



Dixon Sand Pty Ltd

ABN: 80 002 278 686



Independent Environmental Audit

of the

Haerses Road Quarry

for the period

20 November 2016 to
22 October 2019

Prepared by:



R.W. CORKERY & CO. PTY. LIMITED

January 2020

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Prepared for:

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EXECUTIVE SUMMARY

This audit report has been prepared in accordance with *Schedule 5, Condition 13* of DA 165-7-2005 for the Haerses Road Quarry and generally in accordance with the requirements of the document *Independent Audit Post Approval Requirements* (DPE, 2018).

Compliance Status

The status of compliance against the conditional components of Development Approval (DA) 165-7-2005, Environment Protection Licence (EPL) 12513, Water Access Licence (WAL) 25941 and WAL 25956 was assessed as follows.

| Approval | DA 165-7-2005 | EPL 12513 | WAL 25941 | WAL 25956 |
|----------------|---------------|-----------|-----------|-----------|
| Compliant | 168 | 49 | 5 | 5 |
| Non-Compliant | 7 | 0 | 0 | 0 |
| Not Triggered | 36 | 11 | 5 | 5 |
| Not Determined | 1 | 0 | 1 | 1 |
| Total | 213 | 60 | 11 | 11 |

The non-compliances recorded were considered principally administrative or technical in nature and related to:

- not reporting all required VENM records within the Annual Review;
- notifying EPA of the deposited dust exceedance but not the (then) DPE;
- the need for additional information within the Biodiversity and Rehabilitation Management Plan;
- the presence of a single unbanded 205L drum of hydrocarbons; and
- lodgement of the Biodiversity and Rehabilitation Bond 1 week past the due date.

Management Plans

A high-level review of the various strategies, plans and programs required by DA 165-7-2005 was undertaken. The plans were considered to meet the respective conditional requirements of DA 165-7-2005 although a range of suggested improvements have been made. A range of non-conformances with the implementation of some aspects of the plans were also identified and recommendations made to address these non-compliances.

Key Strengths

During the audit, a high degree of knowledge of environmental management matters was evident amongst all employee levels. This was reflected in the condition of the site which displayed excellent housekeeping, no discernible maintenance issues, and no obvious 'ad hoc' management. Whilst a range of recommended actions have been provided to assist in maintaining compliance and improving environmental management, there is an existing proactive approach to environmental management.

Recommended Actions

A total of 20 compliance-based Recommendations and 15 suggested Improvements have been provided for the Company's consideration and action.



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1. INTRODUCTION

1.1 PROJECT BACKGROUND

Dixon Sand Pty Ltd (“the Company”) operates the Haerses Road Quarry (“HR Quarry”) and an associated Old Northern Road Quarry (“ONR Quarry”), in Maroota, NSW, approximately 40km north of Parramatta. Component areas for the HR Quarry are generally referenced by the relevant land parcels within the Quarry Site, namely:

- Lot 170 DP 664766;
- Lot 170 DP 664767;
- Lots A and B DP 407341;
- Lots 176 and 177 DP 752039; and
- Lot 216 DP 752039.

Extraction commenced in the Stage 1 cell in 2006, with ongoing extraction operations confined to the Stage 1 and Stage 2 cells. An expansion of the extraction area was approved on 22 January 2018 following the determination of Modification 1, permitting extraction of material from Extraction Areas A and B.

Unprocessed sand is transferred from the HR Quarry to the ONR Quarry for processing and subsequent despatch. Silts from the washing of materials extracted from both quarries are retained in engineered structures within former extraction areas at the ONR site, with these structures progressively rehabilitated to form the ONR Quarry approved final landform. Whilst opportunities for progressive rehabilitation at the HR Quarry have been limited to date, rehabilitation of the Stage 1 extraction area has commenced.

1.2 SCOPE AND AUDIT OBJECTIVES

The objectives and scope of this independent environmental audit are to fulfil the following audit requirements for the HR Quarry.

This audit has been prepared for Dixon Sand Pty Ltd (“the Company”) in accordance with *Schedule 5, Condition 13* of DA 165-7-2005 for the Haerses Road Quarry which requires that:

“By the end of November 2019, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant must commission, commence and pay the full cost of an Independent Environmental Audit of the development. This audit must:

- a) be led and conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;*
- b) include consultation with the relevant agencies and the CCC;*
- c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and any relevant EPL or necessary water licences for the development (including any assessment, strategy, plan or program required under these approvals);*

- d) *review the adequacy of strategies, plans or programs required under the abovementioned approvals;*
- e) *recommend appropriate measures or actions to improve the environmental performance of the development, and/or any assessment, strategy, plan or program required under the abovementioned approvals; and*
- f) *be conducted and reported to the satisfaction of the Secretary.*

In addition to the requirements of DA 165-7-2005, this audit has been prepared generally in accordance with the requirements of the *Independent Audit Post Approval Requirements* (DPE, 2018). These requirements are similar to those of DA 165-7-2005 with the addition of the following.

- The status of implementation of the previous Independent Audit findings, recommendations and actions (if any).
- A high-level review of the project's environmental management systems, including assessment of any third-party certification of them, the type, nature and scope of the systems having regard to the nature and scale of the development and the implementation of the systems with a focus on any key deficiencies identified within the system.

The Department of Planning, Infrastructure and Environment (DPIE), other government agencies, and the Community Consultative Committee (CCC) were consulted during the development of the audit scope. Further details of this consultation is provided in Section 3.1.

This audit has been undertaken concurrently with the audit of Company's ONR Quarry. Details of the ONR Quarry audit are provided in a separate report (Ref: 1021/01) with this audit report confined to operations associated with the HR Quarry and associated Development Consent 165-7-2005.

1.3 ENVIRONMENTAL AUDIT TEAM

The environmental audit team comprised the following members who have the necessary skills and qualifications required by DPIE. A copy of DPIE's endorsement of the audit team is provided as **Appendix 1**.

- Mr Rob Corkery – Lead Environmental Auditor
Mr Rob Corkery, B.Sc(Hons), M.Appl.Sc, Certified Lead Environmental Auditor No. 5359, Principal Environmental Consultant of R.W. Corkery & Co Pty Limited (RWC). Mr Corkery has been a certified Lead Environmental Auditor for more than 20 years and has extensive and industry leading experience for assessing and auditing extractive industry and mining-related projects.
- Mr Scott Hollamby – Environmental Auditor
Mr Scott Hollamby, B.EnvSc(Hons), Senior Environmental Consultant with RWC. Mr Hollamby has 14 years auditing experience and was a certified environmental auditor for 6 years.

- Mr Jack Flanagan – Environmental Auditor
Mr Jack Flanagan, B.Sc, M.EnvSc, Environmental Consultant with RWC.

The conditions of Development Consent 165-7-2005 do not specify a requirement for technical specialists, and none were requested through the agency consultation process.

1.4 AUDIT PERIOD

The previous independent environmental audit for the HR Quarry was undertaken between 17 and 19 November 2016. Therefore, the current audit addresses the period between 20 November 2016 and 22 October 2019 (the date of this audit site inspection).

1.5 LIMITATIONS

The findings in this report are based on a site inspection on 22 October 2019, discussions with Company personnel and documentation provided prior to, during and following the inspection.

The assessment of compliance relying upon documentation has been limited to documentation that has been supplied or otherwise obtained from public sources. R.W. Corkery & Co. Pty Limited has made every endeavour to identify compliance based upon the available documentation assuming it to be authentic and that all copies of original documents are a true and accurate copy.

The site inspection was undertaken as a combination “drive over” / “walk-over” with observations made of the various features of the Quarry Site. The main components of the Quarry were observed to gain an appreciation of activities undertaken on site and the Company’s compliance with the various conditional requirements. Not all areas of the Quarry Site were inspected nor were any subsurface investigations carried out or any samples collected for analysis during or following the inspections. On this basis, it cannot be discounted that issues could exist within areas of the site not inspected.

2. AUDIT METHODOLOGY

2.1 INTRODUCTION

The audit was undertaken in accordance with the requirements of *Schedule 5, Condition 13* of DA 165-7-2005 and generally in accordance with the *Independent Audit Post Approval Requirements* (DPE, 2018) and International Standard ISO 19011:2014. Whilst ISO 19011:2014 focuses on environmental management systems, the basic principles also apply to environmental auditing.

The following subsections outline the development of the audit plan and methodology used in undertaking the audit. The development of the audit scope and endorsement of the audit team are outlined in Sections 1.2 and 1.3 respectively.

2.2 AUDIT PLAN

The audit plan was compiled to outline all of the activities necessary for planning, organising and conducting the audit and involved the following.

