

# Independent Environmental Audit 2017

Orica Kurri Kurri - Ammonium Nitrate Emulsion Plant



Prepared for:  
Orica Mining Services

February 2017

# Independent Environmental Audit 2017

Orica Kurri Kurri ANE Plant

## Prepared for

Orica Mining Services  
Orica Australia Technical Centre  
1151 George Booth Drive  
Richmond Vale NSW 2322

## Prepared by

Environment & Planning Pty Ltd  
PO Box 747, The Junction, NSW 2291. T+61 4 2424 3014. ABN 51 162 344 612

Lead Auditor: Peter Horn

## Revision History

Revision	Date	Details	Authorised by	Signature
Draft A	29 November 2016	Draft for Orica review	Peter Horn	
Draft B	23 January 2017	Draft for Orica review	Peter Horn	
Final	1 February 2017	Final	Peter Horn	

# Independent Audit Certification

## Project

Development Application Number	09_0090 (as modified)
Description of Project	Orica Ammonium Nitrate Emulsion Project
Project Address	George Booth Drive, Lot 2 DP 809377, Richmond Vale, NSW
Proponent	Orica Australia Pty Ltd
Proponent Address	1151 George Booth Drive, Richmond Vale NSW 2322

## Independent Environmental Audit

<p>I certify that I have undertaken the independent audit and prepared the contents of the attached independent audit report and to the best of my knowledge:</p> <ul style="list-style-type: none"> <li>• The audit has been undertaken in accordance with relevant approval condition(s) and in accordance with the auditing standard AS/NZS ISO 19011:2014 and Post Approval Guidelines – Independent Audits</li> <li>• The findings of the audit are reported truthfully, accurately and completely;</li> <li>• I have exercised due diligence and professional judgement in conducting the audit;</li> <li>• I have acted professionally, in an unbiased manner and did not allow undue influence to limit or over-ride objectivity in conducting the audit;</li> <li>• I am not related to any owner or operator of the development as an employer, business partner, employee, sharing a common employer, having a contractual arrangement outside the audit, spouse, partner, sibling, parent, or child;</li> <li>• I do not have any pecuniary interest in the audited development, including where there is a reasonable likelihood or expectation of financial gain or loss to me or to a person to whom I am closely related (i.e. immediate family);</li> <li>• Neither I nor my employer have provided consultancy services for the audited development that were subject to this audit except as otherwise declared to the lead regulator prior to the audit; and</li> <li>• I have not accepted, nor intend to accept any inducement, commission, gift or any other benefit (apart from fair payment) from any owner or operator of the development, their employees or any interested party. I have not knowingly allowed, nor intend to allow my colleagues to do so.</li> </ul> <p><i>Note.</i></p> <p>a) <i>The Independent Audit is an 'environmental audit' for the purposes of section 122B(2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000.</i></p> <p>b) <i>The Crimes Act 1900 contains other offences relating to false and misleading information: section 192G (Intention to defraud by false or misleading statement—maximum penalty 5 years imprisonment); sections 307A, 307B and 307C (False or misleading applications/information/ documents—maximum penalty 2 years imprisonment or \$22,000, or both).</i></p>	
Signature	
Name	Peter Horn
Address: PO Box 122, Clarence Town, NSW 2321	E-mail Address: <a href="mailto:Peter.horn62@gmail.com">Peter.horn62@gmail.com</a>
Auditor Certification: Environmental Compliance & Environmental Management Systems Lead Auditor (ISO14001:2015) through Exemplar Global	Date: 2nd February 2017

# Table of Contents

Independent Audit Certification .....	iii
Executive Summary .....	v
Abbreviations .....	vi
1.0 Introduction .....	1
1.1 Background .....	1
1.2 Audit Objective .....	1
1.3 Scope .....	2
1.4 Report Structure .....	2
2.0 Audit Approach .....	3
2.1 Audit Team Approval .....	3
2.2 Methodology .....	3
2.3 Assessment Criteria .....	4
2.4 Limitations of the Audit .....	5
3.0 Consultation, Complaints and Reportable Incidents .....	7
3.1 Agency consultation.....	7
3.2 Community consultation .....	7
3.3 Complaints .....	7
3.4 Reportable incidents.....	7
4.0 Response to previous Independent Environmental Audit .....	8
5.0 Documents Reviewed .....	13
6.0 Audit Findings .....	16
6.1 Project Approval 09_0090 .....	16
6.2 Statement of Commitments .....	19
6.3 Environmental Protection Licence 4121 .....	20
6.4 Submissions Report .....	21
6.5 Fire Safety Study .....	22
6.6 Emergency Plan .....	23
6.7 Safety Management System .....	23
6.8 Road Transport Protocol.....	24
6.9 Vegetation Management Plan .....	24
6.10 Bushfire Threat Assessment .....	25
6.11 Soil and Water Management Plan.....	25
6.12 Environmental Management Strategy .....	26
7.0 Assessment of Environmental Performance.....	30
8.0 Review the Adequacy of any Strategy / Plan / Program .....	32
9.0 Recommendations .....	33
Appendix A DPE audit team approval	
Appendix B Audit Results	
Appendix C OEH Response	

## Executive Summary

This Independent Environmental Audit of Orica's Kurri Kurri Ammonium Nitrate Emulsion (ANE) Plant has been prepared to meet the requirements of Schedule 4, Condition 4 of the Project Approval (MP 09\_0090).

The Independent Environmental Audit was conducted between October 2016 and January 2017, and includes:

- A review of compliance with the conditions of the Project Approval; the Environmental Protection Licence (EPL) 4121; and supporting documents required under the Project Approval such as environmental management plans;
- An assessment of the Plant's environmental management and performance and the adequacy of relevant environmental management plans; and
- A list of recommendations flowing from the findings of this audit.

The audit consisted of an inspection of the ANE Plant operations over two days (17 and 18 October 2016) and interviews with key Orica staff at the ANE Plant; and detailed desktop review of documentation conducted prior to and following the site inspection. It was undertaken generally in accordance with AS/NZS ISO 19011:2003 – Guidelines for quality and/or environmental management systems auditing.

Thirty-five (35) non-compliances were identified during the audit. The majority of the non-compliances (45.7%) resulted from administrative oversights. Twenty percent of the non-compliances were low risk, and 34.3% of the non-compliances were medium risk. There were no high risk non-compliances.

Of the 19 low and medium non-compliances identified during the audit, most (68%) related to two key issues: oversight in report reviewing/auditing, and tasks related to community stakeholder relationships. There were no environmental incidents during the audit period.

Overall, the commitment of time and resources by Orica Mining Services to manage environmental issues at the Kurri Kurri ANE Plant was found to be acceptable.

There were no observations or non-compliances that indicated a lack of control of environmental risk at the site. However, there are recommendations to revise and audit the environmental management documents at the site (as required under the site Environmental Management Strategy) to ensure that that site plans are kept up to date, and that the management plans and other documentation are aligned with site practices and operations.

Other recommendations for improvements have been outlined at the end of this audit report.

## Abbreviations

ANE	Ammonium Nitrate Emulsion
ANS	Ammonium Nitrate Solution
DECCW	(The former) Department of Environment, Climate Change and Water
DPE	Department of Planning and Environment
DPI Water	Division of Water within the Department of Primary Industries
DRE	Division of Resources and Energy within the Department of Industry
EPA	Environment Protection Authority
OEH	Office of Environment and Heritage. Formerly DECCW

# 1.0 Introduction

## 1.1 Background

This Independent Environmental Audit has been prepared for Orica Australia Pty Ltd (Orica) for their Ammonium Nitrate Emulsion (ANE) plant operating at Orica Mining Services Technology Centre, located near Kurri Kurri, New South Wales (NSW).

The ANE plant commenced operations at the site 7 February 2012 under Project Approval 09\_0090 (issued 26 July 2010 by the Minister for Planning). The Project Approval enables the production of up to 250,000 tonnes per annum of ANE at the site.

The Project Approval requires that an Independent Environmental Audit be prepared within two years of the commencement of operations at the ANE Plant, and every three years thereafter. The first Independent Environmental Audit was completed by 7 February 2014 (within two years of the commencement of operations). This Independent Environmental Audit is the second for the site, and was prepared three years after. The audit was undertaken between October 2016 and January 2017 and completed by 7 February 2017.

Since the first Independent Environmental Audit, approval to install a heat exchanger and cooling tower at the ANE plant has been obtained from the Department of Planning and Environment (DPE). Several of the ANE plant's site management plans have also been updated. This audit considers the plant as modified by the Project Approval, and site documents as updated at the time of the audit.

## 1.2 Audit Objective

This Independent Environmental Audit report has been prepared to satisfy Schedule 4, Condition 4 of the Project Approval. It focuses on verification of the site's compliance against key licences, approvals and supporting documents such as management plans.

Schedule 4, Condition 4 stipulates the requirement for an Independent Environmental Audit to be undertaken at the ANE Plant. Table 1.1 identifies the specific requirements of Schedule 4, Condition 4 and confirms where each matter is addressed within this Report.

*Table 1.1: Schedule 4, Condition 4, Project Approval 09\_0090*

Condition	Commitment	Where addressed in this report
Independent Environmental Audit		
4.	Within 2 years of the commencement of operations of the ANE Facility, and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the Project. This audit must:	This audit report

Condition	Commitment	Where addressed in this report
a)	Be conducted by a suitably qualified, experienced, and independent expert whose appointment has been endorsed by the Director-General;	Section 2.1
b)	Assess the environmental performance of the Project, and its effects on the surrounding environment;	Section 6
c)	Assess whether the Project is complying with the relevant standards, performance measures, and statutory requirements;	Section 7
d)	Review the environmental adequacy of any strategy/plan/program required under this approval; and, if necessary,	Section 8
e)	Recommend measures or actions to improve the environmental performance of the Project, and/or any strategy/plan/program required under this approval.	Section 9

### 1.3 Scope

The audit covers the three-year period from the first Independent Environmental Audit (completed 7 February 2014). It considers works undertaken during this time, and commitments/requirements relevant to the site during this time.

With the exception of a few commitments applying to the Kurri Kurri Technical Centre, the audit only examines commitments related specifically to the ANE plant and does not seek to verify commitments beyond the control of Orica.

### 1.4 Report Structure

This report is structured as follows reflecting the condition and its requirements:

- Section 2 outlines the audit team and the audit approach;
- Section 3 outlines consultation undertaken for the audit, and provides information on complaints and reportable incidents during the audit period
- Section 4 reviews Orica's response to the previous independent environmental audit
- Section 5 lists the planning approvals and management plans in place at the ANE Plant, and confirms those that have been the subject of this audit.
- Section 6 provides a discussion of non-compliances against the Project Approval and other licences and management plans.
- Section 7 provides a review of effectiveness of environmental performance under the mentioned approvals at the ANE Plant.
- Section 8 provides a review of the adequacy of the environmental management plans reviewed.
- Section 9 provides recommendations for measures or actions to improve the environmental performance of the ANE Plant.

## 2.0 Audit Approach

### 2.1 Audit Team Approval

Peter Horn, Certified Lead Environmental Auditor (certified by EXEMPLAR), conducted the environmental audit. Alison Dodds, Environmental Planner, assisted Mr Horn.

The Director-General endorsed Mr Horn and Ms Dodds as the audit team to undertake the Independent Environmental Audit in their correspondence to Orica, 12 May 2016 (provided at Appendix A).

The lead auditor has certified this audit. The “Independent Audit Submission Form” is attached to the front of this audit report at page iii.

### 2.2 Methodology

This Independent Environmental Audit was undertaken generally in accordance with:

- *AS/NZS ISO 19011:2014 – Australian/New Zealand Standard Guidelines for auditing management systems*; and
- *Independent Audit Guideline, Post-approval requirements for State significant developments*, October 2015. NSW Government.

The audit consisted of:

- Detailed desktop review of Orica’s environmental management documents
- Site inspection over two days
- Interview with key Orica staff, and
- Agency consultation.

Prior to the audit, the commitments and requirements made within the site’s environmental documents were compiled and reviewed.

The site inspection of the ANE Facility was undertaken on 17 and 18 October 2016. Weather on the 17 October 2016 at the time of the first site inspection was cool and raining which limited opportunity to see the full site. The following day, 18 October 2016, weather was fine and a complete walk over the site was possible.

During the inspection, the audit team observed site processes, procedures, documentation and operations. Electronic records held at the premises were sighted.

Interviews and discussions with key Orica staff were held during, and following, the site inspection, including:

- Frederick Oberholzer, Manufacturing Superintendent, Liddell and Kurri ANE Plants
- Denise Blackadder, Sustainability & Training Officer, Liddell & Kurri ANE Plants
- David Horne, ANE Plant Superintendent

- Operations staff
- Maintenance planner

Further information regarding agency consultation and feedback is provided at Section 3.0.

## 2.3 Assessment Criteria

The environmental documents audited are listed at Section 3.0. The compliance status of each requirement or commitment was assessed in accordance with the criteria in Table 2.1.

*Table 2.1: Compliance Assessment Criteria<sup>1</sup>*

Assessment	Criteria
Compliant	Where the auditor has collected sufficient verifiable evidence to demonstrate that the intent and all elements of the requirement of the regulatory approval have been complied with within the scope of the audit.
Not verified	Where the auditor has not been able to collect sufficient verifiable evidence to demonstrate that the intent and all elements of the requirement of the regulatory approval have been complied with within the scope of the audit. In the absence of sufficient verification the auditor may in some instances be able to verify by other means (visual inspection, personal communication, etc.) that a requirement has been met. In such a situation, the requirement should still be assessed as not verified. However, the auditor could note in the report that they have no reasons to believe that the operation is non-compliant with that requirement.
Non-compliant	Where the auditor has collected sufficient verifiable evidence to demonstrate that the intent of one or more specific elements of the regulatory approval have not been complied with within the scope of the audit.
Administrative non-compliance	A technical non-compliance with a regulatory approval that would not impact on performance and that is considered minor in nature (e.g. report submitted but not on the due date, failed monitor or late monitoring session). This would not apply to performance-related aspects (e.g. exceedance of a noise limit) or where a requirement had not been met at all (e.g. noise management plan not prepared and submitted for approval).
Not triggered	A regulatory approval requirement has an activation or timing trigger that had not been met at the time of the audit inspection; therefore a determination of compliance could not be made.
Observation	Observations are recorded where the audit identified issues of concern which do not strictly relate to the scope of the audit or assessment of compliance. Further observations are considered to be indicators of potential non-compliances or areas where performance may be improved.

<sup>1</sup> As per the DPE's *Independent Audit Guideline*, October 2015

Assessment	Criteria
Note	A statement or fact, where no assessment of compliance is required.

Risk levels for non-compliances have been identified consistent with Table 2.2. Risk levels have been determined by assessing the consequence of the risk and the likelihood of the risk arising. Descriptions of consequence and likelihood are provided at Appendix B.

*Table 2.2: Risk levels for non-compliances<sup>2</sup>*

Risk level	Colour code	Description
High		Non-compliance with potential for significant environmental consequences, regardless of the likelihood of occurrence
Medium		Non-compliance with: <ul style="list-style-type: none"> <li>• Potential for serious environmental consequences, but is unlikely to occur; or</li> <li>• Potential for moderate environmental consequences, but is likely to occur</li> </ul>
Low		Non-compliance with: <ul style="list-style-type: none"> <li>• Potential for moderate environmental consequences, but is unlikely to occur; or</li> <li>• Potential for low environmental consequences, but is likely to occur</li> </ul>
Administrative non-compliance		Only to be applied where the non-compliance does not result in any risk of environmental harm (e.g. submitting a report to government later than required under approval conditions)

## 2.4 Limitations of the Audit

The audit team received complete cooperation from all Orica staff during the audit. Orica supplied the documents reviewed for the audit. In the weeks following the audit, Orica provided documents not readily available at the time of the site inspection.

Following are the audit's limitations:

- Opinions presented in this report apply to the site's conditions and features, as they existed at the time of the audit team's site visit on 17 and 18 October 2016, and those reasonably foreseeable. They necessarily cannot apply to conditions and features of which the audit team is unaware of and has not had the opportunity to evaluate.
- The conclusions presented in this report are professional opinions based solely on the audit team's visual observations of the site and the immediate vicinity, and upon the audit team's interpretations of the documentation reviewed,

<sup>2</sup> As per the DPE's *Independent Audit Guideline*, October 2015

interviews and conversations with personnel knowledgeable about the site and other available information, as referenced in this report. These conclusions are intended exclusively for the purpose stated herein, at the site listed, and for the project indicated; and

- This report does not, and does not purport to, give legal advice on the actual or potential environmental liabilities of any individual or organisation, or to draw conclusions as to whether any particular circumstances constitute a breach of relevant legislation.

## 3.0 Consultation, Complaints and Reportable Incidents

This section outlines consultation undertaken for the audit, and provides information on complaints and reportable incidents during the three-year audit period.

### 3.1 Agency consultation

Key agencies with a role in regulating the ANE plant were contacted during the audit period to obtain their feedback. The following agencies were invited to comment:

- DPE
- EPA
- OEH
- Cessnock City Council

Other regulating agencies were not contacted, as they have no involvement in regulating the ANE plant and have had no contact with the site administration or approval processes:

- Consultation with DPI Water was not considered necessary, as the Orica Kurri Kurri site does not have a water licence.
- Consultation with the DRE was not considered necessary, as the plant does not engage directly in mining activities.

A written response was received from OEH following the invitation to comment (refer to Appendix C). In their response (17 November 2016) OEH confirmed that the biodiversity offset required by the Project Approval had been implemented in the form of a Conservation Agreement. OEH advised they do not have a formal role in the management of the site and therefore did not have any additional comments or advice in relation to the audit.

No other responses were received from the agencies that were contacted.

### 3.2 Community consultation

A Community Consultative Committee has not been established for Orica's Kurri Kurri site. There are also no close residents or community stakeholders with whom Orica has ongoing communication. Therefore, community members were not contacted or invited to provide feedback for the audit.

### 3.3 Complaints

There were no community, or other, complaints received by Orica during the audit period. None of the agencies contacted advised that there were any complaints received.

### 3.4 Reportable incidents

There were no reportable incidents at the ANE plant during the audit period.

## 4.0 Response to previous Independent Environmental Audit

The first Independent Environmental Audit (February, 2014) identified 32 non-compliances. The majority of the non compliances resulted from administrative oversights (62.5%), followed by training commitments (15.5%), actions from commitments not completed (12.5%), and an environmental incident (9.5%).

Recommendations for improvements stemming from the audit were provided in the 2014 audit report. Orica’s response to the 2014 Independent Environmental Audit recommendations is provided in Table 4.1 below.

*Table 4.1 – Orica’s response to 2014 Independent Environmental Audit*

Source	Reference	2014 Audit Recommendation	Orica Priority 2014	2017 Evidence Recommendation was implemented
Statement of Commitments	Section 6.6.2.2 of the EA outlines mitigation measures following the Transport Hazard Assessment. Most of the measures outlined in Section 6.6.2.2 have been included in the transport protocol, emergency plan, and other site documents. However, one of the mitigation measures refers to: “filling nozzles and loading facilities for the ANS, ANE and other chemicals are of different configurations and sizing to prevent incorrect loading”. This measure has not been referred to in any of the site documents.	Document “filling nozzles and loading facilities for the ANS, ANE and other chemicals are of different configurations and sizing to prevent incorrect loading” in the most appropriate site environmental management document.	MEDIUM	Completed. The filling nozzles of ANE, ANS and other chemicals at the plant are of different configurations and located in different physical locations. Safety measures are also in place to prevent incorrect loading. The plant operating manuals document the different filling nozzles.
	A review of energy efficiency will be undertaken as part of plant and equipment procurement.	Energy efficiency guidelines for purchases to be extended to cover all power consuming devices, not just motors.	LOW	Completed. Energy efficiency review was undertaken during procurement for MOD 2 infrastructure
EPL 4121	M1.3 The following records must be	Ensure all monitoring conducted for the EPL	HIGH	Completed. Monitoring complies

Source	Reference	2014 Audit Recommendation	Orica Priority 2014	2017 Evidence Recommendation was implemented
	kept in respect of any samples required to be collected for the purposes of this licence: a) the date(s) on which the sample was taken; b) the time(s) at which the sample was collected; c) the point at which the sample was taken; and d) the name of the person who collected the sample.	complies with these recording requirements.		with these recording requirements.
Emergency Plan	Controlled hard copy prints of the plan with manifests are held in the following locations onsite; Copy 1: Main Administrative building adjacent to the fire control panel Copy 2: Hazmat Box - Emergency Services information Package (ESIP) at the site main entrance near the Electrical Control Panel Copy 3: Chief Wardens office in the Haber building.	If no evidence of a failure to follow procedure is identified, revise procedure for document control to ensure that the documentation is updated at all points where controlled documentation is kept.	LOW	Completed. Emergency plan held at these locations
Road Transport Protocol	The Orica Technical Centre site Sign will be updated to reflect the relevant contact details for the RTP;	Update the sign as per the requirement.	MEDIUM	Completed. Sign has been updated
	Relevant Orica Technical Centre operational staff will be briefed on the RTP and its obligations.	Train relevant Orica Technical Centre operational staff in the RTP	MEDIUM	No evidence to verify this item. Orica intend to conduct a briefing with staff.
Vegetation Management Plan	Weed management	Ensure weed grasses (whisky grass, Coolatai grass and Rhodes grass) and minor weeds are	MEDIUM	Completed. These weeds are included in weed monitoring

Source	Reference	2014 Audit Recommendation	Orica Priority 2014	2017 Evidence Recommendation was implemented
		included in weed monitoring and assessed and controlled as necessary.		
	The Hunter Fire Management Plan includes an allowance for environmental land use categories. The environmental land use category recognises that the presence threatened species, populations and ecological communities affects the fire management activities to be undertaken. To ensure that these records are accurate for the site and in particular the Biodiversity Offset Area and inform the RFS land use mapping, Orica will provide the vegetation community and threatened species records for the Biodiversity Offset Area to the RFS.	Ensure the RFS has the documentation and consult with the RFS to ensure that the requirements of the Hunter Fire Management Plan are implemented appropriately for the environmental values of the Biodiversity Offset Area.	MEDIUM	The RFS has reviewed the latest iteration of the Emergency plan and are invited to site during the annual emergency drill. Their feedback is incorporated into combined feedback/results of the drill.
Environmental Management Strategy	Training	Revise the site induction to ensure that environmental roles and responsibilities and Orica Environmental Policies are included.	HIGH	Yes, this is now included
	The Technology Centre number isn't advertised on the entrance sign, and was not in the white pages.	Provide phone numbers as per the commitment.	HIGH	Adequate
	Corrective Actions	Ensure that employees receive feedback on corrective actions and that the monthly inspections review the effectiveness of the	HIGH	There is a feedback system within Enablon that provides feedback to employees

Source	Reference	2014 Audit Recommendation	Orica Priority 2014	2017 Evidence Recommendation was implemented
		implementation of corrective actions.		
	Participate in community pest animal control programs, and encourage neighbours to implement pest animal control programs. Contact your local National Parks office to find out if community control programs are occurring in the area.	Contact National Parks on an annual basis to determine if there are community control programs in the area.	MEDIUM	No direct consultation with National Parks and wildlife, however a wild dog eradication program has been implemented with adjoining landowners.
Observation from Site Inspection	During the site visits conducted 25 November 2013 and 3 December 2013, the auditor observed that the quality of rehabilitation on the upgradient bank towards the rear of the site was not acceptable. There were issues with dispersible soils and resulting erosion and poor vegetative cover.	<ol style="list-style-type: none"> <li>1. Get the soils tested to determine the correct amount of gypsum to add to ameliorate sodicity and the dispersive nature of the soils.</li> <li>2. Once the slope is reshaped and the soil treated, plant with <i>Hardenbergia violacea</i>, <i>Pandorea pandorana</i>, <i>Clematis</i> and <i>Kennedia rubicunda</i> – all natives and rapid growing climbers that as long as there is nothing to climb up should sprawl across the ground climbing over each other. Add <i>Lomandra longifolia</i> and <i>Dianella</i>. All dependent on availability.</li> <li>3. Plant at 0.3 - 0.5m spacing for a more rapid cover.</li> <li>4. Consider a physical mulch rather than hydro mulch given the lack of organic matter in the soil, use either compost from Sita or green waste mulch from Council. Both may have some weed seeds included but your weed contractor</li> </ol>	HIGH	Slope was successfully rehabilitated

Source	Reference	2014 Audit Recommendation	Orica Priority 2014	2017 Evidence Recommendation was implemented
		HLM should be able to deal with them relatively easily given the accessibility of the slope. 5. Maintain. Key point is getting the right amount of gypsum into the mix as it will prevent rework down the track.		

## 5.0 Documents Reviewed

Table 5.1 lists the documents reviewed to assess compliance for this audit – that is: the Project Approval; the strategies, plans and programs required under the Approval; and licences and permits. Table 5.1 also indicates where in this report the compliance of each document has been addressed.

*Table 5.1: Documents Assessed for Compliance*

Document	Where addressed in this audit report
<p>Project Approval</p> <ul style="list-style-type: none"> <li>• Project Approval 09_0090 (granted 26 July 2010)</li> <li>• MP 09_0090 MOD 1 (granted 9 November 2012)</li> <li>• MP 09_0090 MOD 2 (granted 4 July 2016).</li> </ul>	6.1
<p>Statement of Commitments</p> <ul style="list-style-type: none"> <li>• <i>Draft Statement of Commitments, Section 7.0, Orica ANE Facility and Continued Operations Environmental Assessment.</i> (EA) Prepared by Umwelt (Australia) Pty Limited, December 2009.</li> <li>• Mitigation measures from <i>Section 75W Modification to Project Approval 09_0090 Orica Australia Pty Limited, Ammonium Nitrate Emulsion Production Facility, Richmond Vale</i> (prepared by Umwelt, 14 April 2016).</li> </ul>	6.2
Environmental Protection Licence 4121	6.3
<p>Submissions Reports</p> <ul style="list-style-type: none"> <li>• <i>Proposed Ammonium Nitrate Emulsion (ANE) Production Facility and Continued Operation of Orica Mining Services Technology Centre, Richmond Vale, NSW - Response to Submissions, Prepared by Umwelt (Australia) Pty Limited. March 2010.</i></li> <li>• <i>Orica Ammonium Nitrate Emulsion Facility – Mod 2 Response to Submissions</i>, prepared by Umwelt, 25 May 2016.</li> </ul>	6.4
<p>Fire Safety Study</p> <ul style="list-style-type: none"> <li>• <i>“FIRE SAFETY STUDY PROPOSED ANE FACILITY KURRI KURRI TECHNOLOGY CENTRE”</i> (Rev 3, 14 September 2011) prepared by Sherpa Consulting.</li> </ul>	6.5
<p>Emergency Plan</p> <ul style="list-style-type: none"> <li>• <i>“ORICA AUSTRALIA PTY LTD KURRI KURRI TECHNICAL CENTRE EMERGENCY PLAN”</i> prepared/updated by Orica. REVISION 10, 10/9/2015</li> </ul>	6.6
<p>Safety Management System</p> <ul style="list-style-type: none"> <li>• <i>“ORICA KURRI KURRI SAFETY MANAGEMENT SYSTEM”</i>, November 2011. Prepared by Orica,</li> </ul>	6.7

Document	Where addressed in this audit report
Road Transport Protocol <ul style="list-style-type: none"> <li>“Orica ANE Production Facility Road Transport Protocol” prepared by Umwelt (Australia) Pty Limited, April 2015.</li> </ul>	6.8
Vegetation Management Plan <ul style="list-style-type: none"> <li>“Biodiversity Offset Area Vegetation Management Plan” (January 2012) prepared by Umwelt (Australia) Pty Limited</li> </ul>	6.9
Bushfire Threat Assessment <ul style="list-style-type: none"> <li><i>Bushfire Threat Assessment</i>, October 2011. Prepared by Bushfire Consulting Specialists.</li> </ul>	6.10
Soil and Water Management Plan <ul style="list-style-type: none"> <li>“Operation Soil and Water Management Plan for Ammonium Nitrate Emulsion Production Facility” (January 2012) prepared by Umwelt (Australia) Pty Limited.</li> </ul>	6.11
Environmental Management Strategy <ul style="list-style-type: none"> <li>“Environmental Management Strategy - Operations” prepared by AECOM Australia, February 2012.</li> </ul>	6.12

Table 5.2 provides some detail on the key approval and licence held by the ANE Plant.

*Table 5.2: Status of ANE Plant Approvals and Licences*

Approval Type	Granted	Granting Authority	Detail
Project Approval 09_0090	26 July 2010	NSW Department of Planning	For the Orica Ammonium Nitrate Emulsion Project, Richmond Vale in the Cessnock City local government area.
MP 09_0090 MOD 1 (Modification to the Project Approval)	9 November 2012	NSW Department of Planning	Modified conditions of approval with additional Hazard and Risk conditions
MP 09_0090 MOD 2 (Modification to the Project Approval)	4 July 2016	NSW Department of Planning and Environment	Modified conditions of approval by installation of a heat exchanger and cooling tower to enable the cooling of the ANE plant during production
Environmental Protection Licence 4121	Anniversary Date: 4 January	NSW Office of Environment and Heritage	For Dangerous Goods Production >25000T produced and Explosives production 0-2000T produced.
Licence to Manufacture Explosives	Date of Expiry: 15/06/2021	WorkCover NSW	To manufacture, supply, possess, store the class of explosives listed

Approval Type	Granted	Granting Authority	Detail
XMNF100002			
Licence to operate a major hazard facility. Licence number: 10277-01	Date of expiry: 23/10/2017	WorkCover NSW	Licence is granted under the <i>Work Health and Safety Regulation 2011</i> by SafeWork NSW to operate a major hazard facility subject to the conditions in SafeWork NSW's letter to the operator dated 23 October 2015.

## 6.0 Audit Findings

Non-compliances found during the audit for each document are detailed below. Recommendations made by the auditor in relation to compliance are provided at Section 9.

### 6.1 Project Approval 09\_0090

The Project Approval was modified during the audit period. A detailed assessment of compliance for each condition in the Project Approval 09\_0090 (as modified) is provided at Appendix B (Table B1). Table 6.1 (below) is a summary of the conditions that were found to be non-compliant during the audit.

There were six non-compliances. The risk level of each non-compliance is identified in Table 6.1. Five of the non-compliances were administrative. One non-compliance was identified as low risk.

*Table 6.1: Non-compliances against Project Approval 09\_0090*

Reference	Commitment	Audit Finding		Risk level
Schedule 2 – Structural Adequacy, condition 8	The Proponent shall ensure that all new buildings and structures on the Project Site are constructed in accordance with the relevant requirements of the Building Code of Australia. Notes: Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works. Part 8 of the EP&A Regulation sets out the requirements for the certification of the Project.	No evidence was provided to demonstrate that the new structures on the Project Site were constructed in accordance with the relevant requirements of the Building Code.	Admin Non-compliance	Admin. non-compliance
Schedule 3 – Hazards, condition 5	Twelve months after the commencement of operations of the proposed ANE Facility and every three years thereafter, or at such intervals as the Director-General may agree, the Proponent shall carryout a comprehensive Hazard Audit of the site and within one month of each audit submit a report to	Based on the date operations commenced (7 February 2012), the second Hazard Audit was due to be conducted by 7 February 2016, and the report due to be submitted to the Director-General by 7 March 2016. Planager was approved by DPE to conduct the second Hazard Audit. The audit was held	Admin. non-compliance	Admin. non-compliance

Reference	Commitment	Audit Finding		Risk level
	<p>the Director-General.</p> <p>a) The audits shall be carried out at the Proponent's expense by a qualified person or team, independent of the overall site, approved by the Director-General prior to commencement of each audit. Hazard Audits shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No.5, 'Hazard Audit Guidelines'.</p> <p>b) The audit report must be accompanied by a program for the implementation of all recommendations made in the audit report. If the Proponent intends to defer the implementation of a recommendation, reasons must be documented.</p>	November/December 2015. However, the Audit Report (dated 5 June 2016) wasn't submitted to DPE until 20 June 2016. All documents were sighted during the audit.		
Schedule 3 – Independent Traffic Audit, condition 11a	<p>This audit must:</p> <p>a) have the verification component of the audit undertaken without prior notice to the Proponent,</p>	The traffic audit does not state that the verification component of the audit was undertaken without prior notice to the Proponent. The independent traffic audit report was prepared 6 July 2015 and submitted to the Director-General 8 July 2015. DPE wrote to Orica (23.10.16) requesting "That future ITAs clearly state that the verification component of the audit was undertaken without prior notice to the Proponent in accordance with Schedule 3, Condition 11(a).	Non-compliant	Low
Schedule 3 – Independent Traffic Audit, condition 11	Within 1 month of commissioning the audit, or as otherwise agreed by the Director-General, the Proponent shall submit a copy of the audit report to the Director-General, with	The independent traffic audit report was prepared 6 July 2015 and submitted to the Director-General 8 July 2015. The written submission to the Director-General did not	Admin. non-compliance	Admin. non-compliance

Reference	Commitment	Audit Finding		Risk level
	<p>a response to any of the recommendations contained in the audit report.</p>	<p>include a response to the recommendations contained in the audit report. DPE wrote to Orica requesting a response to the traffic audit's recommendations be provided by 11 November 2015. Orica provided DPE their response to the audit's recommendations 10 November 2015. Therefore, the information was submitted, but not in the timeframe stipulated.</p>		
<p>Schedule 4 - AEMR, condition 2</p>	<p>Within 12 months of this approval, and annually thereafter, the Proponent shall submit an Annual Environmental Management Report (AEMR) for the Project to the Director-General. The report must:</p> <ul style="list-style-type: none"> <li>a) identify the standards and performance measures for the project;</li> <li>b) describe the works carried out in the past 12 months and the works to be carried out in the next 12 months;</li> <li>c) include a summary of complaints received in the past year and provide comparison with previous years;</li> <li>d) report results of all monitoring required by this approval and an EPL for the project;</li> <li>e) provide analysis of monitoring results in the context of relevant criteria and limits, previous monitoring results and the predictions made in the EA;</li> <li>f) identify any trends in monitoring results over the life of the project; and</li> <li>g) report on compliance with the project approval, summarise non-compliances in the</li> </ul>	<p>Project approval 09_009 is dated 26 July 2010. Therefore, Orica's annual AEMR is required to be submitted before the 26 July each year.</p> <p>Within this audit period, three AEMRs were scheduled to be submitted to the Director-General. The 2014 and 2016 AEMR's were submitted by the 26 July of the year they were due. However, the 2015 AEMR was submitted 31 August 2015. The content of each of the AEMR's satisfies the content requirements of the condition.</p>		<p>Admin. non-compliance</p> <p>Admin non-compliance</p>

Reference	Commitment	Audit Finding		Risk level
	previous 12 months and report on actions taken to rectify non-compliances.			
Schedule 4 – Auditing, condition 5	From the end of 2010, the Proponent shall provide regular reporting on the environmental performance of the Project on its website, including ensuring the following information is publicly available on its website: a) a copy of all current approvals b) a copy of the current environmental management strategy and associated plans and programs c) a copy of any Annual Reports (over the last 5 years) d) a copy of any Independent Environmental Audit, and the Proponent's response to the recommendations in any audit; and e) any other matter required by the Director-General.	<p>Orica's ANE Facility website (<a href="http://www.orica.com/">www.orica.com/</a> Sustainability/Environmental-Monitoring-Data/Kurri-Kurri/Environmental-Assessment#reports) contains the reports and approvals relevant to the site.</p> <p>The following information was missing from the website when checked by the audit team 4 November 2016: - Mod 2 statutory approval from the DPE - the 2016 Annual Environmental Management Report - The EMP</p>	Admin. Non-compliance	Admin. Non-compliance

## 6.2 Statement of Commitments

The Statement of Commitments identifies commitments made by Orica when applying for project approval. In Orica's application to modify the Project Approval (14 April 2016), a commitment was made to notify residents. This additional commitment has been added to the Statement of Commitments made in the Environmental Assessment (December, 2009).

A detailed assessment of compliance for each commitment is provided at Appendix B (Table B2). Table 6.2 (below) is a summary of the commitments that were found to be non-compliant during the audit.

There were two non-compliances identified during the audit. The risk level of each non-compliance is identified in Table 6.2. One non-compliance was identified as medium risk. One non-compliance was administrative.

Table 6.2: Non-compliances against Statement of Commitments

Issue	Commitment	Audit Finding		Risk level
Bushfire	Construction materials for the proposed ANE Production Facility will comply with the Building Code of Australia (BCA) for bushfire protection where applicable.	No evidence was provided to demonstrate that the new structures on the Project Site were constructed in accordance with the relevant requirements of the Building Code.	Admin. non-compliant	Admin non-compliance
Notification	<p>Prior to Mod 2 construction Orica will provide written notification to nearby residents prior to construction commencing. This notification will include (but not be limited to):</p> <ul style="list-style-type: none"> <li>• a brief description of the proposed modification</li> <li>• describe the fact that the Hazard/Risk profile of the site will not change</li> <li>• describe the potential visible water vapour plume from the cooling tower under certain meteorological conditions</li> <li>• describe the justification for the proposed modification</li> <li>• provide contact numbers for complaints/enquiries.</li> </ul>	The Department of Planning notified residents of the application for mod 2 (2 May 2016). There was no further notification to residents by Orica prior to construction commencing that included the items required.	Non-compliant	Medium

### 6.3 Environmental Protection Licence 4121

A detailed assessment of compliance with each condition in EPL 4121 is provided at Appendix B (Table B3). Table 6.3 (below) is a summary of the commitments that were found to be non-compliant during the audit.

There was one administrative non-compliance identified during the audit.

Table 6.3: Non-compliances against EPL 4121

Condition	Requirement	Audit Finding		Risk level
E1.1	The Licensee must submit an Annual Performance Report with each Annual Return.	The Annual Performance Report was prepared but was not submitted with the 2016 Annual Return when it was submitted to	Admin. Non-compliant	Admin non-compliance

Condition	Requirement	Audit Finding		Risk level
		the EPA 4 March 2016. The EPA website records a "Failure to submit Annual Performance Report with Annual Return. EPA has written to licensee regarding non-compliance and relevant action".		

## 6.4 Submissions Report

The Submissions Report identifies issues raised by stakeholders during the 2009 application for Project Approval. It also identifies the commitments made by Orica at the time. In Orica's application to modify the Project Approval (14 April 2016, MOD 2), further issues were raised by stakeholders and additional commitments made by Orica. The additional commitments have been added to the original Statement of Commitments.

A detailed assessment of compliance for each commitment made in the Submissions Report is provided at Appendix B (Table B4). Table 6.4 (below) is a summary of the commitments that were found to be non-compliant during the audit.

There were three non-compliances. The risk level of each non-compliance is identified in Table 6.4. One non-compliance was identified as medium risk. Two non-compliances were identified as low risk.

Note: In accordance with the Submissions Report, during the audit period, the Cooling Tower was required to be registered with Cessnock City Council, which it was on 25 October 2016. However, the NSW Public Health Act, 2010, Part 3, Division 2, Section 31 requires notification to Council within a month of installation. Installation of the Cooling Tower occurred 9 September 2016. Therefore, Orica were in breach of the Act at the time of the audit. Although this breach is not strictly environmental, a role of this audit is to identify any environmental legislation breaches, and the Public Health Act provides background to the requirement to notify and register the heat exchanger in the Submissions Report.

*Table 6.4: Non-compliances against the Submissions Report*

Issue	Commitment	Audit Finding		Risk level
Cessnock City Council: Construction works associated with the development in accordance with a development consent shall not be commenced until:- (a) detailed plans including design calculations have been endorsed with a	Agreed	A construction certificate for MOD 2 infrastructure was not obtained. An exemption from the BCA approval was not obtained.	Non-compliant	Low

Issue	Commitment	Audit Finding		Risk level
<p>construction certificate by:-            (i) the consent authority;            (ii) an accredited certifier, and            (b) the person having the benefit of the development consent:-            (i) has appointed a principal certifying authority, and            (ii) has notified Council of the appointment, and            © the person having the benefit of the development consent has given at least 2 days notice to the Council of the person's intention to commence construction works.</p>				
<p>NSW Fire Brigade: The NSWFB would expect any new building proposals and substantial alterations to existing buildings to comply with the current BCA and relevant Australian Standards</p>	<p>The NSWFB commented that any new building proposal and substantial alterations to existing buildings comply with the current Building Code of Australia (BCA) and Relevant Australian Standards, which Orica agree to comply with."</p>	<p>A construction certificate for MOD 2 infrastructure was not obtained. An exemption from the BCA approval was not obtained.</p>	<p>Non-compliant</p>	<p>Low</p>
<p>DECCW: The applicant must continue to consult with and involve the registered Aboriginal stakeholders for the project, in the ongoing management of the Aboriginal Cultural Heritage values.</p>	<p>Agreed, as appropriate</p>	<p>Artefacts identified and collected during the original construction remain in Orica's care. Discussions need to be held with Aboriginal stakeholders regarding permanent keeping place an ongoing management of artefacts.</p>	<p>Non-compliant</p>	<p>Medium</p>

## 6.5 Fire Safety Study

A detailed assessment of compliance for each commitment in the Fire Safety Study is provided at Appendix B (Table B5). No non-compliances were identified during the audit.

## 6.6 Emergency Plan

A detailed assessment of compliance for each commitment in the Emergency Plan is provided in Appendix B (Table B6). Table 6.6 (below) is a summary of the commitments that were found to be non-compliant during the audit.

There were two non-compliances. The risk level of each non-compliance is identified in Table 6.6. One non-compliance was medium risk. The other non-compliance was administrative.

*Table 6.6: Non-compliances against the Emergency Plan*

Section	Commitment	Audit Finding	Risk level
1 Introduction	This plan has been submitted to the Director-General NSW Department of Planning for approval and must be resubmitted for approval when there are significant changes to the plan.	The addition of new infrastructure to the site could be considered as a significant change to the plan. No evidence provided to demonstrate updated plan was submitted to DPE	Admin non-compliant Admin non-compliance
8.9.1 Emergency Radios	Two selected wardens from each wing, building, and facility have been issued with a portable secure channel 2-way radio. Radios are tested each Monday as part of the emergency alarm testing.	No evidence provided to demonstrate they are tested	Non-compliant Medium

## 6.7 Safety Management System

A detailed assessment of compliance for each commitment made in the Safety Management System is provided in Appendix B (Table B7). Table 6.7 (below) is a summary of the commitments that were found to be non-compliant during the audit.

There were two non-compliances. The risk level of each non-compliance is identified in Table 6.7. Both non-compliances were administrative.

*Table 6.7: Non-compliances against the Safety Management System*

Issue	Commitment	Audit Finding	Risk level
14.3.1 Specialist SH&E Training	Additionally, all principal Site Managers undergo a Site Manager's Competency Assessment, and preparation of a development plan at least every four years. The Engineering Shared Services team is responsible for scheduling	Refers to an interview process for Letter of Assurance. This no longer happens.	Admin. Non-compliance Admin non-compliance

Issue	Commitment	Audit Finding		Risk level
	the competency assessment.			
17.2 Letter of Assurance	The Letter of Assurance process is used to report SH&E Assurance annually to the Chief Executive Officer (CEO) of Orica Ltd. Letters of Assurance are prepared by each Site Manager, using information gained during audits conducted during the period, the results of investigations into incidents and reviews with the Site Management Team.	This process no longer happens. Letter of assurance is redundant due to new processes.	Admin. Non-compliance	Admin non-compliance

## 6.8 Road Transport Protocol

A detailed assessment of compliance for each commitment in the Road Transport Protocol is provided at Appendix B (Table B8). No non-compliances were identified during the audit.

## 6.9 Vegetation Management Plan

A detailed assessment of compliance for each commitment in the Vegetation Management Plan is provided at Appendix B (Table B9). Table 6.9 (below) is a summary of the commitments that were found to be non-compliant during the audit.

There were two non-compliances. The risk level of each non-compliance is identified in Table 6.9. One non-compliance was low risk. One non-compliance was administrative.

*Table 6.9: Non-compliances against the Vegetation Management Plan*

Section	Commitment	Audit Finding		Risk level
4.4.3.1 Weed Control Program Inspection and Monitoring	The weed control program will also be reviewed following the annual ecological monitoring event for the Biodiversity Offset Area. Where required the weed control program will be modified to address any noxious or significant weeds that have not been discussed in this management plan or any newly established weed infestations. At this time the frequency of weed monitoring inspections may be varied, as the occurrence and density of weed species decreases with	No evidence provided to demonstrate that the weed control program is reviewed following the annual ecological monitoring event.	Non-compliance	Low

Section	Commitment	Audit Finding		Risk level
	ongoing weed control activities.			
7.0 Review	A review of this VMP is to be undertaken every three years or as required. The revised version of the VMP will be submitted to DP&I and OEH for review as necessary.	The ORICA RICHMOND VALE BIODIVERSITY OFFSET AREA MONITORING REPORT – 2016 states that the Vegetation Management Plan (VMP) was revised in 2015 (Umwelt 2015). It does not state whether the VMP was submitted to DP&I and OEH.	Admin. non-compliance	Admin non-compliance

## 6.10 Bushfire Threat Assessment

A detailed assessment of compliance for each commitment made in the Bushfire Threat Assessment is provided at Appendix B (Table B10). There were no conditions that were found to be non-compliant during the audit.

## 6.11 Soil and Water Management Plan

A detailed assessment of compliance for each commitment in the Soil and Water Management Plan is provided at Appendix B (Table B11). Table 6.11 (below) is a summary of the commitments that were found to be non-compliant during the audit.

There were two non-compliances. The risk level of each non-compliance is identified in Table 6.11. Both non-compliances were low risk.

*Table 6.11: Non-compliances against the Soil and Water Management Plan*

Section	Commitment	Audit Finding		Risk level
Table 5.1 – Operation Erosion and Sediment Controls Requirements for the ANE Production Facility Operation Phase Requirements	Maintain existing upslope diversion bunds. Maintain concentrated water channels adjacent to diversion bunds to prevent erosion and down slope sedimentation.	Sighted monthly inspections in SAP. Erosion sighted in the clean water diversion during site inspection. This requires action, currently not compliant with this commitment.	Non-compliant	Low
Table 6.1 – Stormwater Management Measures – Clean Water Diversion	Regular inspection of clean water diversions, especially following rainfall events. Carry out repairs as required to ensure they remain in good working condition.	Sighted monthly inspections in SAP. Erosion sighted in the clean water diversion during the site inspection. This requires action, currently not compliant with this commitment	Non-compliant	Low

## 6.12 Environmental Management Strategy

A detailed assessment of compliance for each commitment in the Environmental Management Strategy is provided at Appendix B (Table B12). Table 6.12 (below) is a summary of the commitments that were found to be non-compliant during the audit.

There were 15 non-compliances. The risk level of each non-compliance is identified in Table 6.12. Five non-compliances were administrative. One non-compliance was low risk and 9 were medium risk.

