

Rocla Quarry Products

**Independent Environmental
Compliance Audit
Calga Sand Quarry 2005 to 2008**

June 2009

Independent Environmental Compliance Audit Calga Sand Quarry 2005 to 2008

Prepared by
Umwelt (Australia) Pty Limited
on behalf of
Rocla Quarry Products

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1.0 Introduction

Rocla Quarry Products, New South Wales (Rocla), undertakes sand extraction operations throughout greater Sydney and several regional areas in New South Wales (NSW). The Kurnell, Calga and Raymond Terrace quarry operations are all suppliers of fine washed sand, specifically graded for blending in premixed concrete.

The Calga Sand Quarry is located approximately 40 kilometres north of Hornsby via the F3 Freeway and services both the Sydney and Central Coast markets. Calga produces washed sands for use in premixed concrete and concrete products as well as yellow and off-white brick laying (mortar) sands. The current approval for the Calga Sand Quarry (known as the Stage 3 expansion) was granted by the NSW Minister for Planning on 28 October 2005 and has been operating since February 2006. This development consent replaced the initial development consent No 10604 issued by the NSW Land and Environment Court on 15 July 1991 and which expired on 1 January 2005.

Rocla commissioned Umwelt (Australia) Pty Limited (Umwelt) to conduct an independent environmental audit of its Calga Sand Quarry. The audit was conducted in accordance with Schedule 5 Condition 5 of the Development Consent for the Stage 3 expansion of the quarry (DA 94-4-2004). The audit assessed the compliance status of the Calga Sand Quarry against the development consent and other relevant environmental approvals and licences, for operations occurring between 28 October 2005 and 27 October 2008.

The site component of the environmental audit was conducted on 23 and 24 February 2009. Some information requested by the audit team but not available on-site at the time of the audit was subsequently provided to the audit team in March 2009 for review. This report provides an outline of the audit methodology and results, and provides recommended actions for achieving full compliance with environmental approvals. **Appendix 1** includes a detailed checklist of the status of compliance with the conditions of development consent DA 94-4-2004.

The audit was led by Rod Williams, Senior Environmental Scientist with the assistance of Steven Crick, Environmental Scientist. John Merrell, Associate, was the Project Director and provided strategic direction for the audit and reviewed this report.

1.1 Scope of the Audit

The audit was conducted in accordance with DA 94-4-2004, which requires that an independent environmental audit of the development be conducted within three years from the date of consent (28 October 2005), and every five years thereafter, unless the Director-General directs otherwise. The audit covers the period from 28 October 2005 to 27 October 2008. The specific requirements of Schedule 5 Condition 5 of DA 94-4-2004 include the following:

Within 3 years from the date of this Consent, and every 5 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 a suitably qualified, experienced and independent person 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 regulatory requirements;*

- e) *review the adequacy of the Applicants Environmental Management Strategy and environmental management plans/protocols; and if necessary*
- f) *recommend measures or actions to improve the environmental performance of the development, and/or the environmental management and monitoring systems.*

Schedule 5 Condition 6 goes on to state:

Within 3 months of commissioning this audit, the Applicant shall submit a copy of the audit report to the Director-General, with a response to the recommendations contained in the audit report.

As required by DA 94-4-2004, the audit covered the following three key areas:

- the environmental performance of the development, and its effect on the surrounding environment;
- compliance with relevant standards, performance measures and regulatory requirements; and
- the adequacy of Rocla's Environmental Management Strategy and environmental management plans/protocols.

Statutory compliance of the Calga Sand Quarry was ascertained with reference to conditions and commitments made in the following documents:

- DA 94-4-2004;
- Environmental Impact Statement (EIS) titled *Environmental Impact Statement for the Proposed Calga Sand Quarry Extension*, (RW Corkery May 2004);
- Specialist Consultant Studies Compendium (Accompanying the EIS) 2004;
- Amendment Report titled *Amendment to a Proposal Submitted as Development Application (DA 94-4-2004) for an Extension to the Calga Sand Quarry*, (RW Corkery June 2005);
- Environmental Management Strategy for the Calga Sand Quarry (February 2006);
- Site Water Management Plan for the Calga Sand Quarry (December 2005);
- Calga Sand Quarry Air Quality Monitoring Program incorporating and Air Monitoring Protocol (December 2005);
- Calga Sand Quarry Noise Monitoring Program incorporating a Noise Monitoring Protocol (2005);
- Rehabilitation and Landscape Management Plan for Stage 3 of the Calga Sand Quarry (August 2006); and
- Environmental Protection Licence (No. 11295).

2.0 Audit Methodology

2.1 Preliminary Document Review

A Phase 1 audit was conducted. That is, an audit that relied on verification by viewing available documents, site inspections and interviews with relevant personnel, without undertaking any site sampling or monitoring.

Following is a brief overview of the main elements of the environmental audit process.

2.2 Site Interviews and Inspections

2.2.1 Opening Meeting

The audit commenced with an opening meeting with the Calga Sand Quarry Manager, Paul Slough. At the meeting, the proposed audit process and audit schedule were discussed and arrangements were made for personnel interviews and site inspections.

Following the opening meeting a preliminary site inspection was undertaken to familiarise the audit team with the site and operations.

2.2.2 Audit Interviews

Audit interviews were conducted with Paul Slough (Calga Sand Quarry Manager), Alex Echt (Resource Development Manager) and Pat McCue (Quarry Superintendent) during the site component of the audit on 23 and 24 February 2009.

2.2.3 Data Collection and Verification

Where possible, documents and data collected during the audit process were reviewed on site. A number of documents were provided to the audit team prior to the on-site component of the audit. Several documents that were not available during the on-site component of the audit were provided following the audit.

All information obtained during the audit process was verified by the audit team where possible. For example, statements made by site personnel were verified by viewing documentation and/or site inspections where possible. Where suitable verification could not be provided, this has been identified in the audit findings.

2.2.4 Site Inspections

A detailed site inspection of key areas of the quarry was undertaken as part of the audit. Paul Slough (Calga Sand Quarry Manager) accompanied the audit team during the site inspection. Areas investigated during the inspection included the acoustic bund, revegetation area, clean water diversion, water storages, active quarry areas, stockpiles, wash plant, workshop areas, hydrocarbon storage facility, office/weighbridge facility, cummins water pump area and processing area.

2.2.5 Closing Meeting

Prior to leaving the site, the audit team conducted a closing meeting with Paul Slough, Alex Echt and Pat McCue. The objectives of this meeting were to discuss any outstanding matters, present preliminary findings and outline the process for finalising the audit report.

2.3 Reporting

Following completion of the site audit, the development consent checklist was completed and audit notes were reviewed in order to compile a list of outstanding matters to be noted in the audit report. This report was prepared to provide an overview of the status of compliance by reference to the relevant compliance documentation and any other observations of the auditors during the site inspections and interviews. This report has been prepared on an exception basis, highlighting any areas where action or improvement is required.

2.4 Definitions

The reporting of results from the compliance audit was determined based on the following definitions.

Compliance

The intent and explicit requirements of the condition have been met. This includes meeting all requirements with respect to consultation (agency or otherwise), timing of actions or activities, the preparation of management plans or other specific requirements of the condition.

The failure to meet any or all of the specific requirements of the condition would result in a non compliance.

Non Compliance

A non compliance occurs when all of the specific requirements of the condition have not been met (i.e. if any sub-component of a requirement is not met (such as timing or consultation), the entire requirement is considered to be non-compliant).

Verification

The inability to provide formal written verification (letter, fax, email, meeting minutes, etc) that a requirement has been met does not necessarily result in a non compliance. If the auditor is able to verify by other demonstrable means (visual inspection, personal communication, etc) that a condition has been met then, in most cases, the operation should be considered to be in compliance for that condition.

Timing of Environmental Performance

For the purpose of a compliance audit the timeframe for environmental performance against the Environment Protection Licence (EPL) can be divided into two periods:

- the current period which is the time from the beginning of the most recent EPL reporting period to the time the audit is conducted; and
- the historical period, which is the time prior to the most recent EPL reporting period.

Environmental performance reporting is then divided into current compliance and historical compliance. The main focus of the audit report is on current compliance with historical compliance listed as appropriate.

3.0 Results and Discussion

3.1 Status of Development at Calga Sand Quarry

The audit has identified that the development of the Calga Sand Quarry site is generally being undertaken in accordance with the development consent (DA 94-4-2004) and associated approval documentation including the EIS and Amendment Report; and other permits, such as EPL (No. 11295). Measures are in place to prevent and minimise environmental harm and very few community complaints have been received during the three year audit period.

The audit also found the Calga Sand Quarry to be non-compliant with a number of the administrative aspects associated with the conditions of the development consent which require Rocla to consult with, or gain approval from government agencies for certain activities. It is considered that compliance with the majority of these conditions is generally an administrative matter in that in most cases the overall intent of the condition has been complied with, although specific elements of the condition have not.

The audit also found the Calga Sand Quarry to be non-compliant with a number of requirements specified in environmental management plans prepared in accordance with the development consent. It was found that these non-compliances generally relate to commitments made in the management plans that are in addition to those specified in the development consent, EIS and the Amendment Report.

The audit also found that Rocla does not currently hold a Part 5 licence under the *Water Act 1912* for the quarry. A Part 5 licence should be obtained as a matter of high priority.

Non-compliances and areas where improvement of environmental management practice is required to ensure compliance with regulatory requirements are discussed in **Section 3.2**.

3.2 Compliance Issues

The following sections discuss compliance with the relevant statutory requirements. Recommendations arising from the audit process are shown in italics.

3.2.1 Development Consent

Operations at the Calga Sand Quarry site are generally being undertaken in a manner that is consistent with the requirements of Development Consent DA 94-4-2004. However, a number of non-compliances were identified where action is required to ensure full compliance.

A full compliance checklist against the requirements of the development consent was completed as part of the audit and is included as **Appendix 1**. A summary of the non-compliance issues are outlined below.

Schedule 2: Condition 2 (d) – Non-compliance

Condition 2: The Applicant shall carry out the development in accordance with the;
d) conditions of this consent.

A number of non-compliances with the development consent conditions were identified during the audit as noted below.

Schedule 3: Condition 1(a) – Verification

Condition 1: Prior to carrying out any development, the Applicant shall:

- a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction;**

Sighted plans by Barry Hunt Associates dated 5/12/05.

Sighted Department of Planning (DoP) letter dated 13/1/06 indicating its satisfaction with respect to this condition. However, the plans held on site were unsigned and did not note the registration number of the surveyor. Therefore, during the audit site personnel could not produce specific evidence to show that all elements of this condition had been met.

Rocla (P Slough pers comm.) confirmed that a registered surveyor was used and therefore this condition has been found to require verification as opposed to being non compliant.

Recommendation

Copy of signed plans noting the registration number of surveyor to be held on site.

Schedule 3: Condition 2 – Non-compliance

Condition 2: The Applicant shall ensure that the noise generated by the development does not exceed the criteria specified in ...

Notes:

- **The noise criteria do not apply where the Applicant and the affected landowner have a valid agreement in regard to noise from the development, and a copy of the agreement has been forwarded to the Director-General and DEC. In this case the Applicant may exceed the noise limits in Table 1 in accordance with the noise agreement.**

Based on the monitoring results, the Calga Sand Quarry was found to have operated within the noise limits specified by DA 94-9-2004, as monitoring identified no exceedence during the reporting period. However, additional noise modelling was undertaken for specific rehabilitation works at the northern boundary of the site by Wilkinson Murray in 2008. This modelling found that impacts of 34 dBA over the specified criteria may occur at the Gazzana's residence, 23 dBA over criteria at Kings' residence and 17 dBA over criteria at Kashouli's (over a 2 week period). The study found that no amelioration could mitigate against these impacts. Rocla advised that verbal agreements had been obtained from the potentially affected residences regarding these impacts, and that a single bobcat was used for the works to minimise noise impacts. However, no further amendment work or monitoring was completed to determine if this change in equipment was effective.

As these agreements were not formalised and forwarded to the Director-General or the Department of Environment and Conservation (DEC – now Department of Environment and Climate Change (DECC)), full compliance with this condition has not been achieved. .

Section 5.5.1 of the amendment report notes 'An agreement with Messrs Gazzana, the owners of the residences likely to be most affected, has been reached over noise exceedences and is provided with this report.'

Note: following the site inspection component of the audit, P McCue (26 May 2009 pers. comm.) advised that the works described in the Wilkinson Murray report were undertaken with a small bobcat so that noise impacts to surrounding residents were minimised, and that verbal agreements with affected residents were achieved prior to the works being undertaken.

Recommendation

Ensure any landholder agreements regarding noise impacts are forwarded to the Director-General and DECC as soon as possible.

Schedule 3: Surface And Groundwater (Note) – Non-compliance

Note: The Applicant is required to obtain licences and permits for the development under the Protection of the Environment Operations Act 1997 and the Water Act 1912.

The *Water Act 1912* is administered by the Department of Water and Energy (DWE). Rocla is required to hold a water licence under Part 5 of the *Water Act 1912* as the pit intersects the groundwater table. No such licence is currently held.

Recommendation

Obtain a Part 5 licence for the quarry pit from DWE as a matter of high priority.

Schedule 3: Condition 10 – Non-compliance

Condition 10: The Applicant shall provide compensatory water supply, in accordance with the Groundwater Contingency Strategy and to the satisfaction of the Director-General, where the development results in a reduction of pumping yield in privately-owned groundwater bores of 10 percent or greater.

The site inspection indicated that only the depth to water level is measured at the groundwater bores. The condition requires pumping yield measurements to be undertaken. The Annual Groundwater Performance Review 2006 Year (Peter Dundon and Associates Pty Ltd 2007) notes that 'all commitments relating to groundwater in the SWM, with the exception of one remaining yield test on the Gazzana domestic bore have been complied within 2006.' No pump yield data however was presented. Rocla letter (titled Calga Sand Quarry: Inspection of 4th July 2006 undated) notes 'Yield measurements have been completed on all bores and the results are being correlated.'

We note an agreement regarding the potential groundwater impacts associated with the EIS proposal has been reached with the Gazzana's (letter dated 14 June 2005). However, no evidence was provided which indicated that this agreement has been forwarded to the Director-General. Note: This agreement was sighted following the site inspection component of the audit.

The water level data indicated differences in excess of 10 per cent, however it is unclear if this correlates to a reduction in yield.

It is noted that no requests for compensatory replacement of water supply have been made.

Note: Rocla has committed to providing groundwater pumping yield data and the agreement made with the Gazzana's to DoP, with the submission of this independent environmental

audit report. As this data has not been provided to the auditors prior to the finalisation of this report we are unable to find that the requirements of this condition have been satisfied.

Recommendation

Locate pump yield data and confirm changes to the pump yields, or commence collection of yield monitoring data and monitor trends.