Planning: RWC completed an initial review of the Company's website and public registers for copies of approvals, leases and licences and other relevant publicly available information. Discussions were then held with the Company's Environmental Officer to confirm the currency of documentation and the existence of any additional relevant approvals, leases and licences. Editable versions of the various approval requirements as well as requirements specified in the approved management plans were provided by the Company, verified by RWC and utilised for the preparation of the compliance tables.

During the planning phase, relevant government agencies and the CCC were consulted to identify any specific issues that they believed the audit should address.

Document Review: Prior to the audit inspection, an initial review of the compliance tables was undertaken, and an initial document request made to the Company for electronic copies of various documentation required to demonstrate compliance. Documentation review continued throughout the audit process with a range of documentation also reviewed during and following the audit site inspection.

Audit Site Inspection: The audit site inspection was planned to involve an opening meeting at the Company's site office (located at the ONR Quarry) with the Company Managing Director, Environmental Officer and key Operational Managers.

It was planned to then undertake an inspection of the HR Quarry by a combination of vehicle and foot to provide the greatest coverage of the site whilst focusing on key areas required to assess compliance and gain an appreciation of the approach taken with respect to environmental management.

Following the site inspection, a period of on-site document review and verification was undertaken. A closing meeting was also planned to be held at the end of the site inspection and document review.

Report Preparation: It was planned that a draft of the completed audit report would be supplied to the Company to review for factual correctness and with a final request for any audit evidence.

It was planned that the audit report would be then finalised following the receipt of the Company's review of the draft audit report.

The conduct of the audit and report preparation was undertaken generally in accordance with the audit plan.

2.3 AUDIT EVIDENCE

The following audit evidence was used to undertake the assessments nominated in *Schedule 5, Condition 13* of DA 165-7-2005 and the *Independent Audit Post Approval Requirements* (DPE, 2018).

1. Issues Raised by Relevant Agencies and the CCC

The issues raised by the relevant government agencies and the CCC were tabulated and considered through the assessment of environmental performance, compliance and approved strategies, plans and programs. Cross references to where the raised issues have been addressed are provided within the tabulated summary (see **Tables 3.1** and **3.2**).

2. Environmental Performance

This was assessed through a combination of:

- a review of any notices, orders, penalty notices or prosecutions;
- a review of any received complaints;
- a review of any incidents; and
- a review of relevant environmental monitoring results and audit observations against relevant criteria and/or predicted impacts.

The results of this assessment are outlined in Section 3.2. Where appropriate, recommended actions were identified (see Section 4).

3. Status of Compliance with Development Consent, Environment Protection Licence and Water Access Licences

Statutory compliance was assessed by methodically reviewing each condition and, based either upon site observations, documentation and/or advice provided by Company representatives, determining whether compliance has been achieved during the audit period. Where documents were supplied, a document number has been assigned and cross referenced. Where documents were simply sighted on site and copies were not retained, these are referenced as 'sighted'.

All conditions outlined in Development Consent DA 165-7-2005, Environment Protection Licence 12513 and Water Access Licences 25941 and 25956 were tabulated and columns provided for compliance assessment, the basis for

compliance, and comments / recommended actions (see **Appendix 4**). Where appropriate, recommended actions arising from the assessment of compliance are presented in Section 4.

4. Compliance with and Adequacy of Approved Strategies, Plans and Programs

All currently approved strategies, plans and programs were reviewed and, in particular, relevant commitments made within these plans. Compliance with these commitments was then assessed and the adequacy of these plans reviewed in light of the conditional requirement, site inspection and document review. Where appropriate, recommended actions arising from the review of these documents are presented in Section 4.

5. Status of Implementation of the Previous Independent Audit findings

The Company's response document submitted following the 2016 Independent Environmental Audit was reviewed and tabulated with an additional column to assess the status of implementation during this audit period (see Section 3.5).

6. High Level Review of the Environmental Management System

The Environmental Management System for the HR Quarry is not a certified Environmental Management System. Therefore, review of the Environmental Management System was undertaken through a combination of document review, site observations and discussions with Company personnel to understand the systems in place and how these are utilised to manage environmental aspects. A commentary on the HR Quarry Environmental Management System is provided in Section 3.6.

2.4 COMPLIANCE STATUS DESCRIPTORS

The assessment of compliance has been recorded generally in accordance with the *Independent Audit Post Approval Requirements* (DPE, 2018). Compliance has been recorded as follows.

| | |
|----------------|--|
| Compliant | The auditor has collected sufficient verifiable evidence to demonstrate that all elements of the requirement have been complied with within the scope of the audit. |
| Non-compliant | The auditor has determined that one or more specific elements of the conditions or requirements have not been complied with within the scope of the audit. |
| Not triggered | A requirement has an activation or timing trigger that has not been met at the time when the audit is undertaken, therefore an assessment of compliance is not relevant. |
| Not Determined | Insufficient information was available upon which to assess compliance. |

3. AUDIT FINDINGS

3.1 CONSULTATION OUTCOMES

Table 3.1 provides a list of the government agencies / stakeholders that were consulted and requested to identify any issues they considered should be addressed during the audit. Each agency / stakeholder was initially called by telephone and subsequently sent a formal email transmission on 20 August 2019. As required, further email and phone follow up was undertaken. Any issues raised are summarised with a cross reference to where they are addressed in this audit report.

Table 3.1
Consultation Outcomes

| Agency / Stakeholder | Issues Raised and Location Addressed in Audit Report |
|--|--|
| Department of Planning, Infrastructure & Environment | <ul style="list-style-type: none"> Response received 16/09/19 (<i>Document HR54a-2019</i>). No additional matters beyond the audit scope requirements outlined within the <i>Independent Audit Post Approval Requirements</i> (DPE, 2018) – see <i>Sections 1.2 and 2</i>. |
| Community Consultative Committee – Independent Chairperson | <ul style="list-style-type: none"> Verbal response received from Lisa Andrews, the Independent Chairperson of the CCC, 17/09/19. Confirmed the CCC members did not raise any specific issues beyond those already raised and recorded in the CCC meeting minutes. Refer to Table 3.2 |
| Resources Regulator | <ul style="list-style-type: none"> No response received. |
| NSW EPA | <ul style="list-style-type: none"> Response received 16/09/19 (<i>Document HR54b-2019</i>). No specific issues/matters to be addressed in the audit report. Noted that self-reported dust exceedances appear to be the most common issue but some of the exceedances are not related to the quarry operations and that the Company has generally responded appropriately – see <i>Sections 3.2.3, 3.2.4 and 3.4.2</i>. |
| Biodiversity and Conservation Division | <ul style="list-style-type: none"> Response received 17/09/19 (<i>Document HR54c-2019</i>). No issues raised. |
| Natural Resources Access Regulator | <ul style="list-style-type: none"> No response received. |
| Roads and Maritime Services | <ul style="list-style-type: none"> No response received. |
| Hills Shire Council | <ul style="list-style-type: none"> Response received 09/09/19 (<i>Document HR54d-2019</i>). It was requested that the following matters were relevant and be reviewed as part of the audit. <ul style="list-style-type: none"> Compliance with setback requirements – see Appendix 4 Table A4-1 Schedule 2 Condition 18. Compliance with depth of extraction – see Appendix 4 Table A4-1 Schedule 2 Conditions 19 and 20. Compliance with ongoing rehabilitation requirements – see <i>Sections 3.3 and 3.4.2</i>. |

As part of the audit preparation and in response to the CCC request, the minutes from the CCC meetings held during the audit period were also reviewed. During the audit period, a total of five CCC meetings were held (*Document HR55-2019*). A summary of any relevant compliance, environmental or operational issues raised by the community or Council representatives during each CCC meeting and where these are addressed within the audit are provided in **Table 3.2**.

