



Dixon Sand Pty Ltd

ABN: 80 002 278 686



# Independent Environmental Audit

of the

## Old Northern 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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## EXECUTIVE SUMMARY

This audit report has been prepared in accordance with *Schedule 5, Condition 13* of DA 250-09-01 for the Old Northern 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 250-09-01, Environment Protection Licence 3916, and Water Access Licence 24341 was assessed as follows.

Approval	DA 250-09-01	EPL 3916	WAL 24341
Compliant	178	38	2
Non-Compliant	5	1	0
Not Triggered	33	11	8
Not Determined	1	4	0
<b>Total</b>	<b>217</b>	<b>54</b>	<b>10</b>

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

- not recording all details (minor) for some of the complaints received during the audit period;
- not finalising the implementation of the Public Positive Covenant for the biodiversity offset;
- not completing a minor adjustment to the Transport Management Plan to explicitly state use of appropriate signage; and
- not providing additional bunding for drums within the hydrocarbon storage area.

### Management Plans

A high-level review of the various strategies, plans and programs required by DA 250-09-01 was undertaken. The plans were considered to meet the respective conditional requirements of DA 250-09-01 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-conformances.

### 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 15 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 Old Northern Road Quarry (“ONR Quarry”) and an associated quarry, Haerses Road Quarry (“HR Quarry”), in Maroota, NSW, approximately 40km north of Parramatta. Component areas for the ONR Quarry are generally referenced by the relevant land parcels within the Quarry Site, namely Lots 29 and 196 DP 752025 and Lots 1 and 2 DP 547255.

Extraction commenced within Lots 29 and 196 in the early 1980s, with the Company undertaking extraction from 1992 to December 1998. Development consent for ongoing extraction within Lots 29 and 196 was granted by the NSW Land and Environment Court on 7 July 2000 with subsequent modification applications being lodged and providing for extraction within Lots 1 and 2. Current extraction operations are occurring within Lots 196, 1 and 2, with materials principally processed, stockpiled and dispatched within Lot 196.

Unprocessed sand is transferred from the HR Quarry to the ONR Quarry for processing and subsequent dispatch. Silts from the washing of materials extracted from both quarries are retained in engineered structures within former extraction areas on site which are, in turn, incorporated progressively to form the approved final landform. Whilst rehabilitation has commenced, final landform creation and rehabilitation largely remains ongoing.

## 1.2 SCOPE AND AUDIT OBJECTIVES

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

This audit has been prepared for Dixon Sand Pty Ltd (“the Company”) in accordance with *Schedule 5, Condition 13* of DA 250-09-01 for the Old Northern 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 250-09-01, 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 250-09-01 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 have 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 Company's HR Quarry. Details of the HR Quarry audit are provided in a separate report (Ref: 1022/01) with this audit report confined to operations associated with the ONR Quarry and associated Development Consent 250-09-01.

### 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 250-09-01 DA 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 ONR 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 250-09-01 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.

### 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 with the Company Managing Director, Environmental Officer and key Operational Managers.

It was planned to then undertake an inspection of the ONR 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 250-09-01 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) a review of any notices, orders, penalty notices or prosecutions;
- b) a review of any received complaints;
- c) a review of any incidents; and
- d) 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, EPL 3916 and WAL

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 the Development Consent DA 250-09-01, Environment Protection Licence 3916 and Water Access Licence 24341 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 (EMS) for the ONR Quarry is not a certified EMS. Therefore, review of the EMS 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 ONR Quarry EMS 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. Copies of correspondence received from government agencies/stakeholders are reproduced in **Appendix 3**. Each agency / stakeholder was initially called by telephone and subsequently sent a formal email transmission on 20 August 2019. As required, further email and telephone follow up was undertaken. Each issue raised is summarised with a cross reference provided in **Table 3.1** to where it is addressed in this audit report.

**Table 3.1**  
**Government Agency Consultation Outcomes**

Agency / Stakeholder	Issues Raised and Location Addressed in Audit Report
Department of Planning, Infrastructure & Environment	<ul style="list-style-type: none"> <li>Response received 16/09/19 (<i>Document ONR31a-2019</i>).</li> </ul> <p>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>.</p>
Community Consultative Committee – Independent Chairperson	<ul style="list-style-type: none"> <li>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 <b>Table 3.2</b></li> </ul>
Resources Regulator	<ul style="list-style-type: none"> <li>No response received.</li> </ul>
NSW EPA	<ul style="list-style-type: none"> <li>Response received 16/09/19 (<i>Document ONR31b-2019</i>).</li> <li>No specific issues/matters to be addressed in the audit report.</li> <li>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>.</li> </ul>
Biodiversity and Conservation Division	<ul style="list-style-type: none"> <li>Response received 17/09/19 (<i>Document ONR31c-2019</i>).</li> <li>No issues raised.</li> </ul>
Natural Resources Access Regulator	<ul style="list-style-type: none"> <li>No response received.</li> </ul>
Roads and Maritime Services	<ul style="list-style-type: none"> <li>No response received.</li> </ul>
Hills Shire Council	<ul style="list-style-type: none"> <li>Response received 09/09/19 (<i>Document ONR31d-2019</i>).</li> </ul> <p>It was requested that the following matters were relevant and be reviewed as part of the audit.</p> <ul style="list-style-type: none"> <li>- Compliance with setback requirements – see <b>Appendix 4 Table A4-1 Schedule 2 Condition 16b</b>.</li> <li>- Compliance with depth of extraction – see <b>Appendix 4 Table A4-1 Schedule 2 Conditions 16d and 17 to 20</b>.</li> <li>- Compliance with ongoing rehabilitation requirements – see <i>Sections 3.3 and 3.4.2</i>.</li> </ul>

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 ONR32-2019*). 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
9 May 2017	<ul style="list-style-type: none"> <li>No compliance, environmental or operational issues raised by community or Council representatives.</li> </ul>
21 November 2017	<ul style="list-style-type: none"> <li>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 <i>Sections 3.2.2 and 3.4.</i></li> <li>Whilst not specific to the ONR 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 <i>Section 3.4.3.5.</i></li> </ul>
8 May 2018	<ul style="list-style-type: none"> <li>No compliance, environmental or operational issues raised by community or Council representatives.</li> </ul>
20 November 2018	<ul style="list-style-type: none"> <li>No compliance, environmental or operational issues raised by community or Council representatives.</li> </ul>
14 May 2019	<ul style="list-style-type: none"> <li>No compliance, environmental or operational issues raised by community or Council representatives.</li> </ul>

## 3.2 ENVIRONMENTAL PERFORMANCE

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

During the audit period, the Resources Regulator issued four Section 191 Improvement Notices, under the *Work Health and Safety Act 2011*, dated 7 April 2017, 13 June 2018, 27 November 2018, and 23 July 2019. These notices and the required actions were reported within each respective Annual Review / viewed on site. Whilst these notices were principally focused upon safety, matters that are also relevant to environmental considerations included the following.