*Table 6.12: Non-compliances against the Environmental Management Strategy*

Section	Commitment	Audit Finding		Risk level
2.1 Environmental Aspects	The Register [of Environmental Aspects] will be reviewed every two years, and changes to the identification of aspects, the assessment of risk, and the identification of control measures to reduce the risk will be implemented as required.	No evidence was provided to demonstrate reviews of the EMS. Reviews were due by the 24 February 2014 and 24 February 2016	Non-compliant	Medium
2.2 Legal and Other Requirements	Should the scope of current operations change, or if a development application is to be lodged for alterations or extensions to the ANE Facility or its associated lands, applicable legislation and environmental planning instruments should be investigated, and this section should be updated, to ensure currency.	The EMS has not been updated during the audit period. There have been legislative changes within the audit period that need to be made to the EMS. The legal register and environmental aspects need to be updated.	Non-compliant	Medium
2.3 Objectives and Targets	It is expected that these objectives and targets will be reviewed at least every two years to ensure they are actively achieving best practice in environmental management, and are still relevant to local conditions and the legislative framework. New objectives may be determined and new targets set over time.	The EMS has not been updated during the audit period.	Non-compliant	Medium
3.3.2.3 ANE Facility Website	In accordance with the Project Approval (Schedule 4, Condition 5): From the end of 2010, the Proponent shall provide regular reporting on the environmental performance of the Project on its website, including ensuring the following information is publicly available on its website: a) A copy of all current	Orica's ANE Facility website ( <a href="http://www.orica.com/Sustainability/Environmental-Monitoring-Data/Kurri-Kurri/Environmental-Assessment#reports">http://www.orica.com/Sustainability/Environmental-Monitoring-Data/Kurri-Kurri/Environmental-Assessment#reports</a> ) contains the reports and approvals relevant to the site.	Admin non-compliance	Admin non-compliance

Section	Commitment	Audit Finding		Risk level
	<p>statutory approvals;</p> <p>b) A copy of the current environmental management strategy and associated plans and programs;</p> <p>c) A copy of any Annual Reports (over the last 5 years);</p> <p>d) A copy of any Independent Environmental Audit, and the Proponent's response to the recommendations in any audit;</p> <p>e) Any other matter required by the Director-General.</p> <p>The OMS SH&amp;E team is responsible for providing the environmental content to ensure compliance with the placement of relevant information on the website and for ensuring the content as required in Condition 5 is publicly available on the website: (<a href="http://www.oricaminingservices.com/au/en/page/about/kurri_kurri_ane_environmental_assessment">http://www.oricaminingservices.com/au/en/page/about/kurri_kurri_ane_environmental_assessment</a>) about us - Kurri Kurri ANE Environmental Assessment.</p>	<p>The following information was missing from the website when checked by the audit team 4 November 2016:</p> <ul style="list-style-type: none"> <li>- Mod 2 statutory approval from the DPE</li> <li>- the 2016 Annual Environmental Management Report</li> </ul>		
3.3.2.6 Community Consultation and Support	<p>The Technical Centre site will implement a community consultative group which will include representatives from local government, emergency services and local residents. This group will provide a communication conduit between the site and the local community and provide feedback on business performance and discuss community concerns.</p>	<p>Although Orica conduct informal discussions with local businesses and community, there is not an established Community Consultative Committee run in accordance with DPE guidelines</p>	Non-compliant	Medium
4.1 Monitoring and Evaluation	<p>the EMPs will be formally audited on an annual basis by the Technology Centre site Manager with the SH&amp;E team representative.</p>	<p>The EMPs were not formally audited annually during the audit period.</p>	Non-compliant	Medium
4.3 Records	<p>Appropriate records are required to be maintained and should include records of:</p> <ul style="list-style-type: none"> <li>- Any mandatory or voluntary Audits;</li> <li>- Document revisions;</li> </ul>	<p>There were no records of audits during the audit period.</p>	Admin non-compliance	Admin non-compliance

Section	Commitment	Audit Finding		Risk level
	- Training records; - Inspection and Monitoring records; and - Complaints.			
4.4.1 Internal Audits	The EMS shall be audited on two-yearly (biennial) basis. Biennial audits will also be conducted of the site-specific Management Plans referred to in this EMS.	The EMS and site specific management plans were not audited during the audit period.	Non-compliant	Medium
4.4.1 Internal Audits	Regular Internal audits will be conducted by the OMS SH&E team representative or other SH&E staff. However where appropriate and/or required, internal audits may be undertaken by a suitably qualified external auditor.	The EMS and site specific management plans were not audited during the audit period.	Non-compliant	Medium
4.4.1 Internal Audits	Internal audits must assess the implementation of all documentation associated with the EMS and their effectiveness. The format of the audits will be decided by the SH&E team. The results of the audits must be recorded and communicated to the ANE Facility Manager, together with suggested corrective actions that may be required. The ANE Facility Manager will need to agree to any corrective or preventive actions which may be required, as these may need to be reflected in contractual conditions.	The EMS and site specific management plans were not audited during the audit period.	Non-compliant	Medium
4.4.1 Internal Audits	All auditing records will be maintained by the SH&E team. A formal audit report must be prepared for each audit undertaken.	The EMS and site specific management plans were not audited during the audit period.	Non-compliant	Medium
5.0 Review	This EMS will be reviewed every year to determine the effectiveness of any corrective actions identified in the various audits. The review process will enable changes in environmental legislation and guidelines, and changes in site management to be reflected in the EMS. The reviews should aim to review the continuing suitability and effectiveness of the EMS,	The EMS was not reviewed every year during the audit period.	Admin non-compliance	Admin non-compliance

Section	Commitment	Audit Finding		Risk level
	<p>and should at least include the following considerations:</p> <ul style="list-style-type: none"> <li>- Are the EMS objectives and targets adequate? Are they still the key priorities? They may need to be revised to reflect changing conditions and information.</li> <li>- Are the environmental outcomes at the site acceptable?</li> <li>- Is the Environmental Aspects Register still relevant? Are there further environmental aspects that need to be considered? Are the mitigating measures effective?</li> <li>- Is the site infrastructure functioning efficiently to allow the achievement of environmental goals?</li> <li>- How could the EMS be improved?</li> </ul>			
5.0 Review	The review will be led by the OMS SH&E team and approved by the ANE Facility Manager.	The EMS was not reviewed every year during the audit period.	Admin non-compliance	Admin non-compliance
5.0 Review	If it is determined that the EMS is to be revised following the review the revised EMS should be made available at the ANE Facility, and communicated to employees and contractors, within four months following the review.	The EMS was not reviewed every year during the audit period.	Admin non-compliance	Admin non-compliance
Appendix H, Maintenance of the Conservation Area, Pest animals, Annexure C, Item 1b	<p>Participate in community pest animal control programs, and encourage neighbours to implement pest animal control programs. Contact your local National Parks office to find out if community control programs are occurring in the area.</p> <p>Timing: TBD. Contact National Parks on an annual basis to determine if there are community control programs in the area.</p>	National Parks has not been contacted to determine if there are community control programs in the area. However, a wild dog eradication program has been implemented with adjoining landowners.	Non-compliant	Low

## 7.0 Assessment of Environmental Performance

This section provides an assessment of the environmental performance of the ANE Plant, and its effects on the surrounding environment, as required by Schedule 4, Condition 4(b) of the Project Approval 09\_0090 (as modified).

A summary of audit findings is presented at Table 7.1.

*Table 7.1: Summary of audit findings*

Document and Section in this audit report	Total Non-compliances	Risk Level			
		Admin.	Low	Medium	High
6.1 Project Approval	6	5	1	0	0
6.2 Statement of Commitments	2	1	0	1	0
6.3 EPL 4121	1	1	0	0	0
6.4 Submissions Report	3	0	2	1	0
6.5 Fire Safety Study	0	0	0	0	0
6.6 Emergency Plan	2	1	0	1	0
6.7 Safety Management System	2	2	0	0	0
6.8 Road Transport Protocol	0	0	0	0	0
6.9 Vegetation Management Plan	2	1	1	0	0
6.10 Bushfire Threat Assessment	0	0	0	0	0
6.11 Soil and Water Management Plan	2	0	2	0	0
6.12 Environmental Management Strategy	15	5	1	9	0
<b>TOTAL</b>	<b>35</b>	<b>16 (45.7%)</b>	<b>7 (20%)</b>	<b>12 (34.3%)</b>	<b>0</b>

As shown in Table 7.1, 35 non-compliances were identified during the audit. The majority of the non-compliances (45.7%) resulted from administrative oversights. Twenty percent of the non-compliances were low risk, and 34.3% of the non-compliances were medium risk. There were no high risk non-compliances.

Of the 19 low and medium non-compliances identified during the audit, most (68%) related to two key issues: oversight in report reviewing/auditing, and tasks related to community stakeholder relationships.

Eight of the 12 medium risk non-compliances (66.6%) concerned the failure to undertake annual or biennial reviews (or audits) of the Environmental Management Strategy and other site environmental management plans. One low risk non-compliance concerned the failure to review the weed management program.

Three of the medium risk compliances concerned the failure to implement certain community stakeholder requirements, such as implementing a Community Consultative Committee, liaising with aboriginal stakeholders and notifying residents with details and complaint contacts regarding the MOD 2 upgrade. One low risk non-compliance concerned the failure to contact a stakeholder (NSW National Parks).

The remaining medium risk non-compliance concerned verification of warden phone testing. Other low risk non-compliances concerned: the failure to obtain a construction certificate (or exemption), erosion control near the perimeter fence, and verification the traffic audit was undertaken without prior notice.

Whilst a number of non-compliances have been identified during this audit, not all have resulted in recommendations being made.

## 8.0 Review the Adequacy of any Strategy / Plan / Program

This section addresses Schedule 4, Condition 4(d), of Project Approval 09\_0090 (as modified), which requires this audit to:

*review the adequacy of any strategy/plan/program required under this approval.*

Most of the existing site management plans in use at the existing technology centre are adequate. However, several of the plans that were developed or modified in accordance with the project approval for the ANE plant, have not been reviewed or modified since the commencement of operations 7 February 2012.

Given a key finding of this audit has concerned the failure to undertake reviews of some of the key site management documents, it will be important that the documents are scheduled for review, and that changes at the site, including the MOD 2 infrastructure, are addressed in the updated plans as appropriate.

## 9.0 Recommendations

This section addresses Schedule 4, Condition 4(e), of the Project Approval 09\_0090 (as modified) which requires this audit to:

*if necessary, recommend measures or actions to improve the environmental performance of the Project, and/or any strategy/plan/program required under this approval.*

This Independent Environmental Audit audited the Project Approval, EPL, statement of commitments, the submissions report and the relevant management plans, and identified a total of 35 non-compliances.

Table 9.1 presents key recommendations stemming from this audit in relation to compliance with approvals and management plans. Table 9.1 is intended to provide guidance for Orica in resolving non-compliances identified during the audit, and other observances at the ANE Plant.

*Table 9.1 – Consolidated Audit Recommendations*

Source	Reference	Commitment	Recommendation
Project Approval	Schedule 3 – Hazards, condition 4.1	Within 3 months of the approval of Modification 2. or further time agreed with SafeWork NSW, the applicant shall update the current MHF Safety Case for the facility and provide the relevant information of SafeWork NSW.	To remain compliant, Orica will need to submit the updated Safety Case to SafeWork NSW on or before 27 April 2017.
Project Approval	Schedule 3 – Hazards, condition 5	Twelve months after the commencement of operations of the proposed ANE Facility and every three years thereafter, or at such intervals as the Director-General may agree, the Proponent shall carryout a comprehensive Hazard Audit of the site and within one month of each audit submit a report to the Director-General. a) The audits shall be carried out at the Proponent's expense by a qualified person or team, independent of the overall site, approved by the Director-General prior to commencement of each audit. Hazard Audits shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No.5, 'Hazard Audit Guidelines'. b) The audit report must be accompanied by a program for the implementation of all recommendations made in the audit report. If the Proponent intends to defer the implementation of a recommendation, reasons must be documented.	To meet consent time frames, the next Hazard Audit is due to be conducted by 7 February 2019, and the report due to be submitted to the Director-General by 7 March 2019.
Project	Schedule 3 –	Independent Traffic Audits must have	As requested by DPE in

Source	Reference	Commitment	Recommendation
Approval	Independent Traffic Audit, condition 11a	the verification component of the audit undertaken without prior notice to the proponent.	their letter to Orica (23.10.16) future ITAs must clearly state that the verification component of the audit was undertaken without prior notice to the Proponent
Project Approval	Schedule 3 – Independent Traffic Audit, condition 11f	Within 1 month of commissioning the audit, or as otherwise agreed by the Director-General, the Proponent shall submit a copy of the audit report to the Director-General, with a response to any of the recommendations contained in the audit report.	In future submissions of ITAs include a response to audit recommendations.
Emergency Plan	1.5.1 Document control and Distribution	This plan has been submitted to the Director-General NSW Department of Planning for approval and must be resubmitted for approval when there are significant changes to the plan.	Check with DPE regarding their need to review. If not required, remove the requirement to submit to Director-General from the document. The Plan is submitted to NSW Fire and Rescue when external review is required.
Safety Management System	14.3.1 Specialist SH&E Training	Additionally, all principal Site Managers undergo a Site Manager's Competency Assessment, and preparation of a development plan at least every four years. The Engineering Shared Services team is responsible for scheduling the competency assessment.	We suggest that the document be updated to reflect new process.
Safety Management System	17.2 Letter of Assurance	The Letter of Assurance process is used to report SH&E Assurance annually to the Chief Executive Officer (CEO) of Orica Ltd. Letters of Assurance are prepared by each Site Manager, using information gained during audits conducted during the period, the results of investigations into incidents and reviews with the Site Management Team.	We suggest report is updated to reflect updated process
Road Transport Protocol	1.3.2 Truck controls	Licensing of all vehicles by the relevant regulatory authority	It is recommended that the document be revised to put the responsibility back onto the contractor as Orica can't control this.
Road Transport Protocol	3.2 Compliance	Drivers found to be non-compliant may be subjected to Orica's disciplinary process or prevented from delivering to site in the case of contract or delivery drivers.	We suggest that the document is revised to put the responsibility back onto the contractor as Orica can't control this.
Soil and Water Management Plan	Table 5.1	Maintain existing upslope diversion bunds. Maintain concentrated water channels adjacent to diversion bunds to prevent erosion and down slope	Undertake measures to reduce erosion in clean water diversion.

Source	Reference	Commitment	Recommendation
		sedimentation.	
Soil and Water Management Plan	Table 6.1	Regular inspection of clean water diversions, especially following rainfall events. Carry out repairs as required to ensure they remain in good working condition.	Undertake measures to reduce erosion in clean water diversion.
Soil and Water Management Plan	4.0 Legislative Requirements	In addition to Orica's legislative requirements detailed in Section 2.0 of the EMS-O, Orica will undertake stormwater, erosion and sediment management in accordance with: <ul style="list-style-type: none"> <li>• Project Approval (09_0090);</li> <li>• Environmental Protection Licence (number 4121);</li> <li>• Protection of the Environment Operations Act 1997 (PEO Act), administered by the NSW Department of Environmental and Heritage (OEH);</li> <li>• Environmental Planning and Assessment Act 1979 (EP&amp;A Act), administered by the NSW Department of Planning (DoP);</li> <li>• Water Management Act 2000, administered by the NSW Office of Water (NOW);</li> <li>• Operation phase commitments of the CSWMP;</li> <li>• Managing Urban Stormwater: Soils and Construction (the Blue Book) Volume 1 (Landcom, 2004); and</li> <li>• Managing Urban Stormwater: Harvesting and Reuse (DEC, 2006).</li> </ul>	Undertake measures to reduce erosion in clean water diversion.
Environmental Management Strategy	2.1 Environmental Aspects	The Register [of Environmental Aspects] will be reviewed every two years, and changes to the identification of aspects, the assessment of risk, and the identification of control measures to reduce the risk will be implemented as required.	Schedule a biennial review the register of environmental aspects.
Environmental Management Strategy	2.2 Legal and Other Requirements	Should the scope of current operations change, or if a development application is to be lodged for alterations or extensions to the ANE Facility or its associated lands, applicable legislation and environmental planning instruments should be investigated, and this section should be updated, to ensure currency.	Include review of the legal register in the biennial review of the EMS.
Environmental Management Strategy	2.3 Objectives and Targets	It is expected that these objectives and targets will be reviewed at least every two years to ensure they are actively achieving best practice in environmental management, and are still relevant to local conditions and the legislative	Review the EMS objectives and targets during the biennial review.

Source	Reference	Commitment	Recommendation
		framework. New objectives may be determined and new targets set over time.	
Environmental Management Strategy	3.3.2.1 General enquiries, information and visitors	The contact numbers for the site are as listed below: - Orica Technology Centre enquiry line - (02) 4939 5200; and - ERS - 1800 033 111. These phone numbers will be listed in the White Pages, advertised via signage at the Orica Richmond Vale site entrance on George Booth Drive, and noted on relevant vehicles in the case of the ERS number in accordance with the Road Transport Protocol.	Suggestion for improvement to the document. Remove the ERS number. Add the complaints number. Remove requirement to list these in the white pages. Change to webpage. Advertised number on the signage at front of Orica should be the 1300 number advertised on the website.
Environmental Management Strategy	3.3.2.6 Community Consultation and Support	The Technical Centre site will implement a community consultative group which will include representatives from local government, emergency services and local residents. This group will provide a communication conduit between the site and the local community and provide feedback on business performance and discuss community concerns.	Establish a consultative ground in line with DPE guidelines.
Environmental Management Strategy	4.1 Monitoring and Evaluation	the EMPs will be formally audited on an annual basis by the Technology Centre site Manager with the SH&E team representative.	Implement annual audit process for EMPs.
Environmental Management Strategy	4.4.1 Internal Audits	The EMS shall be audited on two-yearly (biennial) basis. Biennial audits will also be conducted of the site-specific Management Plans referred to in this EMS.	Schedule a biennial internal audit of the EMS.
Environmental Management Strategy	4.4.1 Internal Audits	All auditing records will be maintained by the SH&E team. A formal audit report must be prepared for each audit undertaken.	Establish and maintain a system to record audit records.
Environmental Management Strategy	6.2 Reuse and recycling	Recycling provisions in accordance with council requirements and the Waste Avoidance and Resource Recovery (WARR) Act. Check that any waste produced on site is taken to the appropriately labelled storage bin and taken to the appropriate licensed facility. Monthly via receipt of report from waste contractor.	We suggest a periodic audit of waste vehicles is undertaken to check compliance with weight records.

## Appendix A

# Audit team approval

Mr David Horne  
Manufacturing Superintendent – Kurri ANE Plant  
Orica Mining Services  
1151 George Booth Drive  
Richmond Vale NSW 2323

Dear Mr Horne

**Re: Orica Ammonium Nitrate Emulsion Project, Richmond Vale –  
Approval of Independent Environmental Auditors**

I refer to your correspondence dated 4 May 2016 requesting approval for Mr Peter Horn and Ms Alison Dodds to undertake the 2016 Independent Environmental Audit (the Audit) of the Orica Ammonium Nitrate Emulsion Project.

The Department has reviewed the CVs of Mr Horn (Lead Environmental Auditor) and Ms Dodds (Environmental Planner) and considers they have the relevant qualifications and experience to undertake the Audit. Therefore, in accordance with Schedule 4, Condition 4(a) of the Project Approval (09\_0090 as modified), I endorse their appointment as independent environmental auditors for the Audit.

In preparing the IEA, you must ensure the Audit:

- is conducted in accordance with AS/NZS ISO 19011 Australian/New Zealand Standard Guidelines for quality and/or environmental management systems auditing;
- includes a compliance table indicating the compliance status of each condition of approval (and any other statutory instrument required to be audited);
- avoids terms such as “partial compliance”. An audit is to make findings of either “compliance” or “non-compliance”;
- includes recommended actions in response to non-compliances; and
- identifies opportunities for improved environmental management and performance.

Finally, the Department recommends that you:

- review the IEA report to ensure it complies with the relevant conditions of approval, prior to submitting the report to the Secretary; and
- submit an action plan detailing your response to the recommendations and timeframes outlined in the audit report to implement any adopted recommendations.

Should you wish to discuss any of the above matters, please contact Sally Munk, Senior Environmental Planner, on (02) 9228 6431 or by email at [sally.munk@planning.nsw.gov.au](mailto:sally.munk@planning.nsw.gov.au).

Yours sincerely



Chris Ritchie  
**Director**  
**Industry Assessments**  
*As the Secretary's nominee*

12/5/16.

## Appendix B

# Detailed Audit Results

## Consequences

	Level Descriptor	Consequences
A	Catastrophic	Long term environmental damage (5 years or longer), requiring \$5million to correct or in penalties
B	Major	Medium-term (1-5 years) environmental damage, requiring \$1 to 5million to correct or in penalties
C	Moderate	Short-term (less than 1 year) environmental damage, requiring up to \$1million to correct or in penalties
D	Minor	Environmental damage, requiring up to \$200,000 to correct
E	Insignificant	Negligible environmental impact, managed within operating budgets

		Catastrophic	Major	Moderate	Minor	Insignificant
		A	B	C	D	E
Almost certain	1	High	High	High	Medium	Medium
Likely	2	High	High	High	Medium	Medium
Possible	3	High	High	Medium	Medium	Low
Unlikely	4	High	Medium	Medium	Low	Low
Rare	5	Medium	Medium	Low	Low	Low

## Likelihood

	Level Descriptor	Likelihood of the risk arising and leading to the assessed level of consequence	
1	Almost certain	Is expected to occur in most circumstances and has a history of occurrence	Once a year or more frequent
2	Likely	Will probably occur in most circumstances	Once in 1 to 3 years
3	Possible	Could occur at some time	Once in 3 to 10 years
4	Unlikely	Not likely to occur in normal circumstances	Once in 10 to 50 years
5	Rare	May occur only in exceptional circumstances	Once in 100 years or more

**Table B1 - Project Approval Assessment of Compliance**

Ref	Sub Ref	Requirement (as modified by MOD 1 and MOD 2)	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
<b>Schedule 2 - Administrative conditions</b>								
Obligation to Minimise Harm to the Environment	1	The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction and/or operation of the Project.	Through the process of this audit and the site inspection this has been verified.	Compliant				
Limits of Approval	2	The Proponent shall carry out the Project generally in accordance with the: a) EA; b) modification application MP 09_0090 MOD 1 dated 10 October 2012, environmental assessment dated 8 October 2012 and accompanying plans, prepared by Umwelt (Australia) Pty Ltd; c) modification application MP 09_0090 MOD 2 dated 14 April 2016 and accompanying plans, prepared by Umwelt (Australia) Pty Ltd and the Response to Submissions dated 25 May 2016 prepared by Umwelt (Australia) Pty Ltd. d) Statement of commitments e) Submissions Report; and f) conditions of this approval.	In spite of a number of minor non-compliances, the site is generally managed and operated in accordance with the nominated documents.	Compliant				
	3	If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.	Noted	Noted				
	4	The Proponent shall comply with any reasonable requirements/s of the Director-General arising from the Department's assessment of: a) any reports, plans, strategies, programs or correspondence that are submitted in accordance with this approval; and b) the implementation of any actions or measures contained in these reports, plans, strategies, programs or correspondence.	Orica received feedback from DPE (16/09/2015) following submission of the 2015 AEMR. The Department recommended that the following points are included in future reporting periods: - where relevant, analysis reports referred to in Appendix 2 of this year's submission be provided in future AEMRs in accordance with Schedule 4, Condition 2(e); - further detail be provided in response to audit actions. In particular, details of any non-compliances identified in the reporting period (this can be through internal or external audits etc.) and accompanying actions implemented to address any non-compliances. This information should be portrayed in a table like format similar to those previously submitted to the Department following Independent Environmental Audits or Hazard Audits which identify works to remedy non-compliances; and - where relevant, inclusion of two sections titled "Significant activities undertaken in the reporting period" and "Important initiatives planned in the next reporting period" should be included. Generally, works such as those undertaken or proposed to be undertaken in biodiversity offset areas or to address audit issues could be listed in these sections.  The 2016 AEMR included the above information; - The reports at Appendix 2 of the 2015 AEMR were in the 2016 AEMR - a report on audit actions is provided at Appendix 4 of the 2016 AEMR - Section 4.3 of the 2016 AEMR is titled "Significant Activities Undertaken in the Reporting Period" - Section 4.4 of the 2016 AEMR is titled "Important Initiatives Planned in the next reporting period"	Compliant				
	5	The Proponent shall not produce more than 250,000 tpa of ammonium nitrate emulsion product at the Project site.	Orica holds a weekly Results Action Review and tracks and reviews production of ANE weekly and tabulates annualised production of ANE. Orica's financial year production (1 October 2015 to 30 Sept 2016) tonnage was 98,895.	Compliant				
Surrender of Existing Development Consents	6	Within 12 months of this approval, the Proponent shall surrender all existing development consents and project approvals for the site, apart from this project approval, in accordance with Clause 97 of the EP&A Regulation.	The Project Approval 09_0090 is dated 26 July 2010. On 6 July 2011, Orica sent a "Notice of Surrender of Consents and Project Approvals" to Cessnock City Council, surrendering all existing development consents and project approvals for the site. Council confirmed receipt of the surrender of consents 4 August 2011 (letter to Orica Ref 25170). Correspondence between the Department of Planning and Orica (dated 9/8/2013) confirms that the existing development consents were surrendered on the 07.07.2011 and copies were submitted to the Department of Planning 16.05.2013. No other consents surrendered.	Not triggered				
Submission of Documentation	7	With the approval of the Director-General, the Proponent may submit any plan, study or document required by this approval on a progressive basis. <i>Note: The conditions of this approval require certain documents to be prepared for the Project. They also require these documents to be reviewed and audited on a regular basis to ensure they remain effective. However, in some instances, it will not be necessary or practicable to prepare these documents for the whole Project at any one time; particularly as these documents are intended to be dynamic and improved over time. Consequently, the documents may be prepared and implemented on a progressive basis. In doing this however, the Proponent will need to demonstrate that it has suitable documents in place to manage the existing operations of the Project Site.</i>	Noted	Noted				

**Table B1 - Project Approval Assessment of Compliance**

Ref	Sub Ref	Requirement (as modified by MOD 1 and MOD 2)	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
Structural Adequacy	8	The Proponent shall ensure that all new buildings and structures on the Project Site are constructed in accordance with the relevant requirements of the Building Code of Australia. <i>Notes: Under Part 4A of the EP&amp;A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works. Part 8 of the EP&amp;A Regulation sets out the requirements for the certification of the Project.</i>	No evidence was provided to demonstrate that the new structures on the Project Site were constructed in accordance with the relevant requirements of the Building Code. For previous construction, Construction Certificate No: 000128 was issued by Hunter PCA (the Principal Certifying Authority) on 30 May 2011, and a Final Occupation Certificate (Certificate number 000327) was issued by Hunter PCA 2 June 2012.	Administrative non-compliance				
Protection of Public Infrastructure	9	The Proponent shall: a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the Project; and b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the Project.	Not triggered	Not triggered				
	10	Prior to commencement of construction, the Proponent shall prepare a dilapidation report of the public infrastructure in the vicinity on the Project Site (including roads, gutters, footpaths, etc.) in consultation with the RTA and submit a copy of this report to the Director-General.	Previously satisfied. Outside of the audit period.	Not triggered				
	11	Prior to the construction of any utility works, the Proponent shall obtain the relevant approvals from service providers.	Noted.	Not triggered				
Operation of Plant and Equipment	12	The Proponent shall ensure that all plant and equipment used on the Project Site is: a) maintained in a proper and efficient condition; and b) operated in a proper and efficient manner.	Orica's electronic system for recording maintenance scheduling, inspection checks etc. were signed during the site visit 3 December 2013.	Compliant				
<b>Schedule 3 - Specific Environmental Conditions</b>								
<b>HAZARDS</b>								
Pre-construction	1	At least one month prior to the commencement of construction of the proposed project (except for construction of those preliminary works that are outside the scope of the hazard studies), or within such further period as the Director-General may agree, the Proponent shall prepare and submit for the approval of the Director-General the studies set out under subsections (a) to (d) (the pre-construction studies). Construction, other than of preliminary works, shall not commence until approval has been given by the Director-General and, with respect to the Fire Safety Study, approval has also been given by the Commissioner of the NSW Fire Brigades.  a) An update of the Fire Safety Study of the site to include the proposed ANE Facility. This study shall cover the relevant aspects of the Department of Planning's Hazardous Industry Planning Advisory Paper No.2, 'Fire Safety Study Guidelines' and the New South Wales Government's 'Best Practice Guidelines for Contaminated Water Retention and Treatment Systems'. The study shall also be submitted for approval, the NSW Fire Brigades.	Previously satisfied.  <i>"FIRE SAFETY STUDY PROPOSED ANE FACILITY KURRI KURRI TECHNOLOGY CENTRE"</i> (Rev 3, 14 September 2011) was prepared by Sherpa Consulting. The Fire Safety Study was submitted to the Department of Planning 7 February 2011 and approved (subject to approval by Fire and Rescue NSW) by the Director-General 16 February 2011. In their letter to Orica dated 16 February 2011, the department advised that the report has been prepared in accordance with NSW DoP's HIPAP No. 2 Guidelines for Fire Safety Study. Construction commenced 13 October 2010. Fire and Rescue NSW advised via letter to Orica (1 November 2011) that their issues were addressed and they approved the Fire Safety Study.	Not triggered				
		b) A Hazard and Operability Study for the proposed ANE Facility, chaired by a qualified person, independent of the development, approved by the Director-General prior to the commencement of the study. The study shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No.8, 'HAZOP Guidelines'. The study report must be accompanied by a program for the implementation of all recommendations made in the report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented.	Previously satisfied.  Orica submitted a copy of the Hazard and Operability Study to the Department of Planning on the 14 February 2011. In their letter to Orica 18.02.2011, the Department of Planning states that "the composition of the study team is considered appropriate" and "the HAZOP has been carried out in accordance with the Department's Hazardous Industry Planning Advisory Paper No 8 HAZOP Guidelines". The Director-General approved the HAZOP study, subject to completion of outstanding actions.	Not triggered				

**Table B1 - Project Approval Assessment of Compliance**

Ref	Sub Ref	Requirement (as modified by MOD 1 and MOD 2)	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
		c) A Final Hazard Analysis of the proposed ANE Facility, consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No.6, 'Guidelines for Hazard Analysis'.	Previously satisfied.  A copy of the Final Hazard Analysis was submitted by Orica to the Department of Planning 16 March 2011. The Department of Planning in their letter to Orica 17 March 2011 confirmed that the Final Hazard Analysis was prepared in accordance with the Department's "Hazardous Industry Planning Advisory Paper No 6 - Hazard Analysis". The Department approved the Final Hazard Analysis subject to: - implementation of the safeguards listed in the Hazard Identification table, and - update of the Fire Risk Management Plan for the existing site to cover the ANE Production Facilities.	Not triggered				
		d) A Construction Safety Study for the ANE Facility, consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No.7, 'Construction Safety Study Guidelines'. If the construction period exceeds six (6) months, the commissioning portion of the Construction Safety Study may be submitted two months prior to the commencement of commissioning.	Previously satisfied.  "CONSTRUCTION SAFETY STUDY REPORT, AMMONIUM NITRATE EMULSION PLANT, ORICA AUSTRALIA PTY LTD, KURRI KURRI, NSW" was prepared 7 February 2011 by Pinnacle Risk Management Pty Limited. The Department of Planning in their letter to Orica 18/2/2011 confirmed that the Construction Safety Study was prepared in accordance with the Department's Hazardous Industry Planning Advisory Paper No.7 and approved the Construction Safety Study.	Not triggered				
		The Proponent shall develop and implement the plans and systems set out under subsections (a) to (b). No later than two months prior to the commencement of commissioning of the project, or within such further period as the Director-General may agree, the Proponent shall submit, for the approval of the Director-General, documentation describing those plans and systems. Commissioning shall not commence until approval has been given by the Director-General.	Previously satisfied.  "ORICA AUSTRALIA PTY LTD KURRI KURRI TECHNICAL CENTRE EMERGENCY PLAN" was prepared/updated to satisfy Schedule 3, condition 2a. It was approved by the Director-General in its letter to Orica 28 November 2011. Commissioning commenced 5 October 2011. Operations commenced 7 February 2012	Not triggered				
		a) An update of the existing Emergency Plan and the emergency procedures to include the ANE Facility. This plan shall include consideration of the safety of all people outside of the facility who may be at risk from the Facility. The plan shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No.1, 'Industry Emergency Planning Guidelines'.	The Emergency Plan has been revised. The current revision at the time of the audit: Rev 10 (10/9/2015) .  Previously satisfied.					
Pre-commissioning	2	b) A document setting out a comprehensive Safety Management System, covering all operations and associated transport activities involving hazardous materials associated with the ANE Facility. The document shall clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. Records shall be kept on-site and shall be available for inspection by the Director-General upon request. The Safety Management System shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No.9, 'Safety Management'.	"ORICA KURRI KURRI SAFETY MANAGEMENT SYSTEM" was prepared and updated by Orica to satisfy Schedule 3, condition 2b. The plan specifies: safety related procedures, responsibilities, policies and systems for ensuring adherence to the procedures. Although the report did not state it was consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No 9, the Safety Management Plan (dated November 2011) was approved by the Director-General in its letter to Orica 28 November 2011. In the approval, the Department stated: "the Department has reviewed the SMS and finds the report to be satisfactory and prepared in accordance with the condition. The Director-General approves the SMS subject to finalisation of Hazard Study 5 for all relevant areas prior to startup, and the timely implementation of all recommendations outlined in Hazard Study 5".	Not triggered				
Pre-startup	3	One month prior to the commencement of operation of the project, the Proponent shall submit to the Director-General, a Pre-startup Compliance Report detailing compliance with conditions 1 and 2, including: a) dates of study/plan/system submission, approval, commencement of construction and commissioning; b) actions taken or proposed, to implement recommendations made in the studies/plans/systems; and c) responses to each requirement imposed by the Director-General under condition 6.	Previously satisfied.  "Pre-Startup Compliance Report Kurri Ammonium Nitrate Emulsion Plant" November 2011, was prepared to satisfy Schedule 3, condition 3. The Plan includes: dates of study/plan etc. submission and approval; dates of commencement of construction and commissioning; actions taken or proposed to implement recommendations; and responses to Department of Planning requirements. The Pre-Startup Compliance Report was submitted by Orica to the Department of Planning 10 November 2011 (letter from Orica to the Department of Planning). Operation did not commence until 7 February 2012.	Not triggered				

**Table B1 - Project Approval Assessment of Compliance**

Ref	Sub Ref	Requirement (as modified by MOD 1 and MOD 2)	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
Post-startup	4	Three months after the commencement of operation of the ANE Facility, the Proponent shall submit to the Director-General, a Post-startup Compliance report verifying that: a) transport routes specified in the <i>Technical Note ANE and ANS Transport Hazard Analysis, rev.0</i> prepared by Sherpa and dated 8 Oct 2009, or other routes in accordance with the Traffic Management Plan, are being followed; b) the Emergency Plan required under condition 2a) is in place and that at least one emergency exercise has been conducted; and c) the Safety Management System required under condition 2b) has been fully implemented and that records required by the system are being kept.	Previously satisfied.  "Post-Startup Compliance Report, Kurri Ammonium Nitrate Emulsion Plant, May 2012", prepared by AECOM, was prepared to satisfy Schedule 3, condition 4. The report verifies: transport routes are being followed; the Emergency Plan is in place and fully implemented; and the Safety Management System is in place and fully implemented. Operations commenced at the site 7 February 2012. Correspondence from the Department of Planning to Orica (dated 9/8/2013) confirms that the Post-startup Compliance Report was submitted to the Director-General 29/5/2012 and resubmitted 16/5/2013.	Not triggered				
	4.1	Within 3 months of the approval of Modification 2, or further time agreed with SafeWork NSW, the applicant shall update the current MHF Safety Case for the facility and provide the relevant information of SafeWork NSW.	Modification 2 was approved 4 July 2016. The updated Safety Case for the facility was therefore scheduled to be submitted by 4 October 2016 (three month timeframe from the approval date). Orica advised SafeWork NSW (1 July 2016) that the safety case was in progress. Correspondence sighted from SafeWork NSW (email to Orica, 1 July 2016) showed that SafeWork NSW agreed for the updated Safety Case to be submitted on or before the 27 April 2017.	Compliant	To remain compliant, Orica will need to submit the updated Safety Case to SafeWork NSW on or before 27 April 2017			
TRANSPORT	5	Twelve months after the commencement of operations of the proposed ANE Facility and every three years thereafter, or at such intervals as the Director-General may agree, the Proponent shall carry out a comprehensive Hazard Audit of the site and within one month of each audit submit a report to the Director-General. a) The audits shall be carried out at the Proponent's expense by a qualified person or team, independent of the overall site, approved by the Director-General prior to commencement of each audit. Hazard Audits shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No.5, 'Hazard Audit Guidelines' b) The audit report must be accompanied by a program for the implementation of all recommendations made in the audit report. If the Proponent intends to defer the implementation of a recommendation, reasons must be documented.	Operations commenced at the site 7 February 2012. The first Hazard Audit was due to be carried out at the site by 7 February 2013, and the Hazard Audit report due to be submitted to the Director-General one month later (by 7 March 2013). Correspondence from the Department of Planning to Orica (9/8/2013) confirmed that submission of the Hazard Audit had been extended. The first Hazard Audit was conducted in November 2013.  Based on the date operations commenced, the subsequent Hazard Audit was due to be conducted by 7 February 2016, and the report due to be submitted to the Director-General by 7 March 2016. Planager was approved by DPE to conduct the subsequent Hazard Audit. The audit was held November/December 2015. However, the Audit Report (dated 5 June 2016) wasn't submitted to DPE until 20 June 2016. All documents were sighted during the audit.	Administrative non-compliance	To meet consent time frames, The next Hazard Audit is due to be conducted by 7 February 2019, and the report due to be submitted to the Director-General by 7 March 2019.			
	6	The Proponent shall comply with all reasonable requirements of the Director-General in respect of conditions 1 to 5 inclusive, within such time as the Director-General may agree.	Noted	Noted				
	6A	Prior to the commencement of construction works associated with MP 09_0090 MOD 1, the Proponent shall identify all hazards arising from the potential interaction of construction works associated with MP 09_0090 MOD 1 with the existing operations which are related to Schedule 15 materials identified in the <i>NSW Work Health and Safety Regulation 2011</i> .	Not triggered	Not triggered				
	6B	During construction works associated with MP 09_0090 MOD 1, the Proponent shall implement all necessary control measures to reduce the risk from those hazards identified by Condition 6A of this Schedule to as low as reasonably practicable.	Not triggered	Not triggered				
	6C	The Proponent shall ensure that the safety aspects of all construction works associated with MP 09_0090 MOD 1 are carried out in accordance with the existing Safety Management System for the site. <i>Note: Management of change procedures which must be followed and documented in accordance with the Work Health and Safety Regulation 2011.</i>	Not triggered	Not triggered				
	6D	Prior to the commencement of construction works associated with MP 09_0090 MOD 2, the Proponent shall identify all hazards arising from the potential interaction of construction works associated with MP 09_0090 MOD 2 with the existing operations which are related to Schedule 15 materials identified in the <i>NSW Work Health and Safety Regulation 2011</i> .	The risk register for Modification 2 was sighted during the audit. All completed.	Compliant				
	6E	During construction works associated with MP 09_0090 MOD 2, the Proponent shall implement all necessary control measures to reduce the risk from those hazards identified by Condition 6A of this Schedule to as low as reasonably practicable.	Hazard Study II - Construction Overview (Hazcon) was undertaken 07 July 2016 for the ANE Cooler. The risk assessment included consideration of materials of construction and interaction of construction works with operations.	Compliant				
6F	The proponent shall ensure that the safety aspects of all construction works associated with MP 09_0090 MOD 2 are carried out in accordance with the existing Safety Management System of the site. <i>Note: Management of change procedures which must be followed and documented in accordance with the Work Health and Safety Regulation 2011.</i>	Alteration Authority was sighted during the audit.	Compliant					

**Table B1 - Project Approval Assessment of Compliance**

Ref	Sub Ref	Requirement (as modified by MOD 1 and MOD 2)	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
Design of Site Access, Internal Roads and Parking	7	The Proponent shall ensure that new site access points, internal roads and parking associated with the ANE Facility are designed, constructed and maintained in accordance with the latest versions of the Australian Standards AS 2890.1:2004 and AS 2890.2:2002 or as otherwise agreed by Council.	Previously satisfied. Not triggered by this audit  A design report titled "Council Requirements for design in road and plant areas" was prepared by I.C.D Pty Ltd for Orica to address Cessnock City Council's design requirements. The design report listed each council requirement and Orica's action in relation to that requirement. I.C.D. (Asia Pacific) Pty Ltd design engineers in their letter to Orica dated 13.04.2011, confirmed I.C.D had inspected and reviewed the design of roads and parking facilities in the plant area on the 05.04.2011 and certified that the "roads and the parking areas are in accordance with current Australian Standards and they fully satisfy the environmental planning regulations and rules of local council".	Not triggered				
	8	Prior to the commencement of operation of the ANE Facility, the Proponent shall prepare and implement a Concept Design Plan of the intersection of Echidna Drive with George Booth Drive. The Plan shall be prepared in consultation with the RTA and to the satisfaction of the Director-General. The Plan shall include: a) Details of the upgrade works to the existing advance intersection warning signage to type GI-207 and reposition the signage further in advance of George Booth Drive/Echidna Drive Intersection; b) Details of improvements of the delineation of the double barrier lines in George Booth Drive on the approaches to Echidna Drive; and c) Install a "stop" sign at the Echidna Drive intersection.	This occurred prior to the audit period, therefore not triggered by this audit.  The Department of Planning, in their correspondence to Orica (18/1/2012), stated they had reviewed the RTA's letters of 27 September and 7 December 2011, and was satisfied that these upgrade works have been completed in accordance with these conditions.	Not triggered				
	9	The applicant will be required to enter into a Works Authorisation Deed with the RTA for implementation of required road works on George Booth Drive. In this regard the developer is required to submit detailed design plans and all relevant additional information, as may be required in the RTA's Works Authorisation Deed documentation, for each specific change to state road network for the RTA's assessment and final decision concerning the work.	This occurred prior to the audit period, therefore not triggered by this audit  The Department of Planning, in their correspondence to Orica (18/1/2012), stated they had reviewed the RTA's letters of 27 September and 7 December 2011, and was satisfied that these upgrade works have been completed in accordance with these conditions.	Not triggered				
Road Transport Protocol	10	Prior to the commencement of construction of the ANE Facility, the Applicant shall prepare and implement a Road Transport Protocol for heavy vehicles, in consultation with the RTA, to the satisfaction of the Director-General. This Protocol shall detail the management of heavy vehicles during both construction and operation of the ANE Facility, and where relevant:  a) Define the routes to be used for heavy vehicles; the maximum number of road movements and the haulage hours;  b) Include a Traffic Management Plan, which incorporates the requirements of the site's existing Traffic Management Protocol and addresses: - procedures to ensure that drivers adhere to the designated haulage route as required under this Protocol; - measures to achieve a low-frequency, regular trucking schedule during normal business hours rather than a high-frequency, campaign trucking schedule; - contingency plans where, for example the designated transport route is disrupted. This shall also address procedures for notifying relevant agencies and affected communities of the required implementation of any such contingency plans; - details of procedures for receiving and addressing complaints from the community concerning traffic issues associated with haulage from the site; and - measures to ensure that the provisions of the Traffic Management Plan are implemented, e.g. education of drivers and any contractual agreements with operators of heavy vehicles which service the site;  c) Include a Driver Code of Conduct that addresses: - driver licencing and training requirements in relation to the transport of dangerous goods; - travelling speeds; - staggering of truck departures to ensure a regular trucking schedule throughout the day; and to maintain appropriate distances between vehicles; - instructions to drivers not to overtake each other on the haulage route, as far as practicable, and to maintain appropriate distances between vehicles; - instructions to drivers to restrict the use of exhaust brakes in accordance with the Submissions Report; - instruction to drivers to adhere to the designated haulage route; - instruction to drivers to be especially safety conscious and to ensure that traffic regulations are obeyed strictly; - driver training in the Code to ensure that all drivers are made aware and to adhere to the Code; and	This occurred prior to the audit period, therefore not triggered by this audit  Construction commenced 13 October 2010. "Orica ANE Production Facility Road Transport Protocol" prepared by Umwelt (Australia) Pty Limited September 2010, was prepared to satisfy Schedule 3, condition 10 during construction.  The "Orica ANE Production Facility Road Transport Protocol" (January 2012) prepared by Umwelt (Australia) Pty Limited was prepared to satisfy the Operational aspects of Schedule 3, Condition 10. The RMS was consulted during preparation of the document. In their letter to Orica 7/12/2011, the RMS states that they have reviewed the information provided and consider the amended Road Transport Protocol to be satisfactory. The Department of Planning, in their letter to Orica 18/1/12, stated it was satisfied that the Road Transport Protocol submitted on 16 January 2012 (2915IR92IFinal) meets the requirements of this condition.  The Road Transport Protocol: - defines routes for heavy vehicles - includes the maximum number of road movements - includes a Traffic Management Plan which addresses the aspects required in the condition - includes a Driver Code of Conduct	Not triggered				

**Table B1 - Project Approval Assessment of Compliance**

Ref	Sub Ref	Requirement (as modified by MOD 1 and MOD 2)	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
Independent Traffic Audit	11	Within 6 months of the commencement of operation of the ANE Facility, and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission a suitably qualified person, whose appointment has been approved by the Director-General, to conduct an Independent Traffic Audit of the development.	Operations at the ANE Facility commenced 7 February 2012. The first Independent Traffic Audit was to be commissioned by 7 August 2012. "Independent Traffic Audit for Orica Mining Services Technology Park, Richmond Vale, NSW" was prepared by Better Transport Futures, 6 September 2012 (commissioned 25 June 2012). Better Transport Futures was approved by the Director-General as suitably qualified to conduct the transport audit (as noted in Orica's letter to the Director-General 7 February 2012 which states that the Director-General's approval for Sean Morgan of Better Transport Futures to undertake the independent traffic audit was confirmed in their letter dated 18 July 2012).  The subsequent Independent Traffic Audit was to be commissioned three years following, by the 7 August 2015. An Independent traffic audit was prepared by Better Transport Futures - "Road Transport Review and Road Safety Audit" 6 July 2015, and submitted 8 July 2015.	Compliant				
		This audit must: a) have the verification component of the audit undertaken without prior notice to the Proponent,	The traffic audit does not state that the verification component of the audit was undertaken without prior notice to the Proponent. The independent traffic audit report was prepared 6 July 2015 and submitted to the Director-General 8 July 2015. DPE wrote to Orica (23.10.16) requesting "That future ITAs clearly state that the verification component of the audit was undertaken without prior notice to the Proponent in accordance with Schedule 3, Condition 11(a).	Non-compliant	As requested by DPE in their letter to Orica (23.10.16) future ITAs must clearly state that the verification component of the audit was undertaken without prior notice to the Proponent	E	3	Low
		b) assess the impact of the development on the performance of the road network;	The traffic audit assessed the impact of the development on the performance of the road network. Findings were included in the report at Section 3.	Compliant				
		c) investigate any incidents involving haulage vehicles from the development;	The traffic audit investigated incidents/accidents. Findings were included in the report at section 2.2.	Compliant				
		d) assess the effectiveness of the Driver's Code of Conduct; and, if necessary,	The Driver Code of Conduct prepared by Umwelt (Australia Pty Ltd), January 2012, was being updated by Orica and the transport contractor Toll Group at the time of the transport audit. The new draft Code of Conduct was reviewed during the transport audit. Findings were included in the report at Section 2.3	Compliant				
		e) recommend measures to reduce or mitigate any adverse (or potentially adverse) impacts.	The audit concluded "From the road safety audit and transport review, no significant deficiencies were noted and no measures are required to mitigate any safety concerns". However, recommendations were included in the report at Table 4.	Compliant				
		Within 1 month of commissioning the audit, or as otherwise agreed by the Director-General, the Proponent shall submit a copy of the audit report to the Director-General, with a response to any of the recommendations contained in the audit report.	The independent traffic audit report was prepared 6 July 2015 and submitted to the Director-General 8 July 2015. The written submission to the Director-General did not include a response to the recommendations contained in the audit report. DPE wrote to Orica requesting a response to the traffic audit's recommendations be provided by 11 November 2015. Orica provided DPE their response to the audit's recommendations 10 November 2015. Therefore, the information was submitted, but not in the timeframe stipulated.	Administrative non-compliance	In future submissions of ITAs, include a response to audit recommendations.			
<b>FLORA AND FAUNA</b>								
Offset Strategy	12	Within 6 months of the date of this approval, the Proponent shall implement the offset strategy to the satisfaction of the Director-General. The Proponent shall: a) implement the offset strategy described in the Response to Submissions and summarised in Table 3 (shown in Appendix B); and b) make suitable arrangements, in consultation with DECCW, to provide for appropriate long term conservation security for the offset area.  <i>Table 3: Offset Strategy</i> <b>Offset Area:</b> Biodiversity Offset Area <b>Minimum Size:</b> 31.7ha	Previously satisfied. Not triggered.  The "Biodiversity Offset Area Vegetation Management Plan" (January 2012) was prepared by Umwelt (Australia) Pty Limited to satisfy Conditions 12 and 14 of Schedule 3 of the project approval. Wasn't delivered within 6 months, but extension was granted by OEH (evidence sighted). Evidence of consultation with DECCW was sighted.	Not triggered				
	13	The mechanism for securing the Biodiversity Offset Area, referred to in condition 12, shall not be extinguished or altered without the written consent of the Director-General.	Not triggered	Not Triggered				

**Table B1 - Project Approval Assessment of Compliance**

Ref	Sub Ref	Requirement (as modified by MOD 1 and MOD 2)	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
Vegetation Management Plan	14	The Proponent shall prepare and implement a Vegetation Management Plan for the project to the satisfaction of the Director-General. The plan must: a) be prepared in consultation with DECCW, and be approved by the Director-General prior to the commencement of operation of the ANE Facility; b) describe the detailed measures that would be implemented to protect the Biodiversity Offset Areas; and c) describe the ongoing management measures that would be undertaken to maintain the Biodiversity Offset Areas for the life of the project.	The "Biodiversity Offset Area Vegetation Management Plan" (January 2012) prepared by Umwelt (Australia) Pty Limited was prepared to satisfy Conditions 12 and 14 of Schedule 3 of the project approval. The Plan: - describes the detailed measures that would be implemented - describes the ongoing management measures that would be undertaken  The Director-General's letter to Orica 7/2/2012 states that "The Department is satisfied that the Vegetation Management Plan submitted on 2 February 2012 meets the requirements of this condition". Operations commenced 7/2/2012.  The Vegetation Management Plan has not changed during the audit period, therefore not triggered.	Not triggered				
Vegetation Clearing Protocol	15	The Vegetation Clearing Protocol shall: a) clearly identify the location and type of vegetation to be retained and to be removed from the site; b) detail measures that would be implemented for vegetation clearing; c) detail procedures to manage impacts on fauna including translocation of fauna (if appropriate); and d) detail the staging of construction to avoid, where possible, breeding times for key species on site or alternatively minimise impacts during clearing activities.	The Vegetation Clearing Protocol was prepared by Umwelt to address the vegetation clearing requirements during the construction phase of the ANE Production Facility. The Protocol included: - vegetation clearing measures - managing impacts on fauna - staging of construction  The Vegetation Clearing Protocol hasn't changed during the audit period, therefore not triggered.	Not triggered				
<b>AIR QUALITY</b>								
Mitigation	16	The Proponent shall carry out all reasonable and feasible measures to minimise dust generated by the Project.	The "Environmental Management Strategy for the Construction of Orica's Ammonium Nitrate Emulsion (ANE) Production Facility, Richmond Vale, NSW" Prepared by Umwelt (Australia) Pty Limited, September 2010, includes measures that were to be undertaken during construction for dust management.  The Environmental Management Strategy hasn't changed during the audit period, therefore not triggered.	Not triggered				
	17	During construction, the Proponent shall ensure that: a) all trucks entering or leaving the Project Site with loads have their loads covered; and b) trucks associated with the Project do not track dirt onto the public road network.	The "Environmental Management Strategy for the Construction of Orica's Ammonium Nitrate Emulsion (ANE) Production Facility, Richmond Vale, NSW" states: - Heavy vehicles carrying loads of potentially dust generating material will be covered; - Placement of hardstand material or installation of rumble grids at exit points to minimise the tracking of soil onto pavement surfaces; - Removal of any material which is tracked onto pavement surfaces at the end of each working day;  The Environmental Management Strategy hasn't changed during the audit period, therefore not triggered.	Not triggered				
<b>NOISE</b>								
	18	The Proponent shall ensure that the noise generated from the construction and operation of the project does not exceed 35 dB(A) LAeq(15 minute) at the nearest residential receptor at any time.  <i>Notes:</i> a) To determine compliance with the LAeq(15 minute) noise level limit in condition 17, noise from the project is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of a dwelling where the dwelling (rural situations) is more than 30 metres from the boundary. Where it can be demonstrated that direct measurement of noise from the project is impractical, the Department may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable. b) The noise emission limits identified above apply under meteorological conditions of: - wind speeds of up to 3 m/s at 10 metres above ground level; and - temperature inversion conditions of up to 3 degrees C/100m, and wind speeds of up to 2 m/s at 10 metres above ground level.	Noise monitoring has been undertaken annually by Umwelt during the audit period. The 2014, 2015 and 2016 noise monitoring reports were sighted. Each of the reports state: "Results of the attended noise monitoring program conducted... indicated that the Technology Centre was in compliance with the LAeq,15minute industrial noise assessment criteria as outlined in Project Approval 09_0090 and EPL 4121 for the meteorological conditions experienced at the time of monitoring."	Compliant				