Table 3.2
Issues Raised in CCC Meetings Held During the Audit Period

| CCC Meeting | Issues Raised and Location Addressed in Audit Report |
|------------------|---|
| 9 May 2017 | <ul style="list-style-type: none"> No compliance, environmental or operational issues raised by community or Council representatives. |
| 21 November 2017 | <ul style="list-style-type: none"> Results of a community survey completed by the Company were presented. Common comments raised during the survey and reported during the meeting was occasional dangerous truck driving behaviour – see Sections 3.2.2 and 3.4. Whilst not specific to the HR Quarry, it was recorded that the Maroota Public School had requested an extension to the timeframe for the 40km/hr zone to a least 4:20pm to cater for the high-school bus schedule – see Section 3.4.3.5. |
| 8 May 2018 | <ul style="list-style-type: none"> No compliance, environmental or operational issues raised by community or Council representatives. |
| 20 November 2018 | <ul style="list-style-type: none"> No compliance, environmental or operational issues raised by community or Council representatives. |
| 14 May 2019 | <ul style="list-style-type: none"> No compliance, environmental or operational issues raised by community or Council representatives. A community representative raised concerns regarding various issues (traffic, hours of operation, monitoring of compliance, Buffer Zone encroachment, landscape alteration, health concerns, and groundwater impacts) following an update on the proposed Modification 3 to DA 165-7-2005. Dixon Sand has agreed to prepare a fact Sheet and General Questions and Answers Sheet for distribution to the community which would address common concerns associated with the proposed modification. |

3.2 ENVIRONMENTAL PERFORMANCE

3.2.1 Summary of Agency Notices, Orders, Penalty Notices or Prosecutions

During the audit period the Resource Regulator undertook three inspections and issued three Section 191 Improvement Notices, under the *Work Health and Safety Act 2011*, dated 7 April 2017, 13 June 2018, and 27 November 2018. These notices and the required actions were reported within each respective Annual Review. Matters that are also relevant to environmental considerations for the HR Quarry included the following.

- Hazardous substances across the Quarry to be appropriately stored and labelled.
- Pre-start checks to be conducted for the water truck by the operators (relevant to the extent of ensuring the water cart remains available for dust suppression).

These matters were reviewed as part of this audit with the following results.

- One 205L drum of hydrocarbons was observed within the Quarry site, adjacent the water pump. Whilst the drum and pump were covered, the drum was unbanded (**Recommendation HR R20/19**). No other chemicals or hazardous substances were observed at the Quarry.
- Copies of the pre-start checks for the water truck were inspected during the audit. Spot checks indicate that these were being completed, as required.

No other notices, orders, penalty notices or prosecutions have been reported by the Company or were identified during the audit.

3.2.2 Complaints

A total of six complaints were recorded for HR Quarry (including complaints not specifically allocated to either the HR or ONR quarry) during the audit period (see **Table 3.3**). Of these, four related to trucks and one related to noise / operational hours and one related to both trucks and noise.

Table 3.3
Summary of Complaints Received During Audit Period

| Date | Nature of Complaint | Follow-up Action |
|----------|---|---|
| 29/05/17 | Truck (which made a pick up at the Quarry) was alleged to be driven in a dangerous manner. | The truck was identified via the registration number and the truck Company contacted to inform their management of the complaint. |
| 26/07/17 | Council reported that they had received two noise-related complaints from residents within Maroota alleging operations beyond the approved hours and on Sundays. | The Company management team investigated and confirmed that operations had not been undertaken outside the approved hours or on Sundays. |
| 06/10/17 | Truck (which made a pick up at the Quarry) was alleged to have tailgated the complainant. | The haulage company was contacted regarding the complaint against the specific truck and reminded of the 3-strike policy. |
| 06/06/18 | Council reported that they had received a complaint that trucks were operating outside the approved hours and noise was being generated outside the approved hours. | The Company reviewed the truck records and operating hours on the nominated date. Dixon's management team undertook an investigation into the matter and confirmed with Council that the ONR did not operate outside the approved hours of operation. |
| 01/05/19 | Multiple trucks entering / leaving the quarry area using excessive engine breaks. | The Company consulted with the other quarries who are signatories to the inter-pit policy, spoke directly to the truck driver of one truck which could be identified, and spoke to the truck company for other trucks who were not confirmed as accessing the local quarries and notified them of Dixon Sand's commitment to request drivers to limit use of engine breaks. |
| 19/06/19 | A truck has continued to use engine breaks despite being previously warned. Multiple other trucks speeding, crossing the centre line and using engine breaks without cause. | The identified truck driver was asked to only utilise engine breaks when necessary and email was sent to the complainant extending an invitation to meet to discuss this matter. |

Of the four truck-related complaints, two were confirmed not to be relating to trucks associated with the Quarry. The Company notes that it does not operate (or contract) its own truck fleet. Therefore, outside of the Quarry boundary, the Company does not have legal jurisdiction over the trucks. However, in each instance where the truck was verified, the Company contacted the truck company and/or driver and cautioned them against the alleged behaviour. The Company does reserve the right, in accordance with the Traffic Management Plan and the Maroota Local Traffic Management Policy, to refuse access to drivers who do not comply with the provisions of the plan and policy. Further discussion relating to the adequacy of the Traffic Management Plan and compliance with its implementation is provided in Section 3.4.2.5.

In relation to the two noise-related complaints, the Company confirmed that the operations were undertaken within the approved hours of operation. Noise monitoring undertaken for the Quarry (see Section 3.2.4) also confirms compliance with approved noise limits.

3.2.3 Incidents

The 2016/2017, 2017/2018 and 2018/2019 Annual Reviews reported that there were no environmental incidents during the review periods. Dixon Sand's Environmental Officer also confirmed that no environmental incidents have occurred between 1 July 2019 and 21 October 2019 (i.e. since the latest Annual Review period).

3.2.4 Actual Verses Predicted Environmental Impacts

A summary of the approval criteria and/or predicted environmental outcomes for the principal environmental aspects relevant to the Quarry is provided in **Table 3.4** together with a discussion of performance / compliance during the audit period. Information for assessing performance has largely been drawn from the Annual Reviews, available monitoring data and, to a lesser extent, the observations during the site inspection.

Table 3.4
Summary of Actual Verses Predicted Environmental Impacts / Performance

Page 1 of 2

| Aspect | Approval Criteria / EIS Prediction | Performance During the Audit Period |
|---------------|--|--|
| Noise | Day and shoulder period ranging from 35dB(A) to 40dB(A) at seven residence locations and 35dB(A) at all other locations. (DA Condition 3(3)) | Noise monitoring was undertaken during December 2016, June 2017, June 2018, and June 2019. All monitoring recorded compliance with the approval criteria. Two complaints were received – both relating to noise outside of approved hours of operation. The Company confirmed that operations had occurred within the approved hours (implying the noise source was not the Quarry). |
| Air Quality | PM ₁₀ 24hr (incremental) = 50ug/m ³ PM ₁₀ Annual (cumulative) = 30ug/m ³ TSP Annual (cumulative) = 90ug/m ³ Dep Dust (cumulative) = 4g/m ² /month Dep Dust (incremental) = 2g/m ² /month (DA Condition 3(9)) | Whilst the results of air quality monitoring during the audit period recorded a number of exceedances of the 24hr PM ₁₀ criteria, none of these were attributed to the HR Quarry or occurred when prevailing winds were in a direction for contributions to have been received from HR Quarry. Exceedances of the cumulative deposited dust was also recorded but was attributed to agricultural activities and earthworks (for a nursery) occurring adjacent the gauge. No air quality-related complaints were received during the audit period. |
| Traffic | Truck movement limits: 56 per day (including transfers to ONR Quarry) 20 between 6.00am and 7.00am (DA Condition 2(8)) | During the audit period, maximum daily truck movements were 12 outbound trucks. Therefore, compliance was achieved with the both the daily and early morning limits. |
| Surface Water | The DA does not specify criteria and there are no licenced discharge points. The 2005 EIS and 2016 Environmental Assessment predicted that there would be no significant impacts. | The Annual Reviews report that there were no surface water discharges during the audit period, and this was confirmed by the Environmental Officer. Further, as there has been no discharge and there was no sediment laden wash or other evidence of impacts to off-site surface water, it is considered that the Quarry is unlikely to have significantly impacted surface water. |

Table 3.4 (Cont'd)
Summary of Actual Verses Predicted Environmental Impacts / Performance

Page 2 of 2

| Aspect | Approval Criteria / EIS Prediction | Performance During the Audit Period |
|--------------|---|--|
| Groundwater | <p>Neither the DA nor EPL specify quality criteria.</p> <p>No extraction is to occur within 2m of the highest recorded wet weather groundwater level within both the MTSGS and SCBGS.</p> <p><i>(DA Condition 2(19))</i></p> <p>The 2005 EIS predicted it would be unlikely that there would be extraction induced lowering of groundwater levels. Due to previous agricultural activity and previous removal of humic material it was considered unlikely the quarry would affect the pH of the downstream groundwater.</p> <p>The 2016 Environmental Assessment predicted there would be no capture of groundwater and no interference with neighbouring bores.</p> | <p>Additional monitoring bores as required by MOD1 of DA 165-7-2005 were installed in May 2018 and data loggers installed in all bores. A maximum extraction map has also been prepared and approved by the (then) DPE (included as Appendix 3 of the SWMP). Advised extraction has remained within the approved limit.</p> <p>The Annual Reviews report that there have been no impacts upon the Maroota Tertiary Sands Groundwater Source (MTSGS) and Sydney Basin Central Groundwater Source (SBCGS) groundwater levels or quality.</p> |
| Heritage | <p>During the studies for the 2005 EIS and 2016 Environmental Assessment no heritage matters were identified and the potential for unrecorded cultural material to be encountered was considered low.</p> | <p>The Environmental Officer confirms that no items suspected of being Aboriginal heritage have been encountered during the reporting period.</p> |
| Biodiversity | <p>A range of biodiversity credits must be retired prior to any vegetation clearing in the MOD1 extraction area.</p> <p><i>(DA Condition 3(30 to 33))</i></p> <p>Progressive rehabilitation must be undertaken.</p> <p><i>(DA Condition 3(35))</i></p> | <p>Clearing and extraction has not yet commenced within the MOD1 extraction area. Therefore, the biodiversity offset requirements have not yet been triggered.</p> <p>Progressive rehabilitation has been undertaken at the HR Quarry where practicable to reduce the area of exposed surfaces. Additionally, interim stabilisation measures including the establishment of groundcover on soil stockpiles have been implemented to control dust emission prior to final rehabilitation</p> |

3.3 COMPLIANCE ASSESSMENT

3.3.1 Status of Approvals and Licences

Table 3.5 provides a summary of the status of relevant approvals and licences that have been granted for the ONR Quarry.

