equipment, or a misunderstanding regarding interpretation of limits within the development consent. The quarry has received 12 complaints over the last three years, all of which have been investigated by CB. Based on a review of the findings of the IEA, ERM has identified no significant impact to the local environment.

Based on a review of the audit findings a total of 2 high risk findings, 1 medium risk finding and 6 low risk findings were identified. Further correspondence with the DoPE is required by CB to close out the findings relating to the approval of the Water Management Plan and Blast Management Plan, and the requirement to monitor the background levels of dust.

Annex A

Department of Planning and
Infrastructure Auditor
Approval

RE: Cleary Bros Albion Park Quarry Independent Environmental Audit - Message (HTM...

File Message

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From: Kane Winwood <Kane.Winwood@planning.nsw.gov.au> Sent: Wed 17/09/2014 3:09 PM
To: Helen Nicolaidis
Cc: Phillipa Duncan
Subject: RE: Cleary Bros Albion Park Quarry Independent Environmental Audit

Hi Helen,

I refer to your letter of 11 September 2014 seeking endorsement of Mr Robert Smith (as lead auditor, supported by Mr Chris Page) of Environmental Resources Management Australia to undertake the Independent Environmental Audit (IEA) for the Albion Park Quarry, required by Condition 6(a) in Schedule 6 of LEC Approval No. 10639 of 2005.

The Department has reviewed the information provided and I can advise that the Secretary has approved the appointment of Mr Smith and Mr Page to undertake the audit.

If you have any further enquiries, please contact Phillipa Duncan on 9228 6451.

Regards,
Kane

Kane Winwood
Team Leader, Mining Projects
as nominee of the Secretary

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Kane Winwood

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