**Table B1 - Project Approval Assessment of Compliance**

Ref	Sub Ref	Requirement (as modified by MOD 1 and MOD 2)	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
	19	<p>The Proponent shall conduct a Noise Audit for the premises within 3 months of the commencement of operation of the ANE Facility or as otherwise agreed by the Director-General. This audit shall:</p> <p>a) be undertaken by a suitably qualified and experienced person during a period in which the ANE Facility is operating at normal capacity;</p> <p>b) assess whether the project is complying with the noise limits in this approval;</p> <p>c) identify what additional measures would be implemented to ensure compliance should any non-compliance be detected and clearly indicated who would implements these measures, when these measures would be implemented, and how the effectiveness of these measures would be measured and reported to the Director-General; and</p> <p>d) provide details of any complaints received relating to noise generated by the project, and action taken to respond to those complaints.</p> <p>Within one month of conducting the Noise Audit, the Proponent shall provide the Director-General and DECCW with a copy of the Noise Audit report.</p>	Previously satisfied. Not triggered this audit period.	Not triggered				
<b>BUSHFIRE MANAGEMENT</b>								
	20	The Proponent shall implement the recommendations of the 'Bushfire Threat Assessment' included with the EA and also any additional bushfire hazard reduction measures outlined in the Submissions Report.	The Bushfire Threat Assessment and the Submissions Report have been separately reviewed for this Independent Environmental Audit.					
<b>SOIL AND WATER</b>								
Discharges	21	The Proponent shall comply with Section 120 of the <i>Protection of the Environment Operations Act 1997</i> .	Orica's ANNUAL ENVIRONMENTAL MANAGEMENT REPORTs and Annual Returns to the EPA address compliance with Section 120 of the <i>Protection of the Environment Operations Act 1997</i> . There have been no reported non-compliances within the audit period.	Compliant				
Bundling	22	<p>The Proponent shall ensure that all chemicals, fuels and oils associated with the Project are stored in appropriately bunded areas, with impervious flooring and sufficient capacity to contain 110% of the largest container stored within the bund. The bund(s) shall be designed and installed in accordance with:</p> <p>a) the requirements of all relevant Australian Standards; and</p> <p>b) the DECCW's Storing and Handling Liquids: Environmental Protection, Participants Manual.</p>	<p>In correspondence from the Department of Planning to Orica (18/1/2012), the Department stated:</p> <p>Bundling (Condition 22, Schedule 3)</p> <p>The Department has reviewed your letter of 4 January 2012 and it is satisfied that the bunded areas have been designed and installed in accordance with the requirements of this condition</p> <p>There have been no changes to bunding at the site.</p>	Compliant				
Soil and Water Management Plan	23	<p>The Proponent shall prepare and implement a <b>Soil and Water Management Plan</b> for the project to the satisfaction of the Director-General. This plan must:</p> <p>a) be submitted to the Director-General for approval prior to construction;</p> <p>b) be prepared by a suitably qualified and experienced expert; and</p> <p>c) include, where relevant:</p> <ul style="list-style-type: none"> <li>- a Stormwater Management Plan; and</li> <li>- an Erosion and Sediment Control Plan.</li> </ul> <p><i>Note: The provisions of this plan shall be implemented for all construction works associated with the project and/or modification approved thereafter.</i></p>	<p>Preparation of the Soil and Water Management Plan has been previously satisfied. Implementation of the Soil and Water Management plan is separately considered at Table B11.</p> <p>A Construction Soil and Water Management Plan (CSWMP) was prepared for the site and approved by the Department of Planning on 7 October 2010. Construction commenced 13 October 2010. The Construction Soil and Water Management Plan (CSWMP) included a commitment to develop an operational management plan for soil and water, including a Stormwater Management Plan and Erosion and Sediment Control Plan. The "<i>Operation Soil and Water Management Plan for Ammonium Nitrate Emulsion Production Facility</i>" (January 2012) prepared by Umwelt (Australia) Pty Limited replaced the CSWMP and was prepared to satisfy Conditions 23, 24 and 25 of Schedule 3 of the project approval during project operations. Correspondence from the Department of Planning to Orica (dated 18/1/2012) stated:</p> <p>Soil and Water Management Plan conditions 23, 24 and 25, Schedule 3</p> <p>The Department is satisfied that the Soil and Water Management Plan submitted on 12 January 2012 (2915/R03/Final) meets the requirements of these conditions.</p> <p>The CSWMP was submitted to the Department of Planning prior to construction. The Soil and Water Management Plan includes a stormwater management plan and an erosion and sediment control plan</p>	Not triggered				

**Table B1 - Project Approval Assessment of Compliance**

Ref	Sub Ref	Requirement (as modified by MOD 1 and MOD 2)	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
	24	The Stormwater Management Plan must: a) include detailed plans of the stormwater management system for the site, including any rainwater harvesting infrastructure; b) be consistent with the guidelines <i>Managing Urban Stormwater: Harvesting and Reuse (DECC)</i> ; c) demonstrate that post development flows will not exceed predevelopment flows for a range of ARI from 1 year up to and including the 100 year ARI; d) describe the procedures for the installation, inspection and maintenance of the stormwater system; and e) include a stormwater quality monitoring program for including procedures to be undertaken if any non-compliance is detected.	Previously satisfied. Not triggered.  The "Operation Soil and Water Management Plan for Ammonium Nitrate Emulsion Production Facility" (January 2012) prepared by Umwelt (Australia) Pty Limited replaced the CSWMP and has been prepared to satisfy Conditions 23, 24 and 25 of Schedule 3 of the project approval. The soil and water management plan includes: - detailed plans of the stormwater management system - rainwater harvesting - referred to the Managing Urban Stormwater guidelines - summarised pre- and post development discharge - described procedures for the stormwater system - included stormwater quality monitoring	Not triggered				
	25	The Erosion and Sediment Control Plan shall be prepared in accordance with <i>Landcom's 2004 Managing Urban Stormwater: Soils and Construction</i> .	Previously satisfied. Not triggered.  The "Operation Soil and Water Management Plan for Ammonium Nitrate Emulsion Production Facility" (January 2012) prepared by Umwelt (Australia) Pty Limited states: Orica will undertake stormwater, erosion and sediment management in accordance with: • <i>Managing Urban Stormwater: Soils and Construction (the Blue Book) Volume 1 (Landcom, 2004)</i> ; and • <i>Managing Urban Stormwater: Harvesting and Reuse (DEC, 2006)</i> .  The plan has not changed during the audit period.	Not triggered				
<b>VISUAL</b>								
Lighting	26	The Proponent shall ensure that lighting associated with the Project: a) complies with the latest version of <i>Australian Standard AS 4282(INT)-Control of Obtrusive Effects of Outdoor Lighting</i> ; and b) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.	Lighting audit (30 March 2011, Light Harmony - Lighting Engineering and Design consultants) sighted. There have been no changes to lighting since 2011.	compliant				
<b>WASTE</b>								
Operating Conditions	27	The Proponent shall ensure that all waste generated by the project during construction and operation is classified in accordance with the DECCW's <i>Waste Classification Guidelines 2008</i> and if required, disposed of to a facility that may lawfully accept the waste.	NSW EPA waste tracking dockets were sighted. Classification "hazardous".	Compliant				
<b>ABORIGINAL HERITAGE</b>								
	28	In the event that skeletal remains, or an Aboriginal object is identified, all construction activities that will or would have the potential to impact on indigenous heritage items(s), shall cease until the DECCW is consulted and their directions complied with.	Not triggered. There were some aboriginal artifacts found pre-construction and these were removed in consultation with aboriginal representatives. The works undertaken for Mod 2 were on the existing ground surface. There were no excavations.	Not triggered				
<b>SAFETY</b>								
	29	Prior to finalising the detail design of the additional plant approved by Modification 2, the applicant must consult the the Major Hazards unit of SafeWork NSW with regard to the safety systems to be incorporated into the modification, and incorporate the safety measures to the satisfaction of SafeWork NSW.	Orica corresponded with SafeWork NSW prior to finalising the design. An email with safety design information and request for review was sent to Safework NSW from Orica 20 May 2016.	Compliant				
<b>SCHEDULE 4 - ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING</b>								
<b>ENVIRONMENTAL MANAGEMENT STRATEGY</b>								
	1	The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director-General. This strategy must be submitted to the Director-General prior to commencement of construction, and: a) provide the strategic context for environmental management of construction and operation of the project; b) identify the statutory requirements that apply to the project; c) describe in general how the environmental performance of the Project would be monitored and managed; d) describe the procedures that would be implemented to: - keep the local community and relevant agencies informed about the operation and environmental performance of the Project; - receive, handle, respond to, and record complaints; - resolve any disputes that may arise in relation to operations at the Project; - respond to any non-compliance; - manage cumulative impacts; and - respond to emergencies; and e) describe the role, responsibility, authority, and accountability of all the key personnel involved in environmental management of the project.	Previously satisfied. Not triggered this audit. There have been no changes to the EMS.  "Environmental Management Strategy for the Construction of Orica's Ammonium Nitrate Emulsion (ANE) Production Facility, Richmond Vale, NSW" was prepared by Umwelt, September 2010 to satisfy Schedule 4, condition 1 for the construction of the Project. The EMS meets the requirements of the condition. A letter to Orica from the Department of Planning 7/10/2010 states that the Construction Environmental Management plan was submitted in accordance with Condition 1 of Schedule 4.  "Environmental Management Strategy - Operations" was prepared by AECOM Australia, February 2012, to satisfy Schedule 4, condition 1 for the operation of the Project. The EMS meets the requirements of the condition.	Not triggered				
<b>ENVIRONMENTAL REPORTING</b>								

**Table B1 - Project Approval Assessment of Compliance**

Ref	Sub Ref	Requirement (as modified by MOD 1 and MOD 2)	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
Annual Environmental Management Report	2	<p>Within 12 months of this approval, and annually thereafter, the Proponent shall submit an Annual Environmental Management Report (AEMR) for the Project to the Director-General. The report must:</p> <p>a) identify the standards and performance measures for the project;</p> <p>b) describe the works carried out in the past 12 months and the works to be carried out in the next 12 months;</p> <p>c) include a summary of complaints received in the past year and provide comparison with previous years;</p> <p>d) report results of all monitoring required by this approval and an EPL for the project;</p> <p>e) provide analysis of monitoring results in the context of relevant criteria and limits, previous monitoring results and the predictions made in the EA;</p> <p>f) identify any trends in monitoring results over the life of the project; and</p> <p>g) report on compliance with the project approval, summarise non-compliances in the previous 12 months and report on actions taken to rectify non-compliances.</p>	<p>Project approval 09_009 is dated 26 July 2010. Therefore, Orica's annual AEMR is required to be submitted before the 26 July each year.</p> <p>Within this audit period, three AEMR's were scheduled to be submitted to the Director-General. The 2014 and 2016 AEMR's were submitted by the 26 July of the year they were due. However, the 2015 AEMR was submitted 31 August 2015. The content of each of the AEMR's satisfies the content requirements of the condition.</p>	Administrative non-compliance				
Incident	3	<p>The Proponent shall notify the Director-General and any other relevant agencies of any incident or potential incident with actual or potential significant off-site impacts on people or the biophysical environment associated with the project as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident.</p>	<p>No incidents with actual or potential off-site impacts have occurred during the audit period. Notification not required.</p>	Not Triggered				
<b>AUDITING</b>								
Independent Environmental Audit	4	<p>Within 2 years of the commencement of operations of the ANE Facility, and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the Project. This audit must:</p> <p>a) Be conducted by a suitably qualified, experienced, and independent expert whose appointment has been endorsed by the Director-General;</p> <p>b) Assess the environmental performance of the Project, and its effects on the surrounding environment;</p> <p>c) Assess whether the Project is complying with the relevant standards, performance measures, and statutory requirements;</p> <p>d) Review the environmental adequacy of any strategy/plan/program required under this approval; and, if necessary,</p> <p>e) Recommend measures or actions to improve the environmental performance of the Project, and/or any strategy/plan/program required under this approval.</p>	<p>This Independent Environmental Audit has been conducted to satisfy Schedule 4, Condition 4.</p>	Compliant				
Access to Information	5	<p>From the end of 2010, the Proponent shall provide regular reporting on the environmental performance of the Project on its website, including ensuring the following information is publicly available on its website:</p> <p>a) a copy of all current approvals</p> <p>b) a copy of the current environmental management strategy and associated plans and programs</p> <p>c) a copy of any Annual Reports (over the last 5 years)</p> <p>d) a copy of any Independent Environmental Audit, and the Proponent's response to the recommendations in any audit; and</p> <p>e) any other matter required by the Director-General.</p>	<p>Orica's ANE Facility website (<a href="http://www.orica.com/Sustainability/Environmental-Monitoring-Data/Kurri-Kurri/Environmental-Assessment#reports">http://www.orica.com/Sustainability/Environmental-Monitoring-Data/Kurri-Kurri/Environmental-Assessment#reports</a>) contains the reports and approvals relevant to the site.</p> <p>The following information was missing from the website when checked by the audit team 4 November 2016:</p> <ul style="list-style-type: none"> <li>- Mod 2 statutory approval from the DPE</li> <li>- the 2016 Annual Environmental Management Report</li> <li>- The EMP</li> </ul>	Administrative non-compliance				

**Table B2 - Statement of Commitments Assessment of Compliance**

Issue	Commitment	Timing	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
<b>EA - Project Application</b>								
Compliance with the EA	The Project will be carried out generally in accordance with the Project application and the EA.	Ongoing	Compliant - see comments on DA	Compliant				
Ecology	The Construction Safety Environmental Management Plan (CSEMP) will include: - measures to clearly define the limits of the clearing activities associated with the proposed ANE Production Facility and associated works	Prior to clearing	Previously satisfied. Not triggered. There has been no change.  The "Environmental Management Strategy for the Construction of Orica's Ammonium Nitrate Emulsion (ANE) Production Facility, Richmond Vale, NSW" prepared by Umwelt, September 2010, functioned as the Construction Safety Environmental Management Plan. The Construction EMS included a Vegetation Clearing Protocol (as an appendix) which defined the limits of the clearing activities.	Not triggered.				
	* a clearing procedure for the protection of fauna will be developed in accordance with the procedures outline in Section 6.2.4 of the EA and implemented during clearing activities.	Prior to and during construction	No clearing in the audit period. Not triggered.	Not triggered.				
	* requirements for the management of erosion and sedimentation during the construction of the facility.	During construction	Not triggered	Not triggered.				
	The security fencing for the ANE Production Facility will be restricted to the building perimeter at the 30 metre fire break and will not require further vegetation clearing.	During construction	Previously satisfied. Not triggered	Not triggered.				
	Existing Technology Centre site perimeter fencing will remain unchanged so as to allow fauna movement through the site.	Ongoing	There was no change to the Technology Centre site perimeter fencing.	Compliant				
	Utility easements needing to be created will, where possible, following existing fire trails/roads and other cleared areas to minimise vegetation clearing. Any minor clearing associated with utility easements will be stabilised and reseeded, where necessary, following completion of works.	During construction	The services that supply the site follow the road easement from the existing site. There have been no new easements.	Not triggered.				
	A Biodiversity Offset area is proposed to be established within the study area to offset the vegetation clearing associated with the proposed ANE Production Facility.	Ongoing	A Biodiversity Offset area has been agreed and established as set out in the signed "Conservation Agreement between the Minister Administering the New South Wales Nation Parks and Wildlife Act (1974) and Orica Australia for 'Orica Richmond Vale', 2011". No change.	Compliant				
Surface collection of artefact scatter Orica AS will be undertaken in accordance with the methodology in the Aboriginal Cultural Heritage Assessment.	Prior to disturbance of the site	Previously satisfied. Not triggered this audit.  There were some aboriginal artifacts found pre-construction and these were removed in consultation with aboriginal representatives. The works undertaken for Mod 2 were on the existing ground surface. There were no excavations.	Not triggered.					
Topsoil removal associated with the construction of the ANE Production Facility will be subject to monitoring by representatives of the Aboriginal community in accordance with the methodology in the Aboriginal Cultural Heritage Assessment.	During topsoil removal	Previously satisfied. Not triggered this audit.  The construction site induction (dated September 2010) states that: Aboriginal stakeholders will be on site monitoring all ground topsoil removal works in order to identify any new sites	Not triggered.					

**Table B2 - Statement of Commitments Assessment of Compliance**

Issue	Commitment	Timing	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
Aboriginal Heritage	An Aboriginal Cultural Heritage module will be developed in consultation with the registered Aboriginal stakeholders for inclusion in the site induction training for construction personnel.	Prior to construction	Previously satisfied. Not triggered during the audit period.  An Aboriginal Cultural Heritage module was included in the construction site induction (dated September 2010). The induction includes the acknowledgement: Orica Australia would like to acknowledge the participation of Awabakal Descendants Traditional Owners Aboriginal Corporation (ADTOAC) and Awabakal Traditional Owners Aboriginal Corporation (ATOAC) in the preparation of this presentation	Not triggered.				
	The CSEMP will detail the management of Aboriginal heritage material in accordance with Aboriginal Heritage Assessment Report.	During construction	Previously satisfied. Not triggered during the audit period.  The Construction EMS includes management measures for Aboriginal heritage material.	Not triggered.				
Historical Heritage	If any places, sites or items of potential European heritage significance are identified during the construction phase of the Project, all activities would cease in the immediate area of the site until such time as an appropriate assessment of heritage significance is undertaken and plans to manage the site have been developed in consultation with DoP and, where relevant, the NSW Heritage Office.	During construction	Not triggered.	Not triggered.				
Traffic	A Traffic Management Protocol and Code of Conduct for Drivers operating heavy vehicles to and from the Technology Centre will be implemented.	Prior to the commencement of transport activities associated with the proposed ANE Production Facility.	The "Orica ANE Production Facility Road Transport Protocol" prepared in 2012 was updated by Orica April, 2015, in light of transport route changes. The Protocol includes a Driver Code of Conduct. The implementation of the Protocol and Code of Conduct were reviewed by Better Transport Futures "Road Transport Review and Road Safety Audit" July 2015	Compliant				
Noise	The use of exhaust brakes will be restricted in both directions between John Renshaw Drive and the intersection of Echidna Drive and George Booth Drive.	Operation	The Road Transport Protocol states the following measures: - Reinforcement of the community impacts associated with traffic movements during site meetings and inductions such as the restrictions on the use of exhaust brakes along George Booth Drive between John Renshaw Drive and the site. - The use of exhaust brakes should be avoided at all times in both directions on the section of George Booth Drive between John Renshaw Drive and the intersection between Echidna Drive and George Booth Drive.	Compliant				
	During construction, higher noise generating activities will be conducted during the day where possible	During construction	Previously satisfied. Not triggered this audit.  The Construction EMS states: Where possible higher noise generating activities will be conducted during the day, where this is not possible an assessment of the potential of the activities to generate noise will be undertaken to ensure compliance with the noise levels using standard construction equipment noise levels.	Not triggered.				
	Investigations will be undertaken in response to any concerns raised by the community regarding traffic noise associated with the Project.	Ongoing	There have not been any concerns raised by the community regarding traffic noise during the audit period. Investigations have not been required.	Compliant				
	Orica will design, construct and manage the Project such that the relevant risk criteria are met within the Technology Centre boundary and do not extend off site.	Ongoing	The Hazard Audit " HAZARD AUDIT REPORT 2016, ORICA AUSTRALIA KURRI KURRI TECHNICAL CENTRE AND AMMONIUM NITRATE EMULSION PLANT, RICHMOND VALE" was prepared by Planager, 5 June 2016. The audit report confirms compliance with the condition.	Compliant				

**Table B2 - Statement of Commitments Assessment of Compliance**

Issue	Commitment	Timing	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
Hazards	Orica will manage potential hazards related to the transport of ANE and ANS in accordance with measures outlined in Section 6.6.2.2 including product contamination, heavy vehicles controls, and driver training.	Ongoing	Site is configured in such a way that site contamination is not possible. The only possible cross contamination is in the unloading of caustic and acetic acid. The use of locks and permissives from onsite operator to visually check mitigates risk.  ANE is made on site. ANS is delivered to site. Deliveries go to different parts of the site. Physical contamination not possible as there are site controls	Compliant				
Air and odour	The CSEMP will include measures to minimise air and odour impacts as a result of construction	During construction	Previously satisfied. Not triggered during this audit period.	Not triggered.				
	The Operational EMP (OEMP) will detail measures to minimise air and odour during ongoing operations.	During operation	EMP (SHE-KUR-EMP-EMP-001), June 2014 has been prepared by Orica. It covers all operations within the boundary of the technical centre, including the ANE plant. The EMP includes measures to control air quality and odour. Sighted.	Compliant				
Greenhouse Gas and Energy	A review of energy efficiency will be undertaken as part of plant and equipment procurement.	During construction	Orica considered opportunities to improve energy efficiency during procurement of MOD 2 infrastructure. Orica advised that the design philosophy of the cooling system utilised VSDs (Variable Speed Drives) on the water pump and Cooling Tower fan to optimise energy use, drives run as needed and only as fast as required to achieve Set point. Circulation pump was also modelled on existing pumps installed at the ANE plant for commonality of spare parts, another spare pump did not have to be bought.	Compliant				
	Orica will consider the implementation of energy efficiency opportunities as described in Section 6.8.3.  [section 6.8.3 refers to greenhouse gas emissions. The text states: Some of the opportunities for improving energy efficiency and reducing greenhouse gas emissions that will be implemented, as appropriate, during the life of the Project include: • Orica undertakes a review of energy efficiency as part of plant and equipment procurement during the project planning phase. Consideration will be given to the life cycle cost advantages obtained by using energy efficient components (for example, efficient external lighting); • reviewing and seeking to minimise the electricity consumption for offices and workshops, including such measures as automatic control of external and internal lighting; • reviewing and implementing, where relevant, potential energy efficiency opportunities in water pumping systems (for example, variable speed drive pumps); and • improvements in energy measurement and monitoring to assist with the management focus on energy efficiency]	Ongoing	Orica considered opportunities to improve energy efficiency during procurement of MOD 2 infrastructure (as noted above).	Compliant				
Water	The CSEMP will include requirements to manage the erosion and sediment control measures.	During construction	Previously satisfied. Not triggered during audit period.  A Soil and Water Management Plan was included as an appendix to the Construction EMS. It includes the requirements for the management of soil and water during construction of the ANE Production Facility, in particular as it relates to erosion and sediment control.	Not triggered.				

**Table B2 - Statement of Commitments Assessment of Compliance**

Issue	Commitment	Timing	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
	An OEMP will detail the measures to be undertaken to ensure that the water controls are being effectively maintained. This plan will include the requirements for any water quality monitoring, inspection of the diversion drains, erosion control measures and maintenance of the water management systems within the operational areas of the plant.	Operation	EMP (SHE-KUR-EMP-EMP-001), June 2014 has been prepared by Orica. It covers all operations within the boundary of the technical centre, including the ANE plant. The EMP includes measures for water quality monitoring, inspections and maintenance.	Compliant				
Bushfire	A 30 metre Asset Protection Zone (APZ) will be constructed around the proposed ANE Production Facility and maintained in accordance with the requirements of the Inner Protection Area.	During construction and ongoing	The Operations EMS outlines the maintenance and inspection regime for the APZ undertaken in accordance with daily and monthly housekeeping checks. Maintained during the audit period.	Compliant				
	Construction materials for the proposed ANE Production Facility will comply with the Building Code of Australia (BCA) for bushfire protection where applicable.	During construction	No evidence was provided to demonstrate that the new structures on the Project Site were constructed in accordance with the relevant requirements of the Building Code.  Previously, Final Occupation Certificate (000327) was issued by Hunter PCA 2 June 2012, certifying that: - The building is suitable for occupation or use in accordance with its classification under the Building Code of Australia - A Final Fire Safety Certificate has been issued for the building.	Administrative non-compliance				
	The proposed ANE Production Facility access road will be sized to provide sufficient width to allow fire fighting access	During construction	Not triggered.	Not triggered.				
	Water supplies will be easily accessible and suitable connections for water tanks will be provided so Rural Fire Service (RFS) tankers can refill.	Ongoing	Water supplies were checked during the site visit.	Compliant				
	The Site Emergency Plan and Fire Safety Management Plan will be updated to include the proposed ANE Production Facility.	During construction and operation	The emergency plan "ORICA AUSTRALIA PTY LTD KURRI KURRI TECHNICAL CENTRE EMERGENCY PLAN" prepared/updated by Orica to include the ANE Facility, has been updated during the audit period - REVISION 10 10/09/2015. The fire safety study "FIRE SAFETY STUDY PROPOSED ANE FACILITY KURRI KURRI TECHNOLOGY CENTRE" (Rev 3, 14 September 2011) prepared by Sherpa Consulting to include the ANE Facility has not changed during the audit period.	Compliant				
Waste	The CSEMP [Construction Safety Environmental Management Plan] will include measures to manage waste through the design and procurement of construction materials and establishment of recycling and waste disposal systems.	During construction	Not triggered during the audit period.	Not triggered.				
	The OEMP details the management of waste materials generated during the operation of the Project.	Ongoing	EMP (SHE-KUR-EMP-EMP-001), June 2014 has been prepared by Orica. It covers all operations within the boundary of the technical centre, including the ANE plant. The EMP includes waste management measures.	Compliant				
MOD 2 Mitigation Measures								
Notification	Orica will provide written notification to nearby residents prior to construction commencing. This notification will include (but not be limited to): • a brief description of the proposed modification • describe the fact that the Hazard/Risk profile of the site will not change • describe the potential visible water vapour plume from the cooling tower under certain meteorological conditions • describe the justification for the proposed modification • provide contact numbers for complaints/enquiries.	Prior to Mod 2 construction	The Department of Planning notified residents of the application for mod 2 (2 May 2016). There was no further notification to residents by Orica prior to construction commencing that included the items required.	Non-compliant		E	2	Medium

**Table B3 - EPL Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
<b>1 ADMINISTRATIVE CONDITIONS</b>								
A1 What the licence authorises and regulates	A1.1	Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.  Scheduled Activity: Chemical Production Fee Based Activity: Dangerous goods production Scale: > 25000 T produced  Scheduled Activity: Chemical Production Fee Based Activity: Explosives production Scale: 0 - 2000 T produced	Orica holds a weekly Results Action Review and tracks and reviews production of ANE weekly and tabulates annualised production of ANE. Orica's financial year production (1 October 2015 to 30 Sept 2016) tonnage was 98,895.	Compliant				
A4 Information supplied to the EPA	A4.1	Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.	Works are conducted in accordance with the EPL. An annual return of compliance with the EPL is submitted to the EPA. The only non-compliance reported on the EPA website during the audit period was non-compliance with E1.1 "Failure to submit Annual Performance Report with Annual Return".	Compliant				
<b>2 DISCHARGES TO AIR AND WATER AND APPLICATIONS TO LAND</b>								
P1 Location of monitoring/discharge points and areas	P1.1	The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.	Noted.	Note				
	P1.2	The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.  EPA Identification no.: 1 Type of Monitoring Point: Discharge to utilisation area Type of Discharge Point: Discharge to utilisation area Location Description: Office area lawns and gardens of 1 Ha as shown on drawing No TC-02-6001 submitted with Licence Information Form dated 10/04/2000  EPA Identification no.: 2 Type of Monitoring Point: Wet weather discharge Type of Discharge Point: Wet weather discharge Location Description: Overflow pipe from water treatment system "Stormceptre System" (Pit 17) located at the south-eastern corner of the Ammonium Nitrate Emulsion Production Facility.	Noted.	Note				
<b>3 LIMIT CONDITIONS</b>								
L1 Pollution of waters	L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	Orica's ANNUAL ENVIRONMENTAL MANAGEMENT REPORTS and Annual Returns to the EPA address compliance with Section 120 of the <i>Protection of the Environment Operations Act 1997</i> . There have been no reported non-compliances within the audit period.	Compliant				

**Table B3 - EPL Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
L2 Volume and mass limits	L2.1	For each discharge point or utilisation area specified below (by a point number), the volume/mass of: a) liquids discharged to water; or; b) solids or liquids applied to the area; must not exceed the volume/mass limit specified for that discharge point or area.  Point: 1 Unit of Measure: litres per day; Volume/Mass Limit: 16800	Noted.	Note				
L3 Noise limits	L3.1	Noise generated from the premises must not exceed 35dB(A)LAeq(15 minutes) at receptors R1-R21 referred to in "Environmental Assessment, Proposed Ammonium Nitrate Emulsion Production Facility and Continued Operation of the Orica Mining Services Technology Centre, Richmond Vale, NSW" 2009, at any time during construction and operations.	Noise monitoring has been undertaken annually by Umwelt during the audit period. The 2014, 2015 and 2016 noise monitoring reports were sighted. Each of the reports state: "Results of the attended noise monitoring program conducted... indicated that the Technology Centre was in compliance with the LAeq,15minute industrial noise assessment criteria as outlined in Project Approval 09_0090 and EPL 4121 for the meteorological conditions experienced at the time of monitoring."	Compliant				
	L3.2	Noise from the premises is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of the dwelling where the dwelling is more than 30 metres from the boundary, to determine compliance with the noise limits in Condition L3.1 unless otherwise stated.  The modification factors presented in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.  Note: Where it can be demonstrated that direct measurement of noise from the premises is impractical, the EPA may accept alternate means of determining compliance. See Chapter 11 of the NSW Industrial Noise Policy.	Noted.	Note				
	L3.3	The noise limit in L3.1 applies under all meteorological conditions except for any one of the following: a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or c) Stability category G temperature inversion conditions	Noted	Note				
	L3.4	For the purposes of condition L3.3: a) The meteorological data to be used for determining meteorological conditions is to be recorded by a meteorological station to be established on the premises; and b) Stability category temperature inversion conditions are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the NSW Industrial Noise Policy.	There is a weather station at the Orica ANE plant. The station records meteorological data (wind, rainfall, temperature)	Compliant				

**Table B3 - EPL Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
	L3.5	Noise generated at the premises that is measured at each noise monitoring point established under this licence must not exceed the noise levels specified in Column 4 of the table below for that point during the corresponding time periods specified in Column 1 when measured using the corresponding measurement parameters listed in Column 2  POINT 2 Time period: All hours Measurement parameter: LAeq Measurement frequency: Not stated Noise level dB(A): 35	Noise monitoring undertaken and reported in the Noise Monitoring reports prepared by Umwelt (2014, 2015 and 2016) complies with the requirement.	Compliant				
L4 Potentially offensive odour	L4.1	The licensee must not cause or permit the emission of offensive odour beyond the boundary of the premises. Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.	Orica's AEMRs prepared during the audit period (2014, 2015 and 2016) state: The Orica Australia Technical Centre is compliant with condition L4 and its subsection. No potentially offensive odours were identified at the site.	Compliant				
L5 Other limit conditions	L5.1	The licensee shall not produce more than 250,000 tonnes per annum of ammonium nitrate emulsion product at the premises.	Orica holds a weekly Results Action Review and tracks and reviews production of ANE weekly and tabulates annualised production of ANE. Orica's financial year production (1 October 2015 to 30 Sept 2016) tonnage was 98,895.	Compliant				
<b>4 OPERATING CONDITIONS</b>								
O1 Activities must be carried out in a competent manner	O1.1	Licensed activities must be carried out in a competent manner. This includes: a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.	Site inspection indicated compliance	Compliant				
O2 Maintenance of plant and equipment	O2.1	All plant and equipment installed at the premises or used in connection with the licensed activity: a) must be maintained in a proper and efficient condition; and b) must be operated in a proper and efficient manner.	Site inspection indicated compliance. Interview with maintenance scheduler indicated compliance. Monthly schedules sighted.	Compliant				
O3 Effluent application to land	O3.1	The quantity of effluent applied to the utilisation area must not exceed the capacity of the area to effectively utilise the effluent.  For the purpose of this condition, 'effectively utilise' includes the use of the effluent for pasture or crop production, as well as the ability of the soil to absorb the nutrient, salt, hydraulic load and organic material.	Site inspection indicated compliance	Compliant				
	O3.2	Spray from effluent application must not drift beyond the boundary of the premises.	Site inspection indicated compliance	Compliant				
	O3.3	Public access to any effluent utilisation area must be denied during effluent application and until the effluent application area has dried.	There is no public access permitted within the plant boundary, therefore no public access to the effluent utilisation area.	Compliant				
	O3.4	Adequate notices, warning the public not to drink or otherwise use the treated effluent, must be erected on the site. These notices must be legible English and in any other languages as may be necessary, and must indicate at least that the water in use is "Reclaimed Water - Unfit for Drinking".	Notices/signs were installed on site. Sighted during site visit.	Compliant				

**Table B3 - EPL Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
O4 Emergency response	O4.1	The licensee must maintain, and implement as necessary, a current emergency response plan for the premises. The licensee must keep the emergency response plan on the premises at all times. The emergency response plan must document systems and procedures to deal with all types of incidents (e.g. spills, explosions or fire) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment. If a current emergency response plan does not exist at the date on which this condition is attached to the licence, the licensee must develop an emergency response plan within three months of that date.	The Emergency Plan has been updated and implemented at the site: "ORICA AUSTRALIA PTY LTD KURRI KURRI TECHNICAL CENTRE EMERGENCY PLAN" Rev 10, 10/9/2015. The Emergency Plan is kept at the premises. The Emergency Plan documents systems and procedures to deal with incidents.	Compliant				
O5 Processes and management	O5.1	All above ground tanks containing material that is likely to cause environmental harm must have impervious bunding or have an alternative spill containment system in place.	Sighted	Compliant				
<b>5 MONITORING AND RECORDING CONDITIONS</b>								
M1 Monitoring records	M1.1	The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	Orica staff do water quality sampling. Taken to ALS. They send results back. Orica upload the results onto Orica's website. <a href="http://www.orica.com/Sustainability/Environmental-Monitoring-Data/Kurri-Kurri#.WCKDIner32Q">http://www.orica.com/Sustainability/Environmental-Monitoring-Data/Kurri-Kurri#.WCKDIner32Q</a> . Results sighted.	Compliant				
	M1.2	All records required to be kept by this licence must be: a) in a legible form, or in a form that can readily be reduced to a legible form; b) kept for at least 4 years after the monitoring or event to which they relate took place; and c) produced in a legible form to any authorised officer of the EPA who asks to see them.	Orica upload the results onto their website <a href="http://www.orica.com/Sustainability/Environmental-Monitoring-Data/Kurri-Kurri#.WCKDIner32Q">http://www.orica.com/Sustainability/Environmental-Monitoring-Data/Kurri-Kurri#.WCKDIner32Q</a> . Results of last four years sighted on the webpage.	Compliant				
	M1.3	The following records must be kept in respect of any samples required to be collected for the purposes of this licence: a) the date(s) on which the sample was taken; b) the time(s) at which the sample was collected; c) the point at which the sample was taken; and d) the name of the person who collected the sample.	Chain of Custody forms from ALS Laboratory sighted. The forms show date, time, name of person and point sample was taken.	Compliant				
	M2.1	For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:	Monitoring has been undertaken as required by the EPL and reported on their website <a href="http://www.orica.com/Sustainability/Environmental-Monitoring-Data/Kurri-Kurri#.WCKDIner32Q">http://www.orica.com/Sustainability/Environmental-Monitoring-Data/Kurri-Kurri#.WCKDIner32Q</a> .	Compliant				

**Table B3 - EPL Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
M2 Requirement to monitor concentration of pollutants discharged	M2.2	<p>Water and/ or Land Monitoring Requirements</p> <p>POINT 2</p> <p><b>Pollutant: Ammonia</b></p> <ul style="list-style-type: none"> <li>- Units of measure: milligrams per litre</li> <li>- Frequency: Daily during any discharge</li> <li>- Sampling Method: Grab sample</li> </ul> <p><b>Pollutant: Conductivity</b></p> <ul style="list-style-type: none"> <li>- Units of measure: microsiemens per centimetre</li> <li>- Frequency: Daily during any discharge</li> <li>- Sampling Method: Grab sample</li> </ul> <p><b>Pollutant: Nitrogen (total)</b></p> <ul style="list-style-type: none"> <li>- Units of measure: milligrams per litre</li> <li>- Frequency: Daily during any discharge</li> <li>- Sampling Method: Grab sample</li> </ul> <p><b>Pollutant: Oil and Grease</b></p> <ul style="list-style-type: none"> <li>- Units of measure: Visible</li> <li>- Frequency: Daily during any discharge</li> <li>- Sampling Method: Visual Inspection</li> </ul> <p><b>Pollutant: pH</b></p> <ul style="list-style-type: none"> <li>- Units of measure: pH</li> <li>- Frequency: Daily during any discharge</li> <li>- Sampling Method: Grab sample</li> </ul> <p><b>Pollutant: Total dissolved solids</b></p> <ul style="list-style-type: none"> <li>- Units of measure: milligrams per litre</li> <li>- Frequency: Daily during any discharge</li> <li>- Sampling Method: Grab sample</li> </ul> <p><b>Pollutant: Total suspended solids</b></p> <ul style="list-style-type: none"> <li>- Units of measure: milligrams per litre</li> <li>- Frequency: Daily during any discharge</li> <li>- Sampling Method: Grab sample</li> </ul>	Monitoring has been undertaken as required by the EPL and reported on their website <a href="http://www.orica.com/Sustainability/Environmental-Monitoring-Data/Kurri-Kurri#.WCKDIner32Q">http://www.orica.com/Sustainability/Environmental-Monitoring-Data/Kurri-Kurri#.WCKDIner32Q</a> .	Compliant				
M3 Testing methods - concentration limits	M3.1	Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.	A procedure for the taking of samples has been prepared by Orica. Sighted.	Compliant				
M4 Weather monitoring	M4.1	<p>The Licensee must monitor at the premises weather station Elevation 57.7m (-32.868319E, 151.533961N) by sampling and obtaining results by analysis, each weather parameter specified in Column 1. The licensee must use the sampling method, units of measure and sample at the frequency specified in the other columns.</p> <p>Parameter: Rainfall Units of Measure: mm Frequency: Daily Sampling Method Rain gauge</p>	Rainfall results sighted. Results record daily rainfall in mm.	Compliant				
	M5.1	The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.	No complaints have been received by Orica during the audit period. None of the regulatory agencies contacted during the audit reported receiving any complaints.	Compliant				

**Table B3 - EPL Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
M5 Recording of pollution complaints	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.	No complaints have been received by Orica during the audit period. None of the regulatory agencies contacted during the audit reported receiving any complaints.	Compliant				
	M5.3	The record of a complaint must be kept for at least 4 years after the complaint was made.	Noted.	Note				
	M5.4	The record must be produced to any authorised officer of the EPA who asks to see them.	Noted.	Note				
M6 Telephone complaints line	M6.1	The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.	Sighted. Orica provides a complaints line particular for Kurri Kurri technical centre.	Compliant				
	M6.2	The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.	On the same webpage as the Kurri Kurri phone number, Orica advertises its Customer Feedback Service phone number "as a direct point of contact via phone, fax and e-mail"	Compliant				
	M6.3	The preceding two conditions do not apply until 3 months after the date of the issue of this licence	Noted.	Note				
<b>6 REPORTING CONDITIONS</b>								
R1 Annual return documents	R1.1	The licensee must complete and supply to the EPA an Annual Return in the approved form comprising: a) a Statement of Compliance; and b) a Monitoring and Complaints Summary. At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.	An EPL Annual Return has been prepared and submitted to the OEHL as required under the EPL. EPA website checked by audit team.	Compliant				
	R1.2	An Annual Return must be prepared in respect of each reporting period, except as provided below [REFER EPL R1.3 & R1.4].	An EPL Annual Return has been prepared and submitted to the OEHL as required under the EPL. EPA website checked by audit team.	Compliant				
	R1.5	The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').	The end of the reporting period of the EPL is 3 January each year. Therefore, the due date for the Annual Return submission is not later than 4 March each year. The Annual Returns due during the audit period were received at the EPA within the required timeframe.	Compliant				
	R1.6	The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.	Noted. Sighted.	Compliant				
	R1.7	Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by: a) the licence holder; or b) by a person approved in writing by the EPA to sign on behalf of the licence holder.	The Annual Returns for 2014, 2015 and 2016 were sighted. The Annual Returns included the certified Statement of Compliance and were signed	Compliant				
		Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period. Note: An application to transfer a licence must be made in the approved form for this purpose.	Noted	Note				

**Table B3 - EPL Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
R2 Notification of environmental harm	R2.1	Notifications must be made by telephoning the Environment Line service on 131 555.	Noted.	Note				
	R2.2	The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.  Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.	No incidents have occurred during the audit period	Not Triggered				
R3 Written Report	R3.1	Where an authorised officer of the EPA suspects on reasonable grounds that: a) where this licence applies to premises, an event has occurred at the premises; or b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.	Within the audit period, the EPA has not requested such a written report as per this clause.	Not Triggered				
	R3.2	The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.	Not triggered	Not Triggered				
	R3.3	The request may require a report which includes any or all of the following information: a) the cause, time and duration of the event; b) the type, volume and concentration of every pollutant discharged as a result of the event; c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort; e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants; f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and g) any other relevant matters.	Not triggered	Not Triggered				
	R3.4	The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.	Not triggered	Not Triggered				
<b>7 GENERAL CONDITIONS</b>								
G1 Copy of licence kept at the premises or plant	G1.1	A copy of this licence must be kept at the premises to which the licence applies.	Sighted electronic copy on Orica system and hard copy.	Compliant				
	G1.2	The licence must be produced to any authorised officer of the EPA who asks to see it.	Within the audit period, the EPA has not requested to see the licence.	Not Triggered				
	G1.3	The licence must be available for inspection by any employee or agent of the licensee working at the premises.	The licence is available to persons working at the premises on orca's intranet.	Compliant				