Table 3.5
Summary of Current Consents, Licenses and Permits

| Approval / Licence / Permit | Issue Date | Expiry Date | Details / Comments |
|--|------------|------------------|--|
| Development Approvals | | | |
| Development Consent 165-7-2005 | 14/02/2006 | 14/02/2046 | Development consent originally granted by the (then) Minister for Planning on 14 February 2006. The development consent has subsequently been modified on two occasions, with Modification No. 2 approved in January 2019. |
| Environment Protection Licence | | | |
| Environment Protection Licence No. 12513 | 26/07/2006 | Renewed Annually | Current version date 11 March 2019. Reporting period 25 July to 24 July. |
| Other Approvals & Licences | | | |
| Water Supply Works Approval 10CA104191 | 01/07/2011 | 20/06/2024 | Approves diversion works (pumps) and storages in the Hawkesbury and Lower Nepean Rivers Water Source. This is the nominated work for WAL25941. |
| Water Supply Works Approval 10CA105044 | 01/07/2011 | 30/06/2024 | Approves diversion works (pumps) and storages in the Hawkesbury and Lower Nepean Rivers Water Source. This is the nominated work for WAL25956. |
| Water Access Licence 25941 | Continuing | | Provides an entitlement of 50ML from the Hawkesbury and Lower Nepean Rivers Water Source. Works Approval 10CA104191 is the nominated work. |
| Water Access Licence 25956 | Continuing | | Provides an entitlement of 132ML from the Hawkesbury and Lower Nepean Rivers Water Source. Works Approval 10CA105044 is the nominated work. |

3.3.2 Compliance Performance

A tabulated compliance assessment was completed against the requirements of DA 165-7-2005, EPL12513, WAL 25941 and WAL 25956. The full compliance assessment is presented as **Appendix 4** with a summary of the compliance performance provided as follows.

DA 165-7-2005

The status of compliance against the conditional components of DA 165-7-2005 was assessed as follows.

| | | |
|----------------|---|------------|
| Compliant | - | 168 |
| Non-Compliant | - | 7 |
| Not Triggered | - | 36 |
| Not Determined | - | 1 |
| Total | | 213 |

EPL 12513

The status of compliance against the conditional components of EPL 12513 was assessed as follows.

| | | |
|----------------|---|-----------|
| Compliant | - | 49 |
| Non-Compliant | - | 0 |
| Not Triggered | - | 11 |
| Not Determined | - | 0 |
| Total | | 60 |

WAL 25941

The status of compliance against the conditional components of WAL25941 was assessed as follows.

| | | |
|----------------|---|-----------|
| Compliant | - | 5 |
| Non-Compliant | - | 0 |
| Not Triggered | - | 5 |
| Not Determined | - | 1 |
| Total | | 11 |

WAL 25956

The status of compliance against the conditional components of WAL25956 was assessed as follows.

| | | |
|----------------|---|-----------|
| Compliant | - | 5 |
| Non-Compliant | - | 0 |
| Not Triggered | - | 5 |
| Not Determined | - | 1 |
| Total | | 11 |

3.3.3 Summary of Non-Compliances

Non-compliances recorded against DA 165-7-2005 are presented in full within **Appendix 4** and summarised in **Table 3.6**. No non-compliances were recorded against EPL 12513, WAL 25941 or WAL 25956.

Table 3.6
Summary of Non-compliances with DA 165-7-2005

Page 1 of 2

| Cond. No. | Conditional Requirement | Compliance Status | Basis for Compliance | Comments and Recommended Actions |
|---|--|----------------------|-----------------------------|--|
| SCHEDULE 2 – ADMINISTRATIVE CONDITIONS | | | | |
| 2 (b) | The Applicant must carry out the development: ... in accordance with the conditions of this consent and the Development Layout Plans. <i>Note: The Development Layout Plan is shown in Appendix 1</i> | Non-Compliant | HR14-2019. Observations. | The Quarry layout was observed to reflect the Development Layout Plans included as Appendix 1 of DA 167-7-2005. However, several non-compliances have been recorded against the conditions of this consent during the audit period and hence contributed to the non-compliance status for this condition. See Conditions 2(10b), 3(36f), 3(37), 3(43), 5(7c) and 5(11). |
| 10 (b) | The Applicant must: include a copy of this data [namely accurate records of all VENM and ENM received at the site (including the date, time and quantity received) in the Annual Review. | Non-Compliant | - | Amount of VENM received at the Quarry is reported in the Annual Review. However, the date and time of receipt are not reported. See Recommendation HR R2/19 . |
| SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS | | | | |
| 36 (f) | The Applicant must prepare a Biodiversity and Rehabilitation Management Plan for the development to the satisfaction of the Secretary. This plan must: describe the short, medium and long term measures to be implemented to: <ul style="list-style-type: none"> manage remnant vegetation and habitat on site, <u>including within the Biodiversity Offset Strategy area</u>; and ensure compliance with the rehabilitation objectives and progressive rehabilitation obligations in this consent; | Non-Compliant | HR06-2019 | Section 5 and Table 5.1 of the BRMP outline the short-, medium- and long-term management measures to achieve the rehabilitation objectives. However, Section 5.4 of the BRMP simply indicates that management and monitoring measures for the biodiversity offset area (Haerses Road Biobank Site) are outlined in the approved Biobanking Agreements. To ensure compliance with the development approval, this information must be included in the BRMP either as a summary or by appending the Biobanking Agreement to the Plan. See Recommendation HR R3/19 . |
| 37 | Within 6 months of the approval of the Biodiversity and Rehabilitation Management Plan, the Applicant must lodge a Biodiversity and Rehabilitation Bond with the Department to ensure that the Biodiversity Offset Strategy and rehabilitation of the site are implemented in accordance with the performance and completion criteria set out in the Biodiversity and Rehabilitation Management Plan and the relevant conditions of this consent. | Non-Compliant | HR36-2019. | The BRMP was approved on 18 September 2018 and the Biodiversity and Rehabilitation Bond was lodged on 25 March 2019, i.e. 1 week past the required timeframe and is considered an administrative non-compliance with no further action required. |

Table 3.6 (Cont'd)
Summary of Non-compliances with DA 165-7-2005

| Cond. No. | Conditional Requirement | Compliance Status | Basis for Compliance | Comments and Recommended Actions |
|---|--|----------------------|---|---|
| 43 | The Applicant must ensure that the storage, handling, and transport of dangerous goods is done in accordance with the relevant Australian Standards, particularly AS1940 and AS1596, and the Dangerous Goods Code. | Non-Compliant | Observation. Photo E1022A_022 HR27-2019. | A single drum of hydrocarbons was observed within the Quarry site, adjacent the water pump. Whilst the drum and pump were covered, the drum was unbanded (Recommendation HR R20/19) . Proactive measures concerning dangerous goods management are outlined in the PIRMP. |
| SCHEDULE 5 ENVIRONMENTAL MANAGEMENT REPORTING AND AUDITING | | | | |
| 7 (c) | The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation. Where any exceedance of these criteria and/or performance measures has occurred, the Applicant must as soon as becoming aware of any exceedance: ... within 14 days of the exceedance occurring, submit a report to the Secretary describing these remediation options and any preferred remediation measures or other course of action; and | Non-Compliant | HR43-2019. HR44-2019. HR45-2019. | Whilst the EPA was notified, the (then) DPE was not notified of the exceedance of the deposited dust criteria (albeit the exceedance not being caused by Quarry generated dust) <i>(see DA Condition 3(7))</i> . See Recommendation HR R1/19 . |
| 11 | Within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non-compliance. The notification must be in writing to compliance@planning.nsw.gov.au and identify the development (including the development application number and name), set out the conditions of this consent and that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance. <i>Note: a non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.</i> | Non-Compliant | HR43-2019. HR44-2019. HR45-2019.. | Whilst the EPA was notified, the (then) DPE was not notified of the exceedance of the deposited dust criteria (see DA <i>Condition 3(7)</i>). This audit has determined that, due to the exceedance occurring as a result of non-Quarry related activities, there was no non-compliance. However, the Company reported these exceedance within the Annual Reviews as non-compliances. Therefore, it is considered that the intent of this condition has not been complied with. See Recommendation HR R1/19 . |

3.4 COMPLIANCE WITH AND ADEQUACY OF STRATEGIES, PLANS AND PROGRAMS

3.4.1 Status of Strategies, Plans and Programs

A list of the strategies, plans and programs relied upon to guide environmental practices and their status as at the audit date is provided in **Table 3.7**.