- Review and update of the Safety Data Sheet (SDS) register.
- 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 three matters were reviewed as part of this audit with the following results.

- Two on-site chemicals (Roundup and QD 601 Super Enamel) were selected to spot check the SDS register. Whilst the SDS for Roundup was available it was dated 2004 (i.e. beyond the 5 year review period). The SDS for QD 601 Super Enamel was not available. See **Improvement ONR I4/19**.
- A number of 205L hydrocarbon drums were observed to be stored within a dedicated (but unbunded) storage area within the workshop. However, insufficient banded pallets were available for all drums to be stored in accordance with AS1940. See **Recommendation ONR R1/19**.
- 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 nine complaints were received during the audit period (see **Table 3.3**). Of these, seven related solely to trucks, one to noise and trucks and one solely to 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.
Mid February 2019	Dixon Sand was advised by phone that a truck had crossed double lines. No accident or near miss and truck origin unknown.	No specific actions possible given unable to identify the truck or if it originated from any of the local quarries.
26/02/19	Two trucks exceeded the 20km/hr speed limit on the Quarry Access Road.	The weighbridge operator cautioned all truck drivers that day and reminded them of the speed limit. Signage confirming the speed limit is displayed adjacent to the Quarry Access Road at the weighbridge so visible to all drivers.
19/03/19	A truck was tailgating cars along Wisemans Ferry Road.	A review of weighbridge records and registration database and no trucks with the reported registration details recorded as picking up from the Quarry. The Company contacted and advised PF Formation and Hodgson Quarries who also confirmed that the truck is not a customer from their quarries.
01/05/19	A truck leaving the Quarry tailgated and sped forcing a driver to leave the road.	The Company spoke to the truck driver who admitted to not leaving enough distance. The driver was informed that any further breach would not be tolerated and consequences would be through the inter-pit policy.
28/06/19	The Company's Quarry Manager lodged a complaint against a truck that utilised excessive engine brakes within the Maroota area.	The Company weighbridge operator contacted the truck company and cautioned them. The truck company advised that they would caution the driver to limit use of engine brakes.

Of the 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 ONR 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**

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Aspect	Approval Criteria / EIS Prediction	Performance During the Audit Period
Noise	All private residences Day: 44dB(A). Shoulder: 37dB(A). Any class room at Maroota Public school. Day: 45B(A). (DA Condition 3(3))	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). Noise monitoring was undertaken during December 2016, June 2017, December 2017, June 2018, December 2018 and June 2019. All monitoring recorded compliance with the approval criteria.
Air Quality	PM <sub>10</sub> 24hr (incremental) = 50ug/m <sup>3</sup> PM <sub>10</sub> Annual (cumulative) = 30ug/m <sup>3</sup> TSP Annual (cumulative) = 90ug/m <sup>3</sup> Dep Dust (cumulative) = 4g/m <sup>2</sup> /month Dep Dust (incremental) = 2g/m <sup>2</sup> /month (DA Condition 3(7))	No air quality-related complaints were received during the audit period. Whilst the results of air quality monitoring during the audit period recorded a number of exceedances of the 24hr PM <sub>10</sub> criteria, in all but one instance this was attributed to either non-Quarry related activities or extraordinary weather events (e.g. dust storms, bushfires). One exceedance of the 24 hour PM <sub>10</sub> 50µg/m <sup>3</sup> criteria (51.1µg/m <sup>3</sup> ) occurred on 13 September 2017 and was self-reported to the EPA. Whilst background / non-Quarry sources would have contributed to the recorded level, Quarry contributions were not ruled out.

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

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Aspect	Approval Criteria / EIS Prediction	Performance During the Audit Period
Traffic	Truck movement limits: 180 per day 40 between 5.45 am and 7.00 am (DA Condition 2(7))	During the audit period, maximum daily truck movements remained within the approved limit with the following maximums. - 2016/2017 maximum daily truck movements = 98 - 2017/2018 maximum daily truck movements = 166 - 2018/2019 maximum daily truck movements = 168 No trucks dispatched prior to 6:00am with maximum recorded inbound truck movements before 7:00am as follows (Documents ONR01, ONR02 and ONR03). - 2016/2017 maximum inbound movements = 20 - 2017/2018 maximum inbound movements = 20 - 2018/2019 maximum inbound movements = 20 Therefore, compliance with would be achieved with the 40 total truck movement requirement.
Surface Water	The DA does not specify criteria. Discharge water quality limits pH 4.5 to 6.5 TSS 50mg/L (EPL Condition L2.4) 2001 EIS 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. Therefore, the discharge water quality have not been applicable to the audit period. 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.
Groundwater	Neither the DA nor EPL specify quality criteria. No extraction is to occur within 2m of the highest recorded wet weather groundwater level within the MTSGS buffer zone. (DA Condition 2(20)) The 2001 EIS predicted it would be unlikely that there would be extraction induced lowering of groundwater levels. Due to removal of humic material during quarrying, it was considered possible that a slight increase in groundwater pH may occur.	The extraction limit above the Maroota Tertiary Sands Groundwater Source (MTSGS) buffer zone has been calculated to be 204m AHD. Extraction remained above this level during the audit period. Extraction area depths are regularly checked using GPS. Procedures for extraction depth limit checks, including the engagement of surveyors once extraction approaches within 5m of the maximum extraction depth, are outlined in the SWMP. Surveys of extraction areas are undertaken annually to confirm extraction volumes. Groundwater quality monitoring indicates a relatively stable pH with no discernible increase (or decrease) in pH levels and no impacts upon the MTSGS have been reported.
Heritage	No heritage matters were identified or expected to be encountered.	The Environmental Officer confirms that no items suspected of being Aboriginal heritage have been encountered during the reporting period.
Biodiversity	A biodiversity offset strategy must be implemented. (DA Condition 3(25))  Progressive rehabilitation must be undertaken. (DA Condition 3(27))	The biodiversity offset strategy has been prepared, offset areas surveyed, plans submitted, and monitoring and management of the biodiversity offset areas has commenced. Proposed terms for a Public Positive Covenant were submitted by Dixon Sand to DPIE on 24 August 2019 and a response is awaited.  Progressive rehabilitation has been undertaken at the quarry where practicable to reduce the area of exposed surfaces. Additionally, interim stabilisation measures including the establishment of cover crops on bunds have been implemented to control dust emission prior to final rehabilitation