Schedule 3: Condition 11 – Verification

Condition 11: Prior to carrying out any development, the Applicant shall prepare and subsequently implement a Water Management Plan for the development, in consultation with the DNR, and to the satisfaction of the Director-General. This plan must be prepared by a suitably qualified hydrogeologist/hydrologist whose appointment/s have been approved by the Director-General, and shall include:

Sighted Site Water Management Plan (Ref No 264/26 Feb 2006) which meets the requirements of this condition.

The Director-General indicated their satisfaction with the plan via a letter dated 13/3/06.

No evidence was provided which confirmed that the Director-General had approved the appointment of the hydrogeologist/hydrologist to prepare the plan.

Note: Supplementary information provided 7 May 2009 confirmed compliance with this condition has been achieved, including:

- email from Alex Irwin of RW Corkery to Phil Jones of DoP dated 15 November 2005 requesting approval for GSS Environmental, RW Corkery and CM Jewell and Associates to prepare the Water Management Plan. Evidence of DoP approval of this team has not been sighted although it is noted that DoP approved the plan; and
- letter from Vicki McBride of DNR to Alex Irwin of RW Corkery dated 6 February 2006 stating that DNR is satisfied that the Site Water Management Plan fulfils the intent of the general terms of approval granted under the Water Management Act 1912.

Recommendation

Confirm that DoP are satisfied with the appointment of the hydrogeologist/hydrologist team who prepared the plan.

Schedule 3: Condition 15 (note) – Non-compliance

Condition 15: The Groundwater Monitoring Program shall include:

...

Note: The Groundwater Monitoring Program shall be prepared in accordance with the recommendations of the independent groundwater assessment reports (prepared by Mackie Environmental Research Pty Ltd. Dated July 2005 and December 2004, available from the Department, unless otherwise authorised by the Director-General).

These reports were provided following the completion of the site audit. A review of the reports found that the Groundwater Monitoring Program appears to have been prepared generally in accordance with this plan. The Program does not, however, contain a

commitment to evaluating potential long term impacts of the final void of the Calga Quarry on regional groundwater resources or a commitment to developing a closure and post-closure groundwater management plan, to the satisfaction of DoP, as per the reports recommendations.

Recommendation

Amend the Groundwater Monitoring Program to:

- 1) *include commitments for evaluating long term impacts of the final void on regional groundwater resources; and*
- 2) *develop a closure and post closure groundwater management plan at least 5 years prior to closure of the quarry, to the satisfaction of DoP.*

Schedule 3: Condition 16 – Non-compliance

Condition 16: Within 6 months of the date of this consent, the Applicant shall prepare a Groundwater Contingency Strategy for the development, in consultation with the DNR, and landowners within the predicted drawdown impact zone identified in the Amendment Report, and to the satisfaction of the Director-General. The strategy shall include:

- a) **the procedures that would be followed in the event of any exceedance of the groundwater impact assessment criteria, or other identified impact on groundwater; and**
- b) **measures to mitigate, remediate and/or compensate any identified impacts to provide an alternative long-term supply of water to the affected landowner that is equivalent to the loss attributed to the development.**

Note: The strategy shall be prepared in accordance with the procedures detailed in schedule 4, and the recommendations of the independent groundwater assessment reports (prepared by Mackie Environmental Research Pty Ltd. Dated July 2005 and December 2004, available from the Department, unless otherwise authorised by the Director-General.

The Site Water Management Plan (SWMP) prepared for the Calga Sand Quarry was found to contain proposed components of a Groundwater Contingency Strategy. As these components have not been finalised or approved, the SWMP is not considered to represent a Groundwater Contingency Strategy as referred to in this condition.

Interim or proposed impact assessment criteria, required by part a) of this condition, are included in Section 6.4 of the SWMP. This section provides procedures that would be followed in case of any exceedance of groundwater impact assessment criteria. The impact assessment criteria have not been finalised in consultation with the Department of Natural Resources (now DWE) and therefore, compliance with part a) of this condition has not been achieved.

Rocla advised that verbal agreement has been obtained from potentially affected landholders regarding the Groundwater Contingency Strategy. We note that Rocla provided signed agreements with Gazzanna and Kashouli (landholders) permitting Rocla to install monitoring bores on their properties, following the site inspection component of the audit. While this indicates that they have held discussions with landholders regarding the groundwater resource and future monitoring requirements it is unclear if the groundwater contingency strategy has been prepared in consultation with them and therefore addressed this component of the condition.

Interim or proposed measures to compensate or ameliorate long term water supply losses to affected landholders, required by part b) of this condition, are outlined in Section 6.4.1 of the SWMP. This section appears to generally meet the requirements of part b) of this condition. Although, the long term water supply mitigation measures for surrounding landholders have not been finalised or prepared in consultation with DWE and potentially affected landholders. Therefore, compliance with part b) of this condition has not been achieved.

Recommendation

Ensure the document title reflects the condition of approval requirement.

Locate evidence that consultation was undertaken with DWE or finalise impact assessment criteria in consultation with DWE and potentially affected landholders and obtain approval for these from the Director-General. Formalise agreements with potentially affected landholders regarding impact assessment criteria.

Locate evidence that consultation was undertaken with DWE regarding long-term water supply mitigation measures for potentially affected landholders or finalise long-term water supply mitigation measures for potentially affected landholders in consultation with the landholders and DWE. Formalise agreements with potentially affected landholders regarding long-term water supply mitigation measures.

Locate evidence that confirms that the Director-General is satisfied with the strategy or obtain the Director-General satisfaction of the measures detailed in the strategy

If required, update the SWMP to include the impact assessment criteria and water supply mitigation measures in a section titled 'Groundwater Contingency Strategy' so that this information is easily identified in the future.

Schedule 3: Condition 22 – Non-compliance

Condition 22: Within 6 months of the date of this consent, the Applicant shall prepare and subsequently implement a Rehabilitation and Landscape Management Plan for the development in consultation with Council and DEC, and to the satisfaction of the Director-General: This plan must:

A Rehabilitation and Landscape Management Plan has been prepared for the Calga Sand Quarry (Doc No. 264/30) and was found to meet the requirements listed in this clause. An undated letter was sighted from John Gardiner of Rocla to DoP advising that a final draft of the plan had been submitted to the Director-General and Gosford Council.

No evidence could be found identifying the Director-General's satisfaction with the plan. It is, however, noted that Rocla advised DoP (letter titled Calga Sand Quarry: Inspection of 4 July 2006 undated) that the plan had been forwarded to DoP and Council for comment.

Note: following the site inspection component of the audit, Rocla provided evidence of submission of the plan to DoP, DECC and Gosford City Council, dated 17 August 2006. It is noted the August submission of this report is outside the required 6 month timeframe.

The site inspection confirmed that rehabilitation and landscape management works have been undertaken.

Recommendation

Ensure required consultation timeframes are met.

Locate evidence that the Director-General is satisfied with the plan or provide a copy of the plan to the Director-General seeking their satisfaction with the plan.

Schedule 3: Condition 26 – Non-compliance

Condition 26: Prior to the commencement of extraction in the applicable quarry stages, the Applicant shall:

- a) seal the internal access road from the site entrance to the Stage 3 extraction limit for Stages 3/1 and 3/2; and**
- b) seal the internal access road from the site entrance to the administration area for Stages 3/3 onwards,**

to the satisfaction of the Director-General.

The audit found that compliance has been achieved with part a) of this condition and that part b) does not apply at this stage. No evidence could be found identifying the Director-General's satisfaction with the actions taken under this condition. Therefore full compliance with this condition has not been demonstrated.

The site inspection confirmed that the works have been undertaken.

Recommendations

Locate evidence that the Director-General is satisfied with the sealing of the internal access road or seek confirmation that the Director-General is satisfied with the sealing of the internal access road.

Schedule 3: Condition 27 – Non-compliance

Condition 27: Prior to carrying out any development, the Applicant shall provide a painted seagull arrangement to Peats Ridge Road, to improve egress for vehicles turning right from the access road, to the satisfaction of the RTA.

The site inspection confirmed that the works have been undertaken and the road was generally clean.

Evidence of the RTA's satisfaction with the painted seagull arrangement was not provided.

Recommendation

Locate evidence that the RTA is satisfied with the painted seagull arrangement or seek confirmation that the RTA is satisfied with the painted seagull arrangement.

Schedule 3: Condition 28 – Non-compliance

Condition 28: The Applicant shall ensure that the long term access road is designed to:

- a) accommodate heavy vehicle turning paths for the left hand turn from Peats Ridge Road into the access road, to the satisfaction of the RTA and the Director-General; and**

- b) provide for vehicular access to the pit floor, to the satisfaction of the DPI and the Director-General.**

No evidence could be found of identifying the RTA's or the Director-General's satisfaction with the access arrangements to the site (i.e. heavy vehicle turning paths for the left hand turn from Peats Ridge Road).

No evidence could be found identifying the Department of Primary Industries (DPI) and the Director-General's satisfaction with vehicular access to the pit floor of the quarry.

Recommendations

Locate evidence that the RTA and the Director General are satisfied with the access arrangements or seek confirmation that the Director-General and RTA are satisfied with the access arrangements to the site.

Locate evidence that the DPI and the Director General are satisfied with the access arrangements or seek confirmation that DPI and the Director-General are satisfied with the vehicular access arrangements to the pit floor of the quarry.

Schedule 3: Condition 29 – Non-compliance

Condition 29: The Applicant shall provide sufficient parking on-site for all quarry-related traffic, in accordance with Council's parking codes, and to the satisfaction of the Director-General.

While it was noted during the audit that ample on-site parking is provided at the Calga Sand Quarry for all quarry related traffic, no evidence could be found of the parking facilities being approved by the Director-General or constructed in accordance with relevant Council parking codes.

Recommendations

Locate evidence that the on site parking is in accordance with Council codes and to the Director-General's satisfaction or seek confirmation that on-site parking facilities are designed and constructed in accordance with relevant Council parking codes and the Director-General is satisfied with the on-site parking facilities.

Schedule 3: Condition 32 – Non-compliance

Condition 32: The Applicant shall:

- a) implement all practicable measures to minimise the visual impacts of the development;**
- b) establish, re-vegetate and subsequently maintain the acoustic barrier to minimise the visual impacts of the development, in accordance with the concept final landform in the Amendment Report (as reproduced in Appendix 2);**
- c) include a progress report on the revegetation and maintenance of the acoustic barrier in the AEMR**

to the satisfaction of the Director-General.

The audit found that compliance with this condition has been achieved in regard to the implementation of visual mitigation measures, the establishment of a vegetated, acoustic barrier and the inclusion of a progress report on the barrier in relevant Annual Environmental

Management Reports (AEMRs). Maintenance of the revegetation of the acoustic barrier could be improved in relation to improving the species diversity of re-vegetation and replacement of dead revegetation. However, evidence of the Director-General's satisfaction could not be provided and therefore full compliance with this condition has not been achieved.

Recommendations

Undertake maintenance of the re-vegetation of the acoustic barrier to increase the species diversity and replant areas where re-vegetation has failed.

Locate evidence that the Director-General is satisfied with the works undertaken or seek confirmation that Director-General is satisfied with the works undertaken.

Schedule 3: Condition 37 – Non-compliance

Condition 37: The Applicant shall secure the development to ensure public safety to the satisfaction of the Director-General.

Security measures such as site fences and security cameras were observed during the audit. No evidence of the Director-General's satisfaction being obtained for these security measures was found during the audit and therefore, full compliance with this condition has not been demonstrated.

Recommendations

Locate evidence that the Director-General is satisfied with the security measures or seek confirmation that the Director-General is satisfied with the security measures used to ensure public safety, in accordance with this condition.

Schedule 3: Condition 39 – Non-compliance

Condition 39: The Applicant shall:

- a) provide annual production data to the DPI using the standard form for that purpose; and
- b) include a copy of this data in the AEMR.

Annual production data for the Calga Sand Quarry was sighted during the audit, however no evidence of this data being submitted to DPI could be found. It is noted that annual production data is included in the 2006 and 2007 AEMRs (2008 AEMR had not been produced at the time of the audit), although the standard DPI reporting form was not included in these reports.

Recommendation

Locate evidence or ensure annual production data is provided to DPI using the standard reporting form and ensure a copy of this form is kept on file at the quarry. Locate evidence or provide a copy of the standard reporting form submitted to DPI in each AEMR.

Schedule 4: Condition 1 – Non-compliance

If the results of monitoring required in schedule 3 identify that impacts generated by the development are greater than the relevant impact assessment criteria in

schedule 3, then the Applicant shall notify the Director-General and the affected landowners and/or existing or future tenants accordingly, and provide quarterly monitoring results to each of these parties until the results show that the development is complying with the criteria in schedule 3.

No evidence was provided to satisfy this condition as a result of the noise exceedences identified during the construction of the acoustic barrier (refer to commentary for Schedule 3: Condition 2).

Note: Following the site inspection component of the audit, Rocla advised that verbal agreement had been obtained from potentially affected landholders prior to works commencing, and that the construction methodology had been modified to reduce noise (pers. comm. P McCue 26 May 2009).

However, no monitoring was undertaken to confirm compliance and no further work was undertaken to show the effectiveness of this equipment change.

Schedule 5: Condition 1 – Non-compliance

Condition 1: Within 3 months of the date of this consent, the Applicant shall prepare, and subsequently implement, an Environmental Management Strategy for the development to the satisfaction of the Director-General. This strategy must:

The Environmental Management Strategy (EMS) was sighted and satisfies the content requirements of this condition.

As DoP did not confirm its satisfaction with the EMS until 13 March 2006, compliance with the required timeframes was not achieved.

Recommendation

Ensure reporting timeframes are met.

Schedule 5: Condition 2 – Non-compliance

Condition 2: Within 3 months of the date of this consent, the Applicant shall prepare an Environmental Monitoring Program for the development, to the satisfaction of the Director-General. This program must consolidate the various monitoring requirements in schedule 3 of this consent into a single document.

The Environmental Monitoring Program was sighted and satisfies the requirements of this condition.

As DoP did not confirm its satisfaction with the EMP until 13 March 2006, compliance with the reporting timeframe was not achieved.

Recommendation

Ensure reporting timeframes are met.