Table 3.7
Strategies, Plans and Programs Audited

| Strategy / Plan / Program | Status |
|--|---|
| Environmental Management Strategy | Dated May 2019. Prepared by Umwelt. Requirement of DA 165-7-2005 <i>Schedule 5 Condition 1</i> . Approved by (then) DPE 3 June 2019. |
| Air Quality Management Plan | Appendix 6 of the Environmental Management Strategy. Dated May 2019. Prepared by Umwelt. Requirement of DA 165-7-2005 <i>Schedule 3 Condition 11</i> . Approved by (then) DPE 3 June 2019. |
| Noise Management Plan | Appendix 7 of the Environmental Management Strategy. Dated May 2019. Prepared by Umwelt. Requirement of DA 165-7-2005 <i>Schedule 3 Condition 8</i> . Approved by (then) DPE 3 June 2019. |
| Soil and Water Management Plan | Appendix 8 of the Environmental Management Strategy. Dated May 2019. Prepared by Umwelt. Requirement of DA 165-7-2005 <i>Schedule 3 Condition 19</i> . Approved by (then) DPE 3 June 2019. |
| Traffic Management Plan | Appendix 9 of the Environmental Management Strategy. Dated June 2019. Prepared by Umwelt. Requirement of DA 165-7-2005 <i>Schedule 3 Condition 28</i> . Approved by (then) DPE 3 June 2019. |
| Biodiversity and Rehabilitation Management Plan | Appendix 10 of the Environmental Management Strategy. Dated May 2019. Prepared by Umwelt. Requirement of DA 165-7-2005 <i>Schedule 3 Condition 36</i> . Approved by (then) DPE 3 June 2019. |
| Acoustic Bund Construction Noise Management Plan | Appendix 11 of the Environmental Management Strategy. Dated May 2019. Prepared by Umwelt. Requirement of DA 165-7-2005 <i>Schedule 3 Condition 6</i> . Approved by (then) DPE 3 June 2019. |

3.4.2 Review of Strategies, Plans and Programs

3.4.2.1 Environmental Management Strategy

The Environmental Management Strategy (EMS) addresses the requirements of DA 165-7-2005 *Schedule 5 Condition 1* and is structured in an appropriate manner. The EMS is supported by the other management plans required by DA 165-7-2005 which are appended to the EMS. In relation to matters considered appropriate for improvement, Section 8.3 should be updated to reflect the current requirement to submit EPL Annual Returns via eConnect (**Improvement HR I9/19**).

In relation to implementation of the EMS, non-conformances were identified with respect to the following.

- The current version of the EMS had not been distributed to all of the agencies, regulators and companies specified in Section 10.6 of the EMS (see **Recommendation HR R5/19**).
- The status of inductions was not checked monthly / recorded using the Site Condition Checklist per Section 11 (see **Recommendation HR R6/19**).

3.4.2.2 Air Quality Management Plan

The Air Quality Management Plan (AQMP) addresses the requirements of DA 165-7-2005 *Schedule 3 Condition 11* and EPL 12513 and includes a summary of the regulatory requirements, baseline data, assessment criteria, mitigation measures, monitoring, reporting, responsibilities and review. The AQMP has generally been prepared to a high standard. The presentation of the management measures, both proactive and reactive, in a table format with timing, responsibility and performance indicator is commended.

No specific improvements were identified as part of the high-level review and, in relation to implementation of the AQMP, no specific non-conformances were identified.

3.4.2.3 Noise Management Plan

The Noise Management Plan (NMP) adequately addresses the requirements of DA 165-7-2005 *Schedule 3 Condition 8* and EPL 12513 and includes a summary of the regulatory requirements, the existing noise environment, assessment criteria, mitigation measures, monitoring, reporting, responsibilities and review. The presentation of the management measures, both proactive and reactive, in a table format with timing, responsibility and performance indicator is commended.

The high-level review of the NMP indicates that the NMP is being appropriately implemented and only a minor improvement was identified, namely removing the statement in Section 7.1 which indicates a summary of noise monitoring will be supplied with the EPL Annual Return. Whilst a copy can be supplied, it is not a requirement (**Improvement HR I7/19**).

3.4.2.4 Soil and Water Management Plan

The Soil and Water Management Plan (SWMP) adequately addresses the requirements of DA 165-7-2005 *Schedule 3 Condition 19* and is structured in an appropriate manner. The inclusion of relevant soil and water management commitments and associated hold points in Section 1.3.3 provides a useful summary of those monitoring and management actions which must be completed prior to the commencement of further development stages at the Quarry.

As part of the high-level review, it is noted that, in some instances, the interim surface water quality triggers and groundwater level and quality triggers provide a very narrow margin and may potentially lead to regular exceedances and unnecessary action response. Where insufficient data is available, it may be preferable to adopt a more 'standard' trigger level based upon broader data available for the locality / region. See **Improvement HR I10/19**. There also appear to be typographical errors for the 80th percentile groundwater pH levels. See **Improvement HR I11/19**.

In relation to implementation of the SWMP, non-conformances were identified with respect to the following.

- Section 3.2.3.6 – Records of visual inspections of water quality in sediment basins were not maintained during the audit period. See **Recommendation HR R7/19**.
- Section 4.5 – Records of water cart fills per month, monthly water transfer volumes between storages and monthly clean water import volumes were not maintained during the audit period. See **Recommendation HR R8/19**.

- Section 5.1.2.1 – Monthly monitoring or receiving water quality at the specified monitoring locations was not undertaken from September 2018. Surface water quality, or the inability to conduct surface water quality monitoring due to the ephemeral nature of the monitoring location tributaries, was not reported in the 2018/2019 Annual Review. See **Recommendation HR R9/19**.
- Section 5.1.2.4 – Water management dams were not inspected biennially for structural integrity during the audit period. See **Recommendation HR R10/19**.
- Section 5.1.3.2 – Annual Reviews during the audit period did not discuss the water management system with regards to receiving water quality monitoring results (applicable to the 2018/2019 Annual review only), sediment dam spill frequency or the site water balance. See **Recommendation HR R11/19**.
- Section 6.2 – Water quality results outside of the specified baseline trigger value range (e.g. pH result for BH5 in June 2019) were not subject to repeat sampling or review. See **Recommendation HR R13/19**.
- Section 6.2 – Three consecutive water quality results outside of the specified baseline trigger value range (e.g. EC results for H12 between June 2018 and June 2019) were not subject to monthly sampling or investigation. See **Recommendation HR R13/19**.
- Section 6.2 – Exceedances of water level trigger values (e.g. water level results for H2 over 2018 and 2019) were not followed by confirmation measurements or further responses. See **Recommendation HR R13/19**.
- Section 6.2 - Exceedances of water level trigger values for a continuous period of one week (e.g. water level results for H2 over 2018 and 2019) were not followed by confirmation measurements or investigations. See **Recommendation HR R13/19**.
- Section 7.1 - Water level and quality monitoring during the audit period was not subject to appropriate analysis in order to identify isolated and sustained exceedances of the nominated trigger values. See **Recommendation HR R13/19**.

It is recognised that a range of aspects within the SWMP are not yet relevant / will not be triggered until the commencement of extraction within the Mod 1 extraction area. Further, it was unclear in some instances as to what measures and controls were relevant to the exiting operations and to the future Mod 1 extraction area.

It is suggested that, prior to commencing extraction within the Mod 1 extraction area, a documented review be completed of the various aspects that are required prior to or are triggered by the commencement of extraction within the Mod 1 extraction area. See **Improvement HR I13/19**. Following this review (or prior to), it would be preferable to review and update the SWMP to clearly specify what measures are currently required to be implemented and to what areas / aspects of the operation. See **Improvement HR I14/19**.