### 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**  
**ONR Quarry Approvals and Licences**

Approval / Licence / Permit	Issue Date	Expiry Date	Details / Comments
<b>Development Approvals</b>			
Development Consent 250-09-01	02/01/2003	Extraction 24/05/2042 Processing 14/02/2046	Development consent originally granted by the (then) Minister for Planning on 02 January 2003 and upheld by the Land and Environment Court, Decision 10206/2003 on 24 May 2004. The development consent has been subsequently modified on five occasions, with modification No. 5 approved 17 November 2017.
<b>Environment Protection Licence</b>			
Environment Protection Licence No. 3916	7/12/2000	Renewed annually	Issued by EPA. Current version date 10 May 2017. Reporting period 7 September to 6 September.
<b>Other Approvals &amp; Licences</b>			
Water Supply Works Approval 10WA109393	1 July 2011	29 March 2025	Approves bore construction within the Sydney Basin Central Groundwater Source and Maroota Tertiary Sands Groundwater Source within Lot 196. This is the nominated work for WAL 24341.
Water Access Licence 24341	Continuing		Provides an entitlement of 30ML from the Sydney Basin Central Groundwater Source. Works Approval 10WA109393 is the nominated work.

#### 3.3.2 Compliance Performance

A tabulated compliance assessment was completed against the requirements of DA 250-09-01, EPL3916 and WAL 24341. The full compliance assessment is presented as **Appendix 4** with a summary of the compliance performance provided as follows.

##### DA 250-09-01

The status of compliance against the conditional components of DA 250-09-01 was assessed as follows.

Compliant	-	178
Non-Compliant	-	5
Not Triggered	-	33
Not Determined	-	1
<b>Total</b>		<b>217</b>

### EPL 3916

The status of compliance against the conditional components of EPL 3916 was assessed as follows.

Compliant	-	38
Non-Compliant	-	1
Not Triggered	-	11
Not Determined	-	4
<b>Total</b>		<b>54</b>

### WAL 24341

The status of compliance against the conditional components of WAL24341 was assessed as follows.

Compliant	-	2
Non-Compliant	-	0
Not Triggered	-	8
Not Determined	-	0
<b>Total</b>		<b>10</b>

### 3.3.3 Summary of Non-Compliances

Non-compliances recorded against DA 250-09-01 and EPL3916 are presented in full within **Appendix 4** and summarised as follows in **Tables 3.6** and **3.7**. No non-compliances were recorded against WAL 24341.

**Table 3.6**  
**Summary of Non-compliances with DA 250-09-01**

<b>Cond. No.</b>	<b>Conditional Requirement</b>	<b>Compliance Status</b>	<b>Basis for Compliance</b>	<b>Comments and Recommended Actions</b>
2.(b)	The Applicant must carry out the development: ... in accordance with the conditions of this consent and the Development Layout Plan. Note: The Development Layout Plan is shown in Appendix 1	<b>Non-Compliant</b>	Observations.	The Quarry layout was observed to reflect the Development Layout Plan included as Appendix 1 of DA 250-09-01. However, several non-compliances have been recorded against the conditions of this consent during the audit period and hence contributed to the non-compliance for this condition. See Conditions 2(22(d)), 3(25(c)), 3(35), and 3(36).
22.(d)	The Applicant must: .... use its best endeavours to ensure that appropriate signage is displayed on all trucks used to transport product from the development so they can be easily identified by road users.	<b>Non-Compliant</b>	Document ONR06-2019 (see <b>Appendix 6</b> ).	The requirement to display appropriate truck signage is not included in the TMP or associated driver induction documents. See <b>Recommendation ONR R5/19</b> .
25.(c)	The Applicant must: ... provide appropriate long term security for the Haerses Road Biodiversity Offset Area; and	<b>Non-Compliant</b>	Advice from Environmental Officer.	Proposed terms for a Public Positive Covenant were submitted by Dixon Sand to DPIE on 24 August 2019. However, confirmation of these terms is awaited and, once confirmed, Dixon Sand will seek to register the Hearses Road Biodiversity Offset Area under this arrangement. See <b>Recommendation ONR R2/19</b> .
35.	The Applicant must ensure that all tanks and similar storage facilities (other than for water) are protected by appropriate bunding or other containment, in accordance with the relevant Australian Standards.	<b>Non-Compliant</b>	Observations. Photos E1021A_104 and 303.	Oil drums stored within a dedicated hydrocarbon storage area in the site workshop area were not appropriately bunded. See <b>Recommendation ONR R1/19</b> .
36.	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.	<b>Non-Compliant</b>	Observations Photos E1021A_104 and 303.	The storage, handling and transport of dangerous goods within the Quarry Site was generally observed to have been conducted in accordance with the relevant standards. Several oil drums stored within a dedicated hydrocarbon storage area in the site workshop area were not appropriately bunded. See <b>Recommendation ONR R1/19</b> .





**Table 3.7**  
**Summary of Non-compliances with EPL 3916**

<b>Cond. No.</b>	<b>Conditional Requirement</b>	<b>Compliance Status</b>	<b>Basis for Compliance</b>	<b>Comments and Recommended Actions</b>
M5.2	The record must include details of the following: a) the date and time of the complaint; b) the method by which the complaint was made; c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; d) the nature of the complaint; e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and f) if no action was taken by the licensee, the reasons why no action was taken.	<b>Non-Compliant</b>	Observation. Dixon Sand Website. ONR01-2019. ONR02-2019. ONR03-2019.	Whilst the nature of and response to any complaints received at the Quarry are adequately documented, minor details including the time and date of receipt have not been recorded for several complaints. See <b>Recommendation ONR R4/19</b> .