Schedule 5: Condition 4 – Non-compliance

Condition 4: Each year, following the date of this consent, the Applicant shall prepare and submit an AEMR to the Director-General and the relevant agencies. This report must:

- a) identify the standards and performance measures that apply to the development;**
- b)...**
- c)...**
- d) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years;**
- e)...**
- f) include an analysis of these monitoring results against the relevant:**
 - impact assessment criteria**
 - monitoring results from previous years; and**
 - predictions in the EIS and Amendment Report;**
- g) identify any trends in the monitoring results over the life of the development;**
- h) identify any non-compliance during the previous year; and**
- i) describe what actions were, or are being taken to ensure compliance.**

AEMRs for 2006 and 2007 were reviewed for the audit. The 2008 AEMR had not been prepared at the time of the audit. The audit found that compliance with this condition had not been obtained, due to the following issues:

- a) performance criteria and standards used to assess environmental performance are not clearly defined or referred to in the AEMRs;
- d) the AEMRs do provide information about complaints received during the relevant reporting periods (no complaints received during 2007, two complaints received during 2006). However, a comparison against the complaints received during the previous year is not provided in the 2007 AEMR (this requirement does not apply to the 2006 AEMR);
- f) the detailed monitoring reports provided in the appendix of each AEMR review monitoring results against relevant consent or performance criteria, but do not review performance against predicted impacts described in the EIS and Amendment Report. No review of ongoing performance, or comparison to previous years was identified within the AEMRs;
- g) long-term monitoring trends, or factors that may influence long-term environmental performance, are not discussed in the AEMRs; and
- h) non-compliances are not discussed in the AEMRs. It is noted that no non-compliances occurred during the relevant reporting periods. In order to achieve full compliance with this condition, it must be reported that no non-compliances occurred.

Recommendations

Ensure future AEMRs contain the following:

- *details of performance criteria and standards used to assess environmental performance at the quarry;*

- *a comparison of complaints received during the relevant reporting year against previous years;*
- *a review of monitoring results against predictions made in the EIS and Amendment Report;*
- *a review of monitoring results against previous years;*
- *a review of long-term monitoring trends and factors that may be influencing these trends; and*
- *details of any non-compliances that have occurred, or identify that no non-compliances have occurred.*

It was noted that all copies of the AEMR sighted during the audit did not contain any appendices (as listed in the Table of Contents). It is recommended that all copies of any AEMR are amended to include any attachments and appendices.

Schedule 5: Condition 8 – Non-compliance

Condition 8: Within 6 months of the date of this consent, the Applicant shall establish a Community Consultative Committee to oversee the environmental performance of the development. The CCC shall: ...

Community Consultative Committee (CCC) was not established by 28 April 2006. Rocla sought approval of the CCC members via a letter dated 23/6/06. The first CCC meeting was held 24 August 2006.

Recommendation

Ensure timeframes are met.

Schedule 5: Condition 9 (h) – Non-compliance

Condition 9: The Applicant shall, at its own expense:

- a)...
- b)...
- c)...
- d)...
- e)...
- f)...
- g)...
- h) **forward a copy of the minutes of each Committee meeting, and any response to the Committee's recommendations to the Director-General within a month of the Committee meeting.**

Minutes of the Calga Sand Quarry CCC meetings were not available on Rocla's website during the audit, this has since been rectified.

Evidence of the CCC meeting minutes being lodged with the Director-General could not be obtained during the audit. An internal Rocla email was sighted advising relevant staff members that the minutes should be forwarded to the Director-General, although no evidence of this occurring could be provided.

Note: Following the site inspection component of the audit, Rocla advised that previous CCC meeting minutes have been lodged with DoP by the CCC Chairman, Tony Tuxworth (P McCue, pers. comm. 26 May 2009).

Recommendations

Ensure CCC meeting minutes are submitted to the Director-General within one month of the meeting occurring and ensure records are kept of any correspondence with the Director-General.

Schedule 5: Condition 10 – Non-compliance

Condition 10: Within 1 month of the approval of any management plan/strategy or monitoring program required under this consent (or any subsequent revision of these management plans/strategies or monitoring programs), the completion of the independent audits required under this consent, or the completion of the AEMR, the Applicant shall:

- a) provide a copy of the relevant document/s to the Council, relevant agencies and the CCC;**
- b) ...**
- c) put a copy of the relevant documents on the Applicants website to the satisfaction of the Director-General.**

A number of management plans and an environmental monitoring program have been produced in accordance with the consent and are implemented at Calga Quarry. No evidence of these plans and program being submitted to Gosford City Council could be identified during the audit.

While several monitoring programs and all monitoring reports were available on Rocla's website during the audit, the following plans were not available:

- Rehabilitation and Landscape Management Plan;
- Air Quality Monitoring Program;
- Noise Monitoring Program;
- Independent Groundwater Audits; and
- CCC meeting minutes.

It is also noted that many documents provided on the website were difficult to identify until downloaded, as the website displays a list of files available for download, and many documents use an abbreviated or coded filename.

No evidence of the Director-General's satisfaction for compliance with this condition could be found during the audit.

Recommendations

Ensure a copy of all management plans and monitoring programs are provided to Gosford Council and updated as required. Confirm that the Director-General is satisfied with the updated management plans.

Ensure all documents referred to in this consent, including management plans, monitoring programs, monitoring results and other environmental reports are made available on Rocla's website and are presented in a manner that enables the easy identification of individual documents.

Obtain the Director-General's satisfaction for any actions taken to satisfy this condition.

Schedule 5: Condition 11 – Non-compliance

Condition 11: During the life of the development, the Applicant shall:

- a) make a summary of the results of all monitoring required under this consent publicly available both at the quarry and on the Applicants website; and**
- b) update these results on a regular basis (at least every 2 months) to the satisfaction of the Director-General.**

All monitoring results were observed to be available on Rocla's website (and at the quarry) during the audit and included the most up-to-date monitoring reports.

No evidence of the Director-General's satisfaction being granted for compliance with this condition could be found during the audit.

Recommendations

Locate evidence that the Director-General is satisfied with Rocla's efforts in addressing this condition or seek confirmation that the Director-General is satisfied with the actions taken to satisfy this condition.

Environmental Impact Statement Non-Compliances

Compliance with the commitments made in the EIS and compliance of the development as built against the development as described in the EIS was assessed as part of the audit. The audit found that the development was generally undertaken in accordance with the EIS. Only one non-compliance was identified as discussed below.

The site inspection identified that the re-vegetation of the acoustic bund has approximately five species present (limited diversity) (see **Appendix 2 Photograph 2**). Table 3.4 of the Environmental Impact Statement notes some 20 species to be used in the revegetation works.

The site inspection also identified isolated sections of the revegetation works undertaken along the acoustic barrier had failed (see **Appendix 2 Photographs 3 and 4**).

Recommendation

Supplementary planting with additional species as outlined in Table 3.4 of the Environmental Impact Statement is recommended.

3.2.2 Environmental Protection Licence

Rocla is required to and does hold an EPL for its operation as it conducts an activity that requires a licence under the POEO Act. The EPL outlines Rocla's responsibilities and the environmental performance standards it is required to meet, being:

- operating conditions;
- monitoring and recording conditions; and
- reporting conditions.

Rocla reports its performance against the above responsibilities and environmental performance stands via the submission of its Annual Return.

The licence reviewed as part of this audit has a review date of 14 July 2009. Rocla's compliance with the EPL is discussed below.

Rocla's EPL requires the submission of an Annual Return which contains a summary of monitoring results, details of non-compliances with the licence and a calculation of any fees owing. The Annual Returns for 2006 and 2007 were submitted within the required timeframes. The 2008 Annual Return had not been prepared at the time of the audit and therefore was not submitted within the required timeframe.

The annual returns for 2006 and 2007 listed no non-compliances with the site's EPL. Two complaints were recorded in the 2006 Annual Return. No complaints have been recorded in either the 2007 or 2008 Annual Return years. Records held on site only contain complaints which have been received after 18/2/08.

Note - Condition M1.2 of the EPL requires documentation associated with the EPL to be held on site. A combination of electronic and hard copy records were held on site. While the relevant documents were available, minor improvements to the management of documents would assist in the retrieval of documents and compliance with this requirement.

Non compliance - Condition M4.2 of the EPL requires a record of complaints to be held onsite. There is no record of complaints on site pre 18/2/08. It is noted, however, that the 2006 annual return notes two complaints.

Non compliance -Condition R1.5 of the EPL requires the Annual return to be submitted within 60 days of the end of the reporting period. The 2008 Annual return was not submitted within the required timeframe.

Non compliance - Condition R1.7 of the EPL requires a copy of the Annual return to be held for four years. The audit found that the Annual Returns were not held on site.

Note – While Rocla holds an EPL for the site for extractive industries, it is noted, that there are a number of other scheduled activities undertaken on the site which should also be included on the EPL, (e.g. crushing grinding and separating etc).

Recommendations

- *Rocla needs to improve the management/administration of documentation generally. This is potentially exacerbated through the logistics associated with 'head office' managing some of the reporting requirements and not providing copies of correspondence to the Calga site (e.g. copies of the Annual returns not held on site).*
- *Improved recording of complaints is required given the conflicting information about the number complaints received during the audit period.*
- *Ensure the reporting timeframes are complied with (e.g. submission of the 2008 Annual return).*

- *While Rocla holds an EPL for the site for extractive industries, on review of the operational activities undertaken there are a number of other scheduled activities undertaken which should also be included on the EPL, including crushing grinding and separating etc. In updating the EPL for the Southern expansion Rocla should review the list of scheduled activities and amend where appropriate.*

3.2.3 Environmental Management Plans

A number of Environmental Management Plans have been prepared for the Calga Sand Quarry site. The management plans address specific impacts from the quarry's operation and reflect the requirements detailed in the development consent and EIS. The environmental management plans include:

- Environmental Management Strategy;
- Water Management Plan;
- Noise Monitoring Program;
- Environmental Monitoring Program;
- Air Quality Monitoring Program;
- Rehabilitation and Landscape Management Plan;
- Groundwater Contingency Strategy;
- Erosion and Sediment Control Plan;
- Surface water Monitoring Program;
- Groundwater Monitoring Program.

Condition 5e) of Schedule 5 of the development consent requires that this audit 'review the adequacy of the Applicant's Environmental Management Strategy and environmental management plans/protocols'.

A number of inconsistencies and non-compliances between current operations at the Calga Sand Quarry and those described in the management plans were identified during the audit and are discussed in **Sections 3.2.3.1 to 3.2.3.3.**

3.2.3.1 Environmental Management Strategy (Ref No. 264/27) February 2006

The Calga Sand Quarry Environmental Management Strategy (EMS) contains a number of commitments that have not been complied with. These are generally additional requirements to those specified in the development consent and supporting documents such as the EIS and Amendment Report. Rocla were found to be non-compliant with the following requirements of the EMS:

Section 3

Section 15 of the Noxious Weeds Act 1993 requires the that Gosford City Council be advised of the presence of any notifiable weeds on site.

Gosford City Council has not been notified of the presence of noxious weeds on the site as identified by TREES PTY LTD during rehabilitation inspections.

Part 5 of the *Water Act 1912* requires a licence for the extraction of groundwater.

The quarry intercepts the groundwater system, however Rocla does not hold a licence.

Under the *Roads Act 1993*, the proposed line markings as per Schedule 3 Condition 27 are to be undertaken to the satisfaction of the RTA.

The RTA has not indicated their satisfaction with the works.

Section 4.1

'ultimately all documents (Environmental Management and/or Monitoring Plans/Programs) required by the development consent would be assembled in one comprehensive document, to guide the management of the operation in all aspects';

a requirement for the AEMR to be submitted to the relevant agencies by 31 January for each preceding year.

These have not been achieved.

Section 4.2

'In accordance with Schedule 5 Condition 4, the Company will submit the AEMR to the:

**DOP,
DEC,
DPI,
RTA,
DNR,
Council and
the CCC.**

Rocla has not submitted the AEMR to all of the parties listed above.

The Company proposes to submit each AEMR for the period ending 6 December each year by no later than 31 January in the following year.

Rocla has not complied with these reporting timeframes.

Section 5.1

'The company will nominate the name of the proposed auditor for the initial audit by 6 September 2008, to enable sufficient preparation time for the audit'.

This was not achieved.

Section 6.1

'Community and government consultation ... will be undertaken through ...:

**...
...annual AEMR meetings with Government Agencies.'**

Annual meeting have not been held with Government Agencies.

Section 6.2

'A company representative would visit each [relevant or potentially affected] landowner at least every 12 months to provide them with a copy of the AEMR'; and

This has not been undertaken, however, it is noted that regular contact is maintained with key landholders.

'Outcomes of CCC meetings, and any related actions, will also be documented in relevant AEMRs'.

This information is not included in the 2006 and 2007 AEMRs.

'The company would maintain a communications directory of all relevant officers within each involved Government Agency'

This information was not available during the site inspection.

Section 6.4

'An annual meeting will be held with representatives of involved agencies during the month of February to review the contents of the AEMR'.

This has not been undertaken.

Appendices 1-10

(33) 'The AEMR is to include a section on the impacts of site lighting';

(38) 'Details of fire suppression equipment will be recorded and forwarded to the Rural Fire Service for endorsement';

(5 Sch 3) 'Details of compliance with the hours of operation are to be included in each AEMR';

(6 Sch 3) 'The details of activities undertaken outside the approved hours of operation will be included in each AEMR';

(7 Sch 2) 'transportation details will be calculated at the end of each reporting period and included in each AEMR';

(11 Sch 2) 'details of any inspections made throughout the reporting period will be recorded in each AEMR'; and

(11 Sch 2) 'details of any new equipment to be used on-site will be included in the relevant AEMR'.

This information is not included in the 2006 and 2007 AEMRs.

Recommendations

It is recommended that the EMS is reviewed and updated to remove any requirements that are above and beyond the requirements of DA 94-4-2004, the EIS or Amendment Report, that provide no clear benefit to environmental performance at Calga Quarry and which Rocla no longer meet.

As the Director-General's satisfaction of the EMS is required under Condition 1 of Schedule 5 of DA 94-4-2004, any amendments to the EMS require the Director-General's satisfaction.

3.2.3.2 Site Water Management Plan

The Site Water Management Plan (SWMP) was prepared in 2006 to describe and manage water use and control at the quarry.

Section 3.2.1 of the plan states that approximately 8,000 litres of process water are used at the site to produce one tonne of product sand. Anecdotal evidence provided by Rocla (P. Slough pers. comm.) indicates that actual process water usage is much lower than this.

Section 4.4.3 of the plan states that water discharged from the clean water diversion drain is split by a channel separator so that 50 per cent of drainage water drains to the Gazzana's property and 50 percent drains to the final sedimentation dam to the west of the quarry. It was noted during a site inspection that the channel separator is adjustable and that water discharges to the Gazzana's property are managed according to the landholders wishes.

Recommendations

Update the SWMP and all relevant management plans to more accurately describe current operations at Calga Quarry. Meet relevant consultation requirements and obtain the Director-General's satisfaction for any changes to the plan in accordance with DA 94-4-2004.

3.2.3.3 Noise Management Plan

The Noise Monitoring program (NMP) was prepared in 2005 to ensure potential noise impacts generated by the Calga Sand Quarry are appropriately managed.

Section 3.3 (vi) of the plan states 'The volume of reversing alarms will be adjustable with three settings. The default setting will be the quietest and the volume only increased in situations where surrounding noise levels in close proximity to the vehicle is such that a sound level increase is warranted for safety reasons'.