**Table B3 - EPL Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
<b>8 SPECIAL CONDITIONS</b>								
E1 Annual Performance Report - Ammonium Nitrate Emulsion (ANE) Plant Stormceptre Discharge	E1.1	The Licensee must submit an Annual Performance Report with each Annual Return.	The Annual Performance Report was prepared but was not submitted with the 2016 Annual Return when it was submitted to the EPA 4 March 2016. The EPA website records a "Failure to submit Annual Performance Report with Annual Return. EPA has written to licensee regarding non-compliance and relevant action".	Administrative non-compliance				
	E1.2	<p>The Report required by condition E1.1 must include an assessment of stormwater discharge quality monitoring data obtained by the licensee during the reporting period. The Report must include but need not be limited to the following information:</p> <ul style="list-style-type: none"> <li>- tabulated results of all monitoring data required to be collected for discharges from the Stormceptre (EPA identification Point 2);</li> <li>- a graphical presentation of data in order to show variability and/or trends. This should include as a minimum, data from the previous three (3) reporting periods;</li> <li>- a graphical or tabulated presentation of the monitoring data against relevant environmental guideline values;</li> <li>- any statistically significant variations or anomalies in the data should be highlighted and explained; and</li> <li>- an analysis of any identified potential for environmental impact indicated by the monitoring data and any remedial action taken or proposed to be taken to address potential impacts.</li> </ul> <p>Note: If the results of stormwater analysis suggest that adverse impacts are likely, the EPA may require further investigations and/or works to mitigate these impacts.</p>	The Annual Performance Report for the Stormceptre Discharge prepared 15 January 2016 by JBS&G was sighted. The report included the items as per the condition.	Compliant				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
<b>RESPONDENT - CESSNOCK CITY COUNCIL</b>							
The biodiversity offset area is to be in accordance with the Ecological Assessment, dated December 2009 by Umwelt (Australia) Pty Limited.	Agreed or as developed in consultation with DECCW and DoP .	Outside the audit period.  The biodiversity offset area was developed in consultation with DECCW. A Biodiversity Offset area has been agreed and established as set out in the signed "Conservation Agreement between the Minister Administering the New South Wales Nation Parks and Wildlife Act (1974) and Orica Australia for 'Orica Richmond Vale', 2011"	Not triggered				
A plan of management is to be developed in accordance with the relevant government authorities for the ongoing management of the biodiversity offset area as indicated in Ecological Assessment, dated December 2009 by Umwelt (Australia) Pty Limited.	Agreed	Outside the audit period.  The "Biodiversity Offset Area Vegetation Management Plan" (January 2012) prepared by Umwelt (Australia) was prepared. Adequate.	Not triggered				
The recommendations of the Aboriginal Archaeological Assessment of the EA are to be adhered to in order to minimise any impact upon potential Aboriginal artefacts found on the subject site.	Agreed	Outside the audit period.  The Aboriginal Archaeological Assessment recommendations were included in the Construction EMS, that: - surface collection of artefact scatter Orica AS should be undertaken prior to ground disturbance - topsoil removal within the survey area should be subject to monitoring as an Aboriginal cultural heritage project. - Should skeletal material be identified during ground disturbance works within the survey area, all work must cease and the NSW Police, DECC and the Aboriginal stakeholders contacted immediately - Should additional artefactual material be exposed during ground disturbance works within the survey area, the artefacts will be collected in accordance with the collection methodology - Should sandstone with evidence of Aboriginal axe grinding grooves be exposed during ground disturbance works within the survey area, work should cease in the immediate area.	Not triggered				
Any works required to be undertaken on George Booth Drive are to comply with the provisions of the Road and Traffic Authority.	Agreed	Outside the audit period.  The Department of Planning, in their correspondence to Orica (18/1/2012), stated they had reviewed the RTA's letters of 27 September and 7 December 2011, and was satisfied that these upgrade works have been completed in accordance with these conditions.	Not triggered				
All access crossings and driveways shall be maintained in good order for the life of the development.	Agreed	Checked on site.	Compliant				
The registered proprietor of the land shall construct a sealed access road, including any necessary drainage in accordance with Council's 'Engineering Requirements for Development' from George Booth Drive to the proposed development site.	The sealed access road has been designed and provided for in accordance with current Australian Standards.	Outside the audit period.  I.C.D. (Asia Pacific) Pty Ltd design engineers in their letter to Orica dated 13.04.2011, confirmed I.C.D had inspected and reviewed the design of roads and parking facilities in the plant area on the 05.04.2011 and certified that the "roads and the parking areas are in accordance with current Australian Standards and they fully satisfy the environmental planning regulations and rules of local council. Construction Certificate No: 000128 was issued by Hunter PCA (the Principal Certifying Authority) on 30 May 2011 which included I.C.D.'s documents. A Final Occupation Certificate (Certificate number 000327) was issued by Hunter PCA 2 June 2012.	Not triggered				
On-site car parking shall be provided for a minimum of ten (10) vehicles and such being set out generally in accordance with Council's D.C.P. Full details shall be submitted to and approved by the P.C.A. prior to release of the Construction Certificate for the buildings.	SECTION 3.10.1: Provision of (10) Car Parking Spaces  The final number of car parking spaces shall be determined during the final detailed design phase for the Project and will be determined based upon the expected number of personnel requiring parking during daytime hours. Parking for ten vehicles is unlikely to be required due to the shift work patterns. There may also be opportunities for increasing on-site parking at other locations within the Orica site, which are still being investigated.	Noted.	Note				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
A minimum one (1) car parking space shall be designated and signposted for use by disabled persons for the life of the development. Full details shall be submitted to and approved by the P.C.A. prior to release of the Construction Certificate for the buildings.	SECTION 3.10.2: Provision of (1) Disabled Car Parking Space  Due to the industrial nature of the proposed ANE Production Facility it is not likely that disabled access would be possible. This issue was discussed further with CCC following the lodgment of their submission with DoP. CCC noted that provisions of disabled parking is a standard request however, they were accepting that it may not be practicable in this case. Discussions with CCC resulted in agreement that Orica was not required to provide a disabled car parking space.	Noted.	Note				
All driveways, access corridors and car parking areas are to be designed in accordance with AS2890.1&2 – Parking Facilities. The car parking areas shall be constructed with a base course of adequate depth to suit design traffic loadings with a sealed surface treatment, graded and drained in accordance with Council's 'Engineering Requirements for Development'.	The proposed ANE Production Facility will be constructed in accordance with Australian Standards or acceptable design standards, as appropriate.	Noted.	Note				
A separate off-street loading/unloading facility with capacity to accommodate the largest delivery vehicle likely to deliver goods to and from the premises shall be provided for all loading and unloading of vehicles wholly within the property.	Agreed. Off-street loading/unloading is provided for by the project.	Adequate. Sighted.	Compliant				
The applicant shall consider and adopt the summary of noise control recommendations and project specific noise criteria, construction noise criteria, sleep disturbance criteria and road traffic noise criteria outlined in acoustic report dated November 2009 prepared by Umwelt Environmental Consultants. The acoustic consultant shall be engaged to assist with the design criteria to ensure that acoustic attenuation is provided to the development.	SECTION 3.5.1: CCC Noise Condition  Orica agree to adopt the noise mitigation and management measures outlined in Section 6.5.6 of the EA. Orica also agree to adopt the project specific noise criteria, construction noise criteria, sleep disturbance criteria and road traffic noise criteria outlined in the Noise Impact Assessment (NIA) for the Project dated November 2009. During the design of the proposed ANE Production Facility Orica engaged an acoustic consultant with the aim of minimising noise emissions from the source where possible, and incorporated noise controls into the design. Therefore, the request to engage an acoustic consultant to assist with noise attenuation design for the project is considered unnecessary. Given noise levels emitted from the Project will be below the relevant noise criteria, Orica are not proposing further noise attenuation measures, other than those outlined in Section 6.5.6 of the EA.	Prior to audit period.  The noise audit report titled "Environmental Noise Monitoring April 2012" prepared by Umwelt (Australia) Pty Limited, stated: Results of the attended industrial noise monitoring program conducted within the night time periods of 22 March and 25 March 2012 indicated that the ANE production facility was in compliance with the LAeq,15 minute industrial noise assessment criteria as outlined in the ANE production facility Project Approval 09_0090 and EPL 4121 for the meteorological conditions experienced at the time of monitoring.	Not triggered				
The existing site fire risk management plan is to be updated to cover the proposed ANE Production facilities. This should specifically address extension of the existing site bushfire hazard reduction practices to cover the ANE Production Facility area as recommended in the Preliminary Hazard Analysis, dated 13 October 2009 by Sherpa Consulting Pty Ltd.	Agreed	Orica's "Fire Risk Management Plan" was updated prior to the audit period.	Not triggered				
All vehicles carrying ANE and ANS are to be licensed by the Department of Environment, Climate Change and Water.	Agreed	Haulier audits are conducted and Orica check the licencing as part of the audit (sample of audits sighted).	Compliant				
All drivers of vehicles carrying ANE and ANS are to complete an accredited training course and be licensed by the relevant government authority.	Agreed; All drivers of vehicles carrying ANE and ANS currently undergo emergency response training for incidents such as vehicular accidents or fires as part of their Dangerous Goods certification and internal Orica emergency training.	Noted - beyond audit scope	Note				
All drivers are to undergo emergency response training for incidents such as vehicular accidents or fires.	Agreed; All drivers of vehicles carrying ANE and ANS currently undergo emergency response training for incidents such as vehicular accidents or fires as part of their Dangerous Goods certification and internal Orica emergency training.	Orica induction is undertaken by all drivers. The induction outlines emergency procedures.  Drivers are not employed by Orica. The haulage contractor provides all training for the drivers, including emergency training. Haulier audits are conducted by Orica (sample of audits sighted) during which training received is checked. Orica committed to training drivers in emergency response and management and do not conduct this.	Compliant				
Each vehicle is to carry an emergency procedure guide which summarises the actions to be undertaken in the event of a vehicle fire and also a guide for each type of product being carried.	Agreed; All drivers of vehicles carrying ANE and ANS carry an emergency procedure guide which summarises the actions to be undertaken in the event of a vehicle fire and also a guide for each type of product being carried in accordance with Dangerous Goods requirements.	The haulage contractor provides emergency procedure guides for the drivers. Haulier audits are conducted by Orica (sample of audits sighted) during which the placement within the vehicle of the Emergency Procedures Guide and the Vehicle Fire Emergency Guide is checked.	Compliant				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmndn	Consequences	Likelihood	Risk
The development shall comply with the requirements of the NSW Rural Fire Service. OR The recommendations of the Bushfire Threat Assessment by Bushfire Consulting Specialists, Issue Dated October 2009, as submitted with the application shall be adhered to.	"SECTION 3.6.1: Fire Management  During the environmental assessment process for the Project, Orica consulted with and sought submissions from the NSW Rural Fire Service (RFS) and the NSW Fire Brigades (NSWFB). The RFS responded that the development is to be carried out with the aims and objectives of the Planning for Bushfire Protection (RFS 2006 guidelines), which Orica agree to comply with. The NSWFB commented that any new building proposal and substantial alterations to existing buildings comply with the current Building Code of Australia (BCA) and Relevant Australian Standards, which Orica agree to comply with." The NSWFB stated that a Fire Safety Study and an Emergency Plan should be prepared by Orica for the Project. A Fire Safety Study is currently being prepared for the Project and a copy of this study will be forwarded to the relevant agencies following its completion. As discussed in Section 6.10 of the EA, Orica are committing to updating the existing site Emergency Plan and the site Fire Safety Management Plan to include a fire management strategy for the proposed ANE Production Facility. When updating these documents Orica will consult with the relevant emergency authorities such as the RFS. Fire Fighting Resources In one of the private submissions the author raised the concern that in the event of a fire event threatening the Richmond Vale area fighting resources would be required to help contain the Orica facility, leaving the residents with possible reduced resources for protecting their own properties. However, if a fire were large enough that the local RFS was overstretched the RFS has in place systems to pull additional resources from surrounding areas, thus providing resources to respond to a large or severe bushfire event. In addition, Orica maintains and conducts a program of regular bushfire hazard reduction on the site in conjunction with the RFS thus reducing the potential for a severe fire event. Although bushfires can approach from the east, based on historical experience, it is rare due to the terrain of the site, with bushfires normally approaching the site from the west and it would be extremely rare that a	NSW Fire and Rescue approved the design and response to fire requirements as the facility is a major hazard facility. The Emergency Plan was updated during the audit period (Rev 10, 10/9/2016), RFS was informed when emergency procedure was updated.	Compliant				
All waste that is unable to be reused or recycled on the site, shall be classified in accordance with Department of Environment Climate Change and Water's 2008 Waste Classification Guidelines and shall be removed from the site by an approved licensed contractor to an approval waste disposal facility.	Agreed	Waste generated by the site during construction and operation has been classified as per DECCW waste classification. NSW EPA waste tracking dockets were sighted.	Compliant				
Orica shall comply with the draft statement of commitments as set out in Section 7.0 of the EA.	Agreed	Refer to Statement of Commitments review in this Independent Environmental Audit	Note				
The proposed development shall be carried out strictly in accordance with the details set out in the EA.	Orica will carry out the proposed development 'generally in accordance' with the details set out in the EA.	Generally compliant	Compliant				
The excavated and/or filled areas of the site are to be stabilised and drained to prevent scouring onto adjacent private or public property. The finished ground around the perimeter of the development is to be graded to prevent ponding of water and to ensure the free flow of water away from the proposed ANE facility.	Agreed	Prior to audit period. No excavation in audit period.	Not triggered				
Construction works associated with the development in accordance with a development consent shall not be commenced until:- (a) detailed plans including design calculations have been endorsed with a construction certificate by:- (i) the consent authority; (ii) an accredited certifier, and (b) the person having the benefit of the development consent:- (i) has appointed a principal certifying authority, and (ii) has notified Council of the appointment, and (c) the person having the benefit of the development consent has given at least 2 days notice to the Council of the person's intention to commence construction works.	Agreed	A construction certificate for MOD 2 infrastructure was not obtained. An exemption from the BCA approval was not obtained.	Non-compliant	E	3	Low	

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
Detailed earthworks plans of the development, showing the extent of excavation and/or filling together with details of the method of retaining, draining and stabilising the disturbed areas, construction details, the location of stockpiles, general notes, earthworks notes and geotechnical notes are to be provided. The plans are to be in accordance with Council's 'Engineering Requirements for Development', shall be submitted to and approved by the P.C.A. prior to issue of the Construction Certificate.	The proposed ANE Production Facility will be constructed in accordance with relevant Australian Standards or acceptable design standards, as appropriate.	Prior to audit period.	Not triggered				
A Soil and Water Management Plan is to be prepared for the proposed development and access road prior to issue of a Construction Certificate. The plans are to be in accordance with Council's 'Engineering Requirements for Development', shall be submitted to and approved by the P.C.A. prior to issue of the Construction Certificate.	Agreed – soil and water management will be addressed in the Construction Environmental Management Plan (CEMP).	Prior to audit period.	Not triggered				
An Environmental Management Plan is to be prepared for the proposed development and access road prior to the issue of a Construction Certificate. The plan is to include provision for: <ul style="list-style-type: none"> <li>• Site management plan</li> <li>• Construction management plan</li> <li>• Traffic management plan</li> <li>• Surface water management plan, inclusive of surface water quality for reuse within the proposed facility</li> <li>• Dust</li> <li>• Noise and vibration management plan</li> <li>• Waste management plan</li> <li>• Fire fighting capacity and emergency response</li> <li>• Acid sulphate and salinity management plan (if applicable)</li> </ul>	SECTION 3.2.1: Preparation of Environmental Management Plans  Orica proposed to prepare a Construction Environmental Management Plan (CEMP) for approval by the Department of Planning (DoP) prior to construction commencing on the proposed ANE Production Facility. The purpose of a CEMP is to outline safety and environmental management practices and procedures to be followed during construction of the Project. The CEMP would be prepared in accordance with the requirements of the Guideline for the Preparation of Environmental Management Plans (DIPNR 2004). The CEMP will detail, among other things, how surface water, dust, erosion and sediment control, noise, traffic and waste will be managed during construction of the Project. Orica has also committed to updating the existing Site Emergency Plan and the Fire Safety Management Plan to include the proposed ANE Production Facility. The CEMP will detail all activities to be undertaken on the Site during construction, and outline all statutory and other obligations that the Proponent is required to fulfill during construction. The CEMP will provide a description of the roles and responsibilities for all relevant employees involved in the construction of the project, and will provide details of how the environmental performance of the construction works will be monitored. Lastly, it will outline the complaints and enquiries handling procedures for members of the public during construction. Prior to full commissioning of the facility, Orica will prepare a further Environment Management Plan to the satisfaction of DoP that covers the ongoing operation of the site. In addition to CEMP and the site environmental management plan (site EMP), Orica have committed to implement a Traffic Management Protocol including a Code of Conduct for Drivers operating heavy vehicles to and from the Technology Centre.	Prior to audit period.	Not triggered				
Topsoil shall only be stripped from approved areas and shall be stockpiled for re- use during site rehabilitation and landscaping. Details shall be submitted to and approved by P.C.A. prior to release of the Construction Certificate.	Agreed – Topsoil will be re-used where practicable. Any excess topsoil will be removed from site and managed in accordance with DECCW guidelines.	Prior to audit period.	Not triggered				
A detailed drainage design for the disposal and reuse of surface water from the site. Full details shall be submitted to and approved by the P.C.A. prior to release of the Construction Certificate.	Agreed	Prior to audit period.	Not triggered				
The registered proprietor of the land shall be responsible for all costs incurred in the necessary relocation of any services affected by the required construction works. Council and other service authorities should be contacted for specific requirements prior to commencement of any works.	Agreed	Prior to audit period.	Not triggered				
All site works are to be undertaken in accordance with the requirements of the approved Environmental Management Plan and Council's 'Engineering Requirements for Development'. To ensure that the site does not represent an environmental hazard or a danger to public safety and that the remediation works have been completed in a satisfactory manner.	The proposed ANE Production Facility will be constructed in accordance with Australian Standards or acceptable design standards, as appropriate. Construction will be undertaken in accordance with the CEMP.	Not applicable during the audit period.	Not triggered				
All reasonable measures shall be taken to protect all other vegetation on the site from damage during construction. All useable trees and shrubs shall be salvaged for re-use, either in log form, or as woodchip mulch for erosion control or site rehabilitation.	Agreed – where practicable	Not applicable during the audit period.	Not triggered				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
The control of erosion and the prevention of silt discharge into drainage systems and waterways will be necessary in accordance with Council's 'Engineering Requirements for Development', Department of Conservation and Land Management's 'Urban Erosion and Sediment Control' requirements and the Department of Housing 'Soil and Water Management for Urban Developments'. Erosion control measures are to be implemented prior to the commencement of any earthworks and shall be maintained until satisfactory completion and restoration of site earthworks, including revegetation of all exposed areas.	The proposed ANE Production Facility will be constructed in accordance with Australian Standards or acceptable design standards, as appropriate. Construction will be undertaken in accordance with the CEMP .	Not applicable during the audit period.	Not triggered				
All engineered fill shall be placed in accordance with Council's 'Engineering Requirements for Development' and Australian Standard AS 3798 'Guidelines on Earthworks for Commercial and Residential Developments'. The fill is to be controlled by compaction testing which is to be carried out in accordance with AS 1289 for controlled filling. Testing is to be carried out by a NATA registered laboratory and copies of the test certificate clearly indicating the location of each test and the laboratory's certificate shall be forwarded for approval by the P.C.A. Approved fill beneath roads should be placed in layers not exceeding 300mm loose thickness and compacted to a minimum density ratio of 95% Standard Compaction (AS1289-5.1.1 or equivalent), within a range of ±2% of standard Optimum Moisture Content. The fill shall be certified by a Geotechnical Engineer as being in compliance with AS 3798 and site levels shall be certified by a Registered Surveyor prior to the issue of an Occupation Certificate. To ensure that the site is filled appropriately in accordance with standard engineering requirements. Earthworks and filling shall not be placed in such a manner that natural drainage will be obstructed. To ensure that filling placed on land does not affect natural drainage. Filling shall not be placed on land in such a manner that surface water will be diverted to adjoining land. To ensure that site works do not result in water being diverted onto adjoining land. The excavated and/or filled areas of the site are to be stabilised and drained to prevent scouring. To reduce the risk of environmental and building damage.	The proposed ANE Production Facility will be constructed in accordance with Australian Standards or acceptable design standards, as appropriate.	Not applicable during the audit period.	Not triggered				
The applicant shall provide Council with an Engineering Certificate from a suitably qualified and experienced geotechnical and civil engineer, which confirms that the construction of the earthworks and access road have been constructed strictly in accordance with the provisions of Council's 'Engineering Requirements for Development', Development Consent and the Construction Certificate(s).	Agreed The proposed ANE Production Facility will be constructed in accordance with Australian Standards or acceptable design standards, as appropriate.	Prior to audit period.	Not triggered				
The excavated and/or filled areas of the site are to be stabilised and drained to prevent scouring onto adjacent private or public property. The finished ground around the perimeter is to be graded to prevent ponding of water and to ensure the free flow of water away adjoining properties.	Agreed	Prior to audit period.	Not triggered				
The registered proprietor of the land shall submit a report and a works-as-executed (WAE) drawing of the access road, stormwater drainage and any earthworks. The WAE drawings shall be prepared by a registered surveyor and shall indicate the following as applicable: 1. Invert and surface levels of any stormwater drainage systems 2. Finished surface levels of the proposed earthworks 3. Contour depth of fill plans 4. Access road longitudinal section and cross sections 5. Detailed levels of all associated works The plan shall be accompanied by a report from an engineer suitably qualified and experienced stating the conformance or otherwise of the works in relation to the approved design.	Agreed	Prior to audit period.	Not triggered				
The WAE plan and report shall be submitted to and approved by the P.C.A. prior to the issue of an Occupation Certificate. To ensure the stormwater detention system has been constructed in accordance with the design plans.	Agreed	Prior to audit period.	Not triggered				
The applicant is advised that if Council is the P.C.A. then an engineering plan checking and site supervision fee of \$16,047.00 is payable prior to release of the Construction Certificate for the access road and associated drainage works.	Noted	Prior to audit period.	Not triggered				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
This consent does not authorise the clearing of land in contravention of any other Act or instrument made under an Act concerned with soil erosion, protection of riverbank vegetation or catchment areas or the like or threatened species, populations or communities.	Agreed	Noted.	Note.				
Prior to any clearing of the subject land, the registered proprietor of the land shall obtain the any relevant approval required under the Native Vegetation Conservation Act, 1979 and/or the Threatened Species Conservation Act, 1995.	Agreed	There has been no vegetation clearance during the audit period.	Not triggered				
If Council is appointed as the P.C.A. then the applicant is to advise Council's Development Engineer at least 48 hours prior to commencement of any construction works on site or associated with the site, together with the approved contractor's name and address.	Agreed	Not triggered.	Not triggered				
<b>RESPONDENT - ROADS AND TRAFFIC AUTHORITY (RTA)</b>							
The intersection of George Booth Drive and Echidna Drive (Orica Entrance) shall be upgraded to Channelised Right Turn (CHR) type intersection with painted medians in accordance with the RTA's Road Design Guide and relevant Australian Standards. Advance intersection warning signage shall be provided in accordance with RTA and Council requirements and subject to approval from Council's Local Traffic Committee. Provision shall be made for cyclists through the intersection. All works associated with the proposed development shall be at no cost to the RTA.	SECTION 3.4.1: Intersection Upgrade  The Technology Centre is located on George Booth Drive, a designated state road maintained by the Roads and Traffic Authority (RTA). Access to the site is gained via a dedicated intersection between George Booth Drive and Echidna Drive, the existing Orica internal site access road. As detailed in Section 3.1 of the EA, the Project involves the construction and operation of an ANE Production Facility with a production capacity of up to approximately 250,000 tonnes per annum (tpa) of ANE. Production from the facility will increase incrementally, with production in the first year of operation expected to be approximately 125,000 tpa. The production increase is forecast to occur over about a twelve year period, depending on market demand, with a maximum production of 250,000 tpa currently expected to be achieved in 2023. Currently approximately 283 vehicles per day are generated by the Orica site on a weekday, including 27 heavy vehicles. Heavy vehicle numbers will increase in proportion to the amount of ANE product being produced at the Technology Centre. On weekdays it is expected that approximately 35 additional vehicles per day will be generated by the Project in 2011, increasing to approximately 60 vehicles per day by 2023. Heavy vehicle movements are expected to comprise approximately 25 vehicles per day in 2011 and increase to approximately 50 vehicles per day by 2023. At peak production the Project is expected to result in an increase to traffic on George Booth Drive by 1.1 per cent in total weekday volumes and 8 per cent for heavy vehicle volumes. An assessment of the operation of the intersection of George Booth Drive with Orica's access road, Echidna Drive, was undertaken as part of the Traffic Impact Assessment, contained in Appendix 7 of the EA. Echidna Drive currently forms a T intersection with George Booth Drive and includes an 'AUR' auxiliary lane on George Booth Drive for the right turn into Echidna Drive and an 'AUL' auxiliary lane for the left turn into Echidna Drive. A short acceleration lane for the left turn out of Echidna Drive onto George Booth Drive also currently exists. Sight distance at the intersection is good and exceeds 250 metres to/from the south and 220 metres to/from the north. SIDRA modelling was undertaken to assess the operation of the intersection giving consideration to the proposed increase in traffic associated with the Project. The modelling shows that the intersection will continue to operate at a satisfactory to good level of service, i.e. level of service of A or B, with acceptable vehicle delays in peak periods.	Prior to audit period.  The Department of Planning, in their correspondence to Orica (18/1/2012), stated they had reviewed the RTA's letters of 27 September and 7 December 2011, and was satisfied that these upgrade works have been completed in accordance with these conditions.	Not triggered				
Comment: The RTA has noted there have been safety concerns raised at the intersection of George Booth and Echidna Drive (Orica Entrance), particularly for heavy vehicles entering and exiting the site. It is considered the existing Auxiliary Right Turn (AUR) type intersection is not sufficient to cater for increase in heavy vehicles from a safety perspective and therefore should be upgraded,	Currently approximately 283 vehicles per day are generated by the Orica site on a weekday, including 27 heavy vehicles. Heavy vehicle numbers will increase in proportion to the amount of ANE product being produced at the Technology Centre. On weekdays it is expected that approximately 35 additional vehicles per day will be generated by the Project in 2011, increasing to approximately 60 vehicles per day by 2023. Heavy vehicle movements are expected to comprise approximately 25 vehicles per day in 2011 and increase to approximately 50 vehicles per day by 2023. At peak production the Project is expected to result in an increase to traffic on George Booth Drive by 1.1 per cent in total weekday volumes and 8 per cent for heavy vehicle volumes. An assessment of the operation of the intersection of George Booth Drive with Orica's access road, Echidna Drive, was undertaken as part of the Traffic Impact Assessment, contained in Appendix 7 of the EA. Echidna Drive currently forms a T intersection with George Booth Drive and includes an 'AUR' auxiliary lane on George Booth Drive for the right turn into Echidna Drive and an 'AUL' auxiliary lane for the left turn into Echidna Drive. A short acceleration lane for the left turn out of Echidna Drive onto George Booth Drive also currently exists. Sight distance at the intersection is good and exceeds 250 metres to/from the south and 220 metres to/from the north. SIDRA modelling was undertaken to assess the operation of the intersection giving consideration to the proposed increase in traffic associated with the Project. The modelling shows that the intersection will continue to operate at a satisfactory to good level of service, i.e. level of service of A or B, with acceptable vehicle delays in peak periods.	Prior to audit period.  The Department of Planning, in their correspondence to Orica (18/1/2012), stated they had reviewed the RTA's letters of 27 September and 7 December 2011, and was satisfied that these upgrade works have been completed in accordance with these conditions.	Not triggered				
The developer will be required to enter into a Works Authorisation Deed with the RTA. In this regard the applicant is required to submit detailed design plans and all relevant additional information, as may be required in the RTA's Works Authorisation Deed documentation, for each specific change to state road network for the RTA's assessment and final decision concerning the work.	An assessment of the operation of the intersection of George Booth Drive with Orica's access road, Echidna Drive, was undertaken as part of the Traffic Impact Assessment, contained in Appendix 7 of the EA. Echidna Drive currently forms a T intersection with George Booth Drive and includes an 'AUR' auxiliary lane on George Booth Drive for the right turn into Echidna Drive and an 'AUL' auxiliary lane for the left turn into Echidna Drive. A short acceleration lane for the left turn out of Echidna Drive onto George Booth Drive also currently exists. Sight distance at the intersection is good and exceeds 250 metres to/from the south and 220 metres to/from the north. SIDRA modelling was undertaken to assess the operation of the intersection giving consideration to the proposed increase in traffic associated with the Project. The modelling shows that the intersection will continue to operate at a satisfactory to good level of service, i.e. level of service of A or B, with acceptable vehicle delays in peak periods.	Prior to audit period.  The Department of Planning, in their correspondence to Orica (18/1/2012), stated they had reviewed the RTA's letters of 27 September and 7 December 2011, and was satisfied that the upgrade works have been completed in accordance with their conditions.	Not triggered				
All road works must be completed prior to any occupation certificate being granted for the new development. The WAD process, including acceptance of road design documentation and construction, can take a considerable amount of time. The developer should be aware of this and factor sufficient time within the project to accommodate this process. It is therefore suggested that the developer work through the process as soon as possible.	SIDRA modelling was undertaken to assess the operation of the intersection giving consideration to the proposed increase in traffic associated with the Project. The modelling shows that the intersection will continue to operate at a satisfactory to good level of service, i.e. level of service of A or B, with acceptable vehicle delays in peak periods.	Prior to audit period.	Not triggered				
The WAD shall be executed prior to the approval of a Construction Certificate.	As outlined in Section 6.4.3.3 of the EA, no accidents have been recorded by the RTA at the George Booth Drive/Echidna Drive intersection for the 3 year period from 2005 – 2007. Following the opening of the F3 link to Branxton (Hunter Expressway), currently under construction, in approximately 2013, the traffic volumes on George Booth Drive are expected to be reduced by as much as 92 per cent. Traffic on George Booth Drive is expected to then predominantly	Prior to audit period.  The Construction Certificate 000128 was issued by Hunter PCA 30 May 2011. The Certificate lists the work completed in accordance with the documentation, and includes the "Bunding and Roadworks Certification" 0516-K00789 prepared by I.C.D (Asia Pacific) Pty Ltd 12 May 2011.	Not triggered				
All activities including, loading and unloading associated with this development are to take place within the subject site.	Agreed	Noted and observed on site for the operational phase.	Compliant				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
The movement of oversized loads to and from the site shall be in accordance with RTA requirements and will require separate approval from the RTA.	Agreed	No oversize loads have been made during operation.	Compliant				
Orica's current Traffic Management Protocol (TMP) operating at the site shall be revised to detail management of heavy vehicle movements associated with the project during construction. The protocol shall specifically address the movement of oversize loads to and from the site, the management of construction traffic, restrictions to the hours of heavy vehicle movements to avoid road use conflicts and the transport of construction waste materials. The revised TMP shall be submitted to the RTA and Council for approval prior to any construction activities occurring on site.	SECTION 3.4.2: Traffic Management Protocol and Code of Conduct  As outlined in Section 6.4 of the EA, Orica will develop and implement a Traffic Management Protocol (TMP) and Code of Conduct for drivers operating heavy vehicles to and from the Technology Centre for inclusion in the site EMP to minimise the potential for associated traffic impacts. The TMP will address the movement of oversize loads to and from the site, management heavy vehicle movements and product delivery and dispatch vehicles to minimise road use conflicts. The TMP will be submitted to the RTA and Council prior to the relevant activities occurring on site.	Prior to audit period.  "Orica ANE Production Facility Road Transport Protocol" (January 2012) prepared by Umwelt (Australia) for the Operational aspects of the ANE Facility states: Any oversize loads will be transported according to the requirements of the Roads & Maritime Services (RMS) and police, and have the appropriate approvals and escorts as required.	Not triggered				
<b>RESPONDENT - RURAL FIRE SERVICE</b>							
Developments of this type shall address the aims and objectives of Planning for Bush Fire Protection 2006.	SECTION 3.6.1: Fire Management  During the environmental assessment process for the Project, Orica consulted with and sought submissions from the NSW Rural Fire Service (RFS) and the NSW Fire Brigades (NSWFB). The RFS responded that the development is to be carried out with the aims and objectives of the Planning for Bushfire Protection (RFS 2006 guidelines), which Orica agree to comply with. The NSWFB commented that any new building proposal and substantial alterations to existing buildings comply with the current Building Code of Australia (BCA) and Relevant Australian Standards, which Orica agree to comply with." The NSWFB stated that a Fire Safety Study and an Emergency Plan should be prepared by Orica for the Project. A Fire Safety Study is currently being prepared for the Project and a copy of this study will be forwarded to the relevant agencies following its completion. As discussed in Section 6.10 of the EA, Orica are committing to updating the existing site Emergency Plan and the site Fire Safety Management Plan to include a fire management strategy for the proposed ANE Production Facility. When updating these documents Orica will consult with the relevant emergency authorities such as the RFS. Fire Fighting Resources In one of the private submissions the author raised the concern that in the event of a fire event threatening the Richmond Vale area fighting resources would be required to help contain the Orica facility, leaving the residents with possible reduced resources for protecting their own properties. However, if a fire were large enough that the local RFS was overstretched the RFS has in place systems to pull additional resources from surrounding areas, thus providing resources to respond to a large or severe bushfire event. In addition, Orica maintains and conducts a program of regular bushfire hazard reduction on the site in conjunction with the RFS thus reducing the potential for a severe fire event. Although bushfires can approach from the east, based on historical experience, it is rare due to the terrain of the site, with bushfires normally approaching the site from the west and it would be extremely rare that a	Prior to audit period.	Note				
<b>RESPONDENT - NSW FIRE BRIGADE</b>							
The NSWFB Structural Fire Safety Unit is an advisory authority to both the regulatory authorities and the people of New South Wales regarding fire and life safety issues. The unit works under the ambit of the Environmental Planning and Assessment Act 1979, the Environmental Planning and Assessment Regulation 2000, the Fire Brigades Act, the Local Government Act, the Building Code of Australia (BCA) and applicable Australian Standards to ensure that Fire Safety requirements for existing and proposed developments are met.	SECTION 3.6.1: Fire Management  During the environmental assessment process for the Project, Orica consulted with and sought submissions from the NSW Rural Fire Service (RFS) and the NSW Fire Brigades (NSWFB). The RFS responded that the development is to be carried out with the aims and objectives of the Planning for Bushfire Protection (RFS 2006 guidelines), which Orica agree to comply with. The NSWFB commented that any new building proposal and substantial alterations to existing buildings comply with the current Building Code of Australia (BCA) and Relevant Australian Standards, which Orica agree to comply with." The NSWFB stated that a Fire Safety Study and an Emergency Plan should be prepared by Orica for the Project. A Fire Safety Study is	Noted.	note				
The NSWFB would expect any new building proposals and substantial alterations to existing buildings to comply with the current BCA and relevant Australian Standards.	The NSWFB stated that a Fire Safety Study and an Emergency Plan should be prepared by Orica for the Project. A Fire Safety Study is	A construction certificate for MOD 2 infrastructure was not obtained. An exemption from the BCA approval was not obtained.	Non-compliant		E	3	Low

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
The NSWFB believes the project could be regarded as hazardous or offensive and recommends that a Fire Safety Study is conducted.	currently being prepared for the Project and a copy of this study will be forwarded to the relevant agencies following its completion. As discussed in Section 6.10 of the EA, Orica are committing to updating the existing site Emergency Plan and the site Fire Safety Management Plan to include a fire management strategy for the proposed ANE Production Facility. When updating these documents Orica will consult with the relevant emergency authorities such as the RFS. Fire Fighting Resources In one of the private submissions the author raised the concern that in the event of a fire event threatening the Richmond Vale area fighting resources would be required to help contain the Orica facility, leaving the residents with possible reduced resources for protecting their own properties. However, if a fire were large enough that the local RFS was overstretched the RFS has in place systems to pull additional resources from surrounding areas, thus providing resources to respond to a large or severe bushfire event. In addition, Orica maintains and conducts a program of regular bushfire hazard reduction on the site in conjunction with the RFS thus reducing the potential for a severe fire event. Although bushfires can approach from the east, based on historical experience, it is rare due to the terrain of the site, with bushfires normally approaching the site from the west and it would be extremely rare that a bushfire could approach with no warning. Orica maintains a bushfire hazard reduction program which includes measures such as: • Cleared areas around all facilities, with further low fuel asset protection zones (APZ) in accordance with the relevant NSW Rural Fire Service (RFS) Planning for Bushfire Protection (PBP) 2006 guidelines.	Previously satisfied prior to audit period.  A Fire Safety Study ("FIRE SAFETY STUDY PROPOSED ANE FACILITY KURRI KURRI TECHNOLOGY CENTRE" (Rev 3, 14 September 2011)) was prepared by Sherpa Consulting. Fire and Rescue NSW advised via letter to Orica (1 November 2011) that their issues were addressed and they approved the Fire Safety Study.	Compliant				
The NSWFB believes that the site's operators may be required to prepare and submit to the NSWFB an Emergency Plan (EP) to ensure compliance with the Explosive Regulations 2005-REG 66 and/or clause 174ZC of the OH & S Regulations. It is recommended that the EP follow NSWFB Policy No 1: Guidelines for Emergency Plans at Facilities Having Notifiable Quantities of Dangerous Goods.	Previously satisfied prior to audit period. An emergency plan was prepared and submitted to NSWFB.	Previously satisfied prior to audit period. An emergency plan was prepared and submitted to NSWFB.	Compliant				
<b>RESPONDENT - DEPARTMENT OF ENVIRONMENT, CLIMATE CHANGE AND WATER (DECCW)</b>							
DECCW has reviewed the EA and determined that, if development consent for the proposal is granted, it would be able to issue an Environmental Protection Licence (EPL) for the proposal subject to a number of conditions. The applicant would need to make a separate application to DECCW for an EPL prior to any works commencing.	SECTION 3.1.3: Environment Protection Licence (EPL)  The Protection of the Environment Operations Act (POEO Act) establishes procedures for issuing of licenses for environmental protection on aspects such as waste, air, water and noise pollution control. A premise that performs scheduled activities, as is described in Schedule 1 (such as generation of waste or noise or emits to the air or water), is required to hold an Environmental Protection License (EPL). Orica currently hold an EPL for the Technology Centre site at Richmond Vale. Orica is proposing to apply to DECCW for a variation to the current site EPL (4121) to include the Proposed ANE Production Facility.	Prior to audit period.	Not triggered				
If Aboriginal cultural objects are uncovered due to the development activities, all works must halt in the immediate area to prevent any further impacts to the find or finds. A suitably qualified archaeologist and Aboriginal community representatives must be contacted to determine the significance of the find(s). The site is to be registered in the AHIMS (managed by DECCW) and the management outcome for the site included in the information provided to the AHIMS. It is recommended that the Aboriginal community representatives are consulted in developing and implementing management strategies for all sites, with all information required for informed consent being given to the representatives for this purpose.	Agreed	Prior to audit period.	Not triggered				
If human remains are located during the project, all works must halt in the immediate area to prevent any further impacts to the find or finds. The NSW Police, the Aboriginal community and DECCW are to be notified. If the remains are found to be of Aboriginal origin and the police consider the site not an investigation site for criminal activities, DECCW should be contacted and notified of the situation and works are not to resume in the designated area until approval in writing is provided by DECCW. In the event that a criminal investigation ensues works are not to resume in the designated area until approval in writing from the NSW Police and DECCW.	Agreed	Prior to audit period.	Not triggered				
All reasonable efforts must be made to avoid impacts to Aboriginal Cultural Heritage values at all stages of the development works. If impacts are unavoidable, mitigation measures are to be negotiated with the Aboriginal community and DECCW.	Agreed	Prior to audit period.	Not triggered				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
The applicant must continue to consult with and involve the registered Aboriginal stakeholders for the project, in the ongoing management of the Aboriginal Cultural Heritage values.	Agreed, as appropriate	Artifacts identified and collected during the original construction remain in Orica's care. Discussions need to be held with Aboriginal stakeholders regarding permanent keeping place an ongoing management of artifacts.	Non-compliant		E	2	Medium
An Aboriginal Cultural Education Program must be developed for the induction of personnel and contractors involved in the construction activities on site. The program should be developed in collaboration with the Aboriginal community.	Agreed	Previously satisfied. Not triggered during the audit period.  An Aboriginal Cultural Heritage module was included in the construction site induction (dated September 2010). The induction includes the acknowledgement: Orica Australia would like to acknowledge the participation of Awabakal Descendants Traditional Owners Aboriginal Corporation (ADTOAC) and Awabakal Traditional Owners Aboriginal Corporation (ATOAC) in the preparation of this presentation	Not triggered				
Works and activities must be carried out in accordance with the proposal contained in the document. "Environmental Assessment, Proposed Ammonium Nitrate Emulsion Production Facility and Continued Operation of Orica Mining Services Technology Centre, Richmond Vale, NSW" 2009.	Agreed - Orica will carry out the proposed development 'generally in accordance' with the details set out in the EA	Prior to audit period	Not triggered				
Pollution of waters L1.1 Except as may be expressly provided by a licence under the Protection of the Environment Operations Act 1997 in relation to the development, section 120 of the Protection of the Environment Operations Act 1997 must be complied with in connection with the carrying out of the development.	Agreed	EPL 4121 has been issued for the site.	Compliant				
L6.1 Noise generated from the premises must not exceed 35dB(A) LAeq,(15 minute) at receptors R1 – R21 referred to in "Environmental Assessment, Proposed Ammonium Nitrate Emulsion Production Facility and Continued Operation of Orica Mining Services Technology Centre, Richmond Vale, NSW" 2009, at any time during construction and operations.	Compliance with this condition will be determined by monitoring at the nearest potentially affected residence in accordance with condition L6.2 below.	EPL 4121 has been issued for the site.	Compliant				
L6.2 Noise from the premises is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of the dwelling where the dwelling is more than 30 metres from the boundary, to determine compliance with the noise level limits in Condition L6.1 unless otherwise stated. Where it can be demonstrated that direct measurement of noise from the premises is impractical, DECCW may accept alternative means of determining compliance. See Chapter 11 of the NSW Industrial Noise Policy. The modification factors presented in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.	Agreed	EPL 4121 has been issued for the site.	Compliant				
L6.3 The noise limit in L6.1 applies under all meteorological conditions except for any one of the following: a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or c) Stability category G temperature inversion conditions.	Agreed	EPL 4121 has been issued for the site.	Compliant				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
L6.4 For the purposes of condition L6.3:  a) The meteorological data to be used for determining meteorological conditions is to be recorded by a meteorological station to be established on the premises; and b) Stability category temperature inversion conditions are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the NSW Industrial Noise Policy.	SECTION 3.5.3: Establishment of Meteorological Monitoring Station  This 35dB(A) LAeq, (15 minute) noise limit will apply under all meteorological conditions except for any one of the following: • Wind speeds greater than 3 metres/second at 10 metres above ground level; • Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or • Stability category G temperature inversion conditions. As discussed in Section 6.5.4.1 and Table 6.8 of the EA, predicted LAeq (15 minute) construction noise levels both during the day time and night time periods at all receivers is expected to be less than 15 dB(A). These predicted levels are at least 15 dB(A) lower than the 35 dB(A) LAeq (15 minute) noise criteria specified by DECCW. As discussed in Section 6.5.4.2 and Table 6.9 of the EA, predicted LAeq (15 minute) operation noise levels during a range of modelled meteorological conditions, with the exception of one, are all less than 30 dB(A). These are at least 5 dB(A) below the 35 dB(A) LAeq (15 minute) noise criteria specified by DECCW. Given that the predicted noise levels for the Project, during construction and operation are well below the 35 dB(A) noise criteria, it would appear unnecessary to establish a meteorological station when it is unlikely that noise levels will ever reach or exceed the noise criteria. In the unlikely event of an exceedance Orica will source the relevant meteorological data from an alternative meteorological station located nearby.	EPL 4121 has been issued for the site.	Compliant				
M2 Within 60 days of the commencement of operations, the licensee must submit in writing to the EPA a report that determines the level of compliance of noise emissions from the premises with the New South Wales Industrial Noise Policy. The report should include monitoring details under a range of meteorological and weather conditions.	Agreed	EPL 4121 has been issued for the site.	Compliant				
MANDATORY CONDITIONS FOR ALL ENVIRONMENT PROTECTION LICENCES.	Agree to all mandatory conditions for Environment Protection Licences (EPL's)	Noted.	Note.				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
<p>Increased Offset Area Options</p> <p>DECCW does not consider the 17 ha of offset land currently offered to be large enough to offset impacts to threatened species in the development site. DECCW recommends that the proponent increases the size of the offset on the site to include more Lower Hunter Spotted Gum – Ironbark Forest EEC and also plants or habitat for Grevillea parviflora ssp. Parviflora and Tetratheca juncea. From the site visit it appears that Lower Hunter Spotted Gum – Ironbark Forest occurs to the north and east of the proposed offset area. This area also contains plants of Grevillea parviflora ssp. Parviflora. The proponent may also consider including some Paperbark Depression Forest, as defined by DECC (2008) in the expanded offset. This occurs in the drainage line that flows across the south west corner of the Orica site near the current offset area. It is a rare vegetation type that is also considered to provide habitat for other local threatened species, such as the Green-thighed Frog.</p> <p>If the proponent wishes to objectively determine the appropriate offset area required, one alternative may be to use the BioBanking Credit Calculator. The credit calculator may be found on-line at <a href="http://www.environment.nsw.gov.au/BioBanking/tools.htm">http://www.environment.nsw.gov.au/BioBanking/tools.htm</a></p>	<p>SECTION 3.8.1: Biodiversity Offset Area</p> <p>The DECCW submission on the Project states that DECCW does not consider the 17 hectare biodiversity offset area proposed by Orica to be large enough to offset impacts significant ecological features in the development site. DECCW suggests that Orica increase the size of the biodiversity offset area to include more Lower Hunter Spotted Gum Ironbark Forest EEC, known records or habitat for Grevillea parviflora ssp. parviflora and Tetratheca juncea, and also consider including some Paperbark Depression Forest which occurs in drainage lines that flow across the south west corner of the Orica site near the proposed biodiversity offset area.</p> <p>Orica have considered the points raised by DECCW and propose the following in response:</p> <ul style="list-style-type: none"> <li>• An increase in the size of the proposed biodiversity offset area, from the previously proposed 17 hectares to an area encompassing approximately 31.7 hectares (refer to Figure 1 and Figure 2) and comprising approximately : <ul style="list-style-type: none"> <li>• 16.2 hectares Coastal Plains Smooth-barked Apple Woodland, 12.3 River-flat Eucalypt Forest EEC, and</li> <li>• 3.2 hectares Lower Hunter Spotted Gum Ironbark Forest EEC.</li> </ul> </li> <li>• Inclusion of Paperbark Depression Forest, including the area identified during the DECCW inspection on 19 January 2010.</li> <li>• Inclusion of potential habitat for Tetratheca juncea.</li> <li>• Inclusion of potential habitat for Grevillea parviflora ssp. parviflora, including the potential Grevillea parviflora ssp. parviflora recorded during the DECCW inspection on 19 January 2010.</li> <li>• Inclusion of the grey gum (Eucalyptus punctata) individuals identified by DECCW during the inspection on 19 January 2010 as containing potential feeding marks from the yellow bellied glider (Petaurus australis).</li> </ul> <p>As outlined in the EA, the proposed biodiversity offset area is positioned in the south west corner of the Orica site, adjacent to the Sugarloaf State Conservation Area (Sugarloaf SCA). As outlined by DECCW in their submission, the land to the west of the proposed biodiversity offset area is</p>	<p>Noted.</p>	<p>Note</p>				
<b>RESPONDENT - PRIVATE SUBMISSION 1</b>							
<p>The only landholders who have been consulted are those in the immediate area who would possibly be affected by an on-site explosion. In my interpretation affected landholders includes all residents along the proposed transport route, for it is they, their families and property who could be affected should an "Orica" truck carrying Ammonium Nitrate be involved in a collision.</p>	<p>SECTION 3.9.1: Consultation with Affected Landowners (Kurri Kurri Residents)</p> <p>The area of consultation was chosen with a focus on those residents with the highest potential for impact from the Project. The consultation coverage and approach was discussed with the DoP and department representatives confirmed that they were satisfied with the proposed consultation area and the planned consultation process. Cessnock City Council also confirmed that they were pleased with the level of consultation undertaken for the Project.</p>	<p>Prior to audit period.</p>	<p>Not triggered</p>				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
My most worrying objection relates to an incident in Mexico in 2007. In my opinion "Orica" has a moral obligation to (come clean) on the incident and make a public statement fully explaining it and tell us what measures have been taken to insure a similar tragedy cannot happen here.	<p>SECTION 3.7.2: Risk of Truck Explosion</p> <p>As discussed in Section 6.6.2 of the EA, a Transport Hazard Assessment was completed for the Project, predominantly in response to concerns raised by the community regarding the potential risks associated with transporting ANS and ANE. Both ANS and ANE are classified as Class 5.1 PGII Dangerous Goods and an assessment of the potential hazards associated with the transport of these products was undertaken to ensure that appropriate safeguards are in place.</p> <p>The event of most concern to the community, as raised during consultation and in the submissions, during transport of ANE or ANS is explosion. Potential causes of an explosion for either ANS or ANE are:</p> <ul style="list-style-type: none"> <li>• decomposition of a contaminated load and confinement of gases, resulting in explosion en-route; and</li> <li>• vehicle fire engulfing the load resulting in decomposition, confinement of gases and explosion. A fire could be initiated by various causes including electrical or mechanical faults, a tyre fire or a vehicle accident or collision. In the event of a vehicle accident, the impact or collision alone will not cause ANE or ANS to explode as:</li> <li>• ANS and ANE is insensitive to impact (i.e. does not explode on impact/shock); and</li> <li>• Impact in a vehicle accident is not of sufficiently high energy to cause explosion of ANE.</li> </ul> <p>A high energy explosive charge (such as a detonator) is required to initiate an explosion.</p> <p>A review of transport incidents within Orica and within the industry indicates that vehicle fires and accidents involving ANE and ANS transport vehicles do occur. However it takes a period of time to escalate to conditions which could potentially result in an explosion, providing time to isolate the accident area.</p> <p>The Transport Hazard Assessment concluded that given the existing regulatory requirements for the transport vehicles and the drivers, Orica internal procedures and policies, the nature of the roads to be used and the engineering controls in place in relation to tanker design, no additional</p>	Not relevant to the development.	Not triggered				
RESPONDENT - PRIVATE SUBMISSION 2							