### 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 3.8**.

**Table 3.8**  
**Strategies, Plans and Programs Audited**

Strategy / Plan / Program	Status
Environmental Management Strategy	Dated May 2018. Prepared by Umwelt. Requirement of DA 250-09-01 <i>Schedule 5 Condition 1</i> . Approved by (then) DPE 31 May 2018.
Noise Management Plan	Appendix 6 of the Environmental Management Strategy. Dated April 2018. Prepared by Umwelt. Requirement of DA 250-09-01 <i>Schedule 3 Condition 6</i> . Approved by (then) DPE 1 May 2018.
Air Quality Management Plan	Appendix 7 of the Environmental Management Strategy. Dated April 2018. Prepared by Umwelt. Requirement of DA 250-09-01 <i>Schedule 3 Condition 9</i> . Approved by (then) DPE 1 May 2018.
Soil and Water Management Plan	Appendix 8 of the Environmental Management Strategy. Dated May 2018. Prepared by Umwelt. Requirement of DA 250-09-01 <i>Schedule 3 Condition 20</i> . Approved by (then) DPE 31 May 2018.
Traffic Management Plan	Appendix 9 of the Environmental Management Strategy. Dated April 2018. Prepared by Umwelt. Requirement of DA 250-09-01 <i>Schedule 3 Condition 23</i> . Approved by (then) DPE 1 May 2018.
Biodiversity and Rehabilitation Management Plan	Appendix 10 of the Environmental Management Strategy. Dated April 2018. Prepared by Umwelt. Requirement of DA 250-09-01 <i>Schedule 3 Condition 29</i> . Approved by (then) DPE 1 May 2018.
Community Relations Plan	Appendix 11 of the Environmental Management Strategy. Dated April 2018. Prepared by Umwelt. Requirement of DA 250-09-01 <i>Schedule 5 Condition 1(f)</i> . Approved by (then) DPE 1 May 2018.

#### 3.4.2 Review of Strategies, Plans and Programs

##### 3.4.2.1 Environmental Management Strategy

The Environmental Management Strategy addresses the requirements of DA 250-09-01 *Schedule 5 Condition 1* and is structured in an appropriate manner. The Environmental Management Strategy is supported by the other management plans required by DA 250-09-01 which are appended to the Environmental Management Strategy. In relation to matters considered appropriate for improvement, the following are noted (See **Improvement ONR I14/19**).

- Section 2.2 requires update to reflect the change in water supply licences from the *Water Act 1912* to the *Water Management Act 2000* but should also acknowledge monitoring bore licences issued under the *Water Act 1912*.
- Section 8.2 requires update to reflect the Annual Review reporting period (financial year) and submission timing (by 30 September) as agreed with the (then) Department of Planning.



In relation to implementation of the Environmental Management Strategy, the principal aspect that could be improved is the recording of information specified in Section 10.4 for every complaint. Not all details were recorded in all instances during the Audit Period (see **Recommendation ONR R4/19**).

### 3.4.2.2 Noise Management Plan

The Noise Management Plan (NMP) adequately addresses the requirements of DA 250-09-01 and EPL 3916 and includes a summary of the regulatory requirements, the existing noise environment, assessment criteria, mitigation measures, monitoring, reporting, responsibilities and review. Given the range of modifications that have occurred to DA 250-09-01, the inclusion of a summary of relevant noise management commitments included in the documentation supporting the modifications is very useful. The presentation of the management measures, both proactive and reactive, in a table format with timing, responsibility and performance indicator is commended.

A minor typo was identified, Figure 3.1 being incorrectly referenced as Figure 1.3 (**Improvement ONR I8/19**). Otherwise, there are no further recommended actions resulting from the high-level review.

In relation to the implementation of the NMP during the audit period, one monitoring location, OR3, was not monitored during the December 2016 and June 2017 monitoring rounds. Location OR3 was added to the NMP following the determination of Modification 4 in July 2015. Inclusion of this location during subsequent monitoring events was rectified.

### 3.4.2.3 Air Quality Management Plan

The Air Quality Management Plan (AQMP) adequately addresses the requirements of DA 250-09-01 and EPL 3916 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. Given the range of modifications that have occurred to DA 250-09-01, the inclusion of a summary of relevant air quality management commitments included in the documentation supporting the modifications is very useful. The presentation of the management measures, both proactive and reactive, in a table format with timing, responsibility and performance indicator is commended.

In relation to matters considered appropriate for improvement, the key matters relate to clarity around the criteria, notification and incident reporting. In particular, the following is noted.

- Section 2.2 of the AQMP outlines the relevant EPL 3916 conditions O3.1 to O3.4. However, there are a range of other relevant and important conditions, including M2.4 which outlines what actions must be taken if a rolling average 24hr PM<sub>10</sub> result exceeds 42µg/m<sup>3</sup>.
- Section 4.0 of the AQMP only outlines assessment criteria as listed by DA 250-09-01. Given the criteria and triggers differ between the DA and EPL, both sets of requirements should be clearly outlined.
- The reactive measures in Section 5.2 of the AQMP do not address the requirements of EPL 3916 Condition M2.4.

- The incident and exceedance reporting in Section 7.2 of the AQMP only addresses exceedances of the DA criteria and does not address the EPL notification requirements (except for notification of environmental harm).

Given the regular notifications that have been required as a result of the EPL conditions and the fact that strict compliance could not be determined with all aspects of EPL 3916 Condition M2.4, improvements in the AQMP and subsequent record keeping are recommended. See **Improvement ONR I3/19** and **ONR I1/19**.

In relation to implementation of the AQMP, topsoil stockpiles have not been stabilised in accordance with the commitment in Section 5.1 “*Stabilising topsoil stockpiles by planting with a cover crop of non-invasive cereal or legumes*”. Rather reliance has been placed upon the native seedbank with the use of a cover crop perceived to pose a threat to the long term value of seedbank resources contained within stockpiled topsoil (see **Recommendation ONR R6/19**).

#### 3.4.2.4 Soil and Water Management Plan

The Soil and Water Management Plan (SWMP) adequately addresses the requirements of DA 250-09-01 Schedule 3 Condition 20 and is structured in an appropriate manner. The inclusion of a summary of relevant soil and water management commitments included in the documentation supporting the various modifications to the development consent is very useful.

In relation to matters considered appropriate for improvement, the key matters relate to clarity around the criteria, notification and incident reporting. In particular, the following is noted. See **Recommendation ONR R8/19** and **Improvement ONR I10/19**.