It was noted during site audits and interviews that only one sound level was used by any vehicles operating at the site that was equipped with a reversing alarm.

Recommendations

Ensure any vehicle that requires a reversing alarm is equipped with a three level alarm in accordance with the NMP. Alternatively, update the NMP to remove this requirement and confirm the Director-General's satisfaction with the alternations.

3.2.3.4 Air Quality Monitoring Program

Figure 4.1 Air Quality Monitoring Locations of the Air Quality Monitoring Program, is not current and requires updating.

Recommendation

Update Figure 4.1 Air Quality Monitoring Locations to reflect the current monitoring locations. Ensure relevant consultation and approval requirements are met for the updated program.

3.2.3.5 Rehabilitation and Landscape Management Plan

Section 4.1

‘Populations of the threatened flora species identified on and adjacent to the quarry site, *Darwinia glaucuphylla* and *Hibertia procumbens*, will be monitored.’

No evidence of threatened flora monitoring was sighted.

‘the spread of W3 noxious weeds identified within the quarry site, namely, Crofton Weed, *Ageratina adenophora* and Blackberry, *Rubus fruticosus*, will be prevented and their distribution restricted.’

A TREES PTY LTD report noted the presence of weeds on the site however no action was noted to rectify this situation.

Section 4.2

Monitoring the progress of rehabilitation will be undertaken by a specialist ecological or rehabilitation consultant.’

Monitoring has been undertaken by TREES PTY LTD, a specialist in erosion sediment control.

Appendix 3

Section A3.1.1

‘Inspection of all revegetated areas for noxious and other weeds species will be undertaken regularly by a suitably qualified person on an annual basis.’

No evidence was provided to confirm that the inspections have been undertaken annually.

‘Sampling for all the nominated vertebrate pests will be undertaken in conjunction with the quarry rehabilitation monitoring program.’

No evidence was provided to confirm that the sampling for nominated vertebrate pests has been undertaken

Appendix 4

Section A4.2.5

‘(i) Inspection of the acoustic bund wall to ensure minimal erosion and sedimentation. In the event this is identified, remediation works would be undertaken.’

TREES PTY LTD identified unstable areas on the acoustic bund wall however, no remediation works have been undertaken. Rocla advised that remedial earthworks would result in additional disturbance and erosion and sedimentation issues.

Recommendation

Additional plantings are recommended as a minimum and other possible options to remediate erosion affected areas should be determined in consultation with TREES PTY LTD or another suitably qualified party.

Section A4.2.6

'Rocla would liaise with surrounding residents in an effort to ensure landscape management meets the reasonable expectation of these residents.'

No evidence of consultation with the surrounding residents on this issue was provided during the audit.

3.3 Environmental Performance

3.3.1 Site Inspection

Site inspections of the Calga Sand Quarry were conducted on 23 and 24 February 2009 and included the active extraction cells, clean water diversion drain, sediment and process water dams, water storage dams, processing plant, workshop, acoustic bund, site entry and weighbridge, and a general overview of the site to assess general property management practices.

The site was found to be generally operating with effective environmental management controls in place and Rocla personnel indicated a good understanding of key environmental management issues and approach. Rocla personnel indicated in particular, a good understanding of the site water management system and their responsibilities regarding potential off-site impacts, such as noise, air-quality, water quality and groundwater.

Key observations made during the site inspection included:

- existing environmental management measures described by Rocla during the audit interviews were verified during the inspection;
- vegetation planting on the acoustic bund appears to have resulted in adequate vegetative cover on the internal section of the bund, while some external sections of the bund appear to have substantial vegetative cover consisting of several indigenous acacia species (see **Photograph 1** in **Appendix 2**) and other areas appear to have relatively sparse cover (see **Photograph 2** in **Appendix 2**);
- minor erosion and slumping has occurred along some sections of the acoustic bund (see **Photograph 2** in **Appendix 2**);
- incorrect storage of chemicals, including a fire extinguisher was observed at several locations (refer to **Photographs 3** and **4** of **Appendix 2**); and
- dirty and potentially contaminated water was observed collected in the sumps in the pumphouse located adjacent to the sedimentation dams (refer to **Photograph 5** of **Appendix 2**). These should be cleaned out.

4.0 Conclusion

The development consent for the Calga Sand Quarry requires Rocla to consult with various government agencies during the preparation of management plans and seek the Director-General's satisfaction for numerous conditions. Generally these plans have been prepared and the Director-General has indicated their satisfaction with the plans. Rocla has however not provided any documentation which confirms that the plans have been prepared in consultation with government agencies as required. While Rocla has not been able to provide formal advice regarding the consultation undertaken with government agencies during the preparation of plans, in some instances it is implied that liaison with DECC has been undertaken as the site currently holds an EPL. In addition, for other conditions requiring the satisfaction of the Director-General to be demonstrated, although the requirements of the conditions have been met, no evidence of the Director-General's satisfaction could be provided.

It is not clear if such consultation was not undertaken, or requests of the Director-General's satisfaction note made, or if this information is held by 'head office' and not available on site. This aspect was discussed at the closing meeting attended by site and head office personnel and no further information has been provided.

In addition to the administrative non-compliances, further non-compliances have been identified associated with the various management plans. Generally these non compliances are associated with commitments made by Rocla above and beyond that required by the consent or the various licence.

With regard to the other environmental approvals, Rocla do not currently hold a Part 5 licence under the *Water Act 1912*. It is auditor's opinion that such a licence is required and should be obtained as a high priority. The audit also found that Rocla was generally operating in accordance with its EPL with some minor administrative matter requiring attention.

It is noted that Rocla is currently seeking an extension to the Calga Sand Quarry. Should this development application be approved it is anticipated that the existing consent will be surrendered and new management plans and programs etc will be required. It is suggested that the additional commitments proposed by Rocla which are above and beyond the requirements of the consent and licences be reviewed and amended where necessary.

Rocla is also required to have various documents available on the company's website. This aspect has only been completed since the audit inspection. It is recommended that the terminology and structure of the information contained on the website be revised to improve its user friendliness.

While there are a number of primarily administrative aspects associated with the development consent which need to be addressed to achieve full compliance, operationally the environmental performance of the site was found to be satisfactory at the time of the audit inspection.

APPENDIX 1

Development Consent Compliance Checklist

Appendix 1 – Development Consent Compliance Checklist

SCHEDULE 2 GENERAL ADMINISTRATIVE CONDITIONS					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues/Recommendations
	4	Obligation to Minimise Harm to the Environment			
1	4	The Applicant shall implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the development.	Y		The Calga Sand Quarry has not implemented all practicable measures to: <ul style="list-style-type: none"> stabilise the acoustic bund or re-vegetation of the acoustic bund to the diversity of species which was specified.
	4	Terms of Approval			
2a)	4	DA 94-4-2004;	Y	Supplementary information provided 7 May 2009 confirmed compliance with this condition has been achieved: Sighted signed development application dated 14 May 2004 for the extension of extraction and operational life at Calga Quarry. Information provided post audit inspection confirmed compliance with this condition has been achieved.	
2b)	4	EIS titled <i>Environmental Impact Statement for the Proposed Calga Sand Quarry Extension</i> , dated May 2004;	Y		
2c)	4	Amendment Report titled <i>Amendment to a Proposal Submitted as Development Application (DA 94-4-2004) for an Extension to the Calga Sand Quarry</i> , dated June 2005; and	Y		
2d)	4	conditions of this development consent.	N	Non-compliances as noted below	See comments against relevant Development Consent Conditions below.
3	4	If there is any inconsistency between the above, the most recent document or the conditions of this consent shall prevail to the extent of the	Y		

Appendix 1 – Development Consent Compliance Checklist

SCHEDULE 2 GENERAL ADMINISTRATIVE CONDITIONS					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues/Recommendations
		inconsistency.			
4	4	The Applicant shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of:	Y	Rocla have addressed the requirements arising from the Departments review of the information provided. We note not all of the information to be submitted to the Director-General has been provided. Additional requirements may therefore stem from the Departments review of this information which Rocla is required to address.	
4a)	4	any reports, plans or correspondence that are submitted in accordance with this development consent; and	Y	Rocla have addressed the requirements arising from the Departments review of the information provided (e.g. Monitoring Plans). We note not all of the information to be submitted to the Director-General has been provided. Additional requirements may therefore stem from the Departments review of this information which Rocla is required to address.	
4b)	4	the implementation of any actions or measures contained in these reports, plans or correspondence.	Y	Rocla have addressed the requirements arising from the Departments review of the information provided (e.g. Monitoring Plans). We note not all of the information to be submitted to the Director-General has been provided. Additional requirements may therefore stem from the Departments review of this information which Rocla is required to address.	
	4	Limits on Approval			
5	4	This consent shall lapse on 1 July 2030.	N/A		

Appendix 1 – Development Consent Compliance Checklist

<p style="text-align: center;">SCHEDULE 2 GENERAL ADMINISTRATIVE CONDITIONS</p>					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues/Recommendations
	4	<i>Note: Conditions of this consent may require activities to be carried out by the Applicant beyond the period of approval for extraction, processing and rehabilitation on the site.</i>	N/A		
6	4	This consent is granted for Stage 3 only, as described in the Amendment Report, and shown conceptually on the plan in Appendix 1.	Y	Quarry observed to be operated within limits of Stage 3.	
7	4	The Applicant shall not transport more than 400,000 tonnes of product per year from the site.	Y	Sighted yearly Product Reports for 2006, 2007, 2008 from weighbridge product tracking system.	
	4	Structural Adequacy			
8	4	The Applicant shall ensure that any new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.	Y	No applicable structures built as yet.	
	4	<p><i>Notes:</i></p> <ul style="list-style-type: none"> <i>Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for any building works.</i> <i>Part 8 of the EP&A Regulation sets out the detailed requirements for the certification of development.</i> 	N/A		
	4	Demolition			
9	4	The Applicant shall ensure that all demolition work is carried out in accordance with AS 2601-2001: <i>The Demolition of Structures</i> , or its latest version.	Y	No demolition activities undertaken to date.	It is anticipated that this condition will be activated when the wash plant and office complex's are relocated.

Appendix 1 – Development Consent Compliance Checklist

SCHEDULE 2 GENERAL ADMINISTRATIVE CONDITIONS					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues/Recommendations
	4	Protection of Public Infrastructure			
10	4	The Applicant shall:			
10a)	4	repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and	Y	Telstra line identified within quarry boundary, outside quarrying area. Line has been marked and has not been affected by the operation.	
10b)	4	relocate, or pay the full costs associated with relocating any public infrastructure that needs to be relocated as a result of the development.	Y	No relocation of public infrastructure required to date.	
	4	Operation of Plant and Equipment			
11	4	The Applicant shall ensure that all plant and equipment at the site, or used in connection with the development, are:			
11a)	4	maintained in a proper and efficient condition; and	Y	Observed maintenance notification board on display in lunch room. Maintenance schedule on display in office. Service schedule updated 15/2/09. Pre-start equipment checklist also observed (completed 8/2/09).	
11b)	4	operated in a proper and efficient manner.	Y	Observed certificates of completion for equipment manufacturer training: <ul style="list-style-type: none"> • Front-end Loader training 7 October 09 (Paul Slough, Simon Lindsay); • Dozer training 9 December 2008 (Terry Woodberry); • Artic haul truck training 7 November 2008 (Terry Woodberry); • Wheel loader training 5 November 2008 (Terry Woodberry); • OHS certification – Simon Lindsay 18/5/98 (cert. no. 01383034). During the site inspection all equipment	

Appendix 1 – Development Consent Compliance Checklist

SCHEDULE 2 GENERAL ADMINISTRATIVE CONDITIONS					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues/Recommendations
				including relevant controls were observed to be operating appropriately.	

Appendix 1 – Development Consent Compliance Checklist

SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues /Recommendations
	5	GENERAL EXTRACTION AND PROCESSING PROVISIONS Identification of Boundaries			
1	5	Prior to carrying out any development, the Applicant shall:			
1a)	5	engage a registered surveyor to mark out the boundaries of the approved limits of extraction;	V	Boundary marked by Barry Hunt and Associates 2/2/06. Sighted DoP letter of 13/1/06 stating that this condition had been satisfied. Sighted survey plans (3052LOE and 3052CELLS, Prepared by Barry Hunt and Associates 2005). Plans not signed by surveyor and registration number not noted on plans, therefore it could not be confirmed as part of the audit that a registered surveyor was used. Rocla advised that a registered surveyor was used during the audit.	Copy of signed plans noting registration number of surveyor to be held on site
1b)	5	submit a survey plan of these boundaries to the Director-General; and	Y	Sighted DoP letter of 13/1/06 stating that this condition had been satisfied.	
1c)	5	ensure that these boundaries are clearly marked at all times in a permanent manner that allows operating staff and inspecting officers to clearly identify those limits,	Y	Sighted boundary markers during site inspections on 23 and 24 February 2009.	
	5	<i>Note: The limit of extraction includes the area described in the documents listed in condition 2 of schedule 2, and shown conceptually on the plan in Appendix 1.</i>	N/A		

Appendix 1 – Development Consent Compliance Checklist

SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS																														
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues /Recommendations																									
	5	NOISE																												
	5	Impact Assessment Criteria																												
2.	5	<p>¹The Applicant shall ensure that the noise generated by the development does not exceed the criteria specified in Table 1.</p> <p><i>Table 1: Noise impact assessment criteria dB(A) L_{Aeq} (15 min)</i></p> <table><tr><th>Residential Location</th><th>Day</th><th>Evening</th><th>Night</th><th>Night (L_{A1}(1min))</th></tr><tr><td>Gazzana (Residence 3)</td><td>41</td><td>35</td><td>35</td><td>45</td></tr><tr><td>King</td><td>40</td><td>35</td><td>35</td><td>45</td></tr><tr><td>Kashouli</td><td>39</td><td>35</td><td>35</td><td>45</td></tr><tr><td>Other residences</td><td>35</td><td>35</td><td>35</td><td>45</td></tr></table>	Residential Location	Day	Evening	Night	Night (L _{A1} (1min))	Gazzana (Residence 3)	41	35	35	45	King	40	35	35	45	Kashouli	39	35	35	45	Other residences	35	35	35	45	N	<p>Sighted unattended and attended noise monitoring reports from Wilkinson Murray for 2006-2008. No non-compliances identified through monitoring when typical sand extraction works / operations were being undertaken.</p> <p>Sighted letter from Wilkinson Murray (30/6/08) that predicted the noise impacts for rehabilitation works at the northern boundary would create impacts of 34 dBA over the criteria at Gazzana's residence, 23 dBA over criteria at Kings' residence and 17 dBA over criteria at Kashouli's (over a 2 week period). The report found that no amelioration could mitigate against these impacts. Advised by Paul Slough (23/2/09) that these impacts had been discussed and the works agreed to by the affected residence. Non-compliance as no evidence of these agreements being forwarded to the DoP and DECC could be found.</p>	<p>Ensure any landholder agreements relating to noise impacts are forwarded to DECC and DoP.</p>
Residential Location	Day	Evening	Night	Night (L _{A1} (1min))																										
Gazzana (Residence 3)	41	35	35	45																										
King	40	35	35	45																										
Kashouli	39	35	35	45																										
Other residences	35	35	35	45																										