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
Orica Australia is not obtaining the materials it will be using for the manufacture of ammonium nitrate emulsion from its land at 1151 George Booth Drive, Richmond Vale. Orica is able to manufacture ANE in another location. Materials for manufacture will be transported to the site, and away from the site. Therefore this project could be located elsewhere in a more suitable location.	<p>SECTION 3.3.1: Suitability of the Location</p> <p>As discussed in Section 3.2.1 of the EA, a number of alternative locations were considered during the project development phase. The upgrade of the existing Liddell facility was assessed as an alternative to the Project and it was deemed a non-viable option for a range of reasons. Orica do not own the land that the current Liddell site is situated on and have been unable to secure a long term tenure agreement with the owner for the construction of a new facility, despite negotiations over several years.</p> <p>In addition, an upgrade of the current Liddell facility was also discounted as the current plant is already operating at full production capacity seven days a week. Further expansion of the Liddell plant is not feasible as the existing interaction between facility and construction works would result in interruptions to production at the facility, the risk of increased incidents and an extremely protracted construction timeframe. This would restrict Orica's ability to respond to the projected future demand for ANE, while ensuring safe plant operation.</p> <p>As discussed in Section 3.2.1.3 of the EA, the construction of a new facility in the Upper Hunter was assessed as an alternative to the Project. Orica have searched for an alternative site in the Hunter Valley but a suitable site for secure long term tenure could not be located. As such this option was discounted due to the lack of suitable sites, and the capital costs associated with the construction of new support infrastructure such as roads and utilities. In addition, due to the current ANE facility's production limitations, the additional time involved in locating and acquiring a suitable site and gaining approval for a new facility would restrict Orica's ability to respond to the projected future demand for ANE.</p> <p>The Orica Technology Centre at Richmond Vale is the preferred location for a range of reasons. The Richmond Vale site has the following advantages:</p> <ul style="list-style-type: none"> <li>• secure long term tenure;</li> <li>• established infrastructure and services (electricity, roads, offices etc.);</li> <li>• located within the expanding south-eastern region;</li> </ul>	Noted.	Note.				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
<p>Cessnock City Council (as detailed in draft LEP 2009) has advised our land (and that of many of our neighbours) is to be rezoned from Rural 1(a) to a new E3 Environmental Management. From the information given by Cessnock City Council, this change of zoning also places Orica's proposed development in this corridor of Environmental Management. It is unacceptable that rural homeowners be restricted in the use of their land to the degree to be enforced by the new zoning, while Orica could be permitted to build an ANE production facility within the same area. The proposed ANE facility would not meet the objectives of LEP 2009 as it would place a chemical production facility within an Environmental Management area.</p>	<p>SECTION 3.1.2: Permissibility under Draft Cessnock Local Environmental Plan (LEP) 2009</p> <p>Under the Draft Cessnock LEP 2009 the Technology Centre land would be rezoned to an (E3) Environmental Management Zone. Recent discussions held with Cessnock City Council (CCC) indicate that the Draft Cessnock LEP 2009 is unlikely to be gazetted for at least 12 months. The proposed zoning under the Draft Cessnock LEP 2009 is unlikely to come into effect until after the proposed ANE Production Facility is approved and construction is nearing completion. Therefore the Draft Cessnock LEP 2009 would not impact on the proposed ANE Production Facility.</p> <p>In addition to this the savings provisions (Clause 1.8A) of the Draft 2009 LEP state 'If a development application has been made before the commencement of this Plan in relation to land which this plan applies and the application has not been finally determined before that commencement, the application must be determined as if this Plan had been exhibited but had not commenced'. Under the current LEP 1989, the Project is permissible and the Minister for Planning is not precluded from approving the Project. Despite the fact that the Draft LEP will not apply to the proposed ANE Production Facility consideration has been given to the objectives of the E3 – Environmental Management zoning of the Draft Cessnock LEP 2009.</p> <p>The objectives of this zone are to:</p> <ul style="list-style-type: none"> <li>• To protect, manage and restore areas with special ecological, scientific, cultural or aesthetic values;</li> <li>• To provide for a limited range of development that does not have an adverse effect on those values; and</li> <li>• To permit a limited range of agricultural and tourist and visitor accommodation development on less constrained land, that does not have an adverse effect on those values.</li> </ul> <p>As outlined in Section 6.0 of the EA, assessments were undertaken to ascertain the potential impacts the Project would have on ecology, cultural heritage and aesthetic values of the area. The ecological assessment concluded that, subject to the implementation of proposed mitigation</p>	<p>Noted.</p>	<p>Note</p>				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
The land Orica has chosen for the proposed facility is Bushfire Prone Land. Information on ammonium nitrate emulsion is widely available, and reveals ANE will burn if contaminated by combustible material. Toxic oxides of nitrogen and ammonia are produced during combustion. Closed containers may rupture violently or detonate if heated. Residents in the area already live with the threat of bushfire, and would now have the added concern of living near a facility manufacturing combustible explosive material.	SECTION 3.7.1: Risk of Explosion at Site  As discussed in Section 6.6 of the EA, a Preliminary Hazard Analysis (PHA) of the Project was completed by Sherpa Consulting in accordance with the DoP Hazardous Industry Planning Advisory Papers No 6 Hazard Analysis Guidelines (HIPAP 6), and No 4 Risk Criteria for Land Use Safety Planning (HIPAP 4) and is contained in Appendix 9 of the EA. The general objectives of a PHA are to identify the risks posed by a proposed development, develop an understanding of these risks and the adequacy of the safeguards included in the design. Additional safeguards may also be recommended to reduce the risk to a level that complies with the relevant risk criteria. The PHA assesses potential risk to people, property, the surrounding environment and land use posed by the proposed ANE Production Facility and the existing facilities at the Technology Centre. The PHA covers risks that may arise from: • process operations at the proposed ANE Production Facility, including storage and handling of the associated raw materials and products; and • potential interactions with the existing facilities at the Technology Centre. As discussed in Section 6.6.1.7 of the EA, the PHA found: • No explosion events were identified associated with the proposed ANE Production Facility or existing facilities with the potential to affect off-site residential or industrial populations, or occupied buildings. • No explosion events were identified with the proposed ANE Production Facility or existing facilities with potential to damage off-site property or infrastructure. • No explosion events were identified which would result in escalation incidents between the proposed ANE Production Facility and existing facilities. • Dispersion modelling of toxic decomposition products from a worst case decomposition occurring in the largest ANE Production Facility inventory demonstrated that there would be no off-site fatality effects. Injurious concentrations would not be exceeded in any residential areas. Although irritation effects were possible in populated areas they were at a very low	The HAZOP 3 study covered these issues.	Compliant				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
Placing a buffer zone around the facility may give Orica peace of mind (and meet government regulations), but it does not guarantee the facility would be protected in an extreme, unplanned fire situation. It is also likely that during a severe fire threatening the Buchanan/Richmond Vale area, fire fighting resources would be required to help contain the Orica facility, leaving the residents with possible reduced resources for protecting their own properties.	<p>SECTION 3.6.1: Fire Management</p> <p>During the environmental assessment process for the Project, Orica consulted with and sought submissions from the NSW Rural Fire Service (RFS) and the NSW Fire Brigades (NSWFB). The RFS responded that the development is to be carried out with the aims and objectives of the Planning for Bushfire Protection (RFS 2006 guidelines), which Orica agree to comply with. The NSWFB commented that any new building proposal and substantial alterations to existing buildings comply with the current Building Code of Australia (BCA) and Relevant Australian Standards, which Orica agree to comply with."</p> <p>The NSWFB stated that a Fire Safety Study and an Emergency Plan should be prepared by Orica for the Project. A Fire Safety Study is currently being prepared for the Project and a copy of this study will be forwarded to the relevant agencies following its completion. As discussed in Section 6.10 of the EA, Orica are committing to updating the existing site Emergency Plan and the site Fire Safety Management Plan to include a fire management strategy for the proposed ANE Production Facility. When updating these documents Orica will consult with the relevant emergency authorities such as the RFS.</p> <p>Fire Fighting Resources</p> <p>In one of the private submissions the author raised the concern that in the event of a fire event threatening the Richmond Vale area fighting resources would be required to help contain the Orica facility, leaving the residents with possible reduced resources for protecting their own properties. However, if a fire were large enough that the local RFS was overstretched the RFS has in place systems to pull additional resources from surrounding areas, thus providing resources to respond to a large or severe bushfire event. In addition, Orica maintains and conducts a program of regular bushfire hazard reduction on the site in conjunction with the RFS thus reducing the potential for a severe fire event. Although bushfires can approach from the east, based on historical experience, it is rare due to the terrain of the site, with bushfires normally approaching the site from the west and it would be extremely rare that a</p>	Noted.	Note				
The designated route for transport of the ANE travels into the township of Kurri Kurri, intersecting at an already busy roundabout, past local houses, pre-school, school, churches, shops, small businesses, scout hall, hotels, pedestrian crossings, and petrol stations onto the New England Highway at Maitland. I would question whether the consultation process should have provided information to these people who would also be affected by the transportation of ANE.	<p>SECTION 3.9.1: Consultation with Affected Landowners (Kurri Kurri Residents)</p> <p>The area of consultation was chosen with a focus on those residents with the highest potential for impact from the Project. The consultation coverage and approach was discussed with the DoP and department representatives confirmed that they were satisfied with the proposed consultation area and the planned consultation process. Cessnock City Council also confirmed that they were pleased with the level of consultation undertaken for the Project.</p>	The transport route has changed with the opening of the Hunter Expressway. The route no longer goes through the township of Kurri Kurri.	Not triggered				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
Unfortunately for the properties on George Booth Drive, Orica's trucks would travel past their homes for the life of the project. A potential buyer of our properties would certainly take this into account and most would find having explosive material being trucked past their property undesirable – we would certainly have considered other areas instead had we been looking to buy our property after details of Orica's plans had been made known. Therefore property owners in George Booth Drive may find it more difficult to find buyers for their property.	SECTION 3.11.1: Property Values  As discussed in Section 5.2 of the EA, as part of the community consultation undertaken for the Project, the potential impact of the Project on property values in the area immediately surrounding the Technology Centre site was raised as an issue of concern. Surrounding residents were concerned that the operation of the proposed ANE Production Facility would reduce property values due to the perception that people may have a negative view of owning property in the vicinity of the facility. Factors associated with the Project that could be perceived as resulting in a negative impact on property values in the area immediately surrounding the Technology Centre site could include: • Visibility of the Project from surrounding viewpoints and in particular from surrounding residences. As outlined in the Preliminary Environmental Assessment lodged with DoP in March 2009 (Umwelt, 2009), the proposed ANE Production Facility will not be visible from surrounding viewpoints or residences predominantly due to the location of the plant within the Technology Centre site, and the heavily vegetated nature of the site. In addition the height of infrastructure associated with the proposed facility will remain below the existing tree line. • Potential impacts from the Project on the community. As detailed in Section 6.0 of the EA, the Project is unlikely to result in significant impacts on the community located in the area immediately surrounding the Technology Centre or the broader community of the locality. It is therefore unlikely that actual impacts from the Project would influence property values in the area. • Existing development environment. The general area surrounding the Technology Centre already supports a number of commercial, agricultural and industrial developments, such as Tasman Underground Mine, the Daracon Quarry, a poultry meat farm and a flower farm. George Booth Drive is also an existing approved heavy vehicle route. The proposed ANE Production Facility is not expected to	Noted.	Note				
The impact of approval of this facility is not limited to the immediate residents – it will affect every road user for the life of the project. Investigation into Orica's history when it comes to potential accidents was concerning. Orica's Safety, Health & Environment Performance Report 2006 reveals 18 serious accidents during the year (three resulting in fatalities to members of the public) in distribution incidents. There were also seven serious site losses of containment recorded in 2006.	SECTION 3.11.2: Incident Track Record  Orica is strongly committed to ensuring that our facilities operate to the highest standards to protect our employees, contractors, neighbours and the environment. Orica has in place a safety, health and environmental management system to minimise the potential for environmental incidents. All incidents or non-compliances with regulatory requirements are thoroughly investigated and corrective actions identified.	Noted.	Note				
Orica had 45 environment non-compliances detected during 2006, including discharge of acid wastewater into the Hunter River from the Kooragang Island facility.	SECTION 3.11.3: Compliance Record  As described in Sections 2.1, 2.2 and 2.3 of the EA, Orica currently operate under three development consents issued by Cessnock City Council, dating back to the original development consent issued in 1991. Many of the conditions of consent for the existing operations relate to the provision of further studies, plans and programs following the granting of development consent, such as a Construction Safety Study, Hazard and Operability Study, Final Hazard Analysis, Fire Safety Study, Maintenance Program, and Bushland Management Plan. Some of the conditions of consent also relate to approved works that have not been undertaken. Based on the records of compliance provided by Orica, the site appears to be generally operating in compliance with these statutory approvals, although a complete record of compliance has not been provided due to historical issues with record archiving. There are no outstanding orders, notices or demands from the local Council or any government agencies. There have been no prosecutions relating to operations on the site and there are no known records of complaints being received relating to environmental compliance issues. Orica is committed to improving compliance tracking and record keeping for future operations.	Noted. Does not relate to this project.	Not triggered				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
A clear indication of what might happen if a truck carrying ANE collided with another truck was given in September 2007 when a vehicle transporting ammonium nitrate for Orica was involved in an accident in Mexico. News reports gave a figure of 34 people killed as a result of this accident. There are numerous other reports of accidents available, some serious, others less so. Accidents happen, despite planning for them not to. So there is always potential risk.	<p>SECTION 3.7.2: Risk of Truck Explosion</p> <p>As discussed in Section 6.6.2 of the EA, a Transport Hazard Assessment was completed for the Project, predominantly in response to concerns raised by the community regarding the potential risks associated with transporting ANS and ANE. Both ANS and ANE are classified as Class 5.1 PGII Dangerous Goods and an assessment of the potential hazards associated with the transport of these products was undertaken to ensure that appropriate safeguards are in place.</p> <p>The event of most concern to the community, as raised during consultation and in the submissions, during transport of ANE or ANS is explosion. Potential causes of an explosion for either ANS or ANE are:</p> <ul style="list-style-type: none"> <li>• decomposition of a contaminated load and confinement of gases, resulting in explosion en-route; and</li> <li>• vehicle fire engulfing the load resulting in decomposition, confinement of gases and explosion. A fire could be initiated by various causes including electrical or mechanical faults, a tyre fire or a vehicle accident or collision. In the event of a vehicle accident, the impact or collision alone will not cause ANE or ANS to explode as:</li> <li>• ANS and ANE is insensitive to impact (i.e. does not explode on impact/shock); and</li> <li>• Impact in a vehicle accident is not of sufficiently high energy to cause explosion of ANE.</li> </ul> <p>A high energy explosive charge (such as a detonator) is required to initiate an explosion.</p> <p>A review of transport incidents within Orica and within the industry indicates that vehicle fires and accidents involving ANE and ANS transport vehicles do occur. However it takes a period of time to escalate to conditions which could potentially result in an explosion, providing time to isolate the accident area.</p> <p>The Transport Hazard Assessment concluded that given the existing regulatory requirements for the transport vehicles and the drivers, Orica internal procedures and policies, the nature of the roads to be used and the engineering controls in place in relation to tanker design, no additional</p>	Noted.	Note				
The Environmental Assessment plans for traffic 24 hours per day, 7 days per week past our homes. Tasman Mine has shown a consistent consideration for the residents of our area, and its contractor's trucks use George Booth Drive on Monday to Friday only, observing the cessation of travel between 10pm and 7am. We strongly oppose the 24 hours per day, 7 days per week transportation Orica seeks, and believe it should also be limited to the same hours required of Tasman Mine, who also use trucks to transport material along George Booth Drive.	<p>SECTION 3.4.5: Hours of Operation</p> <p>As detailed in Section 3.1 of the EA, in the first year of operation the ANE Production Facility is expected to produce approximately 125,000 tpa. The production increase is forecast to occur over about a twelve year period, depending on market demand, with a maximum production of 250,000 tpa currently expected to be achieved in 2023. The proposed ANE Production Facility operating hours will increase in line with demand for ANE product up to 24 hours per day seven days per week. The project is based on these operating hours in order to achieve the required maximum production capacity of 250,000 tonnes per annum (tpa) of ANE, whilst ensuring that inventories are minimised, thus minimising offsite consequences of potential explosion events as discussed in section 6.6 of the EA. If the proposed ANE Production Facility is not able to operate 24 hours a day 7 days per week it is likely that Orica's ability to respond to the projected future demand for ANE would be severely restricted.</p> <p>Some of the private submissions raised concerns in relation to the proposed 24 hour operation in regards to potential night-time traffic noise impacts and existing road conditions and safety along George Booth Drive. These concerns have been addressed in this report with traffic noise addressed in Section 3.5.2 and existing road conditions and safety addressed in Section 3.4.3 of this report.</p>	Noted.	Note				
RESPONDENT - PRIVATE SUBMISSION 3							

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
<p>It is my strong view that better alternatives exist in other locations in the Hunter Valley including the location of the present explosives manufacturing facility the applicant operates at Liddell and other locations near Liddell. It appears from the EA that all positive aspects of the proposed project apply to alternative sites at or near Liddell but very few or none of the negative aspects of the proposed project would affect those sites.</p>	<p>SECTION 3.3.1: Suitability of the Location</p> <p>As discussed in Section 3.2.1 of the EA, a number of alternative locations were considered during the project development phase. The upgrade of the existing Liddell facility was assessed as an alternative to the Project and it was deemed a non-viable option for a range of reasons. Orica do not own the land that the current Liddell site is situated on and have been unable to secure a long term tenure agreement with the owner for the construction of a new facility, despite negotiations over several years.</p> <p>In addition, an upgrade of the current Liddell facility was also discounted as the current plant is already operating at full production capacity seven days a week. Further expansion of the Liddell plant is not feasible as the existing interaction between facility and construction works would result in interruptions to production at the facility, the risk of increased incidents and an extremely protracted construction timeframe. This would restrict Orica's ability to respond to the projected future demand for ANE, while ensuring safe plant operation.</p> <p>As discussed in Section 3.2.1.3 of the EA, the construction of a new facility in the Upper Hunter was assessed as an alternative to the Project. Orica have searched for an alternative site in the Hunter Valley but a suitable site for secure long term tenure could not be located. As such this option was discounted due to the lack of suitable sites, and the capital costs associated with the construction of new support infrastructure such as roads and utilities. In addition, due to the current ANE facility's production limitations, the additional time involved in locating and acquiring a suitable site and gaining approval for a new facility would restrict Orica's ability to respond to the projected future demand for ANE.</p> <p>The Orica Technology Centre at Richmond Vale is the preferred location for a range of reasons. The Richmond Vale site has the following advantages:</p> <ul style="list-style-type: none"> <li>• secure long term tenure;</li> <li>• established infrastructure and services (electricity, roads, offices etc.);</li> <li>• located within the expanding south-eastern region;</li> </ul>	Noted.	Note				
<p>Traffic and related noise are a problem on George Booth Drive now but this is not properly addressed.</p> <p>a) Safety entering and exiting driveways along George Booth Drive is currently a problem. Although the EA and other documents published by the applicant state that passing lanes have been installed opposite driveways (for example EA Appendix 7 page 6) this is not the case.</p> <p>b) Although the EA states at 6.4.3.3 the potential impact of traffic associated with the project access to driveways from George Booth Drive is considered to be minimal due to the width of shoulders in the vicinity of most driveways this is contrary to the fact that shoulders are very narrow near the driveways and it is impossible to pull onto the shoulder and slow a vehicle prior to turning left into all driveways I have used in the area. This issue was raised at the community meeting (see EA 6.12.6 at p 6.67) when the residents stated they find it difficult to safely pull into and out of the driveways with the trucks already on George Booth Drive.</p> <p>c) Although the approval of the Tasman Mine was conditional upon the installation of passing lanes and included the suggestion that driveways within 300 metres of each other be the subject of continuous passing lanes, the recommendation was ignored. If large numbers of heavy vehicles are to continue to use this road safety would require attention to this inadequacy.</p>	<p>SECTION 3.4.2: Traffic Management Protocol and Code of Conduct</p> <p>As outlined in Section 6.4 of the EA, an assessment of the potential traffic impacts associated with the construction and operation phases of the Project were completed. This traffic assessment identified that the existing pavement condition on George Booth Drive is assessed as good, including the condition of the existing traffic management facilities, which are deemed satisfactory.</p> <p>The results of the traffic assessment show that the road network will continue to operate at a satisfactory to good level of service with acceptable vehicle delays in both morning and afternoon peak periods. In addition, the line of sight distances at the intersections is considered adequate to allow for the ongoing safe use of these intersections.</p> <p>Once the proposed F3 link to Branxton is open, traffic levels and consequently any potential traffic impacts of the Project will be significantly reduced. Based on the expected low traffic volumes that will use George Booth Drive following the opening of the F3 link to Branxton, the traffic impacts of the additional traffic generated by the Project at full production are expected to be negligible.</p> <p>Regarding the adequacy of passing lanes and shoulder width at property accesses along George Booth Drive, Condition 5 (a) of the Tasman Underground Coal Mine Development Consent (DA 274-9-2002) states that Tasman Mine provide 'sealed passing lanes at each property access between Richmond Vale Road and John Renshaw Drive' designed to the 90 kph design speed or 85th percentile speed, whichever is greater, and may involve a continuous passing lane where property accesses are in</p>	Noted.	Note				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
Although a number of traffic safety concerns were raised by the residents and a number of safety issues are apparent to those using the road day to day, the only commitment the applicant has outlined in relation to this is the implementation of a traffic management protocol and a code of conduct for drivers operating heavy vehicles. This does not appear to address the safety issues which exist.	<p>may involve a continuous passing lane where property accesses are in close proximity (300 metres or less). It also requires widening of road shoulders between the Tasman Mine Access Road and John Renshaw Drive. It is required that all works be undertaken to the satisfaction of the RTA. As stated in the Tasman Underground Coal Mine 2008/2009 Annual Environmental Management Report (R.W. Corkery, 2009) these works have been completed to the satisfaction of the RTA. These works should provide adequate access arrangements for residents along George Booth Drive.</p> <p>As outlined in Section 6.4.3.3 of the EA, no accidents have been recorded by the RTA at the Orica entrance intersection for the 3 year period from 2005 – 2007. Following the opening of the F3 link to Branxton, the number of vehicle accidents along the local road network is expected to decrease significantly, as there will be lower traffic volumes using the local roads, therefore resulting in an improvement in road safety.</p> <p>As discussed in Section 6.4.4 of the EA, Orica will develop and implement a Traffic Management Protocol and Code of Conduct as part of the site EMP for drivers operating heavy vehicles to and from the Technology Centre to minimise the potential for associated traffic impacts. The Traffic Management Protocol is likely to include, where relevant, details on:</p> <ul style="list-style-type: none"> <li>• movement of oversized loads to and from the site;</li> <li>• compliance with designated haulage routes;</li> <li>• controls relating to trucking schedules;</li> <li>• contingency plans in case of a disruption to the normal haulage route;</li> <li>• appropriate vehicle identification;</li> <li>• interaction with other heavy vehicles;</li> <li>• fatigue management.</li> </ul>	Noted.	Note				
Traffic noise is of particular concern to me and other residents I have spoken to. The whole of the EA appears to address the situation which would exist if and when the F3 to Branxton bypass road is built. However, there is no suggestion the proposed project should only be approved conditional upon that road being built. Nor is there any suggestion the proposed project should only be constructed after that road is built.	<p>SECTION 3.5.2: Traffic Noise</p> <p>As detailed in Section 6.5.2.5 and 6.5.4.4 of the EA, a detailed monitoring program was conducted along George Booth Drive as part of the noise assessment for the Project. This included specific monitoring of the heavy vehicles proposed to be used for the Project to ensure that accurate data was used for the assessment of road traffic noise.</p> <p>The road traffic noise level predictions were made at each of the potential residential receivers on George Booth Drive. The data collected from the monitoring program was used in conjunction with the proposed traffic generation estimations to calculate the potential change in traffic noise levels associated with the Project.</p> <p>The likely impacts of the traffic generated by the Project on the road traffic noise levels from George Booth Drive took into consideration:</p> <ul style="list-style-type: none"> <li>• the current traffic levels on George Booth Drive;</li> <li>• the traffic levels on George Booth Drive as a result of the Project; and</li> <li>• the future traffic levels on George Booth Drive with and without the F3 Link to Branxton in place.</li> </ul> <p>As detailed in Section 6.5.4.4 of the EA, the results indicate that during the initial stage of operation of the Project the increase in road traffic associated with the Project will not increase the road traffic noise level more than 0.4 dB nor will the noise levels exceed the relevant road traffic noise level criteria at all but one potentially affected residential receiver location along George Booth Drive.</p> <p>The façade of one property (Property 3) is within 20 metres of the centre line of George Booth Drive. Existing noise levels at this residence are already above the criteria for road traffic noise, during the daytime and at the criteria during the night time without the Project. The increase in road traffic associated with the Project is predicted to increase the road traffic noise level by 0.1 dB during the day time and 0.3 dB during the night time at this residence.</p> <p>Table 6.11 in the EA indicates that following the construction of the F3 link</p>	Noted.	Note				
The following are of particular concern in relation to traffic noise: a) It is proposed the increase in traffic, including the increase in use of the roadway by heavy vehicles, will take place 24 hours per day seven days per week. In relation to the hours between 6pm and 6am this is not an increase, it is new traffic. At night the noise from any heavy vehicle travels across the area from George Booth Drive to Averys Lane and is quite noticeable in all residences I have been in that area. Having continual truck movements at night time will change the area completely. Night time traffic noise was raised as an issue at the meeting held with community members (see EA 6.12.6 at p 6.67) but no solution is canvassed or offered by the applicant. b) The EA discloses that noise criteria is predicted to be exceeded in relation to one residence along George Booth Drive during the first three years of operation of the project. I am not aware which residence this refers to. While it is said mitigation measures are expected to minimise the impact, there is no suggestion the applicant intends to do anything to ensure noise criteria is not exceeded.	<p>SECTION 3.5.2: Traffic Noise</p> <p>As detailed in Section 6.5.2.5 and 6.5.4.4 of the EA, a detailed monitoring program was conducted along George Booth Drive as part of the noise assessment for the Project. This included specific monitoring of the heavy vehicles proposed to be used for the Project to ensure that accurate data was used for the assessment of road traffic noise.</p> <p>The road traffic noise level predictions were made at each of the potential residential receivers on George Booth Drive. The data collected from the monitoring program was used in conjunction with the proposed traffic generation estimations to calculate the potential change in traffic noise levels associated with the Project.</p> <p>The likely impacts of the traffic generated by the Project on the road traffic noise levels from George Booth Drive took into consideration:</p> <ul style="list-style-type: none"> <li>• the current traffic levels on George Booth Drive;</li> <li>• the traffic levels on George Booth Drive as a result of the Project; and</li> <li>• the future traffic levels on George Booth Drive with and without the F3 Link to Branxton in place.</li> </ul> <p>As detailed in Section 6.5.4.4 of the EA, the results indicate that during the initial stage of operation of the Project the increase in road traffic associated with the Project will not increase the road traffic noise level more than 0.4 dB nor will the noise levels exceed the relevant road traffic noise level criteria at all but one potentially affected residential receiver location along George Booth Drive.</p> <p>The façade of one property (Property 3) is within 20 metres of the centre line of George Booth Drive. Existing noise levels at this residence are already above the criteria for road traffic noise, during the daytime and at the criteria during the night time without the Project. The increase in road traffic associated with the Project is predicted to increase the road traffic noise level by 0.1 dB during the day time and 0.3 dB during the night time at this residence.</p> <p>Table 6.11 in the EA indicates that following the construction of the F3 link</p>	Noted.	Note				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
<p>The very presence of heavy vehicles, most being B doubles, day and night seven days per week will change the area greatly. I have over the past years discussed plans with another resident which would involve us seeking approval to build on our properties accommodation in the form of huts or B&amp;B accommodation to attract tourists to the area. Our properties would lend themselves to this as rural settings and the properties have the added advantage of including a large lagoon, a creek and a disused historical railway bridge. We would like to see these plans become reality. While our development would be in accordance with the overall intention of the local LEP and would in fact it create employment opportunities and bring tourism and money to the area, it would become impossible with noise from heavy vehicles 24 hours per day seven days per week.</p>	<p>Table 3.1.1 in the EA indicates that following the construction of the road link to Branxton the road traffic noise levels, including noise generated by road traffic associated with the Project, at each of the properties along George Booth Drive will be reduced from current levels even with the Project in operation and would not exceed the day time and night time criteria of 60 dB(A) LAeq, 1 hour day and 55 dB(A) LAeq, 1 hour night. As night-time traffic noise is not expected to impact on residents it should not preclude the proposed ANE Production Facility from operating 24 hours 7 days per week.</p> <p>Even with predicted traffic noise for the Project not expected to exceed noise criteria during the day time or night time periods, Orica are still proposing additional noise mitigation measures to further reduce potential traffic noise impacts. Proposed noise mitigation measures include:</p> <ul style="list-style-type: none"> <li>• during construction, conducting higher noise generating activities during the day, where possible;</li> <li>• including noise mitigation measures in the Traffic Management Protocol and driver Code of Conduct including: <ul style="list-style-type: none"> <li>restrictions on the use of exhaust brakes in both directions on the section of George Booth Drive between John Renshaw Drive and the intersection</li> </ul> </li> </ul>	<p>Noted.</p>	<p>Note</p>				
<p>Another issue raised by the residents which related to traffic was the potential hazards associated with trucks carrying hazardous materials. The EA does not seek to explain what hazards exist or what will be done to minimise them (see especially Appendix 4). While it is acknowledged regulations exist and the potential for explosion and dangerous spills can be reduced by complying with these regulations it is my view these hazards would be reduced if an alternative site closer to the end users were utilised. The EA (at 6.6.2.2 page 6.42) also refers to the undertaking of a risk analysis but it is not stated whether this analysis has been performed or what any findings were.</p>	<p>SECTION 3.3.1: Suitability of the Location</p> <p>As discussed in Section 3.2.1 of the EA, a number of alternative locations were considered during the project development phase. The upgrade of the existing Liddell facility was assessed as an alternative to the Project and it was deemed a non-viable option for a range of reasons.</p> <p>Orica do not own the land that the current Liddell site is situated on and have been unable to secure a long term tenure agreement with the owner for the construction of a new facility, despite negotiations over several years.</p> <p>In addition, an upgrade of the current Liddell facility was also discounted as the current plant is already operating at full production capacity seven days a week. Further expansion of the Liddell plant is not feasible as the existing interaction between facility and construction works would result in interruptions to production at the facility, the risk of increased incidents and an extremely protracted construction timeframe. This would restrict Orica's ability to respond to the projected future demand for ANE, while ensuring safe plant operation.</p> <p>As discussed in Section 3.2.1.3 of the EA, the construction of a new facility in the Upper Hunter was assessed as an alternative to the Project. Orica have searched for an alternative site in the Hunter Valley but a suitable site for secure long term tenure could not be located. As such this option was discounted due to the lack of suitable sites, and the capital costs associated with the construction of new support infrastructure such as roads and utilities. In addition, due to the current ANE facility's production limitations, the additional time involved in locating and acquiring a suitable site and gaining approval for a new facility would restrict Orica's ability to respond to the projected future demand for ANE.</p> <p>The Orica Technology Centre at Richmond Vale is the preferred location for a range of reasons. The Richmond Vale site has the following advantages:</p> <ul style="list-style-type: none"> <li>• secure long term tenure;</li> <li>• established infrastructure and services (electricity, roads, offices etc.);</li> <li>• located within the expanding south-eastern region;</li> </ul>	<p>Noted.</p>	<p>Note</p>				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
There has been considerable recent publicity in relation to the trucking of dangerous goods and there is nothing in the EA which addresses any alternative mode of transport. It is noted rail links exist throughout the Hunter close to many of the mines which are the ultimate end users of the ANE to the manufactured. Potential may exist to use rail in relation to some of the transport of either the chemicals used in the process or the explosives manufactured.	SECTION 3.4.4: Alternative Mode of Transport  Transporting ANS and ANE product by rail was considered by Orica and determined to be a non-viable transport option for a number of reasons, including the following: <ul style="list-style-type: none"> <li>• The cost associated with the construction and operation of a new rail line, including additional infrastructure for loading and unloading would outweigh any benefits associated with using rail;</li> <li>• The rail network in the Hunter region is currently constrained by the existing rail traffic;</li> <li>• Many of Orica's customer sites are at remote locations necessitating road transport;</li> <li>• The short distances to major transport routes and the flexibility this would allow in responding to ANE demand would favour the use of road transport; and</li> <li>• The expected planning constraints and potential environmental impacts associated with the construction and operation of a new rail line to Orica's facilities make it likely that Orica would need to truck product to the rail loading area and from the rail unloading area i.e. George Booth Drive would likely still be utilised by Orica heavy vehicles.</li> </ul> The currently proposed transport option contained in the EA is the preferred option.	Noted.	Note				
The hazard of explosion at the site was also raised by the residents. It is said a 30 metre asset protection zone would be maintained (see EA 7.0 at page 7.3). It would seem unlikely this would have much effect if an explosion took place. Dangers appear to exist both in relation to bushfires occurring and moving to the project and in relation to bush fires that may be ignited as a result of an accident within the plant. The commitment outlined in the EA in relation to bushfires seems minimal.	SECTION 3.6.1: Fire Management  During the environmental assessment process for the Project, Orica consulted with and sought submissions from the NSW Rural Fire Service (RFS) and the NSW Fire Brigades (NSWFB). The RFS responded that the development is to be carried out with the aims and objectives of the Planning for Bushfire Protection (RFS 2006 guidelines), which Orica agree to comply with. The NSWFB commented that any new building proposal and substantial alterations to existing buildings comply with the current Building Code of Australia (BCA) and Relevant Australian Standards, which Orica agree to comply with." The NSWFB stated that a Fire Safety Study and an Emergency Plan should be prepared by Orica for the Project. A Fire Safety Study is currently being prepared for the Project and a copy of this study will be forwarded to the relevant agencies following its completion. As discussed in Section 6.10 of the EA, Orica are committing to updating the existing site Emergency Plan and the site Fire Safety Management Plan to include a fire management strategy for the proposed ANE Production Facility. When updating these documents Orica will consult with the relevant emergency authorities such as the RFS. Fire Fighting Resources In one of the private submissions the author raised the concern that in the event of a fire event threatening the Richmond Vale area fighting resources would be required to help contain the Orica facility, leaving the residents with possible reduced resources for protecting their own properties. However, if a fire were large enough that the local RFS was overstretched the RFS has in place systems to pull additional resources from surrounding areas, thus providing resources to respond to a large or severe bushfire event. In addition, Orica maintains and conducts a program of regular bushfire hazard reduction on the site in conjunction with the RFS thus reducing the potential for a severe fire event. Although bushfires can approach from the east, based on historical experience, it is rare due to the terrain of the site, with bushfires normally approaching the site from the west and it would be extremely rare that a	Noted.	Note				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
The above concerns are amplified when one considers the applicant's description of the project as a whole. This is not a short-term project and the long-term extent of the operations is unknown to all, probably including the applicant. This is consistent with the statement in the EA that the project expects to be capable of meeting a project emulsion demand to 2020 and beyond (see Executive Summary at page 9). There is nothing that indicates the project caters for demand beyond 10 years and, given the growth in mining in the Hunter and the expansion of the Port of Newcastle expected over the next 10 years, it is a reasonable anticipation that demand for ANE will grow further after that 10 year period.	SECTION 3.11.4: Project Life  As discussed in Section 3.2 of the EA, the global demand for mineral commodities such as coal, iron ore and other metalliferous products is growing significantly and is forecast to continue to do so over the next decade. In 2008 the declared amount of Hunter Valley Coal exported was 97 Mtpa (ABARE 2006). The Australian Bureau of Agricultural and Resource Economics (ABARE), the Commonwealth government economic research agency, has predicted that international demand for Hunter Valley coal will maintain a strong level of growth in the medium term. ABARE forecasts that international demand could drive Hunter Valley coal producers to supply between 130 Mtpa and 200 Mtpa by 2015, dependent on international coal prices and coal chain capacity constraints. This predicted increase in the demand for Hunter Valley Coal will in turn drive up demand for mining support operations and products such as ANE. ANE is a key ingredient in many of the explosives that are commonly used in both open cut and underground coal mining, along with other industries such as metalliferous mining, the construction industry and quarrying. In the Hunter region these explosives are chiefly used in the coal mining industry, both open cut and underground, to remove overlying material as a means to uncover and expose the underlying coal seam and blasting to enable recovery of the coal seam. The proposed ANE Production Facility will enable Orica to meet the projected increase in demand for ANE in the Hunter and broader south-east region.  The proposed ANE Production Facility will be capable of meeting the projected ANE demand to 2020 and beyond using Orica Mining Services global standard technology. Projected demand for ANE beyond 2020 is currently subject to a number of unknown factors, so it cannot be accurately estimated. However, Orica do intend to operate the proposed ANE Production Facility beyond 2020. While no future expansions are planned at this time; any future changes to the facility or increase in ANE production would be subject to further assessment and approvals.	Noted.	Note				
The residents in the area were informed when approval was originally sought prior to operations commencing on the George Booth Drive site in 1991 that the site would only ever be used as a laboratory for research purposes. This has been the case until now. A necessary incident to these purposes has been limited production of explosives for experimental use in testing and market development (see Preliminary Environmental Assessment at page 2.2). Orica now wishes to go against what it said to the residents at that time and manufacture explosives on a large scale for sale to end users in the new facilities to be built if this project is approved.	SECTION 3.11.5: Original 1991 Consent  DA118/690/257, which allows for the majority of operations at the Technology Centre, was granted to ICI Australia Operations Pty Limited (now Orica) in 1991. The development consent allowed for explosives research and production activities. The approved production and manufacturing activities allowed for the manufacture of packaged explosives (e.g. Powergel), emulsion based primers and ANFO type products, primarily Amex.  Orica has approval for the production capacities outlined in Table 3.1 below. Table 3.1 – Approved Production Capacity  Since the 1991 approval there have been significant changes to market demands and Orica is now faced with an increase in demand for ANE and is unable to respond with their current facilities. ANE is a key ingredient in many of the explosives that are commonly used in both open cut and underground coal mining, along with other industries such as metalliferous mining, the construction industry and quarrying. The proposed ANE Production Facility will enable Orica to meet the projected increase in demand for ANE in the Hunter and broader south-east region.	Noted.	Note				
Although the applicant puts the project forward as an extension of current operations the project comprises an entirely new operation on the site. The site has never been approved for use in relation to bulk production of explosives. The only production that has taken place on the site has been incidental to the research carried out on the site. The application is to build new improvements in an area separate to the improvements used for research and testing and to undertake an activity never undertaken on the site before (i.e. bulk production of ANE for sale). The application must be considered in this light.	SECTION 3.11.6: New Development On-Site  The original 1991 development consent allowed for explosives research and production activities. The approved production and manufacturing activities allowed for the manufacture of packaged explosives (e.g. Powergel), emulsion based primers and ANFO type products, primarily Amex (refer to Table 3.1). And while the Proposed ANE Production Facility would result in a substantial change to the existing facility, the Project is not being put forward as a modification to the previous 1991 consent.	Noted.	Note				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
In this regard it is noted that the Preliminary Environmental Assessment states the development is consistent with the description in Clause 5 of Schedule 5 of the LEP and so should be approved, however, this is not so. Although the description referred to includes the word "production" the production that was foreseen at the time the clause was drafted only included production incidental to research which was the approved activity and so the clause must be read down to include production incidental to research only.	SECTION 3.1.1: Permissibility under Current Local Environment Plan (LEP)  As discussed in Section 4.4.3 of the EA, the Project area lies within the Cessnock LGA. Under the Cessnock Local Environmental Plan (LEP) 1989, the land is zoned Rural 1(a). The land is subject to an exemption under the LEP which allows for the development within the Rural 1(a) zoning which would otherwise be incompatible. Clause 45 of the LEP states:  (1) Nothing in this plan prevents a person, with the consent of the Council, from carrying out development on land referred to in Schedule 5 for a purpose specified in relation to that land in that Schedule, subject to such conditions (if any) as are so specified. Clause 5 of Schedule 5, of the LEP notes:  (5) Land fronting George Booth Drive, Richmond Vale, Parish of Stockrington, as shown edged heavy black on Sheet 1 of the map marked "Cessnock Local Environmental Plan 1989 (Amendment No 13)" - explosives research and production facility involving:  (a) the construction and use of offices, laboratories and workshops for the purposes of research into, and development of, explosives and associated manufacturing processes, methods of application of explosives, related advanced engineering processes and blasting physics, and  (b) the production, storage and testing of explosives. Orica's existing facilities and the proposed ANE Production Facility description are consistent with the activity description provided in Schedule 5 of the LEP and are therefore permissible. Therefore the Project is permissible and the Minister for Planning is not precluded from approving the Project.	Noted.	Note				
Approval of the project as proposed would inevitably lead to approval of expansions of Orica's production on the site in the future. Given what is said in the EA regarding desirability of using the site and reasons given for not using alternative sites it is clear Orica seeks to use the George Booth Drive site as its major production facility for explosives for South-East Australia for a very long period. For this reason, the project should be considered with great scrutiny and all aspects should be examined in light of the fact future expansions will follow.	SECTION 3.11.4: Project Life  As discussed in Section 3.2 of the EA, the global demand for mineral commodities such as coal, iron ore and other metalliferous products is growing significantly and is forecast to continue to do so over the next decade. In 2008 the declared amount of Hunter Valley Coal exported was 97 Mtpa (ABARE 2006). The Australian Bureau of Agricultural and Resource Economics (ABARE), the Commonwealth government economic research agency, has predicted that international demand for Hunter Valley coal will maintain a strong level of growth in the medium term. ABARE forecasts that international demand could drive Hunter Valley coal producers to supply between 130 Mtpa and 200 Mtpa by 2015, dependent on international coal prices and coal chain capacity constraints. This predicted increase in the demand for Hunter Valley Coal will in turn drive up demand for mining support operations and products such as ANE. ANE is a key ingredient in many of the explosives that are commonly used in both open cut and underground coal mining, along with other industries such as metalliferous mining, the construction industry and quarrying. In the Hunter region these explosives are chiefly used in the coal mining industry, both open cut and underground, to remove overlying material as a means to uncover and expose the underlying coal seam and blasting to enable recovery of the coal seam. The proposed ANE Production Facility will enable Orica to meet the projected increase in demand for ANE in the Hunter and broader south-east region.  The proposed ANE Production Facility will be capable of meeting the projected ANE demand to 2020 and beyond using Orica Mining Services global standard technology. Projected demand for ANE beyond 2020 is currently subject to a number of unknown factors, so it cannot be accurately estimated. However, Orica do intend to operate the proposed ANE Production Facility beyond 2020. While no future expansions are planned at this time; any future changes to the facility or increase in ANE production would be subject to further assessment and approvals."	Noted.	Note				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
As stated at the beginning of this letter, while I have no objection to the present operations remaining upon the Orica site, the EA does not disclose full details in relation to any consideration given to alternative sites. Some general matters are set out in relation to the present explosives production plant owned by Orica at Liddell but it seems the only real point made is in relation to tenure. It is not clear whether the land is available on long-term but the commercial terms of its availability are not desirable or whether the land is simply not available. Comparing the two sites, one sees the cost of construction would be similar (in both cases approximately \$35 million), the job creation position would be the same as it is said in the Preliminary Environmental Assessment that the 10 positions created by the proposed project would be filled using staff from existing Orica facilities in the region (see page 1.2 & 2.1.3 at page 2.9). When one considers the benefits of the proposal as set out in 8.2 of the EA (see page 8.3), all of the benefits would be equal if a site at or near the present site in Liddell were used.	<p>SECTION 3.3.1: Suitability of the Location</p> <p>As discussed in Section 3.2.1 of the EA, a number of alternative locations were considered during the project development phase. The upgrade of the existing Liddell facility was assessed as an alternative to the Project and it was deemed a non-viable option for a range of reasons. Orica do not own the land that the current Liddell site is situated on and have been unable to secure a long term tenure agreement with the owner for the construction of a new facility, despite negotiations over several years.</p> <p>In addition, an upgrade of the current Liddell facility was also discounted as the current plant is already operating at full production capacity seven days a week. Further expansion of the Liddell plant is not feasible as the existing interaction between facility and construction works would result in interruptions to production at the facility, the risk of increased incidents and an extremely protracted construction timeframe. This would restrict Orica's ability to respond to the projected future demand for ANE, while ensuring safe plant operation.</p> <p>As discussed in Section 3.2.1.3 of the EA, the construction of a new facility in the Upper Hunter was assessed as an alternative to the Project. Orica have searched for an alternative site in the Hunter Valley but a suitable site for secure long term tenure could not be located. As such this option was discounted due to the lack of suitable sites, and the capital costs associated with the construction of new support infrastructure such as roads and utilities. In addition, due to the current ANE facility's production limitations, the additional time involved in locating and acquiring a suitable site and gaining approval for a new facility would restrict Orica's ability to respond to the projected future demand for ANE.</p> <p>The Orica Technology Centre at Richmond Vale is the preferred location for a range of reasons. The Richmond Vale site has the following advantages:</p> <ul style="list-style-type: none"> <li>• secure long term tenure;</li> <li>• established infrastructure and services (electricity, roads, offices etc.);</li> <li>• located within the expanding south-eastern region;</li> </ul>	Noted.	Note				
Although many of the matters raised above are discussed in what may be considered to be a negative light it must be remembered this proposal is being made in light of an undertaking by the applicant many years ago that no such application would be made. It is also made in such a way that shows the applicant is attempting to address issues by complying with regulations only and has not put forward solutions to any of the issues raised by the residents which go beyond compliance with regulations. This renders the consultation process futile.	<p>SECTION 3.11.5: Original 1991 Consent</p> <p>DA118/690/257, which allows for the majority of operations at the Technology Centre, was granted to ICI Australia Operations Pty Limited (now Orica) in 1991. The development consent allowed for explosives research and production activities. The approved production and manufacturing activities allowed for the manufacture of packaged explosives (e.g. Powergel), emulsion based primers and ANFO type products, primarily Amex.</p> <p>Orica has approval for the production capacities outlined in Table 3.1 below. Table 3.1 – Approved Production Capacity</p> <p>Since the 1991 approval there have been significant changes to market demands and Orica is now faced with an increase in demand for ANE and is unable to respond with their current facilities. ANE is a key ingredient in many of the explosives that are commonly used in both open cut and underground coal mining, along with other industries such as metalliferous mining, the construction industry and quarrying. The proposed ANE Production Facility will enable Orica to meet the projected increase in demand for ANE in the Hunter and broader south-east region."</p>	Noted.	Note				

Table B4 -Submissions Report, Assessment of Compliance							
Issue Raised EA application	Orica's Response	Evidence 2016/17	Audit Finding 2016/17	Rcmmdn	Consequences	Likelihood	Risk
It is also in light of the fact there is no proper compliance statement in relation to past compliance by the applicant at the present site. This is said to be a result of poor historical record keeping (see EA 2.4 at page 2.6) which is astonishing in light of the fact the present operation has only been in place since 1991.	SECTION 3.11.3: Compliance Record  As described in Sections 2.1, 2.2 and 2.3 of the EA, Orica currently operate under three development consents issued by Cessnock City Council, dating back to the original development consent issued in 1991. Many of the conditions of consent for the existing operations relate to the provision of further studies, plans and programs following the granting of development consent, such as a Construction Safety Study, Hazard and Operability Study, Final Hazard Analysis, Fire Safety Study, Maintenance Program, and Bushland Management Plan. Some of the conditions of consent also relate to approved works that have not been undertaken. Based on the records of compliance provided by Orica, the site appears to be generally operating in compliance with these statutory approvals, although a complete record of compliance has not been provided due to historical issues with record archiving.  There are no outstanding orders, notices or demands from the local Council or any government agencies. There have been no prosecutions relating to operations on the site and there are no known records of complaints being received relating to environmental compliance issues. Orica is committed to improving compliance tracking and record keeping for future operations."	Noted.	Note				
<b>Issue Raised MOD 2 application</b>	<b>Response</b>	<b>Evidence</b>	<b>Audit Finding</b>	<b>Recommendation</b>			
<b>RESPONDENT - CESSNOCK CITY COUNCIL</b>							
The proponent will need to register the cooling tower with Council under the <i>Public Health Act 2010</i> and the cooling tower will need to be chemically dosed and regularly serviced.	Acknowledged. The cooling tower will be registered and managed in accordance with the <i>Public Health Act 2010</i> .	The Cooling Tower was registered with Cessnock City Council 25 October 2016. However, the NSW Public Health Act, 2010, Part 3, Division 2, Section 31 requires notification to Council within a month of installation so Orica were in breach of the act at the time of the audit. Although this breach is not strictly environmental, a role of this audit is to identify any environmental legislation breaches and this legislation provides background to the requirement to notify and register the heat exchanger.	Compliant				
<b>RESPONDENT - SAFEWORK NSW</b>							
Increased opportunity for pipe blockages to occur within a pressurised system. Recommend the use of an independent flow switch be considered in accordance with current industry best practice.	Orica will consult with the Major Hazards unit of SafeWork NSW with regard to the safety systems to be included to ensure that best practice is implemented for this project.	Orica corresponded with SafeWork NSW prior to finalising the design. An email with safety design information and request for review was sent to Safework NSW from Orica 20 May 2016.	Compliant				
Update MHF Safety Case with details of the process safety implications of the proposed modification	Agreed. Orica will update the MHF Safety Case and provide to SafeWork NSW within the timeframe specified in the consent.	Yes. This is underway. Extention to timeframe has been agreed with SafeWork NSW	Compliant				
Recommended Conditions: 1. Prior to finalising detail design, the applicant must consult with the Major Hazards unit of SafeWork NSW with regard to the safety systems to be incorporated into the modifications. 2. Within 3 months of the approval or further time agreed with SafeWork NSW, the applicant shall update the current MHF Safety Case for the facility and provide the relevant information to SafeWork NSW	Agreed.	Noted. These conditions were added to the MOD 2 approval.	Note				
<b>RESPONDENT - NSW EPA</b>							
No issues	N/A	Noted.	note				
<b>RESPONDENT - Office of Environment &amp; Heritage</b>							
No issues	N/A	Noted	Note.				