- The maximum groundwater trigger levels appear to be recorded incorrectly (being the same as the minimum). All water levels and triggers should be reviewed to ensure these are correct.
- The water quality triggers for surface water and groundwater should be reviewed to ensure that appropriate and sensible levels have been set. Where necessary, default water quality criteria may be used where insufficient data or insufficient variability exists. For example, the lower and upper pH triggers for BH9 are both 4.0. Therefore, any pH measurement other than 4.0 will exceed the trigger and require response.
- Consideration could be given to presenting the relevant criteria / trigger levels, including discharge criteria, in a single sub-section with a dedicated heading.
- The incident and exceedance reporting requirements are not clear with some notification detail relating to the EPL recorded under the Surface Water reporting with a heading simply “EPL” (Section 5.1.3.1). Under groundwater reporting a subheading “Incident Reporting” partly addresses the requirements of the development consent. It is suggested that a separate ‘Incident Response’ section is prepared which clearly identifies the requirements for all approvals / licences (or cross references the appropriate document which outlines these requirements).
- Consider inclusion of level 4 headings in the table of contents to assist with document navigation.
- Clarify the location and details of the licenced bores attached to WAL 24341.

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

- Section 5.2.3.3 – Groundwater extraction volumes were not reported annually to DoI Water during the audit period (albeit the reported volume would be nil). See **Recommendation ONR R7/19**.
- Section 6.1, 6.2 and 7.1 – Exceedance of trigger action response values were recorded without initiation of the action response or contingency measures. However, as noted above, the trigger levels in a number of cases are not considered appropriate or, in some cases accurate / consistent. (see **Recommendations ONR R8/19** and **ONR R9/19** and **Improvement ONR I9/19**).

#### 3.4.2.5 Traffic Management Plan

The Traffic Management Plan (TMP) adequately addresses the requirements of DA 250-09-01 Schedule 3 Condition 23 and is structured in an appropriate manner. The TMP is supported by a number of appendices including the Site Traffic Control Plan and Site Traffic Management Plan, 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 ONR I13/19**).

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 ONR R10/19** and **ONR R11/19**.

One other minor non-conformance was identified with the implementation of Section 6.1 of the TMP in which both the monthly truck movements and amount of quarry products transported from the Quarry would be published 6 monthly on the Company website. However, the published records only present truck movements. See **Recommendation ONR R4/19**.

#### 3.4.2.6 Biodiversity and Rehabilitation Management Plan

The Biodiversity and Rehabilitation Management Plan (BRMP) adequately addresses the requirements of DA 250-09-01 Schedule 3 Condition 29 and is generally structured in an appropriate manner. It is noted that performance and completion criteria for threatened species are included in Section 6.5.6 whilst the remaining performance and completion criteria, including those for translocation, are outlined in Section 5.2. Broad performance criteria are also included in Appendix 5 of the approved Flora and Fauna Monitoring Program, however, these are not referenced in the main text (see **Improvement ONR I12/19**).

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

- Section 6.2.6 – Reliance has been placed upon the native seedbank and not the use of a cereal and legume cover crop. Use of a cover crop is perceived to pose a threat to the long-term value of seedbank resources contained within stockpiled topsoil (see **Recommendation ONR R6/19**).
- Section 6.2.6 – Silt fences have not been installed at the base of topsoil stockpiles (see **Recommendation ONR R13/19**).
- Section 6.3.2 – Annual bush regeneration reports contain descriptions of key weed species and weed control measures employed at the Quarry but do not include maps of weed density or distribution (see **Recommendation ONR R14/19**).
- Section 6.5.2.3 – Information contained in the Annual Biodiversity and Rehabilitation Management Reports during the audit period do not contain baseline information for translocated specimens (e.g. height, dieback, health, GPS coordinates) (see **Recommendation ONR R15/19**).
- Section 8.2.1 – Proforma documents were not used to record information relating to translocated specimens (see **Recommendation ONR R15/19**).

#### 3.4.2.7 Community Relations Management Plan

The Community Relations Management Plan (CRMP) adequately addresses the requirements of DA 250-09-01 Schedule 5 Condition 1(f) and is generally structured in an appropriate manner. The CRMP provides a useful summary of the strategy for and approach to communication with the community. The preparation of the plan in consultation with the Hills Shire Council, Maroota Public School, and the CCC provides a level of confidence that preferred communication methods and frequencies are being applied. The inclusion and use of attitudinal surveys is commended and provides an excellent opportunity to ensure that focus is being placed on relevant matters.

No non-conformances with the implementation of the CRMP were identified.

### 3.5 IMPLEMENTATION OF PREVIOUS AUDIT RECOMMENDATIONS

The 2016 Independent Environmental Audit did not provide specific recommendations, rather it identified five administrative non-compliances and one low-risk non-compliance. The Company prepared a response to the audit findings which included proposed actions for each non-compliance. **Table 3.9** 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.

### 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.



**Table 3.9  
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
2 (3.34)	The Applicant shall advise its drivers and its clients not to arrive at the site prior to 5.45 am on any day. Certified (under company seal) weighbridge dockets and a log book or equivalent computer records are to be kept to verify the arrival and departure times of vehicles. Copies of these records shall be summarized in the Annual Review.	Drivers and its clients are advised not to arrive at the Old Northern Road Quarry site prior to 5.45 am on any day in accordance with the approved Traffic Management Plan. Truck Movement Data for July 2015 to June 2016 have recorded the time-in of each truck arriving at the Old Northern Road Quarry site between 6.00am and 7.00am, and these records indicated that trucks had not arrived at site prior to 5.45am. Arrival time-in between 6.00am and 7.00 Monday to Friday is recorded for all trucks entering the site. Arrival time-in after 7.00am Monday to Friday is not recorded. Weighbridge dockets record departure time for every loaded truck that leaves the Old Northern Road Quarry site.	Administrative Non-Compliance	<p><b>Proposed Action (Feb 2017):</b> An application to amend the quarry start time to 5:45am has been included in DA250-09-01 Modification 5 application which is in the process of being lodged.</p> <p><b>Status (May 2017):</b> The DA250-09-01 Modification 5 application was lodged on 9 March 2017. Dixon Sand proposed:</p> <ul style="list-style-type: none"> <li>• trucks be let in on-site at 5:45am and not allowed to leave site until 6:00am.</li> <li>• There is ambiguity between Conditions 3.30, 3.32 and 3.42</li> <li>• The requirement to certify weighbridge dockets under company seal is obsolete.</li> </ul> <p>The submissions for DA250-09-01 Modification 5 did not raise any objections to the proposed time amendment. Dixon Sand is currently addressing the submissions and anticipated to submit the response to submissions in June 2017.</p>	<p>The equivalent condition within the modified DA 250-09-01 is Schedule 3 Condition 21. The new condition only requires the recording of the arrival and dispatch time for <u>laden</u> trucks. The Managing Director advised that the Quarry did not receive VENM/ENM or other imported extractive materials during the audit period.</p> <p>Checks of the dispatch records within the Annual Reviews and an on-site spot check of weighbridge dockets confirmed the dispatch times for laden trucks was not earlier than 6:00am.</p> <p>The Managing Director also advised that the Quarry gate remains locked until 5:45am to ensure that any trucks (laden or unladen) do not enter the Quarry Site prior to the approved time.</p>