¹ Incorporates DEC GTA

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				<p>Section 5.5.1 of the amendment notes "An agreement with Messrs Gazzana, the owners of the residences likely to be most affected, has been reached over noise exceedences and is provided with this report."</p> <p>Supplementary information provided 26 May 2009: P McCue (26 May 2009 pers. comm.) advised that the works described in the Wilkinson Murray report were undertaken with a small bobcat so that noise impacts to surrounding residents were minimised, and that verbal agreements with affected residents were achieved prior to the works being undertaken.</p>	
	5	<p><i>Notes:</i></p> <ul style="list-style-type: none"> <i>The noise criteria do not apply where the Applicant and the affected landowner have a valid agreement in regard to noise from the development, and a copy of the agreement has been forwarded to the Director-General and DEC. In this case the Applicant may exceed the noise limits in Table 1 in accordance with the noise agreement.</i> <i>Noise from the development is to be measured at the most affected point or within the residential boundary, or at the most affected point within 30 metres of a dwelling (rural situations) where the dwelling is more than 30 metres from the boundary, to determine compliance with the noise limits in the above table. Where it can be demonstrated that direct measurement of noise from the development is impractical, the DEC may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured</i> 			

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		<p><i>noise levels where applicable.</i></p> <ul style="list-style-type: none"> Noise from the premises is to be measured at 1m from the dwelling façade to determine compliance with the $LA_{1(1 \text{ minute})}$ noise limit. The criteria above apply to noise emissions under the following weather conditions: <ul style="list-style-type: none"> wind speed up to 3 m/s at 10m above ground level; or temperature inversion conditions of up to 3°C/100m and wind speed up to 2m/s at 10m above ground level. 			
	5	Land Acquisition			
3	5	If the noise generated by the development exceeds the criteria in Table 1 by more than 5 dB(A), then the Applicant shall, upon receiving a written request for acquisition from the landowner, acquire the land in accordance with the procedures in conditions 8-10 of schedule 4, unless there is a valid noise agreement between the Applicant and an affected landowner.	Y	No requests for acquisition received.	
	5	Noise Mitigation			
4	5	Prior to carrying out any extraction, the Applicant shall construct an acoustic barrier in accordance with the quarry design in the Amendment Report (as reproduced in Appendix 1), to the satisfaction of the Director-General. The construction of the acoustic barrier must be completed within 5 working weeks.	Y	<p>Sighted bund during field inspection 23/2/09. Sighted DoP letter of 13/1/06 accepting compliance with this condition.</p> <p>Supplementary information provided 7 May 2009 confirmed full compliance with this condition has been achieved:</p> <p>Sighted letter from Rocla to DoP dated 10 February 2006 stating that the construction period for the bund commenced on 16 January 2006 and was completed by the date of the letter.</p> <p>Sighted purchase order from</p>	

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				Rocla to TJ&RF Fordham Pty Ltd dated 16 January 2006 for construction of the bund. Sighted Rocla account record for a payment to TJ&RF Fordham with reference 'Bund Wall Calga' dated 31 January 2006.	
	6	Operating Hours			
5	6	The Applicant shall comply with the operating hours in Table 2:	Y	Sighted sign-on/off clock records from 11/1/09, 15/2/09 and 25/1/09. Sighted visitors register. Noted site occasionally accessed out of hours by staff/services. Advised by Paul Slough (23/2/09) that these staff present for setup/shutdown and maintenance activities that are inaudible.	

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Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues /Recommendations																				
	6	<div>Table 2: Operating Hours</div> <table><tr><th>Activity</th><th>Day</th><th>Time</th></tr><tr><td rowspan="3">Extraction and processing</td><td>Monday – Friday</td><td>7:00 am to 6:00 pm</td></tr><tr><td>Saturday</td><td>7:00 am to 4:00 pm</td></tr><tr><td>Sunday and Public Holidays</td><td>Nil</td></tr><tr><td rowspan="3">Delivery and distribution</td><td>Monday – Friday</td><td>5:00 am to 10:00 pm</td></tr><tr><td>Saturday</td><td>5:00 am to 4:00 pm</td></tr><tr><td>Sunday and Public Holidays</td><td>Nil</td></tr><tr><td>Maintenance (if inaudible at neighbouring residences)</td><td>Any day</td><td>Anytime</td></tr></table>	Activity	Day	Time	Extraction and processing	Monday – Friday	7:00 am to 6:00 pm	Saturday	7:00 am to 4:00 pm	Sunday and Public Holidays	Nil	Delivery and distribution	Monday – Friday	5:00 am to 10:00 pm	Saturday	5:00 am to 4:00 pm	Sunday and Public Holidays	Nil	Maintenance (if inaudible at neighbouring residences)	Any day	Anytime			
Activity	Day	Time																							
Extraction and processing	Monday – Friday	7:00 am to 6:00 pm																							
	Saturday	7:00 am to 4:00 pm																							
	Sunday and Public Holidays	Nil																							
Delivery and distribution	Monday – Friday	5:00 am to 10:00 pm																							
	Saturday	5:00 am to 4:00 pm																							
	Sunday and Public Holidays	Nil																							
Maintenance (if inaudible at neighbouring residences)	Any day	Anytime																							
	6	<i>Note: Construction activities, such as the construction of the acoustic barrier, shall only be carried out between 7:00am to 6:00pm Monday to Friday, and 8:00am to 1:00pm on Saturdays. No construction activities are to be undertaken on Sundays or Public Holidays.</i>	Y																						
6	6	The following activities may be carried out at the premises outside the hours specified in Table 2:	Y	N/A																					
6a)	6	the delivery of materials as requested by Police or other authorities for safety reasons; and	Y	N/A																					
6b)	6	emergency work to avoid the loss of lives, property and/or to prevent environmental harm.	Y	N/A																					
6	6	In such circumstances the Applicant shall notify DEC and affected residents prior to undertaking the works, or within a reasonable period in the case of emergency.	Y	N/A																					

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	6	Noise Monitoring Program			
7	6	Prior to carrying out any development, the Applicant shall prepare, and subsequently implement, a Noise Monitoring Program for the development, in consultation with DEC, and to the satisfaction of the Director-General. This program must include a combination of attended and unattended noise monitoring, and a noise monitoring protocol for evaluating compliance with the noise impact assessment criteria in this consent.	Y	<p>Sighted Noise Monitoring Program (Report No. 264/26b) prepared by RW Corkery. Sighted DoP letter of 13/3/06 indicating its satisfaction with this plan.</p> <p>Supplementary information provided 7 May 2009 confirmed compliance with this condition has been achieved:</p> <p>A record of consultation activities undertaken during preparation of the Noise Monitoring Program was provided (compiled by RW Corkery Ref. No. 264/28), which included the following:</p> <ul style="list-style-type: none"> email to Hamish Rutherford of DEC from Alex Irwin of RW Corkery dated 21 November 2005 providing draft Noise and Air Quality Monitoring Programs and requesting the Department's review; and letter from Rebecca Scrivener of DEC dated 25 November 2005 stating that DEC is a regulatory authority and as such does not undertake review of management plans. <p>As this condition requires Rocla to consult with DEC during</p>	

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SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS																				
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues /Recommendations															
				preparation of the Noise Monitoring Program and evidence of this has been sighted, and the plan has been approved by DoP, it is considered that Rocla are compliant with this condition.																
	6	AIR QUALITY																		
		Impact Assessment Criteria																		
8	6	<p>The Applicant shall ensure that dust generated by the development does not cause additional exceedances of the criteria listed in Tables 3 to 5 at any residence on, or on more than 25 percent of, any privately-owned land.</p> <p><i>Table 3: Long term impact assessment criteria for particulate matter</i></p> <table><tr><th>Pollutant</th><th>Averaging period</th><th>Criterion</th></tr><tr><td>Total suspended particulate (TSP) matter</td><td>Annual</td><td>90 µg/m³</td></tr><tr><td>Particulate matter < 10 µm (PM₁₀)</td><td>Annual</td><td>30 µg/m³</td></tr></table> <p><i>Table 4: Short term impact assessment criteria for particulate matter</i></p> <table><tr><th>Pollutant</th><th>Averaging period</th><th>Criterion</th></tr><tr><td>Particulate matter < 10 µm (PM₁₀)</td><td>24 hour</td><td>50 µg/m³</td></tr></table>	Pollutant	Averaging period	Criterion	Total suspended particulate (TSP) matter	Annual	90 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	Annual	30 µg/m ³	Pollutant	Averaging period	Criterion	Particulate matter < 10 µm (PM ₁₀)	24 hour	50 µg/m ³	Y	Sighted <i>HVAS Fine Particulates (PM₁₀) Air Quality Monitoring Calga Quarry</i> reports prepared by Carbon Based Environmental for August, Feb 2007. Sighted <i>Rocla Quarry Products Environmental Monitoring Dust Deposition, Gauges, Surfaces and Groundwaters and Meteorological Station</i> monthly reports for 2006-2008. Sighted AEMR for 2006, 2007. No exceedances identified to date.	
Pollutant	Averaging period	Criterion																		
Total suspended particulate (TSP) matter	Annual	90 µg/m ³																		
Particulate matter < 10 µm (PM ₁₀)	Annual	30 µg/m ³																		
Pollutant	Averaging period	Criterion																		
Particulate matter < 10 µm (PM ₁₀)	24 hour	50 µg/m ³																		

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		<p><i>Table 5: Long term impact assessment criteria for deposited dust</i></p> <table><tr><th>Pollutant</th><th>Averaging period</th><th>Maximum increase in deposited dust level</th><th>Maximum total deposited dust level</th></tr><tr><td>Deposited dust</td><td>Annual</td><td>2 g/m²/month</td><td>4 g/m²/month</td></tr></table> <p><i>Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, 1991, AS 3580.10.1-1991: Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method.</i></p>	Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level	Deposited dust	Annual	2 g/m ² /month	4 g/m ² /month			
Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level										
Deposited dust	Annual	2 g/m ² /month	4 g/m ² /month										
	6	Air Quality Monitoring Program											
9	7	² Prior to carrying out any development, the Applicant shall prepare, and subsequently implement, an Air Quality Monitoring Program for the development, in consultation with DEC, and to the satisfaction of the Director-General. This program must include an air monitoring protocol for evaluating compliance with the air quality impact assessment criteria in this consent.	Y	<p>Sighted Air Quality Monitoring Program (Report No. 264/26c, Dec 05) prepared by RW Corkery. Sighted DoP letter of 13/3/06 approving this plan.</p> <p>Supplementary information provided 7 May 2009 confirmed compliance with this condition has been achieved:</p> <p>A record of consultation activities undertaken during preparation of the Air Quality Monitoring Program was provided (compiled by RW Corkery Ref. No. 264/28), which included the following:</p> <ul style="list-style-type: none">email to Hamish Rutherford of DEC from Alex Irwin of RW Corkery dated									

² Incorporates DEC GTA

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				<p>21 November 2005 providing draft Noise and Air Quality Monitoring Programs and requesting the Department's review; and</p> <ul style="list-style-type: none"> letter from Rebecca Scrivener of DEC dated 25 November 2005 stating that DEC is a regulatory authority and as such does not undertake review of management plans. <p>As this condition requires Rocla to consult with DEC during preparation of the Air Quality Monitoring Program and evidence of this has been sighted, and the plan has been approved by DoP, it is considered that Rocla are compliant with this condition.</p>	
	7	<i>Note: Initially, this program should concentrate on monitoring the dust deposition impacts of the development. However, in time, it may be expanded to include other pollutants.</i>			
	7	SURFACE AND GROUNDWATER			
	7	<i>Note: The Applicant is required to obtain licences and permits for the development under the Protection of the Environment Operations Act 1997 and the Water Act 1912.</i>	N	<p>Sighted Environmental Protection Licence (no. 11295). No licences have been applied for by Rocla under the <i>Water Act 1912</i> (Paul Slough 23/2/09). However, as the quarry involves and excavation that intercepts groundwater, a licence under Part 5 of the <i>Water Act 1912</i> is required and should be obtained.</p>	Obtain a Part 5 licence from DWE.

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Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues /Recommendations
	7	Groundwater Impact Assessment Criteria			
10	7	The Applicant shall provide compensatory water supply, in accordance with the Groundwater Contingency Strategy and to the satisfaction of the Director-General, where the development results in a reduction of pumping yield in privately-owned groundwater bores of 10 percent or greater.	N	<p>The Annual Groundwater performance Review 2006 Year (Peter Dundon and Associates Pty Ltd 2007) notes that “all commitments relating to groundwater in the SWM, with the exception of one remaining yield test on the Gazzana domestic bore have been complied within 2006.” No pump yield data however was presented. Rocla letter (titled Calga Sand Quarry: Inspection of 4 July 2006 undated) notes “Yield measurements have been completed on all bores and the results are being correlated.”</p> <p>Rocla has committed to providing groundwater pumping yield data which is to accompany the submission of the independent environmental audit report. As this data has not been provided to the auditors prior to the finalisation of this report we are unable to confirm that the requirements of this condition have been satisfied.</p>	
	7	<p><i>Notes:</i></p> <ul style="list-style-type: none"> <i>If the Applicant has reached a negotiated agreement with an affected landowner in regard to groundwater, and a copy of the agreement has been forwarded to the Director-General, then the Applicant may exceed</i> 	N	We note an agreement regarding the potential groundwater impacts associated with the EIS proposal has been reached with	

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		<p><i>the groundwater impact assessment criteria in accordance with the negotiated agreement.</i></p> <ul style="list-style-type: none"> <i>The Applicant must establish the basis for determining development-related impact in the Groundwater Monitoring Program (see condition 15).</i> <i>The Applicant shall establish additional groundwater impact assessment criteria for its groundwater monitoring bores, in accordance with the Groundwater Monitoring Program, to provide advance warning of a potential exceedance of the groundwater impact assessment criteria.</i> 		<p>the Gazzana's (letter dated 14 June 2005).</p> <p>This agreement was sighted following preparation of the draft audit report.</p> <p>Rocla has committed to providing the agreement to the Department as an attachment to accompany the submission of the independent environmental audit report. As this action has not been completed prior to the finalisation of this report we are unable to confirm that the requirements of this condition have been satisfied.</p>	