3.4.2.5 Traffic Management Plan

The Traffic Management Plan (TMP) adequately addresses the requirements of DA 165-7-2005 Schedule 3 Condition 28 and is structured in an appropriate manner. The TMP is supported by a number of appendices including the Site Traffic Management Plan: Maroota, Maroota Local Traffic Management Policy and Site Induction for Drivers.

As flagged in the CCC Minutes 21 November 2017 (see **Table 3.2**), Maroota Public School had requested an extension to the timeframe for the 40km/hr zone. It was confirmed with the NSW Department of Education that the school zone times are currently between 8:00am and 9:30am and between 2:30pm and 4:00pm. However, the TMP records school zone times of 8.30am to 9.00am and 3.00pm to 3.30pm (**Improvement HR I2/19**).

Given that the Company does not operate or contract its own trucks, the measures as outlined within the TMP are generally considered adequate, however, some improvements in the implementation of these measures are recommended and should be formalised as part of the TMP. These relate to consulting with the local quarries who are signatories to the Maroota Local Traffic Management Policy in relation to verified complaints / non-compliances and to more formally bring these matters to the attention of all truck drivers. See **Recommendations HR R19/19** and **HR R18/19**.

One other minor non-conformance was identified with the implementation of Section 6.1 of the TMP in which both the truck movements (including the quantity, arrival time and dispatch time) and amount of quarry products transported from the Quarry would be published 6 monthly on the Company website. The published records only present truck movements and do not indicate arrival and despatch times or product volumes transported. See **Recommendation HR R14/19**.

3.4.2.6 Biodiversity and Rehabilitation Management Plan

The Biodiversity and Rehabilitation Management Plan (BRMP) adequately addresses the requirements of DA 165-7-2005 *Schedule 3 Condition 36* and is generally structured in an appropriate manner, however, it is noted that many of the cross references are incorrect and require updating (**Improvement HR I5/19**).

In relation to the implementation of the BRMP, non-conformances were identified with respect to the following.

- Section 5.1.1.2 – Pre-clearing surveys were not undertaken at the Quarry prior to, albeit minor, vegetation clearing associated with the establishment of access tracks, monitoring bores, and the installation of fencing. See **Recommendation HR R15/19**.
- Section 5.1.4 – The temporary topsoil stockpile observed during the site inspection exceeded a height of 3m. Additionally, silt fences had not been established at the base of the temporary topsoil stockpile. See **Recommendation HR R16/19**.
- Section 5.2.5 – Bushfire control measures and response procedures have not been communicated to neighbours, with communication concerning bushfire control measures limited to Quarry personnel and contractors. See **Recommendation HR R17/19**.

It is noted that the 2019 Annual Review confirms that, in accordance with Section 7.1.1 of the BRMP, detailed 6 monthly rehabilitation inspections / monitoring are due to commence in 2019/2020 given the recent and ongoing rehabilitation works within the Stage 1 area.

3.4.2.7 Acoustic Bund Construction Noise Management Plan

The Acoustic Bund Construction Noise Management Plan (ABCNMP) adequately addresses the requirements of DA 165-7-2005 Schedule 3 Condition 6 and is generally structured in an appropriate manner.

Construction of the acoustic bunds has not yet commenced as the requirements for the bunds have not been triggered. As such, an assessment of the implementation of the ABCNMP was not possible.

3.5 IMPLEMENTATION OF PREVIOUS AUDIT RECOMMENDATIONS

The 2016 Independent Environmental Audit did not provide specific recommendations, rather it identified six administrative non-compliances. The Company prepared a response to the audit findings which included proposed actions for each non-compliance. **Table 3.8** presents a copy of the 2016 audit response together with a review of the status of the proposed actions as at the time of the 2019 audit.

Table 3.8
Status of Implementation of 2016 Audit Response Actions

| Cond # | Condition Details | IEA 2016 Finding | Compliance Classification | Dixon Sand Comments & Proposed Actions | 2019 IEA Status Review |
|----------|---|--|-------------------------------|--|---|
| 3 (3.3) | Within 3 months of the completion of the Independent Environmental Audit (see condition 5 of Schedule 5), the Applicant shall review and update the Maximum Extraction Depth Map for the development to the satisfaction of the Director-General. | The Maximum Extraction Depth Map had not been reviewed and/or revised following the 2012 Independent Environmental Audit. The Maximum Extraction Depth Map should be reviewed and updated if necessary following the assessment of the groundwater data conducted to address the recommendation in condition 2. | Administrative Non-Compliance | Proposed Action (Feb 2017): The review of the Maximum Extraction Depth Map is in progress. Dixon Sand has commissioned a groundwater specialist to undertake this task. Status (May 2017): The Maximum Extraction Depth Map and Wet Weather Groundwater Levels were reviewed by Peter Dundon of Dundon Consulting. The revised Maximum Extraction Depth Map was submitted to the DP&E on 5 May 2017 and subsequently approved on 22 May 2017. | A subsequent review and update occurred in April 2018. The Company did not deem an update necessary in 2019 with further review planned in early 2020 (following this audit). |
| 3 (3.20) | Within 3 months of the completion of each Independent Environmental Audit (see condition 5 of Schedule 5), the Applicant shall review, and if required, revise the Site Water Management Plan to the satisfaction of the Director-General. | The Site Water Management Plan was not reviewed/revised following the 2012 Independent Environmental Audit. The Site Water Management Plan and Environmental Monitoring Program should be reviewed, and revised if necessary, to ensure the Plan and Program still represent the soil and water management procedures implemented on the Haerses Road Quarry site. | Administrative Non-Compliance | Proposed Action (Feb 2017): The review of the Site Water Management Plan is in progress. Status (May 2017): The SWMP was reviewed and no changes have been proposed. A letter outlining the review was submitted to the DP&E on 19 May 2017 (via registered mail). | The current SWMP is dated May 2019 and is planned to be reviewed following this audit. |
| 3 (3.23) | Within 3 months of the completion of each Independent Environmental Audit (see condition 5 of Schedule 5), the Applicant shall review and if required revise the Rehabilitation and Landscape Management Plan for the development to the satisfaction of the Director-General | The Rehabilitation and Landscape Management Plan was not reviewed / revised following the 2012 Independent Environmental Audit, or the DP&E Compliance Audit 2015. The Rehabilitation and Landscape Management Plan should be reviewed, and revised if necessary, to ensure the Plan and Program still represent the soil and water management procedures implemented on the Haerses Road Quarry site. | Administrative Non-Compliance | Proposed Action (Feb 2017): The review of the Rehabilitation and Landscape Management is in progress. Status (May 2017): The RLMP was reviewed and no changes have been proposed. A letter outlining the review was submitted to the DP&E on 19 May 2017 (via registered mail). | The RLMP is now conditioned as a Biodiversity and Rehabilitation Management Plan. The current BRMP is dated May 2019 and is planned to be reviewed following this audit. |

Table 3.8 (Cont'd)
Status of Implementation of 2016 Audit Response Actions

| Cond # | Condition Details | IEA 2016 Finding | Compliance Classification | Dixon Sand Comments & Proposed Actions | 2019 IEA Status Review |
|--------|--|---|-------------------------------|---|--|
| 5 (2) | Within 3 months of the completion of the Independent Environmental Audit (see condition 6 below) the Applicant shall review, and if necessary revise, the Environmental Management Strategy to the satisfaction of the Director-General | The Environmental Management Strategy was not reviewed/revise following the 2012 Independent Environmental Audit, or the DP&E Compliance Audit 2015. The Environmental Management Strategy should be reviewed, and revised if necessary, to ensure the Environmental Management Strategy still represents the procedures implemented on the Haerses Road Quarry site | Administrative Non-Compliance | Proposed Action (Feb 2017): The review of the Environmental Management Strategy is in progress. Status (May 2017): The EMS was reviewed and minor changes have been proposed. A letter outlining the proposed changes and the reviewed EMS were submitted to the DP&E on 19 May 2017 (via registered mail). | The current EMS is dated May 2019 and is planned to be reviewed following this audit. |
| 5 (3) | Prior to the commencement of the development the Applicant, shall prepare (and following approval) implement an Environmental Monitoring Program for the development in consultation with relevant agencies, and 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 prepared and approved by DoP on 31 August 2006 for the Haerses Road Quarry project. This Environmental Monitoring Program consolidates the various monitoring requirements in Schedule 3 of this consent into a single document. Monitoring requirements in Schedule 3 Include: Condition 10 - noise monitoring Condition 14 - air quality monitoring Condition 19 – groundwater monitoring Condition 23 – rehabilitation performance monitoring Condition 32 – waste generation Monitoring The Environmental Monitoring Program does not include waste and rehabilitation monitoring. The Environmental Monitoring Program should be reviewed and revised to include all monitoring required under Development Consent 16507-2005 Schedule 3. | Administrative Non-Compliance | Proposed Action (Feb 2017): The review of the Environmental Monitoring Program is in progress. Dixon Sand will ensure all relevant consent conditions have been included in the review: Condition 10 - noise monitoring Condition 14 - air quality monitoring Condition 19 – groundwater monitoring Condition 23 – rehabilitation performance monitoring Condition 32 – waste generation Monitoring Status (May 2017): The EMP was reviewed and the proposed inclusion of Conditions 10, 14, 19, 23 and 32 actioned. A letter outlining the proposed changes and the reviewed EMP were submitted to the DP&E on 19 May 2017 (via registered mail). | The current DA 165-7-2005 does not require the preparation of a separate Environmental Monitoring Program. |
| 5 (4) | Within 3 months of the completion of the Independent Environmental Audit (see condition 6 below), the Applicant shall review, and if necessary revise, the Environmental Monitoring Program to the satisfaction of the Director-General. | The Environmental Monitoring Program was not reviewed/revise following the 2012 Independent Environmental Audit, or the DP&E Compliance Audit 2015. The Environmental Monitoring Program should be reviewed, and revised if necessary, to ensure the Plan and Program still represents the monitoring required for the Haerses Road Quarry site. | Administrative Non-Compliance | Proposed Action (Feb 2017): See above. Status (May 2017): See above. | As above. |