**Table 3.9 (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
2 (3.42)	Loading of trucks and truck movements at the site must only be carried out between 6am and 6pm Monday to Saturday, and at no time on Sundays and Public Holidays. All other activities at the premises must only be carried out between 7am and 6pm Monday to Saturday, and at no times on Sundays and Public Holidays	Refer to condition 3.34. Loading of trucks and truck movements at the site do not commence until 6.00am Monday to Saturday. Drivers and its clients are advised not to arrive at the Old Northern Road Quarry site prior to 5.45 am on any day in accordance with the Development Consent 250-09-01 Schedule 2 condition 3.34 and approved EP5-Traffic Management Plan. Arrival times of vehicles at the Old Northern Road Quarry site are recorded on the Truck Movement Data Sheets recorded for each load at the weighbridge	Administrative Non-Compliance	<b>Proposed Action (Feb 2017):</b> See above. <b>Status (May 2017):</b> See above.	As above.
2 (3.49A)	By the end of June 2016, unless the Secretary agrees to extend this date, the Applicant shall make suitable arrangements to protect the Haerses Road Biodiversity Offset Area in perpetuity to the satisfaction of the Secretary.	Arrangements to protect the Haerses Road Biodiversity Offset Area in perpetuity were in the process of execution with the Dixon Sand solicitor at the date of this audit (November 2016)	Administrative Non-Compliance	<b>Proposed Action (Feb 2017):</b> Dixon Sand is in the process of arranging for a Public Positive Covenant in combination with Restrictions in Use of Land on the land titles of the Offset Area to protect the Haerses Road Biodiversity Offset Area in perpetuity. This matter is being dealt through Dixon Sand's Solicitor. <b>Status (May 2017):</b> The matter is still in progress. The progress has been delayed due to the requirement for the Bank to release the Property Title Deed to the Solicitor.	(Now DA <i>Condition 3(25d)</i> ). The proposed terms for a Public Positive Covenant were submitted by Dixon Sand to DPIE on 24 August 2019, a response is awaited. Notwithstanding, until the security is established, this condition remains non-compliant (see <b>Recommendation ONR R2/19</b> ).







**Table 3.9 (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
2 (3.49C)	By the end of June 2016, unless the Secretary agrees to extend this date, the Applicant shall lodge a Conservation Bond with the Department to ensure that the Biodiversity Management Plan is implemented.	The Conservation Bond had not been lodged at the date of this audit (November 2016). The calculation of the cost of implementing the Biodiversity Management Plan is to be prepared by a specialist ecological consultant. Dixon Sand corresponded with DP&E in relation to the requirement for a 'quantity surveyor' to be employed 'to verify the calculated costs' and was advised that a 'quantity surveyor' must be commissioned in accordance with the condition, or to include any proposed change to use a Senior Ecologist should be addressed through a Modification to the Development Consent.	Administrative Non-Compliance	<p><b>Proposed Action (Feb 2017):</b>  Dixon Sand proposes to substitute the 'quantity surveyor' with 'suitably qualified person' in the DA250-09-01 Modification 5 application. Calculation and lodgement of the conservation bond will be actioned following the determination of Modification 5.</p> <p><b>Status (May 2017):</b>  The DA250-09-01 Modification 5 application was lodged on 9 March 2017. The submissions for DA250-09-01 Modification 5 did not raise any objections to the proposed changes to this condition. Dixon Sand is currently addressing the submissions and anticipated to submit the response to submissions in June 2017. Calculation and lodgement of the conservation bond will be actioned once Modification 5 is approved.</p>	Requirement now part of DA <i>Condition 3(30)</i> . The Biodiversity and Rehabilitation Bond was lodged with the Department on 1 November 2018.
2 (6.3©)	A Rehabilitation and Landscape Plan to detail the proposed final land use and landform for the site and measures to be undertaken to create that landform and vegetation cover.	xi. details of all backfilling works, including source of materials and the grades and stability of all batters. Batter design should be in accordance with the provisions of DCP No 500 – Extractive Industries, and certification is to be provided by appropriately qualified engineers regarding the stability of all designed batters. Details of backfilling works were not available at the date of this audit.	Administrative Non-Compliance	<p><b>Proposed Action (Feb 2017):</b>  DCP No 500 is now obsolete. Dixon Sand is seeking to remove this condition in the DA250-09-01 Modification 5 application.</p> <p><b>Status (May 2017):</b>  The DA250-09-01 Modification 5 application was lodged on 9 March 2017. The submissions for DA250-09-01 Modification 5 did not raise any objections to the proposed changes to this condition. Dixon Sand is currently addressing the submissions and anticipated to submit the response to submissions in June 2017.</p>	DA 250-09-01 (MOD5) now requires a Biodiversity and Rehabilitation Management Plan. The current conditional requirements do not specify this level of detail must be included within the plan. The current plan does include a conceptual final landform.