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Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues /Recommendations
	7	Monitoring and Management			
11	7	Prior to carrying out any development, the Applicant shall prepare and subsequently implement a Water Management Plan for the development, in consultation with the DNR, and to the satisfaction of the Director-General. This plan must be prepared by a suitably qualified hydrogeologist/hydrologist whose appointment/s have been approved by the Director-General, and shall include:	V	<p>Sighted Site Water Management Plan (Ref No. 264/26 – Feb 2006). Sighted DoP letter of 13/3/06 approving this plan.</p> <p>Supplementary information provided 7 May 2009 confirmed compliance with this condition has been achieved:</p> <p>A record of consultation activities undertaken during preparation of the Water Management Plan was provided (compiled by RW Corkery Ref. No. 264/28), which included the following:</p> <ul style="list-style-type: none"> email from Alex Irwin to Phil Jones of DoP dated 15 November 2005 requesting approval for GSS Environmental, RW Corkery and CM Jewell and Associates to prepare the Water Management Plan; and letter from Vicki McBride of DNR to Alex Irwin of RW Corkery dated 6 February 2006 stating that DNR is satisfied that the Site Water Management Plan fulfils the intent of the general terms of approval granted under the <i>Water</i> 	Confirm or provide evidence from DoP which confirms the appointment of the hydrogeologist/hydrologist who prepared the plan

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				<i>Management Act 1912.</i> We note that approval from the Director-General for the appointment of a 'suitably qualified hydrogeologist has not been received. We note however that DoP have approved the Management Plan.	
11a)	7	a Water Balance;	Y	Section 3 of the Site Water Management Plan.	Update water balance in light of improved operational water usage information.
11b)	7	an Erosion and Sediment Control Plan;	Y	Section 4 of the Site Water Management Plan.	
11c)	7	a Surface Water Monitoring Program; and	Y	Section 5 of the Site Water Management Plan.	
11d)	7	a Groundwater Monitoring Program.	Y	Section 6 of the Site Water Management Plan.	
12	7	The Water Balance shall:	Y	Section 3 of the Site Water Management Plan.	
12a)	7	include details of all water extracted (including water make), dewatered, transferred, used and/or discharged by the quarry; and	Y	Section 3 of the Site Water Management Plan.	
12b)	7	describe measures to minimise water use by the development.	Y	Section 3.4 of the Site Water Management Plan.	
13	7	The Erosion and Sediment Control Plan shall:	Y	Section 4 of the Site Water Management Plan.	
13a)	7	be consistent with the requirements of the Department of Housing's <i>Managing Urban Stormwater: Soils and Construction</i> manual;	Y	Section 4 of the Site Water Management Plan.	
13b)	7	identify activities that could cause soil erosion and generate sediment;	Y	Section 4.2 of the Site Water Management Plan.	

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13c)	7	describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters;	Y	Section 4.4. of the Site Water Management Plan.	
13d)	7	describe the location, function, and capacity of erosion and sediment control structures; and	Y	Sections 4.4.3 to 4.4.6 of the Site Water Management Plan.	
13e)	7	describe what measures would be implemented to maintain the structures over time.	Y	Section 4.4.7 of the Site Water Management Plan.	
14	7	The Surface Water Monitoring Program shall include:	Y	Section 5 of the Site Water Management Plan.	
14a)	7	detailed baseline data on surface water flows and quality in waterbodies that could potentially be impacted by the quarry;	Y	Section 5.2 of the Site Water Management Plan.	
14b)	7	surface water impact assessment criteria;	Y	Section 5.2 of the Site Water Management Plan.	
14c)	7	a program to monitor surface water flows and quality;	Y	Section 5.3 of the Site Water Management Plan.	
14d)	7	a protocol for the investigation, notification and mitigation of identified exceedances of the surface water impact assessment criteria; and	Y	Section 5.4 of the Site Water Management Plan.	
14e)	7	a program to monitor the effectiveness of the Erosion and Sediment Control Plan.	Y	Section 5.5 of the Site Water Management Plan.	
15	8	The Groundwater Monitoring Program shall include:	Y	Section 6 of the Site Water Management Plan.	
15a)	8	a program to collect detailed baseline data, based on sound statistical analysis, to benchmark the pre-quarrying natural variation in groundwater levels, yield and quality in groundwater bores within the predicted drawdown impact zone identified in the Amendment Report;	Y	Section 6.2 of the Site Water Management Plan.	
15b)	8	groundwater impact assessment criteria for monitoring bores and privately-owned bores;	Y	Section 6.4 of the Site Water Management Plan.	
15c)	8	a program to monitor impacts on the groundwater supply of potentially affected landowners, groundwater dependent ecosystems, and on vegetation; and	Y	Section 6.2 of the Site Water Management Plan.	

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15d)	8	a protocol for the investigation, notification and mitigation of identified exceedances of the groundwater impact assessment criteria.	Y	Section 6.4 of the Site Water Management Plan.	
15	8	<i>Note: The Groundwater Monitoring Program shall be prepared in accordance with the recommendations of the independent groundwater assessment reports (prepared by Mackie Environmental Research Pty Ltd, dated July 2005 and December 2004, available from the Department), unless otherwise authorised by the Director-General.</i>	N	<p>Sighted letter from Mackie Environmental Research to DIPNR dated 21 July 05, re: Calga Sand Quarry. Sighted Mackie Environmental Research Report <i>Review of Additional Groundwater Modelling of Calga Sand Quarry</i> December 2004.</p> <p>The Groundwater monitoring program appears to have been generally prepared in accordance with this plan. The plan does not contain a commitment to evaluating potential long term impacts of the final void on regional groundwater resources or a commitment to developing a closure and post closure groundwater management plan, to the satisfaction of DoP. This is required 5 years before closure of the quarry as specified in the report titled <i>Review of Additional Groundwater Modelling of Calga Sand Quarry</i>, Mackie Environmental Research December 2004.</p>	Ensure Groundwater Monitoring Program or SWMP is amended to include commitments for evaluating long term impacts of the final void on regional groundwater resources and to develop a closure and post closure groundwater management plan at least 5 years prior to closure of the quarry, to the satisfaction of DoP.
	8	Groundwater Contingency Strategy			
16	8	Within 6 months of the date of this consent, the Applicant shall prepare a Groundwater Contingency Strategy for the development, in consultation with the DNR, and landowners within the predicted drawdown impact zone	N	The Site Water Management Plan prepared for the Calga Sand Quarry contained	Finalise the Groundwater Contingency Strategy in consultation with DWE and

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		identified in the Amendment Report, and to the satisfaction of the Director-General. The strategy shall include:		<p>components of a Groundwater Contingency Strategy. As these components have not been finalised or approved, the SWMP is not considered to represent a Groundwater Contingency Strategy as referred to in this condition.</p> <p>P McCue advised (26 May 2009) that verbal agreement had been reached with potentially affected landholders regarding the Groundwater Contingency Strategy.</p> <p>We note that Rocla provided signed agreements with Gazzana and Kashouli (landholders) permitting Rocla to install monitoring bores on their properties. While this indicates that they have held discussions with landholders regarding the groundwater resource and future monitoring requirements it is unclear if the groundwater contingency strategy has been prepared in consultation with them.</p>	landholders and to the satisfaction of the Director General.

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16a)	8	the procedures that would be followed in the event of any exceedance of the groundwater impact assessment criteria, or other identified impact on groundwater; and	N	Interim or proposed impact assessment criteria outlined in Section 6.4 of Site Water Management Plan. The Site Water Management Plan also outlines procedures that would be followed in case of an exceedance.	Finalise Groundwater Contingency Strategy in consultation with DWE, landowners and to the satisfaction of the Director General.
16b)	8	measures to mitigate, remediate and/or compensate any identified impacts to provide an alternative long-term supply of water to the affected landowner that is equivalent to the loss attributed to the development.	N	Interim or proposed measures to compensate or ameliorate long term water supply losses to affected landholders are outlined in Section 6.4.1 of SWMP.	Finalise Groundwater Contingency Strategy in consultation with DWE, landowners and to the satisfaction of the Director General.
16	8	<i>Note: The strategy shall be prepared in accordance with the procedures detailed in schedule 4, and the recommendations of the independent groundwater assessment reports (prepared by Mackie Environmental Research Pty Ltd, dated July 2005 and December 2004, available from the Department), unless otherwise authorised by the Director-General.</i>	N	Sighted letter from Mackie Environmental Research to DIPNR dated 21 July 05, re: Calga Sand Quarry. Sighted Mackie Environmental Research Report <i>Review of Additional Groundwater Modelling of Calga Sand Quarry</i> December 2004. SWMP appears to have been generally prepared in accordance with this plan. The plan does not contain a commitment to evaluating potential long term impacts of the final void on regional groundwater resources or a commitment to developing a closure and post closure groundwater management plan, to the satisfaction of DoP. This is required 5 years before closure of the quarry as specified in the report titled	Ensure SWMP or finalised Groundwater Contingency Strategy is amended to include commitments for evaluating long term impacts of the final void on regional groundwater resources and to develop a closure and post closure groundwater management plan at least 5 years prior to closure of the quarry, to the satisfaction of DoP.

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<p style="text-align: center;">SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS</p>					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues /Recommendations
				Review of Additional Groundwater Modelling of Calga Sand Quarry, Mackie Environmental Research December 2004.	
	8	Annual Independent Groundwater Audit			
17	8	Each year from the date of this consent, or as otherwise directed by the Director-General, the Applicant shall undertake an independent audit of the groundwater impacts of the development to determine compliance with the groundwater impact assessment criteria, to the satisfaction of the Director-General. The audit shall be conducted by a suitably qualified and independent hydrogeologist whose appointment has been approved by the Director-General.	Y	Sighted <i>Calga Sand Quarry Annual Groundwater Performance Review 2006 and 2007</i> prepared by Peter Dundon and Associates and Aquaterra respectively. 2008 report is currently in preparation. Sighted approval from DoP letter dated 22.11.06 for Peter Dundon and Associates to undertake 2006 groundwater audit.	
	8	Reporting			
18	8	Each year from the date of this consent, the Applicant shall:			
18a)	8	review, and if necessary update, the Water Management Plan; and	Y	SWMP reviewed in annual groundwater audits. No amendments required as yet.	Consider adding description of SWMP review process to SWMP.
18b)	8	report the results of this review in the AEMR, including:	Y	Groundwater audits appended to AEMRs for 2006 and 2007. SWMP not discussed in body of AEMR.	Consider providing summary of SWMP review in body of AEMR.
	8	<ul style="list-style-type: none"> details of the review for each sub-plan; 	Y	Contained in groundwater audits which are appended to the AEMR.	
	8	<ul style="list-style-type: none"> the results of monitoring; 	Y	Monitoring results discussed in Section 5 of AEMR. Monitoring results for all monitoring provided in appendices of	Ensure AEMRs are kept on site and provided on website (including all appendices).

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Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues /Recommendations
				AEMR (not sighted in copies provided on-site or currently on Rocla's website however, sighted these reports separately).	
	8	<ul style="list-style-type: none"> the results of the independent groundwater audit (including a copy of the report); and 	Y	Groundwater monitoring and water table depth results provided in Section 5.2 of AEMR. Independent annual audit provided as an appendix (although not cross referenced in main body of text).	
	8	<ul style="list-style-type: none"> details of the measures undertaken/proposed to address any identified issues. 	Y	Discussed if relevant in Section 5.2.	
	8	Quarry Closure Groundwater Management Plan			
19	8	Prior to the commencement of quarrying in Stage 3/6 or 5 years prior to the cessation of quarrying (whichever is the sooner), the Applicant shall commission a suitably qualified hydrogeologist, whose appointment has been approved by the Director-General, to assess the potential long term impacts of the final void on groundwater resources, and to develop a quarry closure and post-closure groundwater management plan. The plan shall:	N/A	Stage 3/6 not commenced yet. Quarry is more than 5 years from completion.	
19a)	8	be prepared in consultation with the DNR, the CCC, and landowners within the predicted drawdown impact zone identified in the Amendment Report; and	N/A		
19b)	8	include strategies, in accordance with the Groundwater Contingency Strategy, to ensure the long-term security of water supply to any landowner whose groundwater bores exceed, or are likely to exceed in the future, the groundwater impact assessment criteria,	N/A		
	8	to the satisfaction of the Director-General.	N/A		

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SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues /Recommendations
	9	METEOROLOGICAL MONITORING			
20	9	Prior to carrying out any development, the Applicant shall establish and subsequently maintain a meteorological station in the vicinity of the development, to the satisfaction of the DEC and the Director-General. The station shall as a minimum, unless otherwise authorised by the Director-General, monitor daily rainfall and evaporation in accordance with the requirements in <i>Approved Methods for the Sampling and Analysis of Air Pollutants in NSW</i> .	Y	Sighted DoP letter confirming their satisfaction with the metrological monitoring (13.1.06). Sighted metrological monitoring display in main office area. Evaporation data provided by Peats Ridge Metrological Station as agreed to by DoP.	
	9	REHABILITATION AND LANDSCAPING			
	9	Rehabilitation			
21	9	The Applicant shall progressively rehabilitate the site to the satisfaction of the Director-General, in a manner that is generally consistent with the concept final landform in the Amendment Report (as reproduced in Appendix 2). The rehabilitation of the site must include at least 1 hectare of open heathland/sedgeland in low lying and drainage areas.	N/A	Minor rehabilitation has been undertaken to date due to the limited opportunities available.	
	9	Rehabilitation and Landscape Management Plan			
22	9	Within 6 months of the date of this consent, the Applicant shall prepare and subsequently implement a Rehabilitation and Landscape Management Plan for the development in consultation with Council and DEC, and to the satisfaction of the Director-General: This plan must:	N	Sighted Rehabilitation and Landscape Management Plan 2006 (Doc No. 264/30). Sighted letter from John Gardiner to DoP (undated) advising that a final draft of the plan had been submitted to DoP, DEC and Gosford Council. Sighted letter from Alex Irwin (RW Corkery) to Paul Slough (Rocla) dated 17 Aug 2006, stating that the plan had been submitted to DoP, DEC and	Confirm DoP is satisfied with the plan.

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SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues /Recommendations
				GCC on 8 August 2006. August submission of this plan is also outside the 6 month timeframe required by the condition. No evidence of DoP's satisfaction was sighted.	
22a)	9	identify the areas likely to be disturbed by the development;	Y	Described in Section 2.3 of the Rehabilitation and Landscape Management Plan.	
22b)	9	describe in general the short, medium, and long-term measures that would be implemented to rehabilitate the site;	Y	Described in Section 3 of the Rehabilitation and Landscape Management Plan.	
22c)	9	describe in detail the measures that would be implemented over the next 5 years to rehabilitate the site;	Y	Described in Section 3.3 of the Rehabilitation and Landscape Management Plan.	
22d)	9	describe how the performance of these measures would be monitored over time;	Y	Described in Section 4.2.5 of the Rehabilitation and Landscape Management Plan.	
22e)	9	set completion criteria for the rehabilitation of the site;	Y	Described in Section 4.1 of the Rehabilitation and Landscape Management Plan.	
22f)	9	include a Vegetation Clearing Protocol, a Pest and Weed Management Plan, and a Landscape Plan; and	Y	Described in appendices 2, 3 and 4 of the Rehabilitation and Landscape Management Plan.	
22g)	9	include a program to monitor the development's effects on vegetation, including threatened species and groundwater dependent ecosystems.	Y	Described in Section 4.2.5. Groundwater Dependent Ecosystem monitoring not specifically mentioned, however <i>Darwinia glaucophylla</i> and <i>Hibertia procumbens</i> and surrounding vegetation monitoring is included. These species are groundwater dependent.	