3.6 REVIEW OF ENVIRONMENTAL MANAGEMENT SYSTEM

The Company does not have a formal or certified Environmental Management System. Notwithstanding, the Company's informal Environmental Management System is supported by the Environmental Management Strategy and associated management plans as well as a range of registers for complaints, engagement / consultation, incidents, TEOM alarms etc, inspection checklists / records, toolbox talks, additional forms and records.

Overall, the existing system appears to be supporting the necessary functions. Whilst existing personnel are familiar with the various components of the system, a simple summary document that records the various components of the system and relevant linkages / connections is advisable in the event of personnel changes (**Improvement HR I1/19**).

3.7 KEY STRENGTHS AND COMMENDABLE OBSERVATIONS

During the audit, a high degree of knowledge of environmental management matters was evident amongst all employee levels. This was reflected in the condition of the site which displayed excellent housekeeping, no discernible maintenance issues, and no obvious 'ad hoc' management. Whilst a range of recommended actions have been provided to assist in maintaining compliance and improving environmental management, there is an existing proactive approach to environmental management.

The Company's active engagement with the local community, particularly with the Maroota Public School and the CCC is highly commended. The record of engagement demonstrates that engagement occurs regularly and is not restricted to CCC meetings.

The Company's commitment to maintaining records is also commended with well organised documentation / records provided throughout the audit.

4. RECOMMENDED ACTIONS

4.1 INTRODUCTION

The audit of the HR Quarry has identified a number of recommended actions either in response to a non-compliance (“Recommendation”) or a potential for improvement in environmental performance (suggested “Improvement”). Recommendations have been presented with the prefix “HR R” and are provided in Section 4.2 whilst suggested “Improvements” have been presented with the prefix “HR I” and are provided in Section 4.3. Each of the recommended actions in the following subsections has been referred to throughout Section 3 and/or **Appendix 4**. A brief commentary is provided in italics beneath each recommended action to explain the background to the recommended action.

In light of the results of the environmental audit, a total of 20 compliance-based Recommendations and 15 suggested Improvements are provided for the Company’s consideration and action.

4.2 RECOMMENDATIONS ARISING FROM NON-COMPLIANCES

HR R1/19 Ensure that all non-compliances or exceedances are reported in accordance with the relevant requirements and timeframes specified in the conditions of both DA 165-7-2005 and EPL 12513.

Dust exceedances were reported to EPA but not to DPE. Additionally, non-compliances were reported as part of the Annual Review but not reported to DPE within the required 7 day timeframe.

HR R2/19 Include details of VENM/ENM receipt at the Quarry in Annual Reviews, including date, time and quantity of material received.

Schedule 2 Condition 10(b) of DA 165-7-2005 requires a copy of the VENM/ENM records to be included with the Annual Review. VENM importation commenced in 2019 with a total volume reported but not all required records.

HR R3/19 Include in the Biodiversity and Rehabilitation Management Plan a description of the short-, medium- and long-term measures to be implemented to manage remnant vegetation and habitat on site, including within the Biodiversity Offset Area, and to ensure compliance with the rehabilitation objectives and progressive rehabilitation obligations required under DA 165-7 2005 Mod 2.

Section 5.4 of the Biodiversity and Rehabilitation Management Plan notes that the required information is outlined in the approved Biobanking Agreement. To ensure compliance with the development approval, this information must be included in the Biodiversity and Rehabilitation Management Plan either as a summary or by appending the Biobanking Agreement to the Plan.

HR R4/19 Rationalise the water level and water quality trigger values nominated in the Surface Water Management Plan using either default water quality guideline values or site-specific trigger values.

Current water quality and water level trigger values specified by the Surface Water Management Plan are restrictive and inadequately reflect natural variation in water levels and water quality. Default water quality guideline values should be utilised until appropriate site-specific trigger values (20th and 80th percentile values) can be derived from a minimum of two years of monthly data.

HR R5/19 Ensure that all components of the Environmental Management Strategy for the Quarry are distributed to the relevant stakeholders following approval.

The entire Environmental Management Strategy, or individual sections following revision, should be provided to the relevant stakeholders including the Department of Planning, Infrastructure and Environment, Environment Protection Agency, Biodiversity Conservation Division, Heritage NSW under the Department of Premier and Cabinet, Roads and Maritime Services, the Hills Shire Council and the Community Consultative Committee.

HR R6/19 Include a monthly check of induction records as an item on the Site Condition Checklist in accordance with Section 11 of the Environmental Management Strategy.

A documented check of the induction records was not available.

HR R7/19 Develop and implement a sediment basin inspection form for use during the inspection of sediment basins following storm events.

The sediment basin inspection form should be used to record the date and time of inspection, meteorological data relevant to the preceding storm event (e.g. rainfall over the relevant period), comments on the visual quality of water in the sediment basin, and comments on the stability of the sediment basin and associated drainage structures.

HR R8/19 Maintain a record of monthly water cart fills, monthly water transfer volumes and monthly clean water import volumes.

These records were not maintained during the audit period in accordance with Section 4.5 of the Soil and Water Management Plan.

HR R9/19 Commence 'receiving waters' quality monitoring and continue monthly monitoring for a minimum of two years to establish baseline site-specific trigger values in accordance with Section 5.1.2.1 of the Soil and Water Management Plan (ensuring records of no flows are also maintained). Alternatively, update the Soil and Water Management Plan to specify alternate monitoring locations and/or approach to determining baseline conditions.

As receiving water quality monitoring locations represent ephemeral drainage lines, monthly monitoring must be undertaken for the equivalent of at least two years. However, it is advised that, since the requirement to commence monitoring, no flows have been present during monitoring.

HR R10/19 Ensure that inspections of water management dam walls are undertaken biennially by a suitably qualified engineer in accordance with Section 5.1.2.4 of the Soil and Water Management Plan.

Section 5.1.2.4 of the Soil and Water Management Plan requires that all water management dam walls be inspected by a suitably qualified engineer every 2 years. These inspections should be undertaken or the management plan amended.

HR R11/19 Ensure that the Annual Reviews include all relevant aspects committed to be reported to within the Soil and Water Management Plan, including comparisons of receiving water quality results against relevant trigger values, sediment dam spill frequencies, clean water imports compared to the predicted water balance, etc.

The Annual Reviews did not include all information committed to within the management plans.

HR R12/19 Ensure that the Annual Reviews report on water take in accordance with the Annual Review Guideline (DPE, 2015 – or latest version).

The Annual Reviews did not include the details of water take under the Water Access Licences.

HR R13/19 Ensure that water monitoring results are reviewed against the relevant trigger and criteria values as soon as possible following receipt of results. If water quality or levels exceeds the nominated trigger values, implement measures outlined in the trigger action response plan.

Exceedances of the nominated trigger values must be identified as soon as possible to permit the effective implementation of response measures outlined in the trigger action response plan (e.g. confirmation sampling, increase in sampling frequency or investigation of possible causes).

HR R14/19 Ensure that monthly and annual summaries of truck movements (number of trucks, arrival time and despatch time) and product volumes transported from the Quarry are published on the Dixon Sand website every six months.

Six monthly truck movement summaries are provided on the Dixon Sand website however six monthly production summaries are not provided.