Table B5 - Fire Safety Study, Assessment of Compliance									
Ref	Sub Ref	Requirement	Evidence 2016/17 audit	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk	
<b>5. FIRE PREVENTION, DETECTION AND PROTECTION MEASURES</b>									
5.3. Proposed ANE Plant	5.3.1. Design Safeguards	The main means of fire prevention are inherent to the proposed ANE plant design and operations including: <ul style="list-style-type: none"> <li>· No flammable materials are stored or handled.</li> <li>· Buildings are constructed from non-combustible materials.</li> <li>· Combustible liquids storages are well separated from other inventories and separately bunded.</li> <li>· Minimisation of inventory – ANE is manufactured on demand and filled into trucks for distribution. ANE is not stored for significant periods of time.</li> </ul>	Flammable paint and dye is kept on site. A risk assessment has been prepared for the storage of the dye. The Hazard Audit 2016, identified that no bulk flammable materials are stored or handled at the ANE plant. The EA did not commit to no flammable materials on site. Risks are appropriately managed via risk assessment.	Compliant					
	5.3.2. Ignition Control	Potential for ignition has been minimised as follows: <ul style="list-style-type: none"> <li>· Minimisation of heat sources eg hot water rather than steam or electric heating for ANS storage.</li> <li>· Vehicle access for all loading/unloading is via a ring road. There is no requirement for trucks/delivery vehicles to enter process areas.</li> <li>· Electrical design in accordance with relevant Australian Standards.</li> </ul>	Outside of the audit. The design of these areas was been assessed by suitable experts in the HAZOP and other hazard studies	Not Triggered					
	5.3.3. Procedural Controls	As for the existing facilities, the following safety management systems and operations procedures minimise the likelihood of spills, failure of mechanical equipment and/or ignition: <ul style="list-style-type: none"> <li>· Hot work permit system.</li> <li>· Maintenance/ inspection of equipment.</li> <li>· Operator inspections.</li> <li>· Operating procedures.</li> <li>· Housekeeping - regular clean-up of debris/combustible materials.</li> <li>· Audits.</li> <li>· Spill clean up procedures.</li> </ul>	Sighted during site inspection. Maintenance scheidules sighted.	Compliant					
	5.3.4. Fire Detection Measures	Fire detection and protection measures are aimed at early detection of a fire, hence increasing the effectiveness of the response taken and minimising the fire severity. <ul style="list-style-type: none"> <li>· Fully attended operations - visual detection by operations personnel during day shift.</li> <li>· Building smoke detection and alarm to security.</li> <li>· Security patrols after hours.</li> <li>· The plant will also have manual call points which will alert site security and the fire brigade.</li> </ul>	All sighted except the security patrols. Site is now 24/5 operation so security patrols only required on weekends when site not operating.	Compliant					
	5.3.5. Protection / Suppression		The following fire protection/suppression systems will be available: <ul style="list-style-type: none"> <li>· Extinguishers: <ul style="list-style-type: none"> <li>o Fire extinguishers within the buildings.</li> <li>o Provision of portable fire extinguishers at combustible liquid storage in compliance with the requirements of AS1940.</li> <li>o Provision of portable fire extinguishers for pumps and transfer points in oxidiser storage areas in compliance with AS4326.</li> <li>o Provision of portable fire extinguishers on vehicles as per Dangerous Goods Code.</li> </ul> </li> </ul>	Sighted during site inspection, in building and on site.	Compliant				
			<ul style="list-style-type: none"> <li>· Fixed Site Firewater System <ul style="list-style-type: none"> <li>o 2 x 70,000 l capacity firewater tanks (including additional connections for Rural Fire Service)</li> <li>o additional firewater available from the existing Technical Centre firewater storage which is maintained at a minimum capacity of 180,000 l and has storage capacity of up 380,000 l. Fire tankers could fill up from this source if supplies at the ANE plant were low</li> <li>o 2 x fixed monitors for protection of mineral oil storage rated at minimum discharge pressure of 700 kPa and 20 L/s. The minimum throw from the monitors on jet is 47 m</li> <li>o 4 x hydrants supplied at 700 kPa</li> <li>o hose reel for dry store</li> </ul> </li> </ul>	Sighted during site inspection	Compliant				
			<ul style="list-style-type: none"> <li>· Bushfire protection <ul style="list-style-type: none"> <li>o connections at the car park to the 2 x 70,000 onsite firewater tanks</li> </ul> </li> </ul>	Sighted during site inspection	Compliant				
5.3.6. Fire Protection required by Codes and Standards	For the maximum quantities of materials potentially handled, specified fire protection is summarised in Table 5.1 [of the Fire Safety Study].	Noted	Note						

Table B5 - Fire Safety Study, Assessment of Compliance								
Ref	Sub Ref	Requirement	Evidence 2016/17 audit	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
5.4. Bushfires	5.4.1. Existing facilities	A comprehensive bushfire hazard reduction programme is in place for the existing facilities at the Technology Centre site. This includes: <ul style="list-style-type: none"> <li>· Cleared areas around all facilities, with further low fuel asset protection zones (APZ) in accordance with the relevant NSW Rural Fire Service (RFS) Planning for Bushfire Protection (PBP) 2006 guidelines.</li> <li>· Provision of leafguards and appropriate windows (non-openable) for all buildings.</li> <li>· Provision of fire trails within and surrounding the site.</li> <li>· Regular programme of inspections by the RFS.</li> <li>· Controlled hazard reduction and backburning operations undertaken by the RFS (timing and location as advised by RFS as needed).</li> <li>· Manual hazard reduction (ie clearing of vegetation within designated APZ).</li> </ul>	Quarterly bushfire and perimeter maintenance checks are undertaken (sighted). The RFS attended the fire drill at the Orica ANE site 10 December 2015 (sighted correspondence from the RFS). The RFS provided feedback from observations re the drill.	Compliant				
		Regular maintenance is also carried out as follows: <ul style="list-style-type: none"> <li>· Low fuel zones up to 60 m from facilities including lawns, planted garden strips, roads and pathways.</li> <li>· Fire trails checked regularly by trained site personnel with frequency increasing during fire season.</li> <li>· Water levels checked daily, minimum of 200,000 litres retained for fire fighting.</li> <li>· Fire pumps, fire hoses and equipment checked monthly by site personnel.</li> </ul>	Referred to in monthly inspection checklists	Compliant				
	5.4.2. Bushfire Protection of the Proposed ANE Production Facility	The existing Emergency Response Plan (ERP) and Fire Risk Management Plan (FRMP) will be updated to cover the ANE Production Facility.	Sighted updated copies	Compliant				
		The required APZ around the ANE Production Facility is shown in APPENDIX 1. The APZ is 20 m on the northern, southern and eastern sides of the proposed facility and 25 m from the western edge of the proposed facility.	Sighted during site inspection	Compliant				
		The firewater tanks for the ANE plant will have suitable connections for the RFS tenders to refill.	Sighted during site inspection	Compliant				
5.5. Fire Services Existing Facilities	5.5.1. Alarms	The Technology Centre has existing fire protection and emergency response systems in place: <ul style="list-style-type: none"> <li>- Site firewater supply system supplied throughout the operational plant areas and associated buildings.</li> <li>- Site process alarm system and evacuation alarm system. Site emergency response procedures</li> <li>- Fire brigade response.</li> </ul>	Noted	Note				
		The site Fire and Emergency evacuation systems are monitored by NSWFB 24 hours per day 7 days per week.	Noted.	Note				
	5.5.2. Firewater Systems	A red light warning system is in place at the entrance to the site, to prevent people entering the site during an emergency, a mimic panel at the front gate is also connected to the main Fire Indicator Panel (FIP) and Evacuation Warning Information System (EWIS) to give Emergency Service providers information prior to entering the site. An occupancy report is also available at the front gate to provide information as to who is on site.	There are red flashing lights located at the entrance to the site as noted in the the site induction.	Compliant				
		The Kurri site firewater supply is contained in 4 concrete water storage tanks of approximately 90,000 litres in each. The top half is piped to supply potable water to the site administration buildings and the Mixing Lab.	Noted.	Note				
		Rainwater is collected from the roof tops of buildings and collected in two 20,000 litre collection tanks and pumped into the storage tanks as space allows.	Noted - sighted during the site inspection	Note				
		The firewater system has a small Grundfoss jacking pump, to maintain pressure in the system, any other drop in pressure is detected and automatically starts the electric fire pump and in the case of power outage has a diesel backup pump. The system is connected the Fire alarm system and if a pump starts this automatically calls the NSW Fire Brigade.	Noted	Note				
		The main fire pumps are capable of pumping 20,000 litres of firewater per hour, and are tested monthly.	Referred to in monthly inspection checklists	Compliant				
The main electric fire pump has a flow rate of 40,000 litres per hour and there is also a diesel backup fire pump and also has a flow rate of 40,000 litres per hour.	Noted.	Note						

Table B5 - Fire Safety Study, Assessment of Compliance										
Ref	Sub Ref	Requirement		Evidence 2016/17 audit	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk	
5.6. Additional Firewater Demand – Proposed ANE Plant		The dry stores building has a floor area of 524 m2 and has a BCA classification of Class 8. Under AS 2419.1:2005 and the BCA (area > 500 m2) it requires two fire hydrants outlets. Under the BCA it requires one hose reel.		Sighted in site inspection	Compliant					
		The dry stores building is the only area with mandatory fire protection (Table 5.2). Its demand is discharge from 2 hoses at 10 l/s each.		Sighted in site inspection	Compliant					
	TABLE 5.2: FIRE SCENARIO WATER DEMAND UNDER CODES AND STANDARDS	LOCATION: Dry stores	WATER DEMAND: 2x hydrant outlets capable of 10 l/s		Sighted in site inspection	Compliant				
		LOCATION: All	WATER DEMAND: 2 x 70,000 L tanks		Sighted in site inspection	Compliant				
5.7. Emergency Response Plan		the NSW OHS (DG Amendment) Regulations require that emergency services be consulted about emergency plans. The updated ERP will be submitted for review as required		Prior to audit period. The ERP has been revised and submitted. A copy went to fire and rescue.	Not Triggered					
		FIRE SCENARIO	PREVENTION MEASURES							
		1. Spill of oxidising material and contact with combustible materials, leading to fire.	Appropriate construction materials & construction QA process. Routine maintenance procedures. Clearance To Work procedures which control the introduction of fuels and ignition sources. Very limited combustible materials are present in oxidiser storage areas. Bunding & standoff distances to ensure oxidisers are separated from combustible liquids and minimise radiant heat effects. Grading of facility to prevent oil spills pooling near oxidisers.		Noted	Note				
		2. Fire in mineral oil storage bund.	Appropriate construction materials & construction QA process. Tanks are top fill, top empty and double skin, therefore minimal leak sources in banded area and very low fire potential. Routine maintenance procedures. Bunding and grading.		Noted	Note				
		3. Fire in E25 storage bund.	Appropriate construction materials & construction QA process. Routine maintenance procedures. Bunding. E25 is very viscous and classed as C2 combustible. Therefore the potential for a fire involving E25 in the absence of an adjacent fire is negligible.		Noted	Note				
		4. Fire in acetic acid storage bund.	Quality of stock to keep out of flammable concentration. Appropriate construction materials & construction QA process. Routine maintenance procedures. Bunding. The potential for a fire involving acetic acid in the absence of an adjacent fire is negligible.		Noted	Note				
		5. Road tanker cabin fire in mineral oil unloading bay.	Routine truck maintenance procedures. Driving technique		Noted	Note				
		6. Fire of spilled combustible liquids in unloading bay, e.g. diesel.	Appropriate construction materials & construction QA process. Design and training to minimise human errors. Routine maintenance procedures. Kerbing around unloading bay with grading towards drains.		Noted	Note				
		7. Air compressor fire.	Small sized compressor, small lube oil circulation. Separation from oxidisers and grading to prevent oils pooling near oxidisers.		Noted	Note				
		8. Fire at diesel day tank.	Appropriate construction materials & construction QA process. Routine maintenance procedures. Bunding. Separation from oxidisers and grading to prevent diesel pooling near oxidisers.		Noted	Note				
	9. Fire in workshop.	AN materials excluded from this workshop. Appropriate construction materials & construction QA process Housekeeping to minimise combustible materials. Training and awareness of hazards.		Noted	Note					

Table B5 - Fire Safety Study, Assessment of Compliance									
Ref	Sub Ref	Requirement	Evidence 2016/17 audit	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk	
		10. Fire in stores (adjacent to workshop).	Separation between combustible material and electrical equipment. Appropriate construction materials & construction QA process	Noted	Note				
		11. Fire in switchroom.	Appropriate construction materials & construction QA process Inspection and maintenance Design to accommodate loads.	Noted	Note				
		12. Transformer fire.	Inspection and maintenance by energy regulator. Design to accommodate loads. Separation from oxidisers and grading to prevent oil pooling near oxidisers.	Noted	Note				
		13. ANE tanker cabin fire in ANE loading bay.	Truck maintenance Driving technique Design to appropriate standards. The ground is sloped to prevent fuels from pooling underneath the truck.	Noted	Note				
		14. Fire in lab.	No unmanned activities in lab. Appropriate construction materials & construction QA process. Flammable gas not used in lab.	Noted	Note				
		15. Fire in control room.	Appropriate construction materials & construction QA process Design to appropriate standards. Routine maintenance procedures. Full time operator presence in this building.	Noted	Note				
		16. Fire in office and amenities building after hours, e.g. electrical fires switchroom.	Appropriate construction materials & construction QA process Design to appropriate standards. Routine maintenance procedures.	Noted	Note				
		17. Bushfires with potential escalation to ANS/ANE/AN inventory.	Clearing of vegetation around perimeter with minimum 30 m clearing from plant equipment to security fence (Asset Protection Zones). ANS tanks, E25 tank & ANE hoppers are stainless steel tanks with thermal insulation layer and reflective aluminium cladding.	Noted	Note				
<b>6. CONTAINMENT OF CONTAMINATED WATER</b>									
		If firewater is applied to equipment, the penstock valve to the stormwater harvester will be closed to prevent overflow of the stormwater system.	Process was checked during emergency drill. The penstock was closed as required.		Compliant				
<b>7. FIRST AID FIRE PROTECTION</b>									
		Switchrooms and other unattended buildings containing electrical equipment will be provided with CO2 extinguishers. Extinguishers will also be provided in occupied buildings in accordance with the BCA. The fire extinguishers will comply with the requirements in AS2444.	Sighted during site inspection		Compliant				
<b>8. CODES AND STANDARDS</b>									
8.1. Codes		The fire detection and protection systems installed in the ANE plant will comply with the current version of the following codes and Australian Standards where applicable. · Building Code of Australia (BCA). · AS 1670 · AS 1851 · AS 2419.1 · AS 2444 · AS/NZS 3000 8.2. Maintenance and Testing Automatic Fire Detection and Alarm Systems - System Design, Installation and Commissioning. Maintenance of Fire Protection Equipment. Fire Hydrant Installations Part 1: System Design, Installation and Commissioning. Portable Fire Extinguishers - Selection and Location. SAA Wiring Rules.	Not part of the scope of this audit. A Hazard Audit was prepared by Planager, 05/06/2016. The Hazard Audit says the PCA signed off that it meets building code.		Not verified				
8.2. Maintenance and Testing		All site fire protection systems are maintained to schedules in accordance with relevant Australian Standards (i.e. AS1851).	A Hazard Audit was prepared by Planager, 05/06/2016. The audit states fire detection and protection equipment are listed		Compliant				
		Additional equipment for the ANE plant will be added to the schedules. Typical frequencies are shown in Table 8.1.	Noted.		Not Triggered				
		TEST/INSPECTION FREQUENCY: Monthly	COMMENTS: Test run of pumps	Active maintenance checks of items in maintenance system were sighted.		Compliant			

Table B5 - Fire Safety Study, Assessment of Compliance									
Ref	Sub Ref	Requirement		Evidence 2016/17 audit	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
TABLE 8.1: TESTING AND INSPECTION EXAMPLES	Firewater system	TEST/INSPECTION FREQUENCY: Monthly	COMMENTS: Diesel pumps serviced by contractor	Active maintenance checks of items in maintenance system were sighted.	Compliant				
		TEST/INSPECTION FREQUENCY: Daily	COMMENTS: Firewater tank level	Active maintenance checks of items in maintenance system were sighted.	Compliant				
		TEST/INSPECTION FREQUENCY: 3 years	COMMENTS: Hydrant flow testing	Active maintenance checks of items in maintenance system were sighted.	Compliant				
	Hydrants and fire hoses	TEST/INSPECTION FREQUENCY: 6 Monthly		Active maintenance checks of items in maintenance system were sighted.	Compliant				
	Extinguishers	TEST/INSPECTION FREQUENCY: 6 Monthly	COMMENTS: Will be extended to ANE Plant	Yes, monthly checks undertaken (inspection sheet sighted). Spot checks in site inspection indicated compliance	Compliant				
	Smoke and thermal detectors	TEST/INSPECTION FREQUENCY: Monthly	COMMENTS: Testing by contractor Will be extended to ANE Plant	Active maintenance checks of items in maintenance system were sighted.	Compliant				
	FIP - plants	TEST/INSPECTION FREQUENCY: Monthly	COMMENTS: Testing by contractor	Active maintenance checks of items in maintenance system were sighted.	Compliant				
	Emergency services alarm	TEST/INSPECTION FREQUENCY: Weekly	COMMENTS: Will be extended to ANE Plant	Active maintenance checks of items in maintenance system were sighted.	Compliant				
	Safety showers	TEST/INSPECTION FREQUENCY: 2 weeks	COMMENTS: Will be extended to ANE Plant	Yes, weekly check undertaken (inspection sheet sighted). Sighted during interview with maintenance planner.	Compliant				
	Boom gate entry warning lights	TEST/INSPECTION FREQUENCY: Monthly	COMMENTS: Will be extended to ANE Plant	Active maintenance checks of items in maintenance system were sighted.	Compliant				
	Mimic Panel front gate	TEST/INSPECTION FREQUENCY: Monthly	COMMENTS: Will be extended to ANE Plant	Active maintenance checks of items in maintenance system were sighted.	Compliant				
	Occupancy report front gate	TEST/INSPECTION FREQUENCY: Monthly	COMMENTS: Will be extended to ANE Plant	Active maintenance checks of items in maintenance system were sighted.	Compliant				
	Asset protection zones	TEST/INSPECTION FREQUENCY: Monthly	COMMENTS: Will be extended to ANE Plant	Yes, monthly checks undertaken (inspection sheet sighted)	Compliant				
	Fire trails	TEST/INSPECTION FREQUENCY: Monthly	COMMENTS: Will be extended to ANE Plant	Active maintenance checks of items in maintenance system were sighted.	Compliant				
Periodic back burning. Manual hazard reduction.	TEST/INSPECTION FREQUENCY: Yearly	COMMENTS: Will be extended to ANE Plant	Active maintenance checks of items in maintenance system were sighted.	Compliant					

**Table B6 - Emergency Plan, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17 audit	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
<b>1 INTRODUCTION</b>								
1.5.1 Document control and Distribution		<p>The master controlled copy of the plan is the authorised document held in the Document Management System (DMS). Document control, revision, retention and authorisation are managed through the functionality of the DMS. All personnel on site have access to the plan via the DMS.</p> <p>In addition, controlled hard copy prints of the plan are held in the following locations on site:</p> <ul style="list-style-type: none"> <li>- Copy 1: Main administration building adjacent to the Fire Control Panel.</li> <li>- Copy 2: Hazmat Box – Emergency Services Information Package (ESIP) at the site main entrance near the Electrical Control Panel.</li> <li>- Copy 3: Chief Wardens Office (Haber Building).</li> </ul> <p>Hard copies will be distributed to the following external services:</p> <ul style="list-style-type: none"> <li>- Copy 4: Director General NSW Department of Planning.</li> <li>- Copy 5: Fire and Rescue NSW – Kurri Kurri Station.</li> <li>- Copy 6: NSW Police Force.</li> <li>- Copy 7: District Emergency Management Officer.</li> </ul> <p>Electronic copies of the plan will be provided to:</p> <ul style="list-style-type: none"> <li>- Fire and Rescue NSW Structural Fire Safety Unit.</li> <li>- SafeWork NSW Major Hazard Facility Unit.</li> <li>- Director-General NSW Department of Planning.</li> </ul>	<p>Yes, the master copy of the Emergency Plan is held in the DMS. All personnel at the ANE Facility have access to the DMS. Controlled hard copy prints are held in the locations specified.</p>	Compliant				
		<p>This plan has been submitted to the Director-General NSW Department of Planning for approval and must be resubmitted for approval when there are significant changes to the plan.</p>	<p>The addition of new infrastructure to the site could be considered as a significant change to the plan. No evidence provided to demonstrate updated plan was submitted to DPE</p>	Administrative non-compliance	<p>Check with DPE regarding their need to review. If not required, remove the requirement to submit to Director-General from the document. The Plan is submitted to NSW Fire and Rescue when external review is required</p>			
<b>3 ROLES OF EXTERNAL AGENCIES AND THE COMMUNITY</b>								
3.5 Consultation		<p>The various State and Local Agencies, neighbours and community were consulted during development of this plan, and further consultation will be undertaken whenever there is:</p> <ul style="list-style-type: none"> <li>- significant change to the nature of the hazards and therefore the emergency scenarios in the plan;</li> <li>- significant change in the emergency management systems and structure on the site;</li> <li>- during debrief from actual or simulated emergencies where the agency, neighbour or community was involved.</li> </ul>	<p>The DPE's Mod 2 Assessment Report at Section 6, states the "risks associated with the proposal would not significantly change the overall risks from the facility". Therefore, consultation with neighbours and community was not triggered.</p>	Compliant				
<b>4 HAZARDS</b>								
4.1 Material Hazards		<p>Basic information on key substances may be found in the site Emergency Services Information Package (ESIP) located in the Hazmat Box at the main gate near the electrical panel. Safety Data Sheets(SDS's) can be located at reception with copies of these SDS' for all hazardous materials on site in the chemical registers located near each plant. SDS's are also available via the Orica Chemical Data System, located on the Intranet (Path: Internet Explorer - The Globe – MSDS).</p> <p>A full register of dangerous goods (including description, UN No., DG Classification, &amp; HAZCHEM Code) is contained in 'Appendix 03 - Register of Dangerous Goods and other storages on site' and 'Appendix 21 – Dangerous Goods Maps'</p>	<p>Copies of MSDSs are available at the ANE Facility in the site ESIP. A copy of the ESIP is available on the Intranet. A copy of the ESIP (including MSDSs) is placed in the Hazmat box at the entrance to the ANE Facility. Sighted during sight inspection.</p>	Compliant				
<b>5 LEVELS AND TYPES OF EMERGENCIES</b>								
5.2.7 Flammable Liquid Fires		<p>Small quantities of flammable liquids are stored in the Site Services Workshop, Haber Building, ML1, RL1, and the ANE plant.</p> <p>Flammable liquids are stored in approved flammable liquid cabinets and quantities are kept to less than 250L</p>	<p>Noted. Sighted during site inspection</p>	Compliant				

**Table B6 - Emergency Plan, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17 audit	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
5.2.9	Aluminium Fires	Aluminium Powder is stored in RL1 in a labelled steel cabinet and maybe present in the Mixing Laboratory.	Noted	Note				
5.2.11	Chemical Spill – Acetic Acid	The ANE plant has a 30,000 litre capacity acetic acid tank. This tank sits in a full containment bund which holds the entire contents of the tank.	Noted. Sighted during site inspection	Compliant				
5.2.12	Chemical Spill - Caustic Soda	The ANE plant has a 30,000 litre capacity caustic soda tank. The tank contains a 50% solution of caustic soda. This tank sits in a full containment bund which holds the entire contents of the tank.	Noted. Sighted during site inspection	Compliant				
<b>6 EMERGENCY FUNCTIONS AND ORGANISATION STRUCTURE</b>								
6.1	Emergency Response Organisation Structure – Orica Kurri Kurri	To ensure that there is an effective site emergency response organisation and adequate systems of management the following guiding principles have been applied; That during normal office work hours the Chief Warden, who is part of the site management team will be in charge · The Deputy Chief Warden will assume the position of Chief Warden if the Chief Warden is not on site. · Wardens are appointed for each facility or building. · That the Incident Support Team will be appointed by the Chief Warden as required · After hours the ANE manufacturing plant Warden will be in charge until the Chief Warden arrives on the scene · That routine desktop exercises & drills shall be used to build competency and to confirm that this capability is in-place.	Noted. Copy of desk top exercise and drills were sighted.	Compliant				
		The Kurri Kurri site emergency response organisation for all levels of site emergency is formation of the following: · Chief Warden · Deputy Chief Warden · Warden(s) for each building/ facility	The specified Warden structure is in place. Sighted.	Compliant				
		Listing of the Building or Area Warden are detailed in Appendix-06 Emergency Wardens – Kurri Kurri Technical Centre.	Sighted	Compliant				
<b>7 EMERGENCY PROCEDURES</b>								
7.2	Evacuation procedure	To alert personnel on site that an emergency exists the site has installed an EWIS (Early Warning Intercom System). The EWIS system can provide alternative messages based on the source of the emergency. The EWIS is connected to the Fire Panels and Break Glass Alarms and is programmed to evacuate people away from the area that the Emergency exists, with two types of automatic voice recordings. · · 'Whoop Whoop Whoop, Please evacuate now' 'Whoop Whoop Whoop, Please evacuate via the fire trail now'	The EWIS is installed and functional. It is tested weekly. Experienced testing during audit.	Compliant				
7.3	Emergency Assembly Point	There are two emergency assembly points (use will depend on wind direction) and location of the emergency: - The Engineering car park (Car Park 1) behind the Bluhm administration office. There are signs marked for surname A to L in the front section of the car park and a similar sign marked L to Z in rear section of the car park. - The area near the Test cell behind the QS depot (this is the alternative location).This alternate location however may change, and will be determined by the location of the emergency. Any changes will be communicated by overriding the EWIS alarm and through the use of wardens.	Sighted. The Bluhm and test cell evacuation location signs are in place. An additional assembly point for the ANE plant has been determined (in the ANE car park) and signage has been erected.	compliant				

**Table B6 - Emergency Plan, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17 audit	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
7.4 Site Security and Reporting System		<p>The site occupancy reporting system is used to rapidly account for personnel and to determine if there are unaccounted for missing persons.</p> <p>At the primary emergency assembly point (Car Park 1) an electronic occupancy log that lists the name of anyone who is swiped "in" to the site through the security boom gate or other proximity access reader can be viewed....</p> <p>...On activation of the Site Emergency Alarm, reception personnel or building wardens will generate a backup hardcopy site occupancy report that lists the name of anyone who is swiped "in" to the site through the security boom gate or registered on the induction system at reception...</p> <p>...The electronic occupancy log can be viewed at the emergency assembly point (Carpark 1), reception, the Chief Wardens office or next to the front boom gate.</p> <p>The hardcopy backup site occupancy reports can be printed from the security system at the front desk or the front gate or from the Chief Wardens in the Haber building.</p> <p>The ANE plant also has a security terminal and ANE plant Warden will be able to view and print a site occupancy report in an emergency.</p>	<p>A site occupancy recording and reporting systems is currently in place. A list of personnel present onsite can be obtained by the warden in the event of emergency by printing a copy of 'swiped in personnel' from the security system (can be printed from multiple locations if a building cannot be accessed) and the visitors sign-in book. An occupancy report was printed when requested by the audit team.</p>	Compliant				
7.6 Main Gate Do Not Enter Indication		<p>A flashing red sign 'FIRE ALARM DO NOT ENTER' and four additional red lights have been installed at the front entrance and boom gates, this is to advise NOT TO ENTER the site during an emergency.</p> <p>Two of the red lights are located near the front entrance signs on George Booth Drive, these are there to warn that an emergency is in progress, and you are now advised to continue your journey safely past the site entrance and go to the Kurri Kurri Bowling Club car park. There are two flashing red lights on Echidna Drive prior to the boom gates as well as the red flashing FIRE ALARM DO NOT ENTER sign at the boom gates.</p> <p>MMU's, shot firers vehicles, ANS tankers and ANE tankers and explosives delivery drivers will comply with safe distances and their standard emergency procedures.</p>	<p>Four lights have been installed plus "do not enter" signs.</p>	Compliant				
<b>8 EMERGENCY RESOURCES</b>								
8.1 Emergency Control Centre		<p>The Emergency Control Centre (ECC) is located at the Main administration building reception Area. Dependent on the location of the emergency the Chief Warden will setup an alternate ECC in the event that the primary ECC is compromised. Alternate locations include:</p> <ul style="list-style-type: none"> <li>· Site Services Managers office in the Haber Building.</li> <li>· The ANE plant Control Room building</li> <li>· Alternate off-site locations depending on time of day and nature of the emergency.</li> </ul> <p>The Emergency Control Centre is equipped with the following:</p> <ul style="list-style-type: none"> <li>- Red phone to communicate with Wardens.</li> <li>- Portable phone and 2-way radio.</li> <li>- Fire Board Mimic panel showing location and nature of emergency alarm.</li> <li>- Maps.</li> <li>- Hardcopy of this plan, and all appendices.</li> <li>- Whiteboards, markers, pens, paper etc.</li> <li>- Laptop or computer system - SDS availability.</li> </ul>	<p>Listed emergency equipment as specified is in place. Radios have been tested across entire site. Maps installed.</p>	Compliant				

**Table B6 - Emergency Plan, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17 audit	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
8.2	Emergency Equipment	<p>The site has the following emergency response equipment:</p> <ul style="list-style-type: none"> <li>- Fixed fire water system, including tank, fire pumps, ring main, hydrants for the administration buildings (with 360,000 litre water storage area, of which 160,000 litres is dedicated fire water).</li> <li>- Fixed fire water system, including 2x tanks (120,000 litres), fire pumps, hydrants for the ANE plant</li> <li>- At the ANE plant fire hydrant connection booster point for NSWFR.</li> <li>- Fire hoses and nozzles.</li> <li>- Portable and hand held fire extinguishers.</li> <li>- Fire panels indicating alarm locations at Reception, Haber - Chief Wardens office , ANE plant lunch room and control room and entry boom gate, RL1 , Bluhm, Haber building – Engineering Store.</li> <li>- EWIS – with ability to manually broadcast alternative information, if required.</li> <li>- Red phones – warden intercom phones</li> <li>- Emergency phones with 2-way radios for use by wardens x 4 (Channel 2 is emergency channel)</li> <li>- Loud Hailers to assist Wardens.</li> <li>- First aid room located in the Bickford wing, and first aid kits in the lunch rooms of each wing, , RL1, Haber Wings depot, Site Workshop, , RL1, ANE plant, Test Cells and a grab kit located in the Site Office in the Haber Wings Depot.</li> <li>- Defibrillators ( located in First Aid room in Administration Building, Chief Wardens office and ANE plant lunch room)</li> <li>- Duress button in Reception linked to Security system actioning Police response.</li> <li>- Lone and Isolated worker system linked to Security system actioning Patrol response.</li> <li>- RL1 Fire suppressant gas in the MCC and Compressor Room.</li> <li>- Smoke alarms in the ANE Plant at the Control Room, MCC, and Office Building.</li> <li>- Thunderstorm early detection and alert system</li> <li>- Emergency alarm system with battery backup during power failure.</li> <li>- Spill kits are located at Process Areas.</li> <li>- Safety Shower are locate adjacent ANS unloading area, Acetic Acid unloading area RL1 and the Eye wash are located at all process areas</li> <li>- Mobile Phones</li> <li>- Two way radios</li> </ul>	<p>All specified emergency response equipment is in place at the ANE Facility and located in the ANE Facility areas and/or at other locations within the Technology Centre. Please note the following:</p> <ul style="list-style-type: none"> <li>- The defibrillator is located in the ANE administration building hallway (rather than the lunch room).</li> <li>- Safety showers are located at all unloading / loading points.</li> <li>- Red phones are located in switch room, control room, and amenities. Plus there is an emergency channel on the two-way. And mobile phones. Red phones are at emergency control centre.</li> </ul>	Compliant				
8.3	Environmental Emergency Equipment	<p>The site has the following environmental emergency response equipment:</p> <ul style="list-style-type: none"> <li>- Environmental spill kits located around the site with additional kits kept in the Store.</li> <li>- ANE plant has containment for 180,000L of water in the paved kerbed areas on site.</li> <li>- Water courses on site would need to be sandbagged to contain fire water run-off on the other side of stormwater culverts in front of Haber Wing to contain fire water run-off from a fire in the Administration offices or Mixing Laboratory.</li> <li>- RL1, has an interceptor pit which collects ground water, and could contain fire water run-off for sampling prior to release.</li> <li>- From the Quarry Services and Magazines area there is an open drain which can be closed by sandbagging to contain fire water run-off for sampling prior to release.</li> <li>- The ANE plant is fully paved and kerbed. This paving can be used to contain contaminated fire water run-off on site. This kerbed and paved area can accommodate 180,000L of water.</li> <li>- Contaminated effluent from an emergency would be held until it was tested. The options for disposing of the effluent would be treat and release or removal by an approved waste contractor.</li> <li>- In some areas of site, the effluent from an emergency could go to ground. As far as possible this will be prevented using the environmental spill kits located around the site. If some contamination occurs, this will be assessed as part of the clean-up and remediation carried out if appropriate.</li> </ul>	<p>The environmental emergency response equipment as specified is in place at the ANE Facility.</p>	Compliant				
8.4	Emergency Systems	<p>Back-up electrical generators are provided for the site (excluding the ANE Plant).</p> <p>All Critical equipment is supplied through UPS (uninterrupted Power Supply).</p> <p>The ANE plant has its own electrical generator to enable the plant to maintain production during a loss of power to site.</p>	<p>The ANE Facility backup generator is onsite at the plant, fully fuelled and is visually in good condition. Generator is manually started as required.</p>	Compliant				

**Table B6 - Emergency Plan, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17 audit	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
8.5		The plants are designed with Emergency Shutdown systems that can be remotely operated from control rooms. These systems initiate trips of main plant items in a manner designed to render the plant in a safe condition. There is push-button remote isolation/shutdown of the following: - ANE plant - North end of the Switch Room. - RL1. - Mixing lab. - Quarry Services plant.	The Emergency Shutdown systems as specified are in place. An ANE Facility Emergency stop is also located in the Control room.	Compliant				
8.6		Break Glass Alarms are located in the following areas: - Nobel wing - Sheahan wing - Bickford wing - Bluhm building - Haber building - Security compound - Mixing laboratory - Rock lab - Magazines - RL1 - Quarry services - ANE Plant x 4 in the - Workshop - located near the north single door - Boiler room - located near the west single door - Oxidiser Batching area - located near the east single door - Storeroom - located near the south single door	Alarm activation is available in all the specified locations. In addition, the alarm can be activated in the ANE crib and control rooms.	Compliant				
8.7		Some of the buildings and operational areas of the site are monitored by a fire alarm system, which relays notification automatically to Fire and Rescue NSW via ADT Monitoring. These areas are equipped with an audible (and some cases, visual) alarm system and are listed in the table below. - Fire Hydrant ring main - Nobel wing - Sheahan wing - Bickford wing - Bluhm building - Haber building - Mixing laboratory - RL1 - Dual smoke detection in MCC room for fire suppression system. Note - Fire pump and hose reel system is a stand alone system with no alarming - ANE Plant Smoke alarms which are located in the: Office Building, Control Room and Hot Water Generator Building VESDA system in the Switch room Any drop in pressure in ANE Plane fire hydrant water system	Smoke alarms are located at the specified locations at the ANE Facility.	Compliant				
		At the ANE plant there is also three main fire panels located in the amenities/office building, and in switch room and control room. These fire panels have manual alarm activation points.	Fire panels are located as specified.	Compliant				
8.8		The EWIS is tested on Monday at 1000, by the front desk receptionist. The Site fire panel and backup is tested for operation and reset on Monday at 10:00 am, by the front desk receptionist as part of testing the EWIS. The Site fire panel and backup is also tested for operation monthly during the last week of the month by the Site Manager or his nominee.	EWIS alarm testing is undertaken each Monday at 10:00 am. Panel and backup testing occurs as specified. Testing was heard during the audit.	Compliant				
8.9	8.9.1	Two selected wardens from each wing, building, and facility have been issued with a portable secure channel 2-way radio. Radios are tested each Monday as part of the emergency alarm testing.	No evidence provided to demonstrate they are tested	Non-compliant		D	2	Medium
8.10		The site telephone system can be powered by backup generator and the UPS system.	Yes, the site telephone system can be powered by the UPS and generator in place.	Compliant				

**Table B6 - Emergency Plan, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17 audit	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
8.11	Warden Intercoms	Red Warden intercom phones allow communication between facilities in an emergency if the site phone system is down. Warden intercom phones are located at: Reception – Main fire panel Nobel wing Sheahan wing Bickford wing Bluhm building Haber building – Site Managers Office Security compound Workshop Mixing laboratory RL1 Quarry Services Depot Test Cell ANE Plant x 3 in the: - amenities/office building; - control room; and - switch room.	Warden intercoms are available in the ANE Facility amenities/office building and control room. Red phones are located in switch room, control room, and amenities.	Compliant				
8.12	Plant Public Address Systems	The site has a public address system that can be used as a means to communicate progress reports on the incident response or the need for additional evacuations. Access to the PA system is available from the front desk at reception in the main administration building or the Chief Wardens office in the Haber building. Both have a PA system that can speak to individual areas or the entire site if needed for certain scenarios.	Testing heard during audit.	Compliant				
8.14	Back-up Electricity Generator	The ANE plant has a separate back-up generator which is on a manual start system as the ANE plant has a UPS.	Noted. Sighted during site inspection.	Compliant				
<b>9 ACTIVATION OF THE EMERGENCY PLAN</b>								
9.2	Building Evacuation Procedure	The Building or area emergency evacuation procedure is listed in following appendices, · Appendix 07 Kurri Kurri Site all areas and Administration Building Evacuation Procedures · Appendix 10 Mixing Laboratory Evacuation Procedure · Appendix 11 ANE Plant Evacuation Procedure · Appendix 12 RL1 Evacuation Procedure · Appendix 13 QS Depot and Magazine Evacuation Procedure · Appendix 14 Test Cell Evacuation Procedure · Appendix 15 Emergency evacuation paths RL1, Quarry Depot & Test Cell	The evacuation procedure as presented in Appendix 13 to the EMP is in place at the ANE Facility.	Compliant				
9.5	Thunderstorms	There is also a separate thunderstorm alert which is an audible tone at each the following buildings or facilities: · Mixing Lab · RL1 · Magazines · Quarry services · Test cell · Reception.	Noted.	Not triggered				
9.11	ALL Personnel Onsite - Emergency Assembly Point Accountability Process	On arrival at the emergency assembly point there are three primary signs utilized to split the site up into three smaller groups; 1) 'VISITOR' sign – Assembly location for all visitors to the site 2) 'A-L' Sign – Assembly location for all inducted personnel whose surnames begin with letter between A & L. 3) 'M-Z' Sign – Assembly location for all inducted personnel whose surnames begin with letter between M & Z.	Sighted. Signs are in place.	Compliant				
<b>11 REPORTING AND INVESTIGATIONS</b>								

**Table B6 - Emergency Plan, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17 audit	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
11.1	Reports on Emergencies	All reportable incidents shall be reported to relevant Government and Statutory Authorities within the prescribed time frame. The following authorities may require notification: - SafeWork NSW – for workplace incidents resulting in serious bodily injury or judged to be a 'dangerous occurrence'. - SafeWork NSW MHF Unit as a requirement for a major hazard facility. - Office of Environment Dept of Environment, Climate Change & Water – for workplace incidents resulting in potential pollution offences. - NSW Police Service – for any workplace incident resulting in a fatality, or an incident that may have resulted from a criminal offence. - Department of Health –. Department of Health will become involved in assessing the risks to personnel or neighbours from. Potential chemical exposures due to release of hazardous substance to the environment. - NSW Fire and Rescue – fire and hazmat requirements. - Department of Planning and Infrastructure – part of the project approval requirements.	Reporting to the authorities would be undertaken if a WHS reportable incident occurs at the site. To date there have been no reportable incidents at the ANE Facility (as advised by Orica email 21.01.2014)	Not triggered				
11.2	Investigation and Evidence	Immediately after completion of any emergency situation, the Site Manager shall nominate an appropriate investigation team leader to commence the investigation and manage the reporting requirements for both Orica and the responsible governmental agency.	No reportable incidents.	Not triggered				
<b>12 MANAGEMENT OF THE PLAN</b>								
12.1	Training	The site training matrix specifies the training requirements for ensuring that all personnel on site can undertake their roles in the emergency response plan. This includes:  Site induction – all personnel attend a two hour site induction prior to commencing on the site, which covers details of emergency arrangements, including nature of emergencies, emergency alarm, safe house location, muster point operation etc.  Visitors and day contractors must complete an on line computer based training modules to receive a visitor's induction and Visitor Pass which allows them assorted access to the site.  Wardens have a Skills matrix and undertaken formal training from external providers with certificates of compliance. The three core training courses needing to be completed include; · Senior First Aid · Warden training (External RTO) · Warden Training (Internal site specific course)	Inductions are conducted in accordance with this direction. Training matrix was checked. List of wardens were posted on wall.	Compliant				
12.2	Maintenance of Emergency Resources	The maintenance and testing of emergency equipment is covered by a number of systems: · Emergency notification & communication systems are tested weekly. · Fire systems infrastructure is maintained under contract with a third parties service provider. Maintenance and testing is undertaken to comply with applicable statutory requirement. · First Aid equipment is maintained under contract with a third parties service provider.	Verified on site	Compliant				
12.3	Emergency Exercises	The site will hold at least one emergency exercise per annum, involving sounding of the emergency alarm, activation of the emergency plan and on-site response the simulated scenario. Scenarios will be chosen to cover a range of possible events identified in this plan. External emergency services will be invited to participate and/or critique at least one exercise per annum. A full debrief of each exercise will be undertaken, with actions and opportunities for improvement identified. These actions will be loaded into the SHERMIS action management module.	An emergency drill was completed on the 8 December 2016. The drill was attended by the Rural Fire Service, Fire & Rescue NSW, and SafeWork NSW (WorkCover). Orica advised via email that drill scenarios have been undertaken over the previous three years (2013, 2014 and 2015).	Compliant				
12.4	Audits of the Plan	This emergency response plan will be audited annually, based on the audit checklist and requirements of Model Procedure MP-SG-20 "Emergency Plans". The audit outcomes and any actions identified will be recorded in SHERMIS.	Records demonstrating annual audit of Emergency Plan were sighted.	Compliant				

**Table B6 - Emergency Plan, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17 audit	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
12.5	Updating the Plan	<p>This emergency response plan will be updated at least annually following the internal audit process. The following activities may also trigger an update of the plan:</p> <ul style="list-style-type: none"> <li>- Changes to staffing.</li> <li>- Changes to neighbourhood populations.</li> <li>- Changes to adjacent premises.</li> <li>- Changes to Orica or Statutory requirements.</li> <li>- Outcomes of incident investigations.</li> <li>- Outcomes of the periodic hazard study process.</li> <li>- Learning from emergency exercises.</li> <li>- After a near miss on the plant.</li> <li>- After a Significant Incident in a similar plant.</li> <li>- Change in surroundings, i.e. land use.</li> <li>- After capital improvement or plant project modifications.</li> <li>- After revision of Basis of Safety.</li> </ul>	<p>The Emergency Plan is has been updated several times. During this Independent Environmental Audit, the current Emergency Plan is revision 10.</p>	Compliant				

Table B7 - Safety Management System, Assessment of Compliance								
Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
<b>3 GOVERNANCE</b>								
3.3 Site Management Team		Managers of personnel, including the Site Manager and Shift Team Leaders are responsible for providing SH&E leadership, utilising the organisation's SH&E Management System, providing training to personnel to ensure people and the environment are protected and for the development and implementation of SH&E Management Plans in their areas of responsibility.	These responsibilities are included in the position descriptions together with performance measures. These measures are SH&E accountabilities.	Compliant				
		A SH&E Charter details the commitments Orica makes to employees and the responsibilities of all personnel in relation to SH&E.	All employees and all personnel must sign-on to the SH&E Charter (after checking that the employee understands it).	Compliant				
		Contractors are also required to confirm their commitment to ensuring environmental performance through the Contractor SH&E Charter.	All contractors confirm their commitment by signing-on to the SH&E Charter (after checking that the contractor understands it).	Compliant				
		The roles and expectations of line managers and employees for SH&E management are formally expressed and periodically reviewed and reinforced through formal discussions between line managers and their subordinates during yearly performance reviews.	Done annually as part of inductions.	Compliant				
<b>4 SH&amp;E MANAGEMENT SYSTEM IMPLEMENTATION</b>								
4.1 SH&E System Implementation	4.1.2 SH&E Model Procedure Categories	A process to identify and prioritise the implementation of the Model Procedures is undertaken at the site. The identification of Model Procedures is based on a risk profile of the site activities and hence logically addresses the most serious hazards first.	Core and critical procedures have been identified for ANE Plant Details on the core and critical procedures identified are in the Document Management System.	Compliant				
		Details on the classifications of the model procedures and the relevant site representatives responsible for them are detailed in the Document Management System.	Noted.	Note				
4.2 Site Specific Procedures		Where local site circumstances require more detailed allocation of responsibilities than that provided by the generic Model Procedure, or there are specific local SH&E requirements (i.e. Core & Critical Procedures), a customised local procedure or supplementary work instruction is produced.	The customised local procedures for ANE Plant have now been produced. Sighted.	Compliant				
		Customised local procedures must, as a minimum, meet the Model Procedure Key Requirements, be consistent with the complexity of the activity, the level of risk involved and the skills and training of the people performing the activity.	A local procedure "Plant Operating Manual" was sighted. The manual has been customised to the site. The plant manual references the model procedure that local procedures are derived from.	Compliant				
		Site specific procedures are developed to address areas including Plant Induction, Emergency Management, Plant Operation including Plant Start-up and Shutdown, Maintenance Registers and Procedures, Waste Management, Traffic Management, Plant Security and Pressure Vessel Management.	Yes, all sighted	Compliant				
		These site procedures are developed in conjunction with site personnel and are authorised by the Plant Manager.	Sighted authorisatoin by Plant Manager. Sighted JSERAs	Compliant				
		Additionally, a comprehensive set of Commissioning Procedures have been written by a dedicated Commissioning Manager.	The commissioning manuals are prepared then the plant is tested. The commissioning manuals become the operational manuals. Sighted an example.	Compliant				
		Site specific procedures are maintained on the site's Document Management System (DMS).	Sighted	Compliant				
4.3 Operating Instructions		Operating instructions include requirements for startup, normal operation and normal shutdown, emergency shutdown, critical operating parameters, SH&E requirements and safety systems.	These are part of the site specific step procedures. Sighted.	Compliant				
		The operating instructions are prepared by the Engineering Information Officer, in consultation with the Process Operations and are included in training requirements where applicable.	The operating instructions were prepared as specified. The engineering department approves updates.	Compliant				

Table B7 - Safety Management System, Assessment of Compliance								
Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
		The instructions include responsibilities and reporting requirements.	Sighted. In the operating instructions.	Compliant				
		Operating procedures are prepared in conjunction with plant personnel post Hazard Study 3 and are subject to a review process and verification to ensure they are updated to reflect the operation of the plant as built. Operating procedures are authorised by the Plant Supervisor.	2ICs raise the change. Goes through change management process. Operating staff get to review. Sighted process. Authorised by Plant Supervisor.	Compliant				
		Operating instructions are maintained on the site's Document Management System (DMS) and records of training included in HR Connect (Central SAP based Database used by HR for personnel records).	Yes, operating instructions sighted on DMS. Training is included on another tracking system. A training database - ANE Manufacturing Training Report. Not everything is done through training connect. Different frequency of training.	Compliant				
<b>5 MANAGEMENT OF LEGAL REQUIREMENTS</b>								
		Orica is committed to ensuring that its operations comply with the legal requirements of the countries in which it operates. Model Procedure SG-004: Legal Requirements details the systems used to ensure compliance. Orica's Corporate SH&E Team and SH&E Counsel assist the site in identifying legal requirements and standards that are applicable to the operations.	Orica's statutory liaison officer advised by email (18 Nov 2016) that: A comprehensive process is in place and is kept on a detailed data base to ensure licences conditions covering the operation of the facility are maintained in accordance with current applicable NSW legislations. When licences are renewed (especially EPA and Dangerous Goods) a broad review of licence conditions is conducted to rigorously ensure conditions at the facility are being maintained in accordance with all set licence conditions. As well, the facility is subjected to internal (every year) and Corporate (every year) audits to ensure Orica's Corporate SHE standards are being fully maintained and as necessary enhanced. The Statutory Liaison Team keeps a watchful eye on legislative changes, which may impact of the statutory requirements covering the operation of the facility.	Compliant				
5.1.1 Legal Requirements		At the Kurri Kurri site technical specialists have been nominated to be responsible for maintaining the systems that ensure compliance with legal requirements.	A statutory liaison officer (Paul Harrison) has been appointed to maintain licenses and monitor compliance.	Compliant				
		The Statutory Liaison Team maintains registers of compliance requirements with regulatory requirements and licences. Performance against the requirements is regularly reviewed.	Yes, sighted.	Compliant				
		Access to legal requirements is maintained electronically, either by external websites or the site's Document Management System (DMS), where copies of licences are maintained.	Yes. All sighted.	Compliant				
<b>6 SAFETY OBJECTIVES, PLANS AND TARGETS</b>								
6.1 Safety Objectives		On an annual basis SH&E targets are developed within each business unit and cascaded to each site. ... Annual SH&E targets are incorporated into the Kurri Kurri ANE and SH&E Plan and into individual performance objectives.	At monthly safety meeting annual targets are translated into site specific actions and objectives. Sighted.	Compliant				
6.2 SH&E Plan Development		The Model Procedure SH&E Improvement Plan (MP-SG-002) describes requirements for the development and implementation of SH&E improvement plans to describe the means and timeframes by which the company's SH&E objectives and targets will be achieved for the site....	Sighted.	Compliant				

Table B7 - Safety Management System, Assessment of Compliance								
Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
		A SH&E Plan is prepared each year for the Kurri Kurri ANE site. The plan includes information on key SH&E related activities that are to be undertaken during the year, the responsibility for the completion of the actions and timeframes for completion.	Sighted	Compliant				
		The actions are incorporated into the site Action Management Database to enable tracking of the resolution of these actions.	Sighted	Compliant				
6.3 SH&E Performance Monitoring		SH&E performance is reviewed on a bi-monthly basis by the Kurri Kurri ANE Management Team. Performance metrics reviewed include: - SH&E performance (All Worker Recordable Case Rate, Environmental Noncompliance; - minor injuries, number of incidents reported); - Number of justifiable community complaints; - Health assessments and occupational hygiene monitoring completed; - Internal audits completed; - Timeliness of resolution of incident investigations and actions; - Process safety incident reviews; and - Key parameters associated with the Plant Modification system.	Done monthly. At safety meeting.	Compliant				
<b>7 TECHNICAL SAFETY MANAGEMENT</b>								
7.1 Corporate Expert Panels		The technology-based Expert Panels relevant to the Kurri ANE site are: - Explosives Expert Team. - Ammonium Nitrate Expert Team. The responsibilities of the Expert Panels are: - To detail the "Basis of Safety" on which the processes should be designed and operated. - To define the Critical Model Procedures which must be fully implemented for a particular technology (Technology Critical). - To authorise any major process changes. - To audit compliance with Functional Expertise Panel mandated standards. - To develop the technology specific engineering standards that must be applied. - To review the process safety sustenance capital requirements and sign off that these are adequate to maintain integrity. - Approval of major projects from a process safety perspective.	Sighted Expert panel signed off on propagation hose.	Compliant				
7.2 Responsible Engineers		Responsible Engineers have been established to cover the following areas: - Instrument, electrical and control engineering. - Mechanical engineering. - Critical pump systems. Responsible Engineers are established to: - Identify best practice standards in their discipline to ensure optimum asset integrity. - Work with the technology based Responsible Engineers to keep them abreast of functional technical developments. - Provide the conduit for implementing external best practice.	Responsible Engineers are established through the Alteration Authority process to cover work associated with the commitment. Sighted.	Compliant				
<b>8 PROCESS SAFETY MANAGEMENT</b>								
8.1 Basis of Safety (BoS)		The Basis of Safety (BoS) documents available at Kurri Kurri ANE are: - Manufacture and Storage of ANE. - Ammonium Nitrate Solutions.	BoS documents are available at the ANE Facility. They are on display in the ANE administration building.	Compliant				
		The requirements of these BoS documents are incorporated into both the engineering design basis for the plant equipment and the safety management system. The BoS is incorporated into the nominated controls when preparing the risk assessment (HIRACs) for the plant process.	BoS have been incorporated into risk assessment eg pump safety	Compliant				

Table B7 - Safety Management System, Assessment of Compliance								
Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
8.2 Process Materials		The model procedure MP-SG-007 Material Safety Data Sheets describes the requirements for the development, distribution and maintenance of Material Safety Data Sheets (MSDS). MSDS are required for all products, intermediates, raw materials, consumable chemicals, aids to manufacture, catalysts, laboratory chemicals and hazardous chemical wastes.	MSDSs are updated. Can't bring chemicals on site without an SDS.	Compliant				
		The MSDS are available on the Company Intranet and are accessible by all employees.	Yes, MSDS are available on Orica's intranet and are accessible by all employees.	Compliant				
		Model procedure MP-SG-019 Workplace Hazardous Substances describes the requirements for the assessment and control of risks from the use of hazardous substances.	Audits show how this has been implemented. Risk assessment has been sighted.	Compliant				
		The workplace hazardous substances risk assessments are managed in the SHERMIS Audit Management database.	Sighted	Compliant				
		Model procedure MP-SF-025 Storage and Handling of Dangerous and Non-Dangerous Goods describes the requirement when using chemicals, including risk assessments, storage in accordance with regulations and standards and appropriate handling.	For example, plant layout, separation of materials, labelling and packaging of goods, checking tanker, inventory of dangerous good. Stocktake is available and sighted.	Compliant				
<b>9 HAZARD ANALYSIS AND RISK ASSESSMENT</b>								
9.1 Hazard Identification and Risk Analysis		The systematic identification, assessment and management of safety, health and environmental risk is essential to the successful undertaking of Orica's activities. A risk assessment methodology is applied to all aspects of the operations, including new projects, modification of existing plant, periodic reviews of existing operations and the assessment of risk in undertaking activities such as maintenance tasks. Safety, health and environmental risks associated with the activity are considered in all of these reviews. This approach is documented in the Orica Model Procedure for Risk Management (MP-SG-030).	Hazard Study has been done for ANE plant. Sighted.	Compliant				
9.2 New Plants or Major Modifications	9.2.1 Hazard Identification	Hazard identification for existing plants is based on the Orica Periodic Hazard Study (PHS) methodology. A hazard study facilitator leads a multi brainstorming process to generate a list of hazardous scenarios, together with approximate consequences and likelihood ratings. The results may be supplemented by other activities such as a review of previous incidents and near misses, review of previous hazard studies, literature surveys, detailed HAZOP studies etc.	Not triggered.  Every five years there will be a PHS. The PHS is very detailed and will pick up any major issues. The PHS is anticipated to occur in 2017.	Not Triggered				
	9.2.2 Hazards Studies	Orica has developed a series of six studies to assist in identifying and controlling potential risks associated with a project or plant modification within Orica. They focus mainly on moderate to major potential hazards and are undertaken in relation to the Project and enable Orica to meet its safety, health and environmental targets in any planned or current business activity. Depending upon the size, cost and risks associated with the development, all, or just selected studies, will be undertaken.	Hazard studies have all been completed.	Compliant				
9.3 Periodic Hazard Studies of Existing Operations		Periodic Hazard Studies are undertaken in accordance with the relevant Model Procedure (MP-SG-032 Periodic Hazard Studies) on a five yearly cycle. These studies, which are modified to be more applicable to existing plants, are based on the first three stages of the Hazard Study Process and involve a review of the cumulative effects of facility modifications, changes to legislation and statutory requirements and organizational change.	Not triggered  The PHS is anticipated to occur in 2017.	Not Triggered				
9.4 Task Based Hazard Assessments		A JSERA is completed prior to carrying out all maintenance and project task for which no procedure exists. The aim is to carry out an informal risk assessment of the task, identify any hazards and take steps to eliminate or control them.	Sighted. All electronic	Compliant				