**Table 3.9 (Cont'd)**  
**Status of Implementation of 2016 Audit Response Actions**

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Cond #	Condition Details	IEA 2016 Finding	Compliance Classification	Dixon Sand Comments & Proposed Actions	2019 IEA Status Review
2 (3.11)	Any topsoil removed during operations must be stockpiled for use in the rehabilitation of the site. Topsoil should not be mixed with other overburden products. The topsoil stockpile location should have easy access and be protected from erosion. The topsoil stockpiles shall be sown with appropriate vegetation to stabilise the soil if they are to be stored for longer than six months. Topsoil stockpiles must have a maximum depth of 1.5 metres	The approved EP-5 - Rehabilitation and Final Landscape Management specifies that stockpiles are to be kept to less than 3m high, left for less than 12 months and revegetated with non-invasive, sterile species. A topsoil stockpile established in 1994, prior to the issue of Development Consent 796/00/HE is greater than 3m in height. This matter will be addressed in the next Modification to 250-09-01 when lodged.	Low Risk Non-Compliance	<p><b>Proposed Action (Feb 2017):</b>            An amendment of stockpile height from 1.5 metres to 3 metres will be proposed in the DA250-09-01 Modification 5 application. An exemption of the topsoil stockpile established in 1994 will also be included in the modification.</p> <p><b>Status (May 2017):</b>            The DA250-09-01 Modification 5 application was lodged on 9 March 2017. The submissions for DA250-09-01 Modification 5 did not raise any objections to the proposed changes to this condition. Dixon Sand is currently addressing the submissions and anticipated to submit the response to submissions in June 2017.</p>	DA 250-09-01 (MOD5) does not specify limits for soil stockpile heights. However, the Biodiversity and Rehabilitation Management Plan (April 2018) specifies that topsoil stockpiles are to be generally less than 3m high.





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 ONR I15/19**).

### **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 ONR 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 “ONR R” and are provided in Section 4.2 whilst suggested “Improvements” have been presented with the prefix “ONR 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 15 compliance-based Recommendations and 15 suggested Improvements are provided for the Company’s consideration and action.

### 4.2 RECOMMENDATIONS ARISING FROM NON-COMPLIANCES

**ONR R1/19** Ensure that adequate bunding (mobile or fixed) is available and utilised for storage of hydrocarbon drums in accordance with AS1940.

*A number of 205L hydrocarbon drums were observed be stored within a dedicated storage area within the workshop (Photographs E1021A\_104 and 303). However, the dedicated area is not bunded and insufficient bunded pallets were available for all drums to be stored in accordance with AS1940. This is required to maintain compliance with conditional requirements and to minimise the potential for harm in the event of spills.*

**ONR R2/19** Ensure that the Positive Public Covenant or other agreed method for providing long-term security of the Haerses Road Biodiversity Offset Area is implemented.

*DA 250-09-01 Schedule 3 Condition 25(c) requires that a long term security is provided for the Haerses Road Biodiversity Offset Area. Whilst proposed terms for a Public Positive Covenant have now been submitted, confirmation of these terms is awaited from DPIE. It is important that the Company remains proactive in following up and implementing the required security.*

**ONR R3/19** Submit a variation application for EPL 3916 to either remove Condition A4.1 or update to reference DA 250-09-01.

*The current Condition A4.1 requires compliance with a consent which is no longer valid. Therefore, compliance cannot be determined and the legal enforceability of this requirement is uncertain.*

**ONR R4/19** Adopt a complaint recording and response form which requires the entry of all required information for each complaint received at the Quarry. Ensure that personnel responsible for recording compliant and subsequent investigation details are made aware of the requirement to record all necessary details.

*Current forms omit details which are required to be recorded for each complaint. Complaint forms should include sections requiring the recording of all details specified in Condition M5.2 of EPL 3916.*

**ONR R5/19** Amend the Traffic Management Plan and associated driver induction documents to include measures / statements encouraging the display of appropriate signage on trucks used to transport products from the Quarry.

*DA 250-09-01 Schedule 3 Condition 22(d) requires the Company to “use its best endeavours to ensure that appropriate signage is displayed on all trucks used to transport product from the development so they can be easily identified by road users”. Whilst it is understood the Company does not have legal jurisdiction to enforce display of signage, formal ‘encouragement’ to do so is required.*

**ONR R6/19** Seek advice from a qualified ecologist regarding the best approach to preserving the native seedbank within topsoil stockpiles whilst limiting dust generation and revise the Air Quality Management Plan accordingly.

*The current Air Quality Management Plan requires that topsoil stockpiles are stabilised using non-invasive cereal or legume cover crops. Limited cover of topsoil stockpiles is currently achieved by native species which have emerged naturally from the stored seedbank. The Company advises that sowing a cover crop would compromise the existing native seedbank.*

**ONR R7/19** Ensure that annual water usage volumes, including groundwater extraction volumes under WAL 24341 (including nil extraction), are reported annually as required under the licence conditions and that ‘Water Take’ is reported in the Annual Review in accordance with the Annual Review Guideline (NSW Government, 2015).

*It is understood that annual water usage were not reported during the audit period. Furthermore, the water take component outlined in the Annual Review Guidelines has not been include in the 2017, 2018 or 2019 Annual Reviews.*

**ONR R8/19** 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 trigger values specified by the Surface Water Management Plan are restrictive and inadequately reflect natural variation in water quality. Default water quality guideline values should be utilised until appropriate site-specific trigger values (20<sup>th</sup> and 80<sup>th</sup> percentile values) can be derived, generally from a minimum of two years of monthly data.*

**ONR R9/19** 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).*

**ONR R10/19** Ensure that, when a verified complaint or non-compliance with the Drivers 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 8 of 9 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.*

**ONR R11/19** 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.*

**ONR R12/19** Ensure that monthly and annual summaries of 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.*

**ONR R13/19** Install and maintain silt fences at the base of topsoil stockpiles until a 70% vegetative (or mulched) cover is achieved to prevent soil loss to surrounding areas.

*Soil stockpiles were observed with insufficient groundcover but no silt fencing (Photographs E1021A\_178 to 181). Whilst no significant loss of soil was obvious and runoff from the stockpiled soil is unlikely to affect water quality or surrounding undisturbed habitat, failure to maintain the silt fencing is in non-compliance with the commitments within the Biodiversity and Rehabilitation Management Plan.*

**ONR R14/19** Develop, in consultation with weed management contractors, a weed density and distribution map for the Quarry.

*The weed density and distribution map should be updated annually and included and discussed in Annual Reviews for each reporting period in order to provide a record of weed management activities.*

**ONR R15/19** Develop and implement a translocated specimens form for use during translocation activities to ensure that all necessary information is recorded for each specimen.

*The translocated specimens form should require the recording of a unique specimen ID, original and translocated locations (including GPS coordinates and photographs of each location), a description of the appropriateness of the translocation position in the landscape, the date of translocation, confirmation of watering following translocation, an assessment of health, height, flowering status, dieback, and broad vegetation community for each specimen. Additional details regarding translocation timing (e.g. seasonal period, following rainfall, the effectiveness of previously recommended actions to protect/enhance the species etc.) should also be recorded on this form. A variation of this form may also be used to record necessary details during subsequent monitoring of translocated specimens, with details including browning or loss of foliage, evidence of unsuitable environmental conditions (e.g. sunburn or windburn), evidence of grazing or insect damage and evidence of plant disease recorded for each specimen.*

### 4.3 SUGGESTED IMPROVEMENTS

**ONR I1/19** Ensure that the Air Quality Management Plan clearly defines and separates the compliance criteria, reactive measures, and notification requirements for both DA 250-09-01 and EPL 3916.