HR R15/19 Ensure that pre-clearing surveys, including surveys by a qualified ecologist no more than two weeks prior to felling and surveys by the Environmental Officer within 24 hours of clearing, are undertaken prior to any vegetation clearing.

Pre-clearing surveys were not undertaken at the Quarry prior to, albeit minor, vegetation clearing associated with the establishment of access tracks, monitoring bores, and the installation of fencing.

HR R16/19 Ensure that topsoil stockpiles are constructed in accordance with the topsoil management measures outlined in the Biodiversity and Rehabilitation Management Plan.

Topsoil stockpile management measures include the location of stockpiles away from quarrying, traffic affected areas and watercourses, positioning within closed water management areas and within the Quarry disturbance footprint, positioning on level or gently sloping ground, establishment in windrows to a height no greater than 3m, and the establishment of silt fences at the base of stockpiles. Topsoil stockpiles to be kept longer than 3 months must be sown with a vegetation cover, with weed growth monitored on a monthly basis and controlled appropriately.

HR R17/19 Distribute copies of the approved Bushfire Management Plan, or summaries of the most relevant sections including bushfire control measures and response procedures, to key stakeholders including relevant land managers and neighbours.

It is understood that the Bushfire Management Plan has been distributed to Quarry personnel and consultation was undertaken with Council and RFS. However, Section 5.2.5 of the Biodiversity and Rehabilitation Management Plan also requires the bushfire management measures to be communicated to land managers and neighbours. The Bushfire Management Plan may inform bushfire management strategies employed by local landholders and feedback from local landholders and land managers may inform future updates to the Plan.

HR R18/19 Ensure that, when a verified complaint or non-compliance with the Driver's Code of Conduct occurs, notification is provided to the other quarries who are also signatories to the Maroota Local Traffic Management Policy and request confirmation as to whether that truck or driver have any verified complaints/non-compliances at those quarries. Should it be verified that the driver has multiple verified complaints/non-compliances, ensure disciplinary action is undertaken in accordance with the Policy.

Traffic is a key management measure for the community given 5 of 6 complaints received during the audit period related to trucks and that traffic was the key matter raised during the community survey presented at the CCC meeting on 21 November 2017. Whilst the fundamentals of the traffic management is included in the traffic management plan, effective implementation through collaboration with the other local quarries is needed.

HR R19/19 Notify all truck drivers of verified complaints / non-compliances relating to traffic and transportation (but maintain complainant and driver privacy) to ensure that they are aware of what types of complaints are being received and that these are being actioned.

Supplementing driver induction documentation with ongoing reminders that any non-compliance with these requirements is being actioned may assist in improving driver behaviour.

HR R20/19 Ensure that the fuel drum for the water pump is stored in a suitably banded manner, remove the drum, or replace the pump with an electric pump.

A 205L drum of fuel was observed adjacent the water pump located adjacent "Work 1 Dam". Whilst located within a covered area, given the location and volume of the drum, appropriate bunding is considered necessary to achieve compliance with Condition 3(43) of DA 165-07-2005.

4.3 SUGGESTED IMPROVEMENTS

HR I1/19 Consider preparing a formal document outlining the various plans, strategies, programs, forms, templates, registers etc. which form the Environmental Management System. The document should be structured so as to outline the framework of the Environmental Management System so that a new employee could locate all necessary documentation. In preparing the document, identify any gaps or updates required or where opportunity exists to consolidate or simplify.

Whilst a certified Environmental Management System is not required, a formalised and documented system would assist both existing and future personnel in effectively implementing the system.

HR I2/19 Update the Traffic Management Plan to reflect the current School Zone times and alert all truck drivers to this change in times.

It was identified that the TMP current identifies school zone times as 8.30am - 9.00am and 3.00pm – 3.30pm, however, the Department of Education has confirmed they are currently between 8:00am and 9:30am and between 2:30pm and 4:00pm.

HR I3/19 Include an additional column in the production summaries presented in the Annual Reviews which summarises the total extracted material in comparison to the approved limit of 250 000tpa.

Whilst total extraction can be inferred from the information presented within the Annual Reviews, it would be preferable to explicitly confirm the amount extracted. This is particularly important when the amount of material exported from the Quarry nears the maximum limits given that additional material could possibly be extracted and stockpiled on site.

HR I4/19 Include an unanticipated Aboriginal heritage find procedure within the Environmental Management Strategy (or separate document / attachment).

Condition 2(29) of DA 165-07-2005 outlines actions required in the event that an object of suspected Aboriginal origin is identified. However, there is currently no procedure or other prompt for training and/or implementation in the event that a find occurs.

- HR I5/19** Review all Section cross references within the Biodiversity and Rehabilitation Management Plan and update as necessary.
Numerous incorrect Section cross references were identified within the Biodiversity and Rehabilitation Management Plan, including cross references to incorrect sections or sections which do not exist.
- HR I6/19** Ensure that the SWMP includes specific reference to the need for the development of specific measures for road and intersection works and noise bund construction as per Condition O4.2 of EPL 12513. Alternatively, include the specific measures within the SWMP.
Whilst road and intersection works and noise bund construction are not currently applicable, to ensure that inclusion of relevant measures related to these aspects, reference to these aspects should be included or, preferably the measures included now.
- HR I7/19** Consider removing from Section 7.1 of the Noise Management Plan the commitment to supply a summary of noise monitoring data with the EPL Annual Return.
It is not a requirement of the EPL to include a summary of noise monitoring with the Annual Returns.
- HR I8/19** Ensure that the annual review of the Maximum Extraction Depth Map as required by Schedule 2 Condition 22 of DA 165-7-2005 is outlined explicitly within the respective Annual Review including where it has been assessed no update to the map is required.
The 2018 and 2019 Annual Review notes that there have been no impacts and states that the Maximum Extraction Depth Map will require review following the 2019 Independent Environmental Audit. It would be preferable to confirm that the map has been reviewed as part of the Annual Review process and, where no change is considered necessary, explicitly state the existing map remains adequate.
- HR I9/19** Update Section 8.3 of the Environmental Management Strategy to reflect the current EPA requirements for submitting EPL Annual Returns, i.e. via eConnect.
Section 8.3 of the EMS refers to EPA providing a copy of the Annual Return form and that this must be submitted via registered post. This is no longer undertaken and registered post is no longer an accepted submission option.
- HR I10/19** Rationalise the water level and water quality trigger values nominated in the Surface Water Management Plan using either 'standard' guideline values or values developed based upon the broader locality / region.
in some instances, the interim surface water quality triggers and groundwater level and quality triggers provide a very narrow margin and may potentially lead to regular exceedances and unnecessary action response. For example, the upper and lower groundwater level trigger values for BH5 are 178.5m AHD and 178.6m AHD respectively.

HR I11/19 Review and update the Soil and Water Management Plan taking into consideration the following.

- Review and update of the water level and quality trigger levels (see **Recommendation HR I10/19**).
- Rectify the typographical error for the 80th percentile groundwater pH levels in Table 2.5.
- Include level 4 headings in the table of contents to assist with document.

During the audit, a range of opportunities were identified to improve the value of the Soil and Water Management Plan. In some instances these improvements will assist in maintaining or demonstrating compliance.

HR I12/19 Continue to consult with the Department of Industry – Water in order to seek formal approval of the aquifer pumping test works undertaken at the Quarry.

Given the potential for this matter to delay the commencement of extraction within the Mod 1 extraction area, the satisfaction of DoI with the pumping tests required DA 165-7-2005 Condition 3(16e) should be actively followed up.

HR I13/19 Undertake a documented formal review of the various requirements of the Soil and Water Management Plan that are to be completed prior to commencement of extraction within the Mod 1 extraction area or that will be triggered by the commencement of extraction.

There a range of measures that are required to be established prior to the commencement of extraction within the Mod 1 extraction area and a range of management actions that are not triggered until extraction commences. A formal review of these matters will assist in ensuring compliance is maintained with the relevant commitments.

HR I14/19 Review and update the Soil and Water Management Plan to clearly specify what measures apply to what areas / aspects of the operation.

Section 3.1 of the Soil and Water Management Plan outlines the existing and future operations, however, it is often not clear in the following subsections what measures are applicable to the existing site or which are applicable to future activities or locations.

HR I15/19 Include in the logbook records the flow volume at Cattai Creek at the Cattai Ridge Road gauge [No. 2122951] for the day prior to and the day of any water take from WAL 25941 and WAL25956.

Condition MW0078-00005 of WAL 25941 and WAL 25956 requires that the flow rate at the Cattai Ridge Road be >3ML/day. To ensure compliance with this requirement, it is suggested that the recorded flows be included in the logbook .