Table B7 - Safety Management System, Assessment of Compliance								
Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
		A JCC is carried out to confirm that a task is being undertaken according to the current procedure. If not, the procedure and task are examined to determine the appropriate changes to the task/procedure to re-establish conformance.	Yes, JCCs are carried out as specified at the ANE Facility. A JCC example was sighted.	Compliant				
		A Take 5 is a personal risk assessment and can be carried out prior to starting a known task or during the task if a new hazard is identified. It is aimed at reviewing the risks of any given task to the person undertaking the task and their surroundings.	Orica's Take 5 is in use at the ANE Facility. One per person per shift.	Compliant				
9.5 Risk Assessment		Following the identification of SH&E hazards each of the hazard study and risk analysis tools requires the assessment of the likelihood and consequence of each event and assigns a risk ranking. This is undertaken in accordance with Orica's Model Procedure "SH&E Risk Management" (MP-SG-30), where Orica's qualitative risk matrix is detailed. Depending up on the type of risk assessment being undertaken, quantitative risk assessments may also be undertaken in accordance with the Model Procedure.	This is what the JSERA system does. It gives a rating and likelihood and consequence	Compliant				
9.6 Information Recording, Storage, and Reporting		All hazards identified, together with the causes, consequences and frequencies, and hence risks assessed from the various hazard study processes carried out at the Kurri Kurri ANE site are recorded in the OMS SHE Risk Register, a Lotus Notes database.	All hazards are recorded as part of the Orica-wide corporate database safety, health and environment data management system. Sighted risk register.	Compliant				
		It incorporates an action management system to track completion of actions arising from the Hazard Studies, with timeframes for appropriate close out of actions. The status of these actions is reviewed monthly by the Orica Kurri Kurri ANE Management Team.	Incidents that have happened, actions that are produced and AAs are reviewed in a UIR (unusual incident report) meeting. Status is reviewed weekly. Recorded in "enabler". Sighted minutes from UIR meeting that showed actions.	Compliant				
<b>10 EQUIPMENT INTEGRITY</b>								
10 Equipment Integrity		Orica Kurri Kurri ANE has an effective and comprehensive reliability and integrity management system in place for all critical plant and equipment. The system includes the following: - Risk based inspections of plant and equipment. - Root cause analysis of failure mechanisms to minimise the potential for a recurrence of reliability issues. - Planning and scheduling of maintenance in systems such as the SAP Planned Maintenance System (Red Book). - Monitoring and reporting on key performance indicators. - Engineering standards. - Engineering specifications documenting the requirements for new plant and equipment, including quality assurance on materials and manufacturing, inspection and test plans, third party inspections, document provision and signoff by key parties as required. Development of life cycle plans for maintenance of the new plant and equipment. - Condition monitoring of key plant and equipment.	Active maintenance checks of items in maintenance system were sighted. Maintenance checks are reviewed and ticked off every week in the SAP system. Need to be closed out on the system by the due dates. Every month the system is checked by a third party (technical centre) to see that all items have been closed out. Regional manufacturing maintenance review meeting. Held every fortnight. Critical systems have schedule for how they are maintained and built. Checks of red (maintenance) books on a monthly basis. Started up with start of plant. Forms maintenance system. And monthly followed up. Each piece of equipment has its own log book. When you do a check you log it in the book and thats how they check critical equipment.	Compliant				
		Orica Model Procedures relating to equipment integrity include: PI - 01 Plant Structures and Pipe Bridges	Prior to this audit.	Not Triggered				

Table B7 - Safety Management System, Assessment of Compliance								
Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
		PI - 02 Critical Machine Systems	Key requirements of MP-PI-02 have been implemented. For example: "2.1 all machine systems must be classified as "critical" or "non-critical" according to the potential consequences from failure of the machine or its protective systems". The ANE Facility has a list of critical machines. These are the machines that pump chemical.	Compliant				
		PI – 03 Gas Detectors	Key requirements of MP-PI-03 have been implemented. This Model Procedure is only used for confined spaces. For example: "2.3 each gas detector must be uniquely identified and registered". Hand held gas detectors are identified and registered. One gas detector is on site. Used for confined entry. Contractors bring their own gas detectors. Two people on site are confined space entry trained.	Compliant				
		PI – 04 Dangerous Tools, including Knives	Key requirements of MP-PI-04 are being implemented. For example: "2.3 training must be provided and documented for persons using dangerous tools". There is a register of dangerous tools, and risk assessments are in place. Policy is communicated through induction and posters in office. Sighted.	Compliant				
		PI – 05 Machine Guarding	Key requirements of MP-PI-05 are being implemented. For example: "2.6 machine guards must be registered and records retained of their inspections". A register of machine guards has been compiled and a task list has been put into the SAP plan maintenance system. Machine guard register sighted.	Compliant				
		PI – 06 Safety Instrumented Systems	Key requirements of MP-PI-06 are being implemented. For example: "2.4 before new plant is put into service, the performance of each Safety Instrumented Function (SIF), including the associated test methods and procedures, must be validated". A register has been prepared. Sighted. All instruments have been commissioned to ensure they operate as required. On commissioning all instruments were tested. Then annual testing.	Compliant				

Table B7 - Safety Management System, Assessment of Compliance								
Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
		PI – 07 Use of Hoses	Key requirements of MP-PI-07 have been implemented. For example: "2.6 A list of approved types of hoses showing the duty for which they are authorised must be maintained". There are registers of hoses for specific uses. The hose register for unloading of ANE/ANS was sighted. Hoses are pressure tested. Register has location, size, couplings etc.	Compliant				
		PI - 08 Pressure Systems	Key requirements of MP-PI-08 have been implemented. For example: "2.9 Before new or modified Critical Pressure Systems are put into operation, the following documentation must be obtained: - Risk assessment - Design verification certificate - Fabrication inspection and testing certificate". There is a register of pressure vessels. Pressure vessels are tested. Pressure vessel register was sighted.	Compliant				
		PI - 09 Lifting Equipment	Key requirements of MP-PI-09 have been implemented. For example: "2.8 All company lifting equipment must be: - Uniquely identified - Marked with its safe working load - Listed in a register". Register of lifting equipment was sighted. Fed into SAP as it has next inspection dates in register. Testing is done by an external contractor	Compliant				
		PI – 10 Electrical Equipment	Key requirements of MP-PI-10 have been implemented. For example: "2.4 Current electrical system records must be kept in a secure manner, readily accessible to electrical staff and must include, as a minimum: - Single line diagrams - Main power earthing diagrams - The location of all underground cables - Hazardous area classification and verification dossier". RCD trip testing, test and tagging, and red book checks sighted. Also generated into SAP. There is a drawing data base of electrical drawing.	Compliant				
		PI – 11 Underground & Secondary Containment Systems, including Bunding	Key requirements of MP-PI-11 have been implemented. For example: "2.4 Storage of solid environmentally hazardous substances must be on an impervious surface, as a minimum". At the ANE Facility, all storage areas have been built to requirements with impervious surfaces. Sighted when walking over site.	Compliant				

Table B7 - Safety Management System, Assessment of Compliance								
Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
		PI - 12 SH&E Critical Equipment	Key requirements of MP-PI-12 are being implemented. For example: "2.7 An inspection and test program must be developed for each item of SH&E Critical Equipment. SH&E Critical Equipment must be inspected/tested at defined intervals in accordance with this program". Equipment is registered. Red book is generated every week to test equipment. Sighted.	Compliant				
		Site specific systems have been developed to ensure that the integrity of these systems is maintained and managed appropriately.	SAP plan maintenance system, registers, and numerous audits verify that these systems are maintained and managed. Sighted.	Compliant				
<b>11 SAFE WORKING PRACTICES</b>								
11.1 Permit to Work		The Model Procedures in the Permit to Work suite address the management of the following key activities: PW-01 Permit to Work	Key requirements of MP-PW-01 have been implemented. For example: "2.15 On completion of the work or on leaving the work incomplete, the Recipient must discuss the job status with the Authorised Person, must record the job status and the date and time on the permit to work certificate and must return the "job copy" of the certificate". This is communicated through induction. There is a register of trained people authorised for Permit to Work. Sighted. There are different categories of permit to work eg. Hot work, confined space, and general permit to work.	Compliant				
		PW-02 Isolation of Plant and Equipment from Hazardous Materials and Stored Mechanical Energy	Key requirements of MP-PW-02 have been implemented. For example: "2.9 Where applicable, multiple Permits which rely on an isolation must be identified on tags / and or cross referenced". All personnel working on the plant must be trained in Permit to Work and be competent in isolation procedures. Sighted isolation tags during site walkover. Induction communicated this as well.	Compliant				
		PW-03 Entry into Confined Spaces	Register of confined spaces has been updated with the Cooling Tower. Sighted	Compliant				
		PW-04 Excavation/Break-in Authority	Active maintenance checks of items in maintenance system were sighted.	Compliant				

Table B7 - Safety Management System, Assessment of Compliance								
Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
		PW-05 Electrical Isolation and Permits	Key requirements of MP-PW-05 have been implemented. For example: "2.7 tags must be applied at each point of electrical isolation to indicate: The purpose of the isolation; The date of isolation; The person who performed the isolation". Sighted isolation tags during site walkover. Induction communicated this as well. There is a register of trained people authorised for Permit to Work. Sighted. There are different categories of permit to work eg. Hot work, confined space, and general permit to work.	Compliant				
		PW-06 Work at Heights/Work on Roofs and the use of Scaffolding, Ladders and Portable Steps	Key requirements of MP-PW-06 have been implemented. For example: "2.6 notices must be mounted at likely access points to roofs and structures to indicate requirements for a work at heights authority to access the area and the presence of any fragile panels". Permit to work is needed to work at heights. Plant had notices re working at height.	Compliant				
		PW-07 Control of Hot Work	Key requirements of MP-PW-07 have been implemented. For example: "2.7 where the work may generate hot sparks, or hot surfaces, the stand-by person(s) must be equipped with suitable fire extinguishing equipment. The authorised person must also carry out an inspection of the work area at least one (1) hour after the hot work is completed to ensure that no smouldering materials remain before signing off on the Hot Work Certificate". There is a register of trained people authorised for Permit to Work. Sighted. There are different categories of permit to work eg. Hot work, confined space, and general permit to work.	Compliant				
		PW-08 Decontamination of Process Equipment	Active maintenance checks of items in maintenance system were sighted.	Compliant				
		Permits to Work and other associated permits are only able to be issued by Authorised Persons, who are experienced personnel who are familiar both with the plant operations and the SH&E Management System requirements for permitting. The permit issuer is responsible for ensuring compliance with all requirements of the Permit to Work and associated permits and JSERA. They are also responsible for communicating the Permit to Work requirements to all personnel involved in the work.	There is a register of authorised people who can issue Permits to Work. Sighted. The register is updated as people are assessed. There are different categories of permit to work eg. Hot work, confined space, and general permit to work.	Compliant				

Table B7 - Safety Management System, Assessment of Compliance								
Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
11.2 Additional Work Practices		There is a handover at the beginning of each shift to enable communication between the outgoing and incoming team on the status of the plants, any operational issues and maintenance or project activities that are underway.	Sighted. There is a handover at the beginning and end of each shift. There is a handover book which details particular issues that may have occurred during the previous shift. Communication also occurs via: - Incident reports; - Bulletins; - Weekly meetings.	Compliant				
<b>12 MANAGEMENT OF CHANGE</b>								
12.1 Management of Change		The requirements for the Management of Change are detailed in the Model Procedure RM-03,	Key requirements of MP-RM-03 have been implemented. For example: "2.4 all change proposals must be approved in writing by the responsible section manager prior to implementation." Managed through AA (Alteration Authority). Sighted.	Compliant				
		Prior to implementation of any modification the changes are subjected to a SH&E Acceptance Check prior to final introduction to confirm that: - The changes will be implemented in accordance with the change proposal; - Specified risk assessments and design verification activities have been completed and all required actions have been implemented; - Temporary change or repair proposals include the time period for which they are valid as part of their approval, and - The changes will not introduce any unforeseen risks.	This is only done where there is a change of physical process or significant change that would affect risk. Managed through AA (Alteration Authority). Sighted.	Compliant				
		For temporary changes a temporary modification is completed. These temporary modifications have a validity period installed as appropriate in accordance with the risk to the process and the hazard. Temporary Modifications are periodically reviewed to ensure the validity period is not exceeded.	Managed through AA (Alteration Authority). Sighted.	Compliant				
		All permanent and temporary plant modifications are managed and recorded in the OMS Modification Database (AA), with the status of modifications reviewed on a weekly basis as part of Kurri Site Incident and Modification review	Managed through AA (Alteration Authority). Sighted.	Compliant				
12.2 Communication of Change		Operations personnel are advised of relevant modifications by shift reviewing processes, regular shift handover procedures including meeting with site operational management personnel, or changes to the operational training material, which is reviewed and carried out by relevant site training personnel.	Managed through the AA process. The initiator who needs to make a change names the implementers. When it is approved, the implementers get an email saying that it has been approved. It is then discussed in tool box talk, or procedure changed as applicable.	Compliant				
<b>13 ACCIDENT AND NEAR MISS REPORTING</b>								
13.1 Incident Reporting and Investigation		The reporting and investigation of incidents is managed in accordance with the requirements of a Model Procedure, BG-06: Incident Management & Corrective Action.	Key requirements of MP-BG-06 have been implemented. For example: "2.4 Initial incident details including relevant evidence and any quick fixes must be recorded". Managed through Enablon system. When an incident happens, details are entered in Enablon, severity, summary, impact etc. When it is submitted it goes to a validator in SHE team. Validator accepts it. Goes to the responsible person. The responsible person has to accept it and investigate. If overdue will show up and goes to VP etc.	Compliant				

Table B7 - Safety Management System, Assessment of Compliance								
Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
		All incidents are recorded into the electronic Safety, Health and Environment Management Information System (SHERMIS) database, classified according to the nature of the incident, assessed to determine what external reporting is required, assigned an Investigation Manager and investigated using a 5 step process or similar investigative technique as follows: 1) Define the problem i.e. incident, subject and consequence; 2) Apply quick fix to render situation safe until root causes identified; 3) Perform a root cause analysis; 4) Determine and apply appropriate corrective actions; and 5) Follow up and evaluate.	Managed through Enablon system. Viewed weekly by the management team. Trends can be seen and discussed. All personnel can view the information it holds.	Compliant				
		Significant incidents are listed in monthly SH&E Performance Metrics which are distributed to all site personnel for communication.	Listing of significant incidents in SH&E Performance Metrics occurs on a weekly basis. Sighted	Compliant				
		A number of personnel onsite have undertaken Root Cause Analysis training which is used in the investigation of significant incidents.	The training has been undertaken by selected personnel at the ANE Facility including David Horne, Plant Manager. ICAM (Incident, Cause, Analysis, Method) training for investigation of significant incidents has been done by several people on site.	Compliant				
		Recordable and Lost Work Case injury investigations are either chaired or followed up by an external senior manager to verify the incident has been appropriately investigated and corrective actions are in keeping with the nature of the injury.	Managed through Enablon system. Because of severity would go through statutory liaison officer to contact corporate bodies.	Compliant				
		Incidents are communicated to site electronically as required. Significant issues are also communicated via routine meetings, monthly reviews by the Occupational Safety, Health and Environment Committee. Site personnel also review relevant incidents at their monthly Safety Meetings. All personnel are able to review incidents from both the Kurri Kurri site and any other Orica operation.	Emails are sent out. All personnel have access to enablon. SHE Monthly report is posted in the crib room and discussed in meetings. There are also safety alerts. Local safety alerts and global safety alerts were posted in the crib room. Sighted	Compliant				
		The status of incidents in the SHERMIS system is tracked on a monthly basis by the Kurri Kurri Compliance Manager, with a KPI of no incidents open post the end of the following month of the incident. The number of incidents recorded monthly is also captured and trended.	Managed by Enablon system. There are to be no open incidents in the system at the end of each month.	Compliant				
		Actions identified in incident investigations are raised in the SH&E Action Database. This database includes automatic notification for personnel that they have been assigned an action, as well as automatic reminders when actions become due. The status of actions is reviewed on a monthly basis, with a target of no overdue actions at the end of each month.	Action database is in Enablon. Sighted.	Compliant				
		Significant incidents are reviewed by the Expert Panels to determine whether any changes to the Basis of Safety are required.	No significant incidents. Nothing has happened on site that required this.	Not Triggered				
13.2 Near Miss fatality (NMF)		The Orica Near Miss Fatality (NMF) System is a reporting framework that supplements the All Worker Case Rate as a measure of SH&E performance by focusing on incidents where due to a lack of, or failure of controls, employees have been exposed to unacceptable risk.	Near Miss Fatality is now termed 'High Potential Incident'. There have been no High Potential Incidents.	Compliant				
<b>14 TRAINING AND COMPETENCY</b>								

Table B7 - Safety Management System, Assessment of Compliance								
Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
		The SH&E Training Model Procedure (SG-005) describes the management of training within Orica and includes: - Training needs assessed at the time of employment; - Provision of safety induction training prior to commencing work on site; - Training provided by people with appropriate levels of knowledge; and - Requirements for maintenance of training records. Appendix 1 provides the linkage between the Work Processes required at the Kurri Kurri ANE Plant and the Training that will be provided to allow safe completion of those Work Processes.	Training connect was sighted. Competency etc all sighted	Compliant				
14.1	Recruitment	Orica seeks to ensure that personnel within our operations are committed to ensuring a high standard of SH&E performance and technical competency through the use of a formal recruitment process. This process includes the use of targeted selection, which includes assessment of SH&E commitment and reference checking to confirm technical competency.	Sighted charter. Part of recruitment process.	Noted				
14.2	General Site Induction	All employees and contractors undertaking work at the site complete the General Site Induction. The induction includes an introduction to the operations at the site and the associated hazards. The SH&E Management Systems which are used at the site to control these hazards are introduced to personnel. The induction includes an assessment of the competency of the inductee, with personnel required to successfully complete a questionnaire.	Training for licences sighted.	Compliant				
		Visitors undertake a brief induction prior to entering the site and are escorted at all times whilst onsite.	Sighted. The audit team undertook site induction. Was put into register.	Compliant				
14.3	Training Requirements	Central to Orica's SH&E strategy is that appropriate training is in place to equip all personnel to carry out their tasks so as to take care of themselves, others and the environment. The training needs of all personnel onsite are documented in training matrices or career progression skills manuals. These include both SH&E and technical training requirements, and in Mining Services is called the Licence to Operate.	Sighted HR Connect and Training Matrices. Training Matrices show competencies for each person, frequency for assessment etc.	Compliant				
	14.3.1 Specialist SH&E Training	The key training for site based personnel includes: - Senior Manager and Business Management Leadership. - Operations Managers and Senior Manufacturing / Production Leadership. All personnel in positions of leadership complete the appropriate SH&E Leadership course, with new Managers required to attend SH&E leadership training within the first year of appointment.	Sighted in matrices and database	Compliant				
		Additionally, all principal Site Managers undergo a Site Manager's Competency Assessment, and preparation of a development plan at least every four years. The Engineering Shared Services team is responsible for scheduling the competency assessment.	Refers to a interview process for Letter for Assurance. This no longer happens.	Administrative non compliance	We suggest that the document be updated to reflect new process.			
		In addition, specialist training in areas such as general and technical hazard study, root cause analysis, and safety integrated systems are periodically undertaken.	Specialist training has occurred, ICAM, Enablon training. An external person does hazard study. Orica staff participate. When training is needed and provided people do it	Compliant				
	14.3.2 Process Operator Training	Process operators undertake training in accordance with career progression manuals and training matrices. Training modules include the assessment of competency both through classroom and field assessment.	Assessment of competency is undertaken in the classroom (through written or oral tests) and in field assessment (through mentoring). The training and assessment have practical components. Mentor training and practical and theoretic assessment is done.	Compliant				

Table B7 - Safety Management System, Assessment of Compliance								
Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
		Updates to plant operating procedures are electronically sent to all relevant personnel using the Document Management System. Procedures are updated following plant modifications or as a result of actions from incident investigations.	System is in place to review step processes. All relevant personnel receive updated to operating procedures.	Compliant				
14.4	Training Records	Training records are maintained in HR Connect, with hard copy documentation maintained by the Training Officer.	Training records. Sighted.	Compliant				
14.5	Contractor /Sub Contractor Selection and Control	All work performed by Contractors and Sub-Contractors on the Kurri Kurri ANE site is covered by the Model Procedure MP-SG-011F - On Site Contractor SH&E Management which defines requirements to ensure works are carried out in a manner which does not present an unacceptable safety, health or environmental risk.	Key requirements of MP-SG-011F have been implemented. For example: "2.6 Contract employees shall receive appropriate induction training prior to commencement of work". All contract employees receive induction training prior to commencement of work. Records of induction and training are maintained at the ANE Facility.	Compliant				
		Prior to carrying out any work onsite evidence of past SH&E performance and commitment to management of SH&E performance are considered in the selection criteria for Contractors. Their previous performance in this regard is assessed commensurate with the risk associated with the work to be performed, the hazards present in the work area and the degree of supervision to be provided.	Have excluded contractors from site for poor SHE performance. When contractors are reviewed, they have their SHE reviewed as well. Their safety management system gets audited by orica supply chain	Compliant				
		SH&E requirements are incorporated into the Site Contractor Regulations and in the general conditions for onsite work.	Yes, SH&E requirements are incorporated as specified. All site contractors must sign off on the SH&E Charter and any controls will form part of their Permit to Work or written procedures.	Compliant				
		All contractors onsite undertake the standard site induction and any relevant plant or specialist inductions.	Records of all contractor inductions are maintained on the ANE Facility server.	Compliant				
		Contractors who are onsite in a full time support role are included in Orica SH&E initiatives.	If contractors are in an administrative role, and are inducted as employees, they will undertake full SH&E requirements (and be included in SH&E initiatives) during the period of their contract.	Not Triggered				
		Selection and control of offsite contractors, such as the organisations who are contracted to transport hazardous materials from the site, are covered by MP-SG-017 Toll Manufacture and Other Contracted Offsite Operations.	When contractors are reviewed, they have their SHE reviewed as well. Their safety management system gets audited by orica supply chain	Compliant				
		An Orica Manager is nominated to control and monitor the contractor's operations and ensure the SH&E, security and quality aspects of the work to be performed are considered.	Each contractor has a responsible person within Orica to manage them. Preferred contractors are in an approved system on vendor list.	Compliant				
		The contractors are assessed prior to appointment to ensure that they understand the hazards relating to the activities and that appropriate measures are in place to manage these hazards, that they hold the appropriate licences and approvals and that they are competent to undertake the activities.	Induction system sighted.	Compliant				
		An assessment of past SH&E performance and commitment is undertaken.	This occurs in supply chain. KPIs are reviewed. Regular meeting are held to ensure this happens. Every day there are phone hook ups	Compliant				
		in addition, periodic reviews of the contractors are undertaken to ensure that the SH&E management systems are operating effectively.	This occurs in supply chain. KPIs are reviewed. Regular meeting are held to ensure this happens. Every day there are phone hook ups	Compliant				
15 EMERGENCY PLANNING AND RESPONSE								

Table B7 - Safety Management System, Assessment of Compliance								
Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendations	Consequences	Likelihood	Risk
		A comprehensive Emergency Response Plan (ERP) is in operation at the site.	The Emergency Response Plan has been prepared. Implementation/compliance at the site is checked separately at Table B6.	Note				
<b>16 SECURITY</b>								
		The Kurri Kurri ANE site has a Security Plan which details the implementation of the security policy. The Security Plan includes: - Personnel and vehicle access arrangements, including supervised access points and electronic access systems. - Security site physical assets. - Security arrangements associated with the manufacture and storage of security sensitive ammonium nitrate. - Security monitoring and assurance.	A Security Plan has been sighted (11 Feb 2016). Has an annual review	Compliant				
		Security of electronic information and documents is also managed. Both the site Local Area Network and the plant Distributed Control System including features to ensure only authorised personnel are able to access the system and that the systems are backed up on a regular basis. Key documents are retained in secure locations.	Personal responsibilities are conveyed through the IT code of conduct. Larger system is looked after by the technical centre	Compliant				
		Breaches of security arrangements are reported through the SHERMIS system.	Managed by Enablon system. There have been no breaches of security.	Compliant				
<b>17 PERFORMANCE MONITORING AND REPORTING</b>								
		Verification and compliance of the various SMS components is conducted through an internal and external audit process. An audit schedule is created annually to document the internal audits of identified core and critical Model Procedures and for required corporate audits	Examples were sighted. In April 2016 there was: Check point audit; Responsible Engineer audit; ISO900; Reliable ANE manufacturer audit; Global BoS Safety audit.	Compliant				
		Data is recorded monthly on numbers of audits completed and compliance to the audit schedule, with the audits carried out by trained auditors in accordance with procedures outlined in the relevant Model Procedures.	Examples were sighted. In April 2016 there was: Check point audit; Responsible Engineer audit; ISO900; Reliable ANE manufacturer audit; Global BoS Safety audit.	Compliant				
17.2 Letter of Assurance		The Letter of Assurance process is used to report SH&E Assurance annually to the Chief Executive Officer (CEO) of Orica Ltd. Letters of Assurance are prepared by each Site Manager, using information gained during audits conducted during the period, the results of investigations into incidents and reviews with the Site Management Team.	This process no longer happens. Letter of assurance is redundant due to new processes.	Administrative non-compliance	We suggest report is updated to reflect updated process			
17.3 Internal SH&E Audits		The site audits compliance with model procedures on an annual basis against the key requirements of the procedures. The SHE Team develops an audit schedule within the SH&E Audit Database which details the auditor and audit due date. Progress against the schedule is routinely tracked at the Management Team meetings with appropriate follow up on any overdue audits.	Examples were sighted. In April 2016 there was: Check point audit; Responsible Engineer audit; ISO900; Reliable ANE manufacturer audit; Global BoS Safety audit.	Compliant				
		Actions identified from audits are included in the SH&E Action database.	Actions from audits are put into Enablon system and sent to nominated persons responsible. As an incentive to responding to the actions, response times are part of key performance indicators for all personnel, and effect bonuses.	Compliant				

**Table B8 - Road Transport Protocol, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
<b>1.0 Introduction</b>								
1.3 Technical Note – ANE and ANS Transport Hazard Analysis Input to Environmental Assessment	1.3.1 Product Contamination Controls:	quality control processes at Kooragang Island and the Technology Centre to ensure product is suitable for transport;	Operations at Kooragang are not part of this audit.  ANE is made on site. ANS is delivered to site. Deliveries go to different parts of the site. Physical contamination not possible as there are site controls	Compliant				
		dedicated ANS and ANE tankers to ensure non compatible materials are not introduced during transport;	Engineering controls prevent cross contamination The only possible cross contamination is in the unloading of caustic and aectic acid. The use of locks and permissives from onsite operator to visually check mitigates risk.  ANE is made on site. ANS is delivered to site. Deliveries go to different parts of the site. Physical contamination not possible as there are site controls	Note				
		different configurations and sizing of filling nozzles and loading facilities to prevent incorrect loading; and	Filling nozzels can't load incorrect materials.	Compliant				
		separate, dedicated tanks for small loads of gasser and companion solution transported with ANE.	Noted.	Note				
	1.3.2 Truck controls including:	licensing of all vehicles by the relevant regulatory authority; and	The contractors are assessed prior to appointment to ensure that they understand the hazards relating to the activities and that appropriate measures are in place to manage these hazards, that they hold the appropriate licences and approvals and that they are competent to undertake the activities.  All contractors undergo induction, 'passport' process, and site based familiarisation for operating site specific equipment. Sighted during interview.	Compliant	It is recommended that the document be revised to put the responsibility back onto the contractor as Orica can't control this.			
		maintenance and pre-start checks undertaken in accordance with manufacturer requirements and the National Heavy Vehicle Accreditation Scheme requirements.		Compliant				
	1.3.1 Driver Training, Education, and Licensing:	All drivers will have relevant licensing required to carry Dangerous Goods.	DG licence is recorded when the contractor attends site induction. Sighted register of licences.	Compliant				
		Orica also requires that drivers complete specific training including information on Orica's Safety Management Systems, information on the products being transported and the controls in place to ensure safe transport of the product.	Covered in site inductions.	Compliant				
	1.3.4 Route Risk Analysis	is undertaken by the transport contractor in accordance with AS/NZS 4360:2004 Risk Management Standard and the Australian Code for the Transport of Dangerous Goods by Road and Rail.	Spot checks are done on trucks.	Compliant				
	1.3.5 Emergency Plans:	all drivers undergo emergency response training for incidents such as vehicle accidents and fires.	Holding a DG licence means that the driver has received Emergency response training.	Compliant				
<b>2.0 Traffic Management Plan</b>								
<b>2.2 Haulage Routes</b>								
		Delivery of ANS and ANE will occur as required during the operating times and as such these vehicle movements will be staggered to ensure safe and efficient movement along the proposed transport route and through the Orica Technical Facility site to the ANE Facility. These vehicles delivering the ANS and ANE materials and product to and from the Orica site will follow the approved route along George Booth Drive to John Renshaw Drive.	There have been no known instances of trucks not operating according to haulage routes. No RMS or council complaints.	Compliant				
	General	Other companies delivering raw materials to site are likely to be ChemTrans, Unanderra Tankers and ACE Water Cartage. These deliveries are associated with other raw materials such as water and will be carried out at a far lower frequency during working hours Monday to Friday.	Noted.	Note				
2.3 Operational Traffic Management Measures		MITIGATION MEASURE: The Safety, Health, Environment and Community (SHEC) induction provided to the ANE staff will include operational traffic components including those outlined below. RESPONSIBILITY: Site Safety/Environment Representative TIMING: As required during operation	Oral information given in the induction. Plus they are given the Road Transport Protocol	Compliant				
		MITIGATION MEASURE: The Safety, Health, Environment and Community (SHEC) induction provided to ANE and ANS Drivers will include operational traffic components including those outlined in this ORTP. RESPONSIBILITY: Site Safety/Environment Representative TIMING: As required during operation	All drivers undertake the Orica site induction. The induction includes traffic components of the Road Transport Protocol. Plus they are given the Road Transport Protocol	Compliant				

**Table B8 - Road Transport Protocol, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
		MITIGATION MEASURE: Reinforcement of the community impacts associated with traffic movements during site meetings and inductions such as the restrictions on the use of exhaust brakes along George Booth Drive between John Renshaw Drive and the site. RESPONSIBILITY: Site Safety/Environment Representative, Manufacturing Superintendent TIMING: As required during operation	Oral information given in the induction. Plus they are given the Road Transport Protocol	Compliant				
		MITIGATION MEASURE: The control of heavy vehicle movements associated with ANE and ANS deliveries to and from the site will be staggered to minimise noise and traffic impacts on nearby residents. This is achieved via implementation of measures such as staggered shift start times and delivery schedules for all deliveries to and from the site. RESPONSIBILITY: Manufacturing Superintendent and Haulage Contractor TIMING: During Operation	Schedule is provided every day. Schedule is given to the contractor. Their supply chain supervisor drafts up the schedule. And notify the drivers.	Compliant				
		MITIGATION MEASURE: Monitoring of truck movements will be undertaken to ensure drivers adhere to the designated haulage route as required by the Driver Code of Conduct and transport route risk assessment. Monitoring will include the use of a GPS system. RESPONSIBILITY: Manufacturing Superintendent TIMING: During Operation	Monitoring is done every month. Put into the weekly RAR (Results action review) meeting. The trucks have a GPS system.	Compliant				
		MITIGATION MEASURE: Any oversize loads will be transported according to the requirements of the Roads & Maritime Services (RMS) and police, and have the appropriate approvals and escorts as required. RESPONSIBILITY: Manufacturing Superintendent and Haulage Contractor TIMING: As required during operation	No oversize loads have been required.	Not Triggered				
		MITIGATION MEASURE: Incident investigation in response to any concerns raised by the community, regarding traffic associated with the operation of the ANE production facility in accordance with Section 2.4 of this document and appropriate action taken if required. RESPONSIBILITY: Manufacturing Superintendent and Haulage Contractor TIMING: During Operation	No incidents or complaints	Not Triggered				
		MITIGATION MEASURE: All Heavy vehicle drivers associated with deliveries to and from the site will be instructed to restrict the use of exhaust brakes in both directions on George Booth Drive between John Renshaw Drive and Echidna Drive, as required by the Driver Code of Conduct. RESPONSIBILITY: Manufacturing Superintendent and Haulage Contractor TIMING: During operation	Oral information given in the induction. Plus they are given the Road Transport Protocol	Compliant				
		MITIGATION MEASURE: Monitoring of haulage contractors will be undertaken to ensure drivers are complying with the requirements of the Driver Code of Conduct. RESPONSIBILITY: Manufacturing Superintendent and Haulage Contractor TIMING: During operation	Monitored by Toll. Is in Orica's contract with the transport company.	Compliant				
		MITIGATION MEASURE: Carry out a Transport Route Risk Assessment for the alternate route identified for transport of the ANE product. RESPONSIBILITY: Manufacturing Superintendent and Haulage Contractor TIMING: During operation	Conducted by Toll. Sighted the transport company risk assessment.	Compliant				
2.4	Contingency Plan	In the unlikely event that there is significant disruption to the normal haulage route revert to "alternative route 1" first. The "alternative route 2" through the Kurri Kurri Township is an approved B Double route and would only be used should significant disruption occur. see Figure 2.1.	Not triggered.	Not Triggered				

**Table B8 - Road Transport Protocol, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
		If an alternate route is required due to an emergency, vehicles will be directed by the relevant authorities (RTA, Police, SES or other emergency agency). In these circumstances Orica will not have sufficient time to communicate the use of the alternate route and will operate under the direction and control of the agency redirecting the traffic. When there is sufficient notice of the requirement to use the alternate route, Orica will communicate the change of route, impact and duration to the following: <ul style="list-style-type: none"> <li>• RMS;</li> <li>• Cessnock City Council; and</li> <li>• Local community (via advert run in the local newspaper).</li> </ul>	Not triggered.	Not Triggered				
2.5 Community Enquiries		All ANS and ANE product trucks are appropriately labelled with the relevant Dangerous Goods Signage. The number listed on these signs directs the caller to Orica Emergency Response Service (ERS) which is staffed 24/7. ERS staff will be briefed on the ORTP and all non emergency related enquiries directed to the ANE Plant Manufacturing Superintendent;	Signage on trucks sighted	Compliant				
		The Orica Technical Centre site Sign will be updated to reflect the relevant contact details for the ORTP; and	Sign has been updated.	Compliant				
		Relevant Orica Technical Centre operational staff will be briefed on the ORTP and its obligations.	There were no personnel within the technical centre that required this training.	Not Triggered				
		All community enquiries relating to the ORTP will be directed to the ANE Plant manager.	Not triggered	Not Triggered				
		Orica model procedure (MP-SG-026) details the requirements for immediate action, investigation and reporting of incidents and non-compliances.-This includes events which cause, or have the potential to cause injury, illness or damage to personnel offsite, damage to the environment, cause concern to the community, public or are reportable to statutory agencies, including non-compliances with statutory approvals.	Have reviewed the URI. Can confirm is correct. Sighted.	Compliant				
		Additional requirements for the investigation of SHEC issues and management of corrective actions include the following requirements which will be: <ul style="list-style-type: none"> <li>• the undertaking of immediate action to minimise the severity of an incident or noncompliance;</li> <li>• reporting of the initial incident or non-conformance details, any 'quick fixes' undertaken and the longer term actions;</li> <li>• initial assessment of the severity of an incident or non-conformance and notification of key personnel by the Kurri ANE Plan Manufacturing Superintendent and ERS personnel as required;</li> <li>• investigation of the incident or non-conformance and development of corrective actions;</li> <li>• the review of any significant incidents by a member of the General Management Team within four weeks of the incident; and</li> <li>• details are entered into 'Enablon' (Orica's computer-based SH&amp;E reporting system) and these records of the incident are retained indefinitely.</li> </ul>	Confirmed. During review of the URI. Except they are put into Enablon rather than URI.	Note				
• Enquiries relating to the operation of the ANE Production Facility including traffic movements will be managed via the main Orica Technical Centre enquiry line, phone number is (02) 4939 5200. Any enquiries or complaints received will be documented and transmitted to the ANE Plant Manufacturing Superintendent immediately; <ul style="list-style-type: none"> <li>• If outside of normal office hours the caller will be directed to the Orica Emergency Response Service. The ERS services is staffed 24/7 with operators trained in Orica Emergency Response Procedures. The complaint will be managed by ERS appropriately according to risk. All complaints will be sent to the ANE Plant Manufacturing Superintendent on the next working day. This phone number has been listed with a telephone company and will be advertised via signage at the Orica entrance on George Booth Drive; and</li> <li>• Orica will maintain a register to record details of all enquiries received and actions undertaken in response. Orica will provide Environment Protection Authority (EPA) with a copy of the enquiries register on an annual basis.</li> </ul>	Not triggered during the audit period.	Not Triggered						

**Table B8 - Road Transport Protocol, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk	
2.6 Implementation of Traffic Management Plan		The following measures are implemented to ensure the Traffic Management Measures detailed within this ORTP: • the ORTP will be available on the Orica website and hard copies will be available on site and on request. A copy will also be kept in each delivery vehicle;	Orica's Road Transport Protocol, April 2015, was on the website during the audit period.	Compliant					
		• the ORTP will be included in the contract between Orica and the relevant haulage company; and	The contract with Toll includes the ORTP (sighted)	Compliant					
		• the Traffic Management Measures detailed within this ORTP will be included in staff inductions and discussed at site meetings.	In the Orica site induction includes measures for management of operational traffic and components of the Road Transport Protocol. Plus discussed at site meetings.	Compliant					
2.7 Travelling Prior to Work		Travelling prior to works covers all drivers of light and heavy vehicles including any movement of heavy vehicles prior to operational use. Orica safety protocols direct all employees in the implementation of safe driving measures such as use of driving lights at all times and adherence to road speed limits and advisory signs.	Noted.	Note					
2.8 Communication		The ANE and ANS haulage company/companies shall nominate a representative to liaise with the ANE Plant and Kurri Kurri Technical Centre management to ensure prompt follow up to any issues regarding the implementation of this ORTP.	Noted.	Note					
<b>P</b>									
3.1 Code of Conduct	3.1.2 Orica Model Procedures	Orica requires the following general measures relevant to Dangerous Goods transport be adopted: • driver training and accreditation; • fatigue Management; • regular drug and alcohol testing; • carrier accreditation; • disciplinary procedures; • carrier maintenance programs; • Orica site and customer site procedures; and • reporting and investigation of incidents.	Schedule 5 of Orica's contract with TOLL (the transport company) contains Orica's standards and procedures including the Road Transport Protocol.	Compliant					
		3.1.3 Driver Licensing and Training	All drivers are to be appropriately licensed to operate the relevant vehicle. Relevant licences must be kept on the driver at all times.	This is checked during induction.	Compliant				
			Appropriate training and information will be provided to all drivers on site during the induction process and at site meetings.	Provided during site induction	Compliant				
			Drivers will not be permitted to operate to or from the site without undertaking the site induction which includes the relevant measures from this ORTP.	Entry onto site cannot happen without induction first. Sighted.	Compliant				
		3.1.4 Travelling Speeds	Drivers must adhere to the regulated speed limits set by the NSW RMS at all times. In addition to the speed limits indicated by road signs drivers are to also follow advisory speed limit signs and drive to the conditions at all times.	Monitored by Toll. Haulier audit sighted. Road Transport Review and Road Safety Audit July 2015 (by Better Transport Futures) also looks at this.	Compliant				
		3.1.5 Staggered Arrivals and Departures	All deliveries to and from the site will be regulated by the delivery schedule and managed on site by the ANE Plant Manufacturing Superintendent. Shift start times for delivery drivers for ANE and ANS will also be staggered. Drivers should also endeavour to maintain this separation distance resulting from the staggered departure between delivery vehicles where practicable.	Monitored by Toll. Haulier audit sighted. Road Transport Review and Road Safety Audit July 2015 (by Better Transport Futures) also looks at this.	Compliant				
3.1.6 Overtaking	George Booth Drive has no passing lanes which allow haulage vehicles to overtake. Due to this there will be no overtaking of other moving vehicles unless under the direction of authorised traffic controllers (i.e. road works). On other sections of the route, heavy vehicles can overtake where there are designated passing lanes. Vehicles should remain in the left lanes when not overtaking, to allow faster vehicles to pass.	Monitored by Toll. Haulier audit sighted. Road Transport Review and Road Safety Audit July 2015 (by Better Transport Futures) also looks at this.	Compliant						

**Table B8 - Road Transport Protocol, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
	3.1.7 Vehicle Separation	Drivers are to also maintain safe separation distances between vehicles at all times. Whilst the staggered departure from the Kooragang Island Site and the Technical Centre should result in a separation of several kilometres between ANE and ANS delivery vehicles it is certain that other heavy vehicles will be encountered en route. Where this does occur a safe separation distance between heavy vehicles is to be maintained. This is applicable to all heavy vehicle delivery to site.  On the open road, drivers should endeavour to maintain a suitable separation distance to other vehicles, particularly other haulage trucks and heavy vehicles. In the event of unavoidable queuing drivers will be required to note these details to assist in identifying trouble spots.	Monitored by Toll. Haulier audit sighted. Road Transport Review and Road Safety Audit July 2015 (by Better Transport Futures) also looks at this.	Compliant				
	3.1.8 Road Shoulders and Passing Opportunity Lanes	Drivers are generally to avoid straying onto road shoulders and haulage trucks should remain on the main section of the road pavement. Where there is a need to pass a turning vehicle on George Booth Drive between Richmond Vale Rd and John Renshaw Drive vehicles must use the 'passing opportunity' lanes that have been installed opposite driveways except in the case of extreme circumstances.	Monitored by Toll. Haulier audit sighted. Road Transport Review and Road Safety Audit July 2015 (by Better Transport Futures) also looks at this.	Compliant				
	3.1.9 Braking	The use of exhaust brakes should be avoided at all times in both directions on the section of George Booth Drive between John Renshaw Drive and the intersection between Echidna Drive and George Booth Drive.	Monitored by Toll. Haulier audit sighted. Road Transport Review and Road Safety Audit July 2015 (by Better Transport Futures) also looks at this.	Compliant				
	3.1.10 Designated Haulage Route	All ANE and ANS drivers are required to strictly follow the relevant assessed designated haul route at all times unless instructed otherwise. All other heavy vehicle movements are to follow the appropriate route to site entry on Echidna Drive via John Renshaw Drive and George Booth Drive. These routes will be revised upon completion of the Hunter Expressway.	Contractual information. Responsibility of toll	Compliant				
	3.1.11 Safety	Drivers of all vehicles are required to strictly adhere to the general road rules. Professionalism and safe driving skills are required at all times including courtesy to other road users. Drivers should not only be aware of their own safe driving skills but also be aware of other road users who may not adhere to the road rules.  The safety measures described in the Technical Note such as the inclusion of a dangerous goods folder containing emergency information in all DG haulage vehicles must be maintained.	Contractual information. Responsibility of toll	Compliant				
	3.1.12 Incident Reporting	All drivers are required to report all incidents immediately to the ANE Plant Manufacturing Superintendent and their supervisor.	Is in the site induction.	Compliant				
3.2 Compliance		All drivers (including contractors) are required to comply with the requirements of this Driver Code of Conduct at all times.	Noted.	Note				
		Compliance with the Driver Code of Conduct will be ensured via periodic monitoring of vehicle movements. All ANS and ANE vehicles will be fitted with a GPS system which will ensure monitoring of route and speed.	All Toll vehicles are fitted with GPS to enable monitoring of truck movements - route and speed.	Compliant				
		Drivers found to be non-compliant may be subjected to Orica's disciplinary process or prevented from delivering to site in the case of contract or delivery drivers.	Not the responsibility of Orica	Not verified	We suggest that the document is revised to put the responsibility back onto the contractor as Orica can't control this.			