*A review of the AQMP confirms that not all requirements of EPL 3916 are specified or clearly separated from the requirements DA 250-09-01. As a result, reliance upon the AQMP alone in reviewing and responding to air quality monitoring results could result in a non-compliance or incorrect responses. For example, the 2018 and 2019 Annual Reviews reported that DA 250-09-01 Schedule 3 Condition 7 was non-compliant, however, a review of the data indicates that compliance was achieved. Further, whilst the Annual Review recorded non-compliances with the DA, these were not recorded as being notified to the (then) DPE.*

**ONR I2/19** Ensure that the incident register (or other record) includes adequate detail to enable compliance against each aspect of the response measures. Given the regularity that this is required, this could be assisted through the use of a simple template form which summarises the requirements and provides for a response to be entered which demonstrates compliance or states where the requirement was not triggered and why. This form could support any required reporting to relevant government agencies.

*With the various and different requirements around air quality criteria triggers and exceedances, the information within the incident register is currently insufficient to determine strict compliance in all instances. See also **Improvement ONR I1/19**.*

- ONR I3/19** Include an explanation within the Air Quality Monitoring Program of how the TEOM trigger system works, including frequency of sampling / averaging, and that, whilst there is a trigger value of  $37\mu\text{g}/\text{m}^3$ , the sampled value from one sampling / averaging period to the next may 'jump' above this level.

*The actual levels reported as part of the trigger alarm have ranged from  $42.1\mu\text{g}/\text{m}^3$  to  $61.6\mu\text{g}/\text{m}^3$ , i.e. the  $\text{PM}_{10}$  concentration rises quickly above the trigger from one measurement to the next. The Air Quality Management Plan should be clear to all stakeholders (the community, regulators, and Company personnel) on how the trigger system works in practice.*

- ONR I4/19** Update the SDS register to include all chemicals on site, the current SDS, an index of chemicals organised in alphabetical order, and a map of the key storage locations, spill kits, etc.

*Two on-site chemicals (Roundup and QD 601 Super Enamel) were selected to spot check the SDS register. Whilst the SDS for Roundup was available it was dated 2004 (i.e. beyond the 5 year review period). The SDS for QD 601 Super Enamel was not available. The SDS register also did not contain an index to enable ready identification of the available SDS or a map of the key storage locations.*

- ONR I5/19** Replace timber boundary markers with steel markers over which ~2m long high visibility conduit (or similar) is placed.

*Whilst some marker posts were steel, many timber stakes were also in use. Steel pickets will provide a more enduring marker and use of high visibility conduit or similar will enhance the visibility of the marked boundary.*

- ONR I6/19** Document within the Environmental Management Strategy, or other suitable management / procedures document, a simple Aboriginal heritage finds procedure which addresses the requirements of DA 250-09-01 Schedule 3 Condition 24.

*Whilst DA 250-09-01 Schedule 3 Condition 24 does not require a documented finds procedure, inclusion of this within relevant documentation, and appropriate training, will increase the likelihood that appropriate steps are undertaken in the event of an unexpected find.*

- ONR I7/19** Update the Soil and Water Management Plan to address / specify the relevant requirements of the Approved methods for the sampling and analysis of water pollutants in NSW as referenced within EPL 3916 Condition M3.1.

*As no discharges occurred during the reporting period this requirement was not triggered. Whilst the Soil and Water Management Plan is not inconsistent with the requirements of EPL 3916, specific review and reference to the relevant requirements of the Approved methods would assist in ensuring compliance is achieved.*

- ONR I8/19** Update references to Figure 1.3 to Figure 3.1 in the Noise Management Plan.

*A minor typo was identified in the Noise Management Plan.*



**ONR I9/19** Ensure that future Annual Reviews:

- include relevant criteria / trigger action levels on applicable charts and graphs;
- assess water quality criteria against the criteria / trigger action levels;
- include a summary of any actions raised by government agencies in response to the previous Annual Review and where those issues have been addressed in the current reporting period.

*During the audit, a range of opportunities were identified to improve the value of the Annual Reviews. In some instances, these improvements will assist in demonstrating compliance.*

**ONR I10/19** Review and update the Soil and Water Management Plan taking into consideration the following.

- Review and update the water level and quality trigger levels (see also **Recommendation ONR R8/19**).
- Presentation of all relevant criteria / trigger levels, including discharge criteria, in a single sub-section with a dedicated heading/headings.
- Preparation of an 'Incident Response' subsection which clearly outlines the relevant requirements for all approvals / licences.
- Inclusion of level 4 headings in the table of contents to assist with document navigation.
- Clarify the location and details of the licenced bores attached to WAL 24341.

*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.*

**ONR I11/19** Include within future Annual Biodiversity & Rehabilitation Management Report an assessment against the translocation performance criteria for translocation as outlined in Section 6.5.6 of the Biodiversity and Rehabilitation Management Plan.

*During the audit period, the success of translocated plants appears to have only been assessed against the survival proportion and not correlated back to the number of individuals impacted. This is required in order to assess compliance.*

**ONR I12/19** Consider combining the performance criteria outlined in Section 6.5.6 of the Biodiversity and Rehabilitation Management Plan with those outlined in Section 5.2 and drawing upon those outlined within Appendix 5 so there is a consolidated summary.

*The inclusion of a separate performance criteria within an 'isolated' subsection (6.5.6) has resulted in its assessment being missed as part of the Annual Biodiversity & Rehabilitation Management Report.*

**ONR I13/19** 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.*

**ONR I14/19** Review and update the Environmental Management Strategy taking into consideration the following.

- The change in water supply licences from the *Water Act 1912* to the *Water Management Act 2000* (i.e. Water Supply Works and Use Approvals and Water Access Licences).
- List the monitoring bore licences issued under the *Water Act 1912*.
- Update the Annual Review reporting components to reflect the agreed reporting period (financial year) and submission timing (by 30 September).

*During the audit a range of opportunities were identified to improve the value of the Environmental Management Strategy. In some instances, these improvements will assist in maintaining compliance .*

**ONR I15/19** 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.*