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<p style="text-align: center;">SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS</p>					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues /Recommendations
23	9	Within 4 years of providing the Rehabilitation and Landscape 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.	N/A	Not yet triggered.	Ensure Rehabilitation and Landscape Management Plan is provided to DoP for its satisfaction. Undertake initial review in 2010.
	9	Rehabilitation Bond			
24	9	Within 12 months of the date of this consent, the Applicant shall lodge a rehabilitation bond for the development with the Director-General. The sum of the bond shall be calculated at \$2.50/m ² for the total additional area to be disturbed in each 5 year review period, or as otherwise directed by the Director-General.	Y	Rocla holds a bank guarantee for the Calga Sand Quarry (ANZ Bank Guarantee No: 18511 dated 18/9/07. The bank guarantee notes Gosford City Council as the "favouree". No correspondence to DoP regarding the bond has been provided.	Confirm that DoP have agreed with this approach.
	9	<p><i>Notes:</i></p> <ul style="list-style-type: none"> <i>If the rehabilitation is completed to the satisfaction of the Director-General, the Director-General will release the rehabilitation bond.</i> <i>If the rehabilitation is not completed to the satisfaction of the Director-General, the Director-General will call in all or part of the rehabilitation bond, and arrange for the satisfactory completion of these works.</i> 	N/A		
25	9	Within 4 years of lodging the rehabilitation bond with the Director-General, and every 5 years thereafter, unless the Director-General directs otherwise, the Applicant shall review, and if necessary revise, the sum of the bond to the satisfaction of the Director-General. This review must consider:	N/A	Not yet triggered.	
	9	TRAFFIC AND TRANSPORT			
	9	Site Access			
26	9	Prior to the commencement of extraction in the applicable quarry stages, the Applicant shall:			

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SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues /Recommendations
26a)	9	seal the internal access road from the site entrance to the Stage 3 extraction limit for Stages 3/1 and 3/2; and	Y	Sighted photos of road sealing activities (outlined in Section 2.5 of 2006 AEMR). Sighted sealed road during site inspection. Sealing undertaken in Jan/Feb 2006 (note road partially obscured by slight covering of sand). During the inspection the road was found to be clean.	
26b)	10	seal the internal access road from the site entrance to the administration area for Stages 3/3 onwards,	N/A	Stage 3/3 not commenced.	
26	10	to the satisfaction of the Director-General.	N	Evidence of DoP's satisfaction with the road sealing activities was not provided.	Confirm DoP is satisfied with the sealing of internal access road.
	10	<i>Note: The access road and quarrying stages are as shown on Figure 3 of the Amendment Report.</i>	N/A		
27	10	Prior to carrying out any development, the Applicant shall provide a painted seagull arrangement to Peats Ridge Road, to improve egress for vehicles turning right from the access road, to the satisfaction of the RTA.	N	Sighted purchase order for road sealing dated 10/1/06. The road works have been completed however, evidence of RTA's satisfaction with a painted seagull arrangement was not provided.	Confirm RTA is satisfied with the works undertaken.
28	10	The Applicant shall ensure that the long term access road is designed to:			
28a)	10	accommodate heavy vehicle turning paths for the left hand turn from Peats Ridge Road into the access road, to the satisfaction of the RTA and the Director-General; and	N	The road works have been completed however, evidence of DoP and RTA satisfaction with the works was not provided.	Confirm DoP and RTA is satisfied with the works undertaken.
28b)	10	provide for vehicular access to the pit floor, to the satisfaction of the DPI and the Director-General.	N	Evidence of DoP and DPI satisfaction with the vehicle assess arrangements was not provided.	Confirm DoP and DPI is satisfied with the access arrangements.

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SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues /Recommendations
	10	Parking			
29	10	The Applicant shall provide sufficient parking on-site for all quarry-related traffic, in accordance with Council's parking codes, and to the satisfaction of the Director-General.	N	Sighted large parking area adjacent to administration buildings. Adequate space available for 8 staff, 3 visitors and trucks present during audit with additional space available. Evidence of DoP's satisfaction with the on-site parking capacity and compliance with council's code was not provided.	Confirm DoP is satisfied with the on-site parking arrangements and confirm compliance with Council codes..
	10	Road Haulage			
30	10	The Applicant shall ensure that all loaded vehicles entering or leaving the site are covered.	Y	Sighted all trucks entering and leaving site complying with this condition during audit. Sighted signs at quarry instructing drivers to cover loads. Drivers also instructed to cover loads during induction process.	
31	10	The Applicant shall ensure that all loaded vehicles leaving the site are cleaned of materials that may fall on the road before they are allowed to leave the site.	Y	Sighted several drivers clearing sand spilt onto trailer covers prior to leaving site during audit. Sighted wheel wash adjacent to site entry/exit point. Operators trained to observe/notify truck drivers of any excess/spilt sand on their vehicles.	
	10	VISUAL IMPACT			
32	10	The Applicant shall			

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SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues /Recommendations
32a)	10	implement all practicable measures to minimise the visual impacts of the development;	Y	Visual bund established around northern part of site. Colourbond fence erected on top of bund. Bund substantially vegetated with sown native vegetation as required by EIS.	Increase the diversity of the vegetation within the earth bund.
32b)	10	establish, re-vegetate and subsequently maintain the acoustic barrier to minimise the visual impacts of development, in accordance with the concept final landform in the Amendment Report (as reproduced in Appendix 2);	Y	Bund has been established in accordance with EIS and amendment report. Bund has been substantially revegetated with native species.	
32c)	10	include a progress report on the re-vegetation and maintenance of the acoustic barrier in the AEMR,	Y	Construction, maintenance and revegetation activities associated with acoustic bund are briefly discussed in 2006 and 2007 AEMRs. Vegetation monitoring report for 2006 prepared by TREES consulting sighted. Results of this report are mostly not discussed in AEMR.	Provide detailed discussion of revegetation monitoring and any rehabilitation activities in AEMR.
	10	to the satisfaction of the Director General.	N	Evidence of DoP's satisfaction with the acoustic barrier works was not provided.	Confirm DoP is satisfied with the works undertaken.
33	10	The Applicant shall take all practicable measures to prevent and/or minimise any off-site lighting impacts from the development.	Y	Sighted measures to mitigate off-site visual lighting impacts during site inspections including: use of nightlight globes, use of common truck paths at night, directing lighting downwards and automatically switching lighting off between 8 pm and 4 am.	
34	10	All external lighting associated with the development shall comply with <i>Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting</i> .	Y	Lights are downward facing and are not directed towards residential receivers.	

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SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues /Recommendations
	10	WASTE MANAGEMENT			
35	10	The Applicant shall:			
35a)	10	monitor the amount of waste generated by the development;	Y	Waste streams identified and briefly discussed in 2006 and 2007 AEMRs. Monitoring of quarry waste undertaken through quarry operations. Monitoring of general waste occurs through contractor. Monitoring of recycling (oil/steel) occurs as required.	No monitoring of the volume of overburden, oversize and slimes is undertaken. This material is critical to the achievement of the final landform / rehabilitation of the site.
35b)	10	investigate ways to minimise waste generated by the development;	Y	Waste minimisation considered as part of quarry planning process (P Slough pers. comm.).	
35c)	10	implement reasonable and feasible measures to minimise waste generated by the development; and	Y	Waste minimisation measures include recycling of oil and steel. Beneficial re-use of overburden (stockpiled for later use and some is sold) and recycling of process water.	Investigate opportunities for recycling of paper and recyclable waste from general waste stream.
35d)	10	report on waste management and minimisation in the AEMR.	Y	Waste management discussed in Section 2.13 of 2006 AEMR and 2.11 of 2007 AEMR.	Include detailed discussion of waste minimisation opportunities in AEMR.
	10	HAZARD MANAGEMENT			
	10	Dangerous Goods			
36	10	The Applicant shall ensure that the storage, handling, and transport of dangerous goods is conducted in accordance with the relevant Australian Standards, particularly AS1940 and AS1596, and the <i>Dangerous Goods Code</i> .	N/A	Due to the small quantities of dangerous goods used on-site the provisions of AS1940 and the Dangerous Goods Code do not apply.	

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SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues /Recommendations
	10	Safety			
37	10	The Applicant shall secure the development to ensure public safety to the satisfaction of the Director-General.	N	Site fences and security measures observed during site inspections. Evidence of DoP's satisfaction with the site security was not provided.	Confirm DoP is satisfied with the site security measures.
	11	BUSHFIRE MANAGEMENT			
38	11	The Applicant shall:			
38a)	11	ensure that the development is suitably equipped to respond to any fires on site; and	Y	Sighted fire fighting measures during site inspections including 12000L water cart and fire extinguishers. Sighted fire training/fire drill records 28/11/08.	
38b)	11	assist the Rural Fire Service and emergency services as much as possible if there is a fire on site.	Y	Rocla will assist the RFS in anyway possible if there is a fire on-site (P Slough pers. comm.).	Provide letter to RFS/emergency services outlining sites fire fighting capabilities/emergency management system.
	11	PRODUCTION DATA			
39	11	The Applicant shall:			
39a)	11	provide annual production data to the DPI using the standard form for that purpose; and	N	Annual production data sighted, however standard form and submission to DPI not provided.	Provide annual production data to DPI using standard form. Keep records of any submission to DPI.
39b)	11	include a copy of this data in the AEMR.	N	Annual production data provided in 2006 and 2007 AEMRs. Standard DPI form not provided.	Provide standard DPI annual data submission form in AEMR.

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SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues /Recommendations
	11	QUARRY EXIT STRATEGY			
40	11	At least 3 years prior to the cessation of quarrying, the Applicant shall prepare a Quarry Exit Strategy for the development, in consultation with the Council, and to the satisfaction of the Director-General. The plan must:	N/A	Not yet triggered.	
40a)	11	define the objectives and criteria for quarry closure;	N/A		
40b)	11	investigate options for the future use of the site, including any final void/s;	N/A		
40c)	11	describe the measures that would be implemented to minimise or manage the ongoing environmental effects of the development; and	N/A		
40d)	11	describe how the performance of these measures would be monitored over time.	N/A		

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SCHEDULE 4 ADDITIONAL PROCEDURES					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues/Recommendations
	12	NOTIFICATION OF LANDOWNERS			
1	12	If the results of monitoring required in schedule 3 identify that impacts generated by the development are greater than the relevant impact assessment criteria in schedule 3, then the Applicant shall notify the Director-General and the affected landowners and/or existing or future tenants accordingly, and provide quarterly monitoring results to each of these parties until the results show that the development is complying with the criteria in schedule 3.	N	No evidence was provided to satisfy this condition as a result of the predicted noise exceedences identified during the construction of the acoustic barrier. P McCue advised (26 May 2009) that verbal agreement had been obtained from potentially affected landholder prior to works commencing and the construction methodology had been modified to reduce the noise. However, no monitoring was undertaken to confirm compliance and no further assessment work was undertaken to show effectiveness of equipment change.	Ensure reporting requirements are satisfied
	12	INDEPENDENT REVIEW			
2	12	If a landowner considers that the operations of the quarry are exceeding the impact assessment criteria in schedule 3, then he/she may ask the Applicant in writing for an independent review of the impacts of the development on his/her land.	N/A	No requests for independent review have been received.	
	12	If the Director-General is satisfied that an independent review is warranted, the Applicant shall within 3 months of the Director-General advising that an independent review is warranted:	N/A		
2a)	12	consult with the landowner to determine his/her concerns;	N/A		

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<p style="text-align: center;">SCHEDULE 4 ADDITIONAL PROCEDURES</p>					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues/Recommendations
2b)	12	commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to conduct monitoring on the land, to determine whether the development is complying with the relevant criteria in schedule 3, and identify the source/s and scale of any impact on the land, and the development's contribution to this impact; and	N/A		
2c)	12	give the Director-General and landowner a copy of the independent review.	N/A		
3	12	If the independent review determines that the quarrying operations are complying with the relevant criteria in schedule 3, then the Applicant may discontinue the independent review with the approval of the Director-General.	N/A		
4	12	If the independent review determines that the quarrying operations are not complying with the relevant criteria in schedule 3, and that the quarry is primarily responsible for this non-compliance, then the Applicant shall:	N/A		
4a)	12	take all practicable measures, in consultation with the landowner, to ensure that the development complies with the relevant criteria; and	N/A		
4b)	12	conduct further monitoring to determine whether these measures ensure compliance; or	N/A		
4c)	12	secure a written agreement with the landowner to allow exceedances of the relevant criteria in schedule 3; or	N/A		
4d)	12	in the case of an exceedance of the groundwater impact assessment criteria, implement compensatory water supply measures in accordance with the Groundwater Contingency Strategy (condition 16 of schedule 3),	N/A		
	12	to the satisfaction of the Director-General.	N/A		
	12	If the additional monitoring referred to above subsequently determines that the quarrying operations are complying with the relevant criteria in schedule 3, then the Applicant may discontinue the independent review with the approval of the Director-General.	N/A		
	12	If the Applicant is unable to finalise an agreement with the landowner, then the Applicant or landowner may refer the matter to the Director-General for resolution.	N/A		
	12	If the matter cannot be resolved within 21 days, the Director-General shall refer the matter to an Independent Dispute Resolution Process (see Appendix 3).	N/A		

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SCHEDULE 4 ADDITIONAL PROCEDURES					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2009	Non-Compliance Issues/Recommendations
	12	If, following the Independent Dispute Resolution Process, the Director-General is satisfied that the noise generated by the development is exceeding the noise impact assessment criteria in schedule 3 by more than 5 dBA, then the Director-General may grant land acquisition rights to the affected landowner.	N/A		
5	12	If the landowner disputes the results of the independent review, either the Applicant or the landowner may refer the matter to the Director-General for resolution.	N/A		
	12	If the matter cannot be resolved within 21 days, the Director-General shall refer the matter to an Independent Dispute Resolution Process (see Appendix 3).	N/A		
6	12	If any disputes arise from the implementation of the Groundwater Contingency Strategy (condition 16 of schedule 3), either the Applicant or the landowner may refer the matter to the Director-General for resolution.	N/A		
	13	If the matter cannot be resolved within 21 days, the Director-General shall refer the matter to an Independent Dispute Resolution Process (see Appendix 3).	N/A		
7	13	If, following an Independent Dispute Resolution Process, the Director-General is satisfied that the quarry is causing an exceedance of the groundwater impact assessment criteria, and that compensatory water supply would not provide an acceptable alternative long-term supply of water to the affected landowner that is equivalent to the loss attributed to quarrying related impacts, then the Director-General may grant land acquisition rights to the affected landowner.	N/A		
	13	LAND ACQUISITION			
8	13	Within 3 months of receiving a written request from a landowner with acquisition rights, the Applicant shall make a binding written offer to the landowner based on:	N/A	No requests for land acquisition have been received.	
8a)	13	the current market value of the landowner's interest in the property at the date of this written request, as if the property was unaffected by the development, having regard to the:	N/A		
	13	<ul style="list-style-type: none"> existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and 	N/A		
	13	<ul style="list-style-type: none"> presence of improvements on the property and/or any approved building or structure which has been physically commenced at the date of the landowner's written request, and is due to be completed subsequent to that date; 	N/A		

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SCHEDULE 4 ADDITIONAL PROCEDURES					
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8b)	13	the reasonable costs associated with:	N/A		
	13	<ul style="list-style-type: none"> relocating within the Gosford local government area, or to any other local government area agreed to by the Director-General; and 	N/A		
	13	<ul style="list-style-type: none"> obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is required; and 	N/A		
8c)	13	reasonable compensation for any disturbance caused by the land acquisition process.	N/A		
9	13	The Applicant shall bear the costs of any valuation or survey assessment requested by the independent valuer, panel, or the Director-General and the costs of determination referred above.	N/A		
10	13	If the Applicant and landowner agree that only part of the land shall be acquired, then the Applicant shall pay all reasonable costs associated with obtaining Council approval for any plan of subdivision, and registration of the plan at the Office of the Registrar-General.	N/A		

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SCHEDULE 5 ENVIRONMENTAL MANAGEMENT, MONITORING, AUDITING AND REPORTING					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2000	Non-Compliance Issues/ Recommendations
	14	ENVIRONMENTAL MANAGEMENT STRATEGY			
1	14	Within 3 months of the date of this consent, the Applicant shall prepare, and subsequently implement, an Environmental Management Strategy for the development to the satisfaction of the Director-General. This strategy must:	N	Sighted EMS prepared by RW Corkery and Associates (Report No. 264/27). Sighted letter from DoP dated 13/3/06 approving the EMS. DoP did not confirm their satisfaction with the EMS until 13 March 2006 and therefore compliance with the timeframe was not achieved.	Ensure compliance timeframes are met.
1	14	a) provide the strategic context for environmental management of the development;	Y	Outlined in Section 2 of EMS.	
1	14	b) identify the statutory requirements that apply to the development;	Y	Outlined in Section 3 of EMS.	
1	14	c) describe in general how the environmental performance of the development would be monitored and managed during the development;	Y	Outlined in Section 4 of EMS.	
1	14	d) describe the procedures that would be implemented to: <ul style="list-style-type: none"> • keep the local community and relevant agencies informed about the operation and environmental performance of the development; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise during the course of the development; • respond to any non-compliance; • manage cumulative impacts; and • respond to emergencies; and • accountability and responsibility. 	Y	Outlined in following section of EMS: <ul style="list-style-type: none"> • Section 6 • Section 7 • Section 8 • Section 9 • Section 10 • Section 11 • Section 12. 	
1	14	e) describe the role, responsibility, authority, and accountability of all the key personnel involved in environmental management of the development; and	Y	Section 12	

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SCHEDULE 5 ENVIRONMENTAL MANAGEMENT, MONITORING, AUDITING AND REPORTING					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2000	Non-Compliance Issues/ Recommendations
1	14	f) be updated within 3 months of the completion of each Independent Environmental Audit.	N/A	Not yet triggered.	
	14	ENVIRONMENTAL MONITORING PROGRAM			
2	14	Within 3 months of the date of this consent, the Applicant shall prepare an Environmental Monitoring Program for the development, to the satisfaction of the Director-General. This program must consolidate the various monitoring requirements in schedule 3 of this consent into a single document.	N	Sighted DoP letter dated 13/3/06 confirming its satisfaction with the monitoring program. Sighted monitoring programs for 2008 and 2009. DoP did not confirm their satisfaction with the EMP until 13 March 2006 and therefore compliance with the timeframe was not achieved.	Ensure compliance timeframes are met.
3	14	Within 3 months of the completion of each Independent Environmental Audit (see below), the Applicant shall review, and if necessary update, the Environmental Monitoring Program to the satisfaction of the Director-General.	N/A	Not yet triggered.	
	14	ANNUAL REPORTING			
4	14	Each year, following the date of this consent, the Applicant shall prepare and submit an AEMR to the Director-General and the relevant agencies. This report must:	Y	Sighted AEMRs for 2006 and 2007 (neither report provided contained appendices). 2008 report in preparation.	
4	14	a) identify the standards and performance measures that apply to the development;	N	Identification of performance criteria and standards applying to the quarry was inadequate in both reports.	Include specific details of performance criteria and standards applying to the quarry in AEMR.
4	14	b) describe the works carried out in the last 12 months;	Y	Outlined in Section 2 of AEMRs.	
4	14	c) describe the works that will be carried out in the next 12 months;	Y	Outlined in Section 3 of AEMRs.	
4	14	d) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years;	N	Complaints listed in AEMR's No complaints received in	Ensure AEMR compares the number of complaints

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SCHEDULE 5 ENVIRONMENTAL MANAGEMENT, MONITORING, AUDITING AND REPORTING					
Condition	Page	Requirement	Compliance Y/N	Evidence/Status 2000	Non-Compliance Issues/ Recommendations
				2007. Two complaints received in 2006. 2007 AEMR does not compare results of previous year.	received in a year to previous years.
4	14	e) include a summary of the monitoring results for the development during the past year;	Y	Outlined in Section 5. Detailed results provided in appendices (not provided, although sighted as separate reports).	Ensure all copies of AEMR contain any appendices/attachments.
4	14	f) include an analysis of these monitoring results against the relevant: <ul style="list-style-type: none"> • impact assessment criteria; • monitoring results from previous years; and • predictions in the EIS and Amendment Report; 	N	2006 and 2007 AEMRs do not compare monitoring results with EIS impact assessment criteria. Detailed monitoring reports in appendices review results against relevant consent/ criteria. No review of ongoing performance or validation of predictions made in EIS was sighted.	Ensure AEMR reviews monitoring results against impact assessment criteria and predictions made in EIS. Also ensure AEMR reviews long term monitoring trends and compares results with the previous year.
4	14	g) identify any trends in the monitoring results over the life of the development;	N	Not discussed within 2006 or 2007 report.	Ensure AEMR discusses long term monitoring results over the life of the project.
4	14	h) identify any non-compliance during the previous year; and	N	Non-compliances not discussed within 2006 or 2007 report.	Ensure AEMR discusses any non-compliance, or mentions that no non-compliances have occurred.
4	14	i) describe what actions were, or are being taken to ensure compliance.	N/A		
5	14	INDEPENDENT ENVIRONMENTAL AUDIT			
5	14	Within 3 years of the date of this consent, and every 5 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:	Y	This condition is satisfied by this audit. DoP confirmed that they are satisfied with the appointment of Umwelt as the auditors.	
5	14	a) be conducted by a suitably qualified, experienced, and independent person whose appointment has been endorsed by the Director-General;	Y	Refer to main body of audit report.	

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5	14	b) be consistent with <i>ISO 19011:2002 - Guidelines for Quality and/ or Environmental Systems Auditing</i> , or updated versions of this guideline;	Y	Refer to main body of audit report.	
5	14	c) assess the environmental performance of the development, and its effects on the surrounding environment;	Y	Refer to main body of audit report.	
5	14	d) assess whether the development is complying with the relevant standards, performance measures, and statutory requirements;	Y	Refer to main body of audit report.	
5	14	e) review the adequacy of the Applicant's Environmental Management Strategy and environmental management plans/protocols; and, if necessary,	Y	Refer to main body of audit report.	
5	15	f) recommend measures or actions to improve the environmental performance of the development, and/or the environmental management and monitoring systems.	Y	Refer to main body of audit report.	
6	15	Within 3 months of commissioning this audit, the Applicant shall submit a copy of the audit report to the Director-General, with a response to the recommendations contained in the audit report.	Y	Extension of time requested Umwelt letter dated 4/5/09. DoP granted an extension to the submission of the report to early June 2009 (K Winwood pers. comm. 2009)	Confirm date of the on site component of the audit prior to commissioning to minimise lost time due to unavailability.
8	15	COMMUNITY CONSULTATIVE COMMITTEE			
8	15	Within 6 months of the date of this consent, the Applicant shall establish a Community Consultative Committee to oversee the environmental performance of the development. The CCC shall:	N	CCC established but not within required timeframe Sighted CCC minutes for 10 March and 18 August 2008, and 19 February and 5 November 2007. Sighted notification of 1 st meeting held 17 August 2006. Sighted letter from DoP (13/7/06) approving CCC representatives and chairperson.	Ensure timeframes are adhered to.
8	15	a) be comprised of at least: <ul style="list-style-type: none"> two representatives from the Applicant, including the person responsible for environmental management at the quarry; 	Y	Sighted meeting minutes for 10 March 2008. Council has elected not to participate with CCC (P Slough pers. comm.).	

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		<ul style="list-style-type: none"> one representative from Council (if available); and at least two representatives from the local community, whose appointment has been approved by the Director-General in consultation with the Council; 			
8	15	b) be chaired by an independent chairperson, whose appointment has been endorsed by the Director-General;	Y	Sighted letter from DoP (13/7/06) approving chairperson (Anthony Tuxworth).	
8	15	c) meet at least twice a year; and	Y	Sighted minutes for meetings on 10 March and 18 August 2008, and 19 February and 5 November 2007.	
8	15	d) review and provide comment on the environmental performance of the development, including any construction or environmental management plans, monitoring results, audit reports, or complaints.	Y	Sighted meeting minutes discussing various environmental matters.	
9	15	The Applicant shall, at its own expense:			
9	15	a) ensure that 2 of its representatives attend the Committee's meetings;	Y	P Slough, A Echt and P McCue (Rocla) attended CCC meetings in all minutes reviewed.	
9	15	b) provide the Committee with regular information on the environmental performance and management of the development;	Y	Monitoring information and management plans provided on website. Standard meeting agenda has been developed (23/10/06).	
9	15	c) provide meeting facilities for the Committee	Y	All CCC meetings have been held on-site.	
9	15	d) arrange site inspections for the Committee, if necessary;	Y	Site inspection held on 10 March 08.	
9	15	e) take minutes of the Committee's meetings;	Y	Minutes of meetings on 18 August, 10 March 2008 and 5 November and	

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				19 February 2007 sighted.	
9	15	f) make these minutes available to the public;	Y	CCC meeting minutes available on Rocla website.	
9	15	g) respond to any advice or recommendations the Committee may have in relation to the environmental management or performance of the development; and	Y	No issues raised in minutes of meetings sighted.	
9	15	h) forward a copy of the minutes of each Committee meeting, and any responses to the Committee's recommendations to the Director-General within a month of the Committee meeting.	N	Evidence of minutes being lodged with DoP not provided. Sighted email from Pat McCue to Tony Tuxworth, Paul Slough and John Gardiner (8.09.06) advising that minutes of CCC meetings should be sent to DoP within one month of a CCC meeting. Since the completion of the site audit, past CCC meeting minutes have been lodged with DoP by the CCC Chairman Tony Tuxworth (P McCue pers. comm. 26 May 2009).	Ensure CCC meeting minutes are submitted to DoP within one month of the meeting occurring and keep records of any correspondence with DoP.
10	15	ACCESS TO INFORMATION			
10	15	Within 1 month of the approval of any management plan/strategy or monitoring program required under this consent (or any subsequent revision of these management plans/strategies or monitoring programs), the completion of the independent audits required under this consent, or the completion of the AEMR, the Applicant shall:			

Appendix 1 – Development Consent Compliance Checklist

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10a)	15	a) provide a copy of the relevant document/s to the Council, relevant agencies and the CCC;	N	No evidence of plans being provided to Council, relevant agencies or the CCC was provided.	Provide a copy of all management/monitoring plans to Council, relevant agencies and the CCC. Record the date that each document is provided to each of these bodies.
10b)	15	b) ensure that a copy of the relevant documents is made publicly available at the quarry; and	Y	All documents held on-site at the quarry and available for public viewing (on request), although AEMRs for 2006 and 2007 are incomplete (missing appendices – which are available as separate reports).	Ensure all copies of plans and documents held on-site are complete.
10c)	15	c) put a copy of the relevant document/s on the Applicant's website;	N	Rehabilitation and Landscape Management Plan, Independent Groundwater Audits and CCC meeting minutes not available on website. Most documents are available, although many are difficult to identify easily.	Ensure all documents are available on the Rocla website and are appropriately named, and stored on appropriate pages (note – 2006 AEMR is stored on Management Plans page and 2007 AEMR is stored on EIS page). Consider re-naming documents by monitoring type and date to ensure they are easy to find. Consider listing documents under headings for specific monitoring types.
	15	to the satisfaction of the Director-General.	N	Rocla has not confirmed with DoP that they are satisfied with the distribution / availability of documents.	Confirm DoP are satisfied with the arrangements of public access to information (i.e. documents stored on site and available on website).

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11	15	During the life of the development, the Applicant shall:			
		a) make a summary of the results of all monitoring required under this consent publicly available both at the quarry and on the Applicant's website; and	Y	Summary of monitoring results required through AEMR, which is available on Rocla's website (although versions on website are lacking appendices). AEMRs available at quarry upon request.	Ensure all copies of AEMR contain appendices.
		b) update these results on a regular basis (at least every 3 months),	Y	All monitoring results are provided on the Rocla website (sighted 2006 to 2009).	
		to the satisfaction of the Director-General.	N	Rocla has not confirmed with DoP that they are satisfied with the approach adopted.	Confirm DoP are satisfied with the arrangements.
		<i>Note: The Applicant's environmental management plans/protocols should specify the reporting provisions for each environmental aspect.</i>			

APPENDIX 2

Site Inspection Photographs



Photograph 1 – Densely vegetated outer wall of the acoustic bund (northern section of site)



Photograph 2 – Sparsely vegetated section of acoustic bund (western section of site)



Photograph 3 – Erosion and slumping above cleanwater diversion drain on outer wall of the acoustic bund



Photograph 4 – Incorrect storage of chemical drum in workshop adjacent to weighbridge and refuelling areas



Photograph 5 – Incorrect storage of fire extinguisher adjacent to sedimentation dam



Photograph 6 – Dirty and potentially contaminated water collected in sumps at Cummins water pump

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