**Table B10 - Bushfire Threat Assessment, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
<b>4 RECOMMENDATIONS AND CONCLUSION</b>								
4.1 Recommendations	1	Provide an APZ around the proposed ANE Production Facility;  (a) the APZ should be a minimum 20m wide north, south and east of the proposed Facility; and  (b) the APZ should be a minimum 25m wide west of the proposed Facility; and  (c) roads are acceptable inclusions within the APZ and are encouraged to be included as part of the APZ where possible.	Checked during site inspection	Compliant				
	2	Maintain the APZ in accordance with the requirements of an inner protection area (IPA) as outlined in Appendix 5 of PBP [Planning for Bushfire Protection guidelines];	Checked during site inspection	Compliant				
	3	The access road into the proposed facility would need to be a minimum of 8m in width kerb to kerb with shoulders on either side;	Adequate. Sighted.	Compliant				
	4	The access road should have a minimum 4m vertical clearance to any overhanging obstructions including tree branches;	Adequate. Sighted.	Compliant				
	5	Provide a 10 000L water tank dedicated to fire-fighting purposes and fitted with a suitable connection for Rural Fire Service (RFS) tankers to refill, such as a 65mm stortz outlet with a gate ball or valve. The tank should be made from a suitable non-combustible material such as concrete.	Sighted during site inspection	Compliant				

**Table B11 - Soil and Water Management Plan, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
<b>1.0 Introduction</b>								
		The OSWMP will be prepared and submitted to the Director General of the Department of Planning for approval prior to the commencement of operations associated with the ANE Production Facility.	The "Operation Soil and Water Management Plan for Ammonium Nitrate Emulsion Production Facility" was prepared by Umwelt (Australia) Pty Limited, January 2012. The Plan was submitted to the Department of Planning on 12 January 2012 (2915/R03/Final) and was approved 18 January 2012. The plan hasn't changed during the audit period.	Compliant				
<b>4.0 Legislative Requirements</b>								
		In addition to Orica's legislative requirements detailed in Section 2.0 of the EMS-O, Orica will undertake stormwater, erosion and sediment management in accordance with: <ul style="list-style-type: none"> <li>• Project Approval (09_0090);</li> <li>• Environmental Protection Licence (number 4121);</li> <li>• Protection of the Environment Operations Act 1997 (POEO Act), administered by the NSW Department of Environmental and Heritage (OEH);</li> <li>• Environmental Planning and Assessment Act 1979 (EP&amp;A Act), administered by the NSW Department of Planning (DoP);</li> <li>• Water Management Act 2000, administered by the NSW Office of Water (NOW);</li> <li>• Operation phase commitments of the CSWMP;</li> <li>• Managing Urban Stormwater: Soils and Construction (the Blue Book) Volume 1 (Landcom, 2004); and</li> <li>• Managing Urban Stormwater: Harvesting and Reuse (DEC, 2006).</li> </ul>	Sighted monthly inspections in SAP. There was evidence of erosion in the clean water diversion. This requires action but is compliant with this commitment.	Observation	Undertake measures to reduce erosion in clean water diversion.			
<b>5.0 Erosion and Sediment Control Plan</b>								
5.1 Existing		the implementation and maintenance of erosion and sediment controls will be the responsibility of the Safety, Health and Environment team (or person with the responsibilities of the Environmental Manager), and monthly inspections of the site will be undertaken by the Site Manager.	Noted.	Note				
		Stabilise any remaining exposed areas as soon as practicable. Stabilisation measures may include: <ul style="list-style-type: none"> <li>• revegetation with turf;</li> <li>• use of commercial stabilisation products; and</li> <li>• installation of hardstand, gravel or concrete material.</li> </ul>	Site inspection confirms this. Noted improvement over last site inspection	Compliant				
		Maintain perimeter fencing and signage to ensure no access is permitted to areas outside the approved limits of disturbance, defined by the project Environmental Assessment.	Sighted during site inspection	Compliant				
		Maintain existing upslope diversion bunds. Maintain concentrated water channels adjacent to diversion bunds to prevent erosion and down slope sedimentation.	Sighted monthly inspections in SAP. Erosion sighted in the clean water diversion during site inspection. This requires action, currently not compliant with this commitment	Non-compliant	Undertake measures to reduce erosion in clean water diversion.	E	3	Low
		Maintain any remaining catch drains to manage erosion. Stabilise retained catch drains with vegetation or by engineering means.	Sighted during site inspection	Compliant				
	Maintain erosion and sediment control measures until remaining exposed surface are stabilised.	Sighted during site inspection	Compliant					

**Table B11 - Soil and Water Management Plan, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
Controls	Table 5.1 – Operation Erosion and Sediment Controls Requirements for the ANE Production Facility Operation Phase Requirements	Maintain drainage controls throughout operation, including inspections for and repair of erosion, and removal of accumulated sediment. Stabilise any drainage controls with vegetation or by engineering means.	Sighted during site inspection	Compliant				
		All high traffic areas should be stabilised as part of construction activities. Should it be identified that additional facilities are required within the approved project footprint for parking or vehicle movement, these areas will be stabilised as part of their construction.	Sighted during site inspection. Has been engineered out.	Compliant				
		Maintain all drainage line control structures including geotextile fabrics and rock check dams throughout the operation of the facility.	Sighted during site inspection	Compliant				
		Maintain all erosion and sediment controls until such time that they can be removed. To facilitate the stabilisation of the final landform, utilise revegetation or install hardstand materials as soon as possible, and maintain these areas as required.	Sighted during site inspection	Compliant				
		Existing clean water drains which are to remain in place throughout the ANE operation phase are to be maintained.	Sighted during site inspection	Compliant				
		Existing catch drains which are to remain in place throughout the ANE operation phase are to be maintained.	Sighted during site inspection	Compliant				
5.2 Decommissioning of Controls		As per Blue Book standards, the decommissioning of controls should not be undertaken prior to the catchment of that control being stabilised at equal to or greater than 75 per cent. Once the catchment of each control can be verified as being effectively stabilised across 75 per cent or greater of the area, the control is permitted to be removed. However, should stabilisation subsequently fail, consideration should be given to replacing the control if other erosion and sediment controls should not be considered suitable.	Silt fence removed after stabilization of southern end of plant.	Compliant				
		Verification of catchment stabilisation should be undertaken by of the Safety, Health and Environment team (or person with the responsibilities of the Environmental Manager).	Silt fence removed after stabilization of southern end of plant. Advised by Plant Manager who oversees Environmental responsibilities.	Compliant				
		While erosion and sediment controls are in place, the inspection and maintenance regime detailed in <b>Table 5.2</b> should be implemented.	noted	Note				
		the implementation of maintenance of stormwater controls will be the responsibility of the Safety, Health and Environment team (or person with the responsibilities of the Environmental Manager), and monthly inspections of the site will be undertaken by the Site Manager.	noted	Note				
		CONTROL MEASURE: Regular maintenance of all controls. FREQUENCY: As required	Erosion and sediment control and bunding around the site is checked during daily and weekly inspections.	Compliant				

**Table B11 - Soil and Water Management Plan, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
5.3 Inspections and Maintenance	Table 5.2 – Operation Erosion and Sediment Control Inspection and Maintenance Regime	CONTROL MEASURE: Material accumulated by erosion and sediment control structures is to be removed before the efficiency of the sediment storage zone is reduced by more than 80 per cent of its designed capacity. FREQUENCY: As required	Erosion and sediment control and bunding around the site is checked during daily and weekly inspections.	Compliant				
		CONTROL MEASURE: The sediment levels in the structures and the need for de-silting will be determined through a visual assessment as part of the regular inspections. FREQUENCY: Monthly	Erosion and sediment control and bunding around the site is checked during daily and weekly inspections.	Compliant				
		CONTROL MEASURE: If the inspections identify that the type, location or condition of the control structures are ineffective, the control structure will be modified, repaired or replaced. FREQUENCY: As required	Erosion and sediment control and bunding around the site is checked during daily and weekly inspections.	Compliant				
		CONTROL MEASURE: If any ineffective erosion and sediment control structures cannot be addressed immediately, the timeframe for the modification, repair or replacement of the structures will be based on an assessment of the risk to the surrounding environment. FREQUENCY: As required	There were no replacement structures put in place during the audit period.	Not triggered				
?								
		the implementation and maintenance of stormwater controls will be the responsibility of the Safety, Health and Environment team (or person with the responsibilities of the Environmental Manager), and monthly inspections of the site will be undertaken by the Site Manager.	Daily, weekly and monthly inspections are undertaken by the site manager. Sighted	Compliant				
	Clean Water Diversion	Regular inspection of clean water diversions, especially following rainfall events. Carry out repairs as required to ensure they remain in good working condition.	Sighted monthly inspections in SAP. Erosion sighted in the clean water diversion during the site inspection. This requires action, currently not compliant with this commitment	Non-compliant	Undertake measures to reduce erosion in clean water diversion.	E	3	Low
	Runoff from Unbundled Areas	Maintain roof over plant areas as required. Ensure no blockages of downpipes and guttering of roof infrastructure.	Checked during regular inspections	Compliant				
		Maintain seal and repair as required.	Checked during regular inspections	Compliant				
		The installation of a commercial stormwater treatment device, the SPEL Stormceptor™, has been undertaken according to the manufacturer's specifications. Maintain the trap in accordance with manufacturer's specifications.	Regular PM for maintenance and electronic surveillance. Sighted monthly stormceptor inspection.	Compliant				
		Maintain trap in accordance with manufacturer's specifications. Ensure collected waste is removed as required.	Regular PM for maintenance and electronic surveillance	Compliant				
		Ensure spill kits are placed and maintained as part of routine inspections of the ANE Production Facility.	checked during site inspection. Spill kits are in place.	Compliant				
		Ensure there is no blockage of pipes or pits for the stormwater containment system. Maintain all bunds around processing area.	twice daily inspections of bunds. One per shift.	Compliant				
		Maintain all bunds around processing area.	twice daily inspections of bunds. One per shift.	Compliant				

**Table B11 - Soil and Water Management Plan, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
Table 6.1 – Stormwater Management Measures	Bunded Areas	All stormwater runoff captured in designated chemical bunded areas will be tested for pH. If the testing shows the water to be of suitable quality then it will be sent to the recycled water tanks for re-use in the process water for the proposed ANE Production Facility. If contaminant levels are excessive then it will be removed from site by a licensed waste contractor.	Testing is internal for reuse.	Compliant				
		Ensure bunds are appropriately sized to contain all material within the bunded area. Maintain all bunds around processing area. Ensure compliance with all relevant legislation.	twice daily inspections of bunds. One per shift.	Compliant				
		Ensure all tanks are regularly inspected and replaced should deterioration be observed.	twice daily inspections of bunds. One per shift.	Compliant				
		Maintain bund, ensuring it is appropriately sized for the material contained in the bunded area. Ensure sump is appropriately sized to store all material which has potential to be spilled within the bunded area. Ensure prompt and full removal of any material which has collected in the sump, to maintain sump capacity. Ensure spill kit is appropriately located and adequately supplied to manage small spillages.	checked during site inspection	Compliant				
		Ensure all activities are undertaken in accordance with the relevant legislation.	A statutory liaison officer (Paul Harrison) has been appointed to maintain licenses and monitor compliance.	Compliant				
	Access Road	Monitor vegetation in grass lined swales to ensure no erosion is occurring. Ensure no blockages of pipes or pits carrying runoff and remove accumulated materials if blockages occur. Monitor geo-fabric lined rock channels to ensure no erosion is occurring, and remove any deposited materials (e.g. sedimentation).	Sighted. No issues.	Compliant				
		Monitor scour protection to ensure it is adequate for the erosion potential of the water. If damage is occurring, extend or improve existing scour protection area. Remove any accumulated material from within the scour protection area.	Sighted. No issues.	Compliant				
	Stormwater Attenuation	If areas of scouring are identified, appropriate remediation measures will be implemented.	noted	Note				
		Inspect regularly and clear sediment as required.	Inspections sighted.	Compliant				
	6.2 Stormwater Attenuation	In order to maintain the peak flow attenuation capabilities of the site, some ongoing maintenance and monitoring measures will be required. These include: • regular inspection of the downstream overland flow paths, especially following discharge events, to ensure that the discharged stormwater does not increase the erosion and scouring of surface material. If areas of scouring are identified, appropriate remediation measures will need to be undertaken; and • regular inspection of rock lined level spreaders at the stormwater discharge points to ensure they remain functional and free from sediment.	Erosion and sediment control and bunding around the site is checked during daily and weekly inspections.	Compliant				

**Table B11 - Soil and Water Management Plan, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
6.3 Stormwater Quality Monitoring		Orica has committed to the Environmental Protection Agency (EPA) of the Office for Environment and Heritage that during any event where stormwater is not contained on site, monitoring of storm water discharging from the outfall will occur. Monitoring will be undertaken with the incentive to prevent harm to the environment, in compliance with any other directive received from the EPA.	Testing reports sighted by Audit team.	Compliant				

**Table B12 - Environmental Management Strategy, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
<b>2.0 PLANNING</b>								
2.1	Environmental Aspects	The Register [of Environmental Aspects] will be reviewed every two years, and changes to the identification of aspects, the assessment of risk, and the identification of control measures to reduce the risk will be implemented as required.	No evidence was provided to demonstrate reviews of the EMS. Reviews were due by the 24 February 2014 and 24 February 2016	Non-compliant		D	2	Medium
2.2	Legal and Other Requirements	Should the scope of current operations change, or if a development application is to be lodged for alterations or extensions to the ANE Facility or its associated lands, applicable legislation and environmental planning instruments should be investigated, and this section should be updated, to ensure currency.	The EMS has not been updated during the audit period. There have been legislative changes within the audit period that need to be made to the EMS. The legal register and environmental aspects need to be updated.	Non-compliant		D	2	Medium
		2.2.2 Protection of the Environment Operations Act 1997 (POEO Act)	Under the POEO Act, Orica holds an Environmental Protection Licence (EPL) 4121 for the Technical Centre site. As such all works and activities at the ANE Facility must be carried out in accordance with the EPL.	Note				
		2.2.3 Explosives Act 2003 & OHS Amendment (Dangerous Goods) Act 2003	A person must not handle security sensitive dangerous substances (SSDSs) unless authorised to do so by a WorkCover licence. Ammonium Nitrate is a listed SSDS. Orica has a WorkCover licence to possess, use, supply and store oxidisers and explosives, and authorises its use of Ammonium Nitrate under the Explosives Act. Where required, individuals are also licensed to handle SSAN (Security Sensitive Ammonium Nitrate) in accordance with the Act.	Compliant				
		2.2.4 Occupational Health and Safety Amendment (Major Hazard Facilities) Regulation 2008	This Regulation requires activities to reduce the risk of a major accident and to minimise the consequences in the event of a major accident. Orica's Richmond Vale site has been classified as a Major Hazard Facility and is required to adhere to the requirements of the Regulation, including registration with the WorkCover Major Hazard Team and notification where applicable.	Compliant				
		2.2.5 Cessnock Local Environmental Plan (LEP) 1989	The ANE Facility is located within Cessnock LEP. Current activities at the site are consistent with the activity description in Cessnock LEP permissible for that area. If activities change, the LEP should be checked to see if activities remain permissible. If the LEP changes, the activity will be checked against the description to ensure the activity is permissible.	Not Triggered				
2.3	Objectives and Targets	It is expected that these objectives and targets will be reviewed at least every two years to ensure they are actively achieving best practice in environmental management, and are still relevant to local conditions and the legislative framework. New objectives may be determined and new targets set over time.	The EMS has not been updated during the audit period.	Non-compliant		D	2	Medium
<b>3.0 IMPLEMENTATION</b>								
3.1	Roles and Responsibilities	Environmental roles and responsibilities for site personnel are shown in Table 3 [of the EMS]	Noted.	Note				
		Roles and environmental responsibilities will be communicated to all staff and contractors at the ANE Facility during site induction, so that all personnel understand their role in environmental performance at the site, and are aware of the key environmental management roles.	The ANE site induction included a policy slide. Everyone is responsible for the environment. Part of induction quiz.	Compliant				
		It is Orica policy that all personnel (including contractors) attend a site induction held at Technical Centre prior to employment, or on commencement of activities. The exception to this is truck drivers operating the ANE and Ammonium Nitrate Solution deliveries with Toll. These drivers are given a site induction at the Toll Facility where they are trained by an Orica authorised representative. The training includes the site induction in association with their driver training for heavy vehicle licensing. The ANE Plant Induction is included at Appendix C [of the EMS]. It is the responsibility of the Facility Manager to ensure that all employees and contractors receive appropriate induction prior to starting work.	Noted. Sighted	Note				
		For the Orica ANE Facility, a site induction including SH&E will be developed that will cover the requirements of working for Orica. The site induction would include an environmental awareness component so that all personnel understand their role and responsibilities in environmental performance at the ANE Facility. It would outline Orica's environmental policies and responsibilities.	The ANE site induction included a policy slide. Everyone is responsible for the environment. Part of induction quiz.	Compliant				

**Table B12 - Environmental Management Strategy, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
3.2 Training, Awareness and Competence		As required, specific training or awareness programs would be conducted for workers with particular environmental duties or for those whose work could cause potential environmental impacts. Particular environmental training needs would be identified by the Orica SH&E Team through "Change Awareness", and specific training programs developed as a result.	Procedures are available for people who do specific environmental tasks. Sighted. Done under an AA.	Compliant				
		Competency will be demonstrated and managed through a short quiz at the end of the induction/training program. The Contractor's Site Induction Assessment Form is provided at Appendix D [of the EMS]. The employee or contractor will not be permitted to work at the ANE Facility if their level of competency is doubted by the trainer or Facility Manager.	Sighted. Done.	Compliant				
		Other Orica SH&E programs are in place and would be implemented at the ANE Facility and its associated lands. These programs and events provide ongoing learning and awareness opportunities to help people anticipate potential incidents and to encourage personal action to minimise risk. Programs include: - Job Safety and Environment Risk Analysis (JSERA) Program; - Job Start; - Periodic Toolbox Talk Meetings; - Monthly Safety Meetings, and - Behavioural Safety Program. A summary of training to occur, timing and who is responsible is provided at Appendix E [of the EMS].	Noted.	Note				
3.3.1 Internal Communication		Both the ANE Facility Manager and the Orica Mining Services (OMS) SH&E team are responsible for maintaining communications to ensure the commitments identified in this EMS are satisfied, potential environmental issues are discussed, and to ensure ongoing awareness of any environmental obligations which may affect the operations.	Noted.	Note				
		Communication of Orica's environmental policy and environmental awareness will be communicated to all staff and contractors through the site induction and ongoing training programs.	Done. Sighted	Compliant				
		Any disputes that may arise in relation to operations at the ANE Facility and the measures outlined within this EMS will be managed by the Facility Manager.	No disputes. Not triggered	Not Triggered				
3.3.2 External Communication		any general enquiries received from the public during business hours will be directed through to the Technology Centre switchboard. The call will then be directed to the appropriate business function (i.e. the ANE Facility or the Technical Centre site). If the call relates to an incident within the Technical Centre site it will be directed to the appropriate business function by the operator or directed to the Emergency Response Service (ERS) as appropriate. When the call is made outside of office hours, the caller will receive a message directing them to Orica's ERS phone number (1800 033 111) if the call relates to an emergency. If the call is a general enquiry, the caller will be asked to leave a message with their contact information, and their call will be returned the next working day by a representative of the relevant business function.	Noted	Note				
		The Orica's ERS is staffed 24/7 by personnel dedicated to the effective management of emergencies.	Noted.	Note				

**Table B12 - Environmental Management Strategy, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
3.3 Communication	3.3.2.1 General Enquiries, Information & Visitors	The contact numbers for the site are as listed below: - Orica Technology Centre enquiry line - (02) 4939 5200; and - ERS - 1800 033 111. These phone numbers will be listed in the White Pages, advertised via signage at the Orica Richmond Vale site entrance on George Booth Drive, and noted on relevant vehicles in the case of the ERS number in accordance with the Road Transport Protocol.	Sign at front gate has ERS #, Tech centre, ANE Plant and site security numbers.	Compliant	Suggestion for improvement to the document. Remove the ERS number. Add the complaints number. Remove requirement to list these in the white pages. Change to webpage. Advertised number on the signage at front of Orica should be the 1300 number advertised on the website.			
	3.3.2 External Communication 3.3.2.2 Complaints	As the new ANE Facility will operate 24 hours 7 days Orica has established a Community Enquiry line for the 24 hour operation of the project [...] in accordance with the site EPL. A log of all complaints will be maintained with complaints relating to the ANE facility or the associated Traffic Movements directed to the ANE Facility Manager as soon as possible. All phone complaints will be followed up on the next working day or as soon as is practicable. Where appropriate and or requested the complainant will be contacted to discuss the complaint.	The complaints register is maintained in Orica's internal UIR system (Unusual Incident Report).	Compliant				
		Orica will maintain a register to record details of all enquiries received and actions undertaken in response. When the complaint relates to an incident that is directed to the Emergency Response System (ERS) there will be a full report relating to the management and communication of the incident. Incidents which require investigation and corrective action will be entered into the OMS Safety Management Database (SHERMIS) and assigned to an investigation manager. Orica will provide OEH with a copy of the enquiries register on an annual basis in accordance with the site EPL.	There have been no disputes during the audit period	Compliant				
		Orica will maintain a register to record details of all enquiries received and actions undertaken in response. When the complaint relates to an incident that is directed to the Emergency Response System (ERS) there will be a full report relating to the management and communication of the incident. Incidents which require investigation and corrective action will be entered into the OMS Safety Management Database (SHERMIS) and assigned to an investigation manager. Orica will provide OEH with a copy of the enquiries register on an annual basis in accordance with the site EPL.	Sighted system for recording complaints	Compliant				
	3.3.2.3 ANE Facility Website	In accordance with the Project Approval (Schedule 4, Condition 5): From the end of 2010, the Proponent shall provide regular reporting on the environmental performance of the Project on its website, including ensuring the following information is publicly available on its website: a) A copy of all current statutory approvals; b) A copy of the current environmental management strategy and associated plans and programs; c) A copy of any Annual Reports (over the last 5 years); d) A copy of any Independent Environmental Audit, and the Proponent's response to the recommendations in any audit; e) Any other matter required by the Director-General. The OMS SH&E team is responsible for providing the environmental content to ensure compliance with the placement of relevant information on the website and for ensuring the content as required in Condition 5 is publicly available on the website: ( <a href="http://www.oricaminingservices.com/au/en/page/about/kurri_kurri_ane_environmental_assessment">http://www.oricaminingservices.com/au/en/page/about/kurri_kurri_ane_environmental_assessment</a> ) about us - Kurri Kurri ANE Environmental Assessment.	Orica's ANE Facility website ( <a href="http://www.orca.com/Sustainability/Environmental-Monitoring-Data/Kurri-Kurri/Environmental-Assessment#reports">http://www.orca.com/Sustainability/Environmental-Monitoring-Data/Kurri-Kurri/Environmental-Assessment#reports</a> ) contains the reports and approvals relevant to the site.  The following information was missing from the website when checked by the audit team 4 November 2016: - Mod 2 statutory approval from the DPE - the 2016 Annual Environmental Management Report	Administrative non-compliance				
	3.3.2.6 Community Consultation and Support	The Technical Centre site will implement a community consultative group which will include representatives from local government, emergency services and local residents. This group will provide a communication conduit between the site and the local community and provide feedback on business performance and discuss community concerns.	Although Orica conduct informal discussions with local businesses and community, there is not an established community consultative group run in accordance with DPE guidelines	Non-compliant	Establish a Community Consultation Committee in line with DPE guidelines	D	2	Medium
3.5 Document Control		The Facility Manager is responsible for maintaining and updating this EMS and the EMPs. Changes to the EMS and EMPs may arise from a corrective action request, a management review or changes to site works. Any changes to the documents must be clearly marked on a new draft document (so they can be readily identified) and comments sought from the Facility Manager. The process of seeking comments and approval from the Facility Manager is to ensure the Facility Manager's awareness of any changes, and to ensure possible impact to other areas of the operation have been considered. Once changes are approved by the Facility Manager, the OMS SH&E team representative will be responsible for updating the document and issuing it for use on site. It will be the responsibility of the SH&E team representative and the Facility Manager to ensure that the changes are communicated to employees and contractors as applicable.	There has been no change to the EMS. EMP (SHE-KUR-EMP-EMP-001), June 2014, has been prepared by Orica during the audit period. There was no change to this document during the audit period. There have been no changes to the Vegetation Management Plan and the Soil and Water Management Plan during the audit period.	Compliant				

**Table B12 - Environmental Management Strategy, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
		The SH&E team representative is responsible for keeping a copy of every revision of the EMS and EMPs issued for use at the site. When a new revision is issued, the SH&E team representative is responsible for recalling and replacing the previous edition on the local network directory or wherever such documents would be filed for access at the site.	Noted. Latest versions of all documents are available on the intranet.	Compliant				
3.6 Emergency Preparedness		The ANE Facility Manager shall ensure the Emergency Response Plan for the ANE Facility is maintained and includes adequate arrangements to protect the employees and contractors in the event of foreseeable emergency conditions. All employees and contractors will be made aware of the emergency procedures through attendance at the site induction.	The Emergency Plan has been updated during the audit period. The Emergency Plan is audited as part of this Independent Environmental Audit. Emergency procedures are included in the ANE Facility induction.	Compliant				
<b>4.0 CHECKING AND CORRECTIVE ACTION</b>								
4.1 Monitoring and Evaluation		Routine inspections of the ANE Facility site operations will be undertaken by the Facility Manager. In addition, there will be regular checks to determine if the requirements set out in the EMPs are being implemented. Such checks will be carried out as required or in accordance with the EPL. All inspections are recorded on the daily and monthly housekeeping inspection checklists provided at Appendix M [of the EMS].	Daily and monthly housekeeping inspections were sighted. EMPs are audited as part of this Independent Environmental Audit.	Compliant				
		The following inspections are carried out by the site team:  Table 5 Routine Inspections Inspection/Check and Frequency Housekeeping Checklist (refer to Kurri Daily Housekeeping Checklist and Monthly Housekeeping Audit Inspection Checklist): Daily / Monthly Envirocycle Maintenance (refer to Envirocycle Maintenance Checklist): Monthly Stormceptor Maintenance (refer to Stormceptor Maintenance Checklist): Monthly Bushfire Prevention Maintenance (Bush Fire Precautions Checklist - Red Book): Monthly Monthly Self Bunded Tank- Maintenance (Self Bunded Tank Maintenance Checklist): Monthly	Daily and monthly housekeeping inspections were sighted.	Compliant				
		the EMPs will be formally audited on an annual basis by the Technology Centre site Manager with the SH&E team representative.	The EMPs were not formally audited annually during the audit period.	Non-compliant	Implement annual audit process for EMPs	E	3	Medium
		A compilation of monitoring tasks to be undertaken at the ANE Facility is provided at Appendix N [of the EMS]	Noted.					
4.2 Non-conformance and Corrective and Preventative Action		Should a non-conformance be identified, corrective and/or preventative actions are to be implemented in accordance with the relevant Orica procedures for incident reporting and investigation. They comprise: - All non-conformances are to be classified as environmental incidents and documented; - Investigate the cause of the potential non-conformance including stopping the activity if applicable; - Identify potential corrective and/or preventative actions; - Implement mitigation measures where applicable; and - Provide feedback to employees and contractor personnel, where relevant. Where improvements are identified, a plan for implementing those will be developed. The effectiveness of the corrective and/or preventative actions is to be assessed during monthly environmental inspections which will be undertaken by, or under the instruction of, the OMS SH&E team.	Sighted corrective action system in Enablon. Employees are notified if items are late. There is feedback.	Compliant				
4.3 Records		Appropriate records are required to be maintained and should include records of: - Any mandatory or voluntary Audits; - Document revisions; - Training records; - Inspection and Monitoring records; and - Complaints.	There were no records of audits during the audit period.	Administrative non-compliance				
		The Facility Manager is responsible for ensuring that the appropriate records required to maintain this EMS are creating and stored appropriately. While the EMS documentation is in the format of ISO 14001; the format of the EMPs and other documents to support the EMS must ensure that the documentation is: - Legible; - Able to be readily retrieved; - Complies with all the records required if ISO 14001:2004 is to be implemented at the Facility; and - Auditable by external parties. All copies of final records should be lodged with Orica's document control, and must be available for external audits.	Sighted	Compliant				

**Table B12 - Environmental Management Strategy, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
4.4 Audit	4.4.1 Internal Audits	The EMS shall be audited on two-yearly (biennial) basis. Biennial audits will also be conducted of the site-specific Management Plans referred to in this EMS.	The EMS and site specific management plans were not audited during the audit period.	Non-compliant		D	2	Medium
		Regular Internal audits will be conducted by the OMS SH&E team representative or other SH&E staff. However where appropriate and/or required, internal audits may be undertaken by a suitably qualified external auditor.	The EMS and site specific management plans were not audited during the audit period.	Non-compliant		D	2	Medium
		Internal audits must assess the implementation of all documentation associated with the EMS and their effectiveness. The format of the audits will be decided by the SH&E team. The results of the audits must be recorded and communicated to the ANE Facility Manager, together with suggested corrective actions that may be required. The ANE Facility Manager will need to agree to any corrective or preventive actions which may be required, as these may need to be reflected in contractual conditions.	The EMS and site specific management plans were not audited during the audit period.	Non-compliant		D	2	Medium
		All auditing records will be maintained by the SH&E team. A formal audit report must be prepared for each audit undertaken.	The EMS and site specific management plans were not audited during the audit period.	Non-compliant		D	2	Medium
	4.4.2 Independent Audits	The following independent audits will also be undertaken in accordance with the Project Approval. The OMS SH&E team representative and the Facility Manager will be responsible for arranging the audits. The requirements of the audits as set out in the Project Approval are outlined below: - Environmental Audit of the Project: In accordance with the Project Approval (Schedule 4, Condition 4), within two years of the commencement of operations of the ANE Facility, and every three years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the Project. - Traffic Audit: In accordance with Project Approval (Schedule 3, Condition 11), within six months of the commencement of operation of the ANE Facility, and every three years thereafter, unless the Director-General directs otherwise, the Proponent shall commission a suitably qualified person, whose appointment has been approved by the Director-General, to conduct an Independent Traffic Audit of the development. - Hazard Audit: In accordance with Project Approval (Schedule 3, Condition 5), twelve months after the commencement of operations and every three years thereafter, or at such intervals as the Director-General may agree, the Proponent shall carry out a comprehensive Hazard Audit of the site and within one month of each audit submit a report to the Director-General. The audit shall be carried out by a qualified person or team independent of the overall site approved by the Director-General. - Noise Audit: In accordance with the Project Approval (Schedule 3, Condition 19), the Proponent shall conduct a Noise Audit for the premises within three months of the commencement of operation of the ANE Facility or as otherwise agree by the Director-General. The audit shall be carried out by a suitably qualified person or team and within one month of conducting the Noise Audit, the Proponent shall provide the Director-General and the OEH a copy of the Noise Audit Report. A summary of auditing to be undertaken, timing and the person responsible is provided at Appendix O [of the EMS].	Within the audit period: - This Independent Environmental Audit (2017) has been conducted to satisfy Schedule 4, Condition 4. - An Independent traffic audit was prepared by Better Transport Futures - "Road Transport Review and Road Safety Audit" 6 July 2015, and submitted 8 July 2015. The Independent Traffic Audit was due by the 7 August 2015. - Planager was approved by DPE to conduct the Hazard Audit held November/December 2015. The Audit Report (dated 5 June 2016) was submitted to DPE 20 June 2016.  Requirements for the noise audit are not triggered within the audit period.	Compliant				
<b>5.0 REVIEW</b>								
		This EMS will be reviewed every year to determine the effectiveness of any corrective actions identified in the various audits. The review process will enable changes in environmental legislation and guidelines, and changes in site management to be reflected in the EMS. The reviews should aim to review the continuing suitability and effectiveness of the EMS, and should at least include the following considerations: - Are the EMS objectives and targets adequate? Are they still the key priorities? They may need to be revised to reflect changing conditions and information. - Are the environmental outcomes at the site acceptable? - Is the Environmental Aspects Register still relevant? Are there further environmental aspects that need to be considered? Are the mitigating measures effective? - Is the site infrastructure functioning efficiently to allow the achievement of environmental goals? - How could the EMS be improved?	The EMS was not reviewed every year during the audit period.	Administrative non-compliance				
		The review will be led by the OMS SH&E team and approved by the ANE Facility Manager.	The EMS was not reviewed every year during the audit period.	Administrative non-compliance				
		If it is determined that the EMS is to be revised following the review the revised EMS should be made available at the ANE Facility, and communicated to employees and contractors, within four months following the review.	The EMS was not reviewed every year during the audit period.	Administrative non-compliance				

**Table B12 - Environmental Management Strategy, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
APPENDIX B ENVIRONMENTAL ASPECTS REGISTER (only those aspects requiring action not already on a separate checklist)								
1. Hazardous Event	1.1 An explosion event	Check access road clearance weekly to maintain a minimum 4 vertical clearance to any overhanging obstructions including tree branches along the access road;	A quarterly inspection of Bushfire and Perimeter Security is undertaken which includes checks fire breaks and APZ and precautions as per the Bushfire Management Plan.	Compliant				
		Check water level in tank daily to maintain the 100,000 litre water tank dedicated to fire- fighting purposes.	Undertaken during daily pre-start checks. Inspection checklist sighted.	Compliant				
		Check perimeter bushfire clearance zone monthly for Maintenance of the 30 metre wide perimeter bushfire clearance zone in accordance with the Bushfire Threat Assessment" included in the EA.	A quarterly inspection of Bushfire and Perimeter Security is undertaken which includes checks fire breaks and APZ and precautions as per the Bushfire Management Plan.	Compliant				
		Checks of connections and water levels. Daily. So Water supplies will be easily accessible and suitable connections for water tanks will be provided to Rural Fire Service tankers can refill. Water levels checked. Daily. A 100,000 litre water tank for bushfire fighting purposes is located on the site.	Undertaken during daily pre-start checks. Inspection checklist sighted.	Compliant				
	1.2 Chemical spill	Spill kits and spill management procedures. Check Weekly or after use. Visual inspection to confirm kits appropriately stocked and located.	Undertaken during regular site inspections. Housekeeping inspection sheets sighted. Spill kits checked during site inspection.	Compliant				
		Chemical storage areas are maintained in a clean and usable condition. Check for cleanliness, usable condition, leaks. Daily.	Undertaken during regular site inspections. Housekeeping inspection sheets sighted. Chemical storage areas checked during site inspection.	Compliant				
		Chemical storage containers are in good working order and contents clearly marked. Check for cleanliness, usable condition, leaks. Daily.	Undertaken during regular site inspections. Housekeeping inspection sheets sighted.	Compliant				
		Control valves on the stormwater system will ensure that no chemicals will be released offsite in the event of spill event outside of the bunded areas. Clean and test "Stormceptor" and maintain waste water system. Monthly and after rainfall.	Stormceptor maintenance checklists sighted	Compliant				
	1.3 Leakage of storage tank	At the ANE Facility, all chemicals, fuels and oils are stored in bunded areas, with impervious flooring and sufficient capacity to contain 110% of the largest container stored within the bund. Bund level and cleanliness checked. Daily.	Undertaken during regular site inspections. Housekeeping inspection sheets sighted. Bund areas checked during site inspection.	Compliant				
		Chemical storage containers and storage areas are maintained in a clean and usable condition. Check for cleanliness, usable condition, leaks. Daily.	Undertaken during regular site inspections. Housekeeping inspection sheets sighted. Chemical storage areas checked during site inspection.	Compliant				
		Process areas are fully contained within bunded areas. Runoff from these areas is captured for reuse by the water management system. Bund level and cleanliness checked. Daily.	Undertaken during regular site inspections. Housekeeping inspection sheets sighted. Bund areas visually inspected during site inspection.	Compliant				
	2. Traffic	2.1 Preservation of neighbourhood amenity	Speed limits and parking areas signposted clearly. Check signs are in place, and visible. As required.	Signposting sighted	Compliant			
Orica Model Procedure TM-01 "Vehicles on site" defines requirements for the safe operation of all vehicles on company owned or controlled sites, including those of contractors, in order to minimise the risks to the health and safety of employees and others working with or near vehicles. Regular visual checks. As required.			Sighted during site visit.	Compliant				
2.2 Vehicle Accidents		Each vehicle carries an Emergency Procedure Guide which summarises the actions to be undertaken in the event of a vehicle fire and a guide for each type of product being carried. Vehicle inspections. Random as required and as per Annual Audit.	The haulage contractor provides emergency procedure guides for the drivers. Haulier audits are conducted by Orica (sample of audits sighted) during which the placement within the vehicle of the Emergency Procedures Guide and the Vehicle Fire Emergency Guide is checked.	Compliant				
	2.3 Fuel/Oil leakage	All plant and equipment used at the ANE Facility will be maintained in a proper and efficient condition; and operated in a proper and efficient manner. Plant shall be checked for leaks, damage, and good order. Daily.	Undertaken during regular site inspections. Housekeeping inspection sheets sighted. Plant and equipment visually inspected during site inspection.	Compliant				
Control valves on the stormwater system will ensure that no fuels or oils will be released into downstream drainage lines. Clean and test "Stormceptor" and maintain waste water system. Monthly and after rainfall.		Stormceptor maintenance checklists sighted	Compliant					
		Investigations will be undertaken in response to any concerns raised by the community regarding traffic noise associated with the Project. Monitoring as required.	Not triggered. There have been no concerns raised by the community during the audit period.	Not Triggered				

**Table B12 - Environmental Management Strategy, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
3. Noise	3.1 Preservation of neighbourhood amenity	All plant and equipment used at the ANE Facility will be maintained in a proper and efficient condition; and operated in a proper and efficient manner. Plant shall be checked for leaks, damage, and good order. Daily.	Undertaken during regular site inspections. Housekeeping inspection sheets sighted. Plant and equipment visually inspected during site inspection. .	Compliant				
		Noise generated from the project will not exceed 35 dB(A) LAeq(15 minute) at the nearest residential receptor at any time. Check equipment in good working order, and that there is no damage or other condition occurring that could affect noise levels. Daily.	Noise monitoring has been undertaken annually by Umwelt during the audit period. The 2014, 2015 and 2016 noise monitoring reports were sighted. Each of the reports state: "Results of the attended noise monitoring program conducted... indicated that the Technology Centre was in compliance with the LAeq,15minute industrial noise assessment criteria as outlined in Project Approval 09_0090 and EPL 4121 for the meteorological conditions experienced at the time of monitoring."	Compliant				
		Orica Model Procedure MP-EP- 014 "Neighbourhood Impact" defines requirements for the management of the impact of operating sites on neighbours (e.g. Noise). For example, the potential for the introduction of new equipment and modification of existing equipment to generate unacceptable impacts beyond the site boundaries shall be assessed. Monitoring as required.	Noted.	Note				
4. Air Quality and Odour	4.1 Preservation of local air quality	All plant and equipment used at the ANE Facility will be maintained in a proper and efficient condition and operated in a proper and efficient manner. Plant shall be checked for leaks, damage, and good order. Daily.	Undertaken during regular site inspections. Housekeeping inspection sheets sighted. Plant and equipment visually inspected during site inspection. .	Compliant				
	4.2 Preservation of local amenity value	All lighting is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network to comply with the latest version of Australian Standard AS 4282(INT)-Control of Obtrusive Effects of Outdoor Lighting. Check lighting is compliant with requirements. Annual compliance audit or as required via change.	Orica's "ANNUAL ENVIRONMENTAL MANAGEMENT REPORT, 2016" states a consultant was engaged to provide a report on external lighting to ensure compliance.	Compliant				
5. Water Quality and Management	5.1 Surface Water Control	Implementation of a water management strategy which segregates clean water runoff, stormwater and process water from process areas, non process areas, and the surrounding areas. Check no obstructions to water flow and segregation of waters. Daily.	Undertaken during daily pre-start checks. Inspection checklist sighted.	Compliant				
		Comply with Section 120 of the POEO Act 1997. Check no obstructions to water flow and segregation of waters. Daily.	Undertaken during daily pre-start checks. Inspection checklist sighted. No discharges beyond permitted licence requirements.	Compliant				
		Control valves on the stormwater system will ensure that no fuels or chemicals will be released into downstream drainage lines. Clean and test "Stormceptor" and maintain waste water system. Monthly and after rainfall.	Stormceptor maintenance checklists sighted	Compliant				
	5.2 Overflow of Surface water from adjacent bushland	Ensure that all chemicals, fuels and oils associated with the ANE Facility are stored in appropriately bunded areas, with impervious flooring and sufficient capacity to contain 110% of the largest container stored within the bund. Bund level and cleanliness checked. Daily and after rainfall.	Undertaken during regular site inspections. Housekeeping inspection sheets sighted. Bund areas visually inspected during site inspection.	Compliant				
		Maintenance of surface water diversion channels and underground drains to prevent scour, erosion and sedimentation. Visual inspection to ensure no obstructions to drains and to detect any signs of erosion. Weekly.	Undertaken during regular site inspections. Housekeeping inspection sheets sighted during site inspection 25 November 2013.	Compliant				
6.1 Poor waste management	6.1 Poor waste management	Maintenance of surface water diversion channels and underground drains. Visual inspection to ensure no obstructions and no damage. Weekly.	Undertaken during regular site inspections. Housekeeping inspection sheets sighted during site inspection 25 November 2013.	Compliant				
		Orica Model Procedure MP-EP- 004 "Waste Management" defines requirements for waste management and reporting. For example, the sources of waste streams shall be identified, characterised and quantified and the material hazards, environmental impact and cost of management of each waste stream shall be assessed. Check that any waste produced on site is taken to the appropriately labelled storage bin. Weekly.	Sighted waste tracking on the SAP system during interview with maintenance planner. Housekeeping inspection checklists include chking that waste is stored in separate designated areas depending on waste type. Waste management reports from the contractors were supplied that showed disposal costs per waste stream	Compliant				
		Ensure that all waste generated by the Project during operation is classified in accordance with the DECCW's Waste Classification Guidelines 2008, and if required, disposed of to a facility that may lawfully accept the waste. Check that any waste produced on site is taken to the appropriately labelled storage bin. Weekly.	NSW EPA waste tracking dockets were sighted. Classification "hazardous".	Compliant				

**Table B12 - Environmental Management Strategy, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
6. Waste Management		All non-recyclable wastes would be assessed in accordance with the DECCW's Waste Classification Guidelines 2008 and disposed of by an approved licensed contractor to a facility that may lawfully accept the waste. Check that any waste produced on site is taken to the appropriate licensed facility. Monthly via receipt of report from waste contractor.	A monthly report is provided by waste contractor sighted. NSW EPA waste tracking dockets were sighted.	Compliant				
	6.2 Re-use and recycling	Recycling provisions in accordance with council requirements and the Waste Avoidance and Resource Recovery (WARR) Act. Check that any waste produced on site is taken to the appropriately labelled storage bin and taken to the appropriate licensed facility. Monthly via receipt of report from waste contractor.	Waste generated on site is separated into appropriate bins including recycling. These are collected via contracted waste collection services. Quantities of waste collected is recorded by the waste contractor (documents sighted). Waste disposal locations appropriate to the waste collected have been specified by the waste contractor (Richards).	Compliant	We suggest a periodic audit of waste vehicles is undertaken to check compliance with weight records.			
	6.3 Use of natural resources	Orica Model Procedure MP-EP- 007 "Resource Conservation" defines requirements to conserve natural resources through the minimisation of the consumption of energy and non-renewable resources throughout the company's operations as a step towards the sustainability of the company's activities. For example, where practicable, reused or recycled materials shall be selected for use in preference to virgin materials. Orica Model Procedure Audit. Ongoing.	Noted.	Note				
		Orica will implement energy efficiency opportunities as described in the EA. Type of monitoring required: Annual compliance audit.	Orica considered opportunities to improve energy efficiency during procurement of MOD 2 infrastructure. Orica advised that the design philosophy of the cooling system utilised VSDs (Variable Speed Drives) on the water pump and Cooling Tower fan to optimise energy use, drives run as needed and only as fast as required to achieve Set point. Circulation pump was also modelled on existing pumps installed at the ANE plant for commonality of spare parts, another spare pump did not have to be bought.	Compliant				
7. Ecology	7.2 Impact on adjacent native bushland	Landscaped areas at the ANE Facility and Technology Centre site to be regularly maintained and checked to ensure they are weed- free. Visual inspection to check areas tidy and weed-free. Weekly	Sighted.	Compliant				
8. Bushfire	8.1 Bushfire in adjacent bushland	Implement the recommendations of the "Bushfire Threat Assessment" included in the EA and measures outlined in the Submissions Report. Check access road clearance and water level in tank. Daily.	Site inspections. Regular. Sighted.	Compliant				
		Maintenance of the 30 metre wide perimeter bushfire clearance zone in accordance with the Bushfire Threat Assessment" included in the EA. Check perimeter bushfire clearance zone. Monthly.	Sighted during inspection	Compliant				
		Water supplies will be easily accessible and suitable connections for water tanks will be provided to Rural Fire Service tankers can refill. Check water level in tank. Daily.	Level is checked as part of pre-start checks. Checklist sighted.	Compliant				
		A 100,000 litre water tank for bushfire fighting purposes is located on the site. Check water level in tank. Daily.	Level is checked as part of pre-start checks. Checklist sighted.	Compliant				
10. Site Access	10.1 Unauthorised access to site	Maintenance of security fence, security cameras, controlled entry, and security procedures. Check all security measures in place and functioning. Daily.	Pre-start checks include check of security and alarm measures. Checklist sighted.	Compliant				
11. Cumulative Impact	11.1 Cumulative Impacts	Recording of all spills. Regular checks of all bund and chemical storage areas to ensure integrity. As required.	Undertaken during regular site inspections. Housekeeping inspection sheets sighted during site inspection 25 November 2013.	Compliant				
<b>APPENDIX G SUMMARY OF REPORTING (only includes reporting not already in a separate checklist)</b>								
	Monitoring Report. From Annexure C, Item 1u, Draft Conservation Agreement (between the Minister Administering the NSW National Parks and Wildlife Act (1974) and Orica Australia for 'Orica Richmond Vale', 2011.	Complete a monitoring report, including photo-point photos, noting changes occurring in the Conservation Area. This will form the basis for decisions about ongoing management actions. A copy of all monitoring reports should be forwarded to the Office of Environment and Heritage. Timing: from time to time.	The ORICA RICHMOND VALE BIODIVERSITY OFFSET AREA MONITORING REPORT – 2016, includes photographs taken at the baseline monitoring point. It was submitted to the OEH 21 November, 2016.	Compliant				

**Table B12 - Environmental Management Strategy, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
<b>APPENDIX N MONITORING MEASURES (not already in a separate checklist)</b>								
Daily Routine Inspections and Ongoing Site Checks	General Housekeeping From: "Kurri Daily Housekeeping Checklist"	Undertake daily housekeeping inspection and record results in accordance with the "Kurri Daily Housekeeping Checklist" (Appendix M [of the EMS]). The following areas are to be checked. - Bund areas; and - General areas. Plant recording is required for: - Rainfall; - Storm harvester; and - Water test results.	Undertaken during regular site inspections. Shift pre-start and housekeeping checklist sighted.	Compliant				
Monthly Routine Inspections	General Housekeeping From: "Monthly Housekeeping Audit Inspection Checklist"	Undertake a monthly housekeeping inspection and record observations and actions in accordance with the "Monthly Housekeeping Audit Inspection Checklist" (refer Appendix M [of the EMS]) in order to maintain a high standard and keep combustible materials (pallets, paper, plastics, and cardboard) minimized in process areas and in proximity to oxidizers and fuels. The following work areas are to be inspected: - Ammonium Nitrate Storage Area. - Ammonium Nitrate Emulsion Storage Area. - Raw Material Storage Area. - Fuel Storage Area. - Site General (e.g. Workshop, office, laboratory).	Undertaken during regular site inspections. Monthly housekeeping checklist sighted.	Compliant				
Monthly Periodic Testing	Waste water system From: "Envirocycle Maintenance Checklist"	Undertake periodic maintenance on the waste water system in accordance with the "Envirocycle Maintenance Checklist" (refer Appendix M [of the EMS]). Clean and test "Stormceptor" and maintain waste water system in accordance with "Stormceptor Maintenance Checklist" (refer Appendix [of the EMS])	Envirocycle maintenance inspection checklists sighted	Compliant				
	Bunded tanks From: "Self Bunded Tank Maintenance Checklist"	Check and undertake maintenance of bunded tanks in accordance with the "Self Bunded Tank Maintenance Checklist" (refer Appendix M [of the EMS]).	Stormceptor maintenance checklists sighted	Compliant				
Bushfire Hazard Reduction - Monthly Tasks From: "Kurri Daily Housekeeping Checklist"	Bushfire inspection	Undertake bushfire inspection and record results in accordance with the "Bush Fire Precautions Checklist (Red Book)" (refer Appendix M [of the EMS]). The following tasks are to be undertaken: - Raking or manual removal of fine fuels. - Mowing grass. - Slashing and littering. - Removal or pruning of trees and shrubs. - Check condition of firebreaks. - Ensure Asset Protection Zone is maintained as per the Bush Fire Management Plan - Ensure standing timber within 15 metres from magazines is trimmed, lopped or removed.  <i>Note: the Bush Fire Precautions Checklist currently states tasks to be undertaken 3-monthly. The checklist is to be updated to monthly.</i>	Sighted during interview with maintenance planner.	Compliant				
Maintenance of the conservation area  From: Draft Conservation Agreement (between the Minister Administering the NSW National Park and Wildlife Act (1974) and Orca Australia for 'Orca Richmond Vale', 2011.	Weed control Annexure C, Item 1a.	Undertake a periodic weed control program to control weeds and non-indigenous flora in the Conservation Area using the following appropriate control methods: - Use Glyphosate based herbicide by direct application to cut surfaces (cut and paint or scrape and paint methods). - Spraying of Glyphosate based herbicide can be performed (only according to the directions on the label) and ensuring that off-target damage is minimised. - Use appropriate control measures as recommended in the Department of Industry and Investment Noxious and Environmental Weed Control 4th Edition 2009 or equivalent replacements for control of weeds, ensuring minimal off target damage. - Remove weeds by hand ensuring that all plant parts which can reproduce are removed and that soils do not become prone to erosion. - Other weed control methods may be undertaken with prior written permission of the Director-General.  Timing to be determined. Ensure control programs are commenced when timing and extent of weed removal will minimise adverse effects on wildlife (weeds may provide protection or habitat for native fauna). Continue to check the Conservation Area for weed invasion and regrowth and treat any outbreaks. Check adjacent areas and gardens for invasive plant species and remove, or control their spread. Monthly	The actions of the weed management program are reported in the Land Management Action Plan 2015-2016. The Plan outlines the control methods used to control weeds and non-indigenous flora in the conservation area. The methods listed are included in the Plan.	Compliant				
			The conservation area is checked monthly, including for weed invasion and regrowth (inspection sheet sighted).	Compliant				

**Table B12 - Environmental Management Strategy, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
	Pest Animals Annexure C, Item 1b	Monitor impacts to the Conservation Area by pest animals and undertake on-going control programs for pest animals if appropriate. - Methods for monitoring pest animal activity can include; · observations and/or hearing calls, · the use of standard "sand plots", · the use of non-poisoned "bait stations", · scat counts, and · other quantitative techniques which can be designed in discussion with the Office of Environment and Heritage or the Livestock Health and Pest Authority. - Methods for control can include shooting, trapping and use of poisonous baits consistent with advice from the Office of Environment and Heritage and the Livestock Health and Pest Authority.  Timing: ongoing.	The ORICA RICHMOND VALE BIODIVERSITY OFFSET AREA MONITORING REPORT – 2016 (prepared by Umwelt, September 2016), includes impacts from feral animals. The biodiversity offset area is considered to contain a low density of pest fauna species, predominately wild dogs. This is based on the observations of tracks and scats along the tracks. Orica has since engaged an external contractor to undertake a targeted baiting and shooting program for wild dogs.	Compliant				
		Participate in community pest animal control programs, and encourage neighbours to implement pest animal control programs. Contact your local National Parks office to find out if community control programs are occurring in the area.  Timing: TBD. Contact National Parks on an annual basis to determine if there are community control programs in the area.	National Parks has not been contacted to determine if there are community control programs in the area	Non-compliant		E	3	Low
	Native Animals Annexure C, Item 1c	Monitor numbers and reduce the population of native grazing animals where grazing pressure is resulting in the degradation of the quality and structure of native vegetation with the Conservation Area and inhibiting natural regeneration and the owner is granted a licence to cull under Section 121 of the National Parks and Wildlife Act 1974.  Ongoing visual checks.	Native fauna numbers are monitored and were reported in the "Orica Richmond Vale Biodiversity Offset Area Monitoring Report – 2016". No reference to overgrazing in the report.	Compliant				
	Fire Hazard Reduction Annexure C, Item 1e and 1f	Undertake fire hazard reduction to protect the natural assets of the Conservation Area, in appropriate locations, with any required approvals and/or permits using: - raking and hand clearing; - pile burning; and - fuel reduction burns. Ensure: - Both live and dead trees with hollows are protected from burning to preserve nesting habitat for hollow dwelling animals. - Where possible, fallen and dead timber are protected from burning to preserve fauna habitat.  Recommended timing for fire hazard reduction burns and controlled burning: - In Wet Sclerophyll Forest vegetation, acceptable fire intervals are 25 to 60 years. Crown fires should be avoided in the lower end of this range. - In Sclerophyll Grassy Woodland vegetation, acceptable fire intervals are 5 to 50 years. Crown fires should be avoided in the lower end of this range.	A quarterly inspection of Bushfire and Perimeter Security is undertaken which includes checks fire breaks and APZ and precautions as per the Bushfire Management Plan.	Compliant				
	Revegetation (if doing) Annexure C, Item 1e and 1f	If undertaking revegetation to establish indigenous plants to maintain the vegetation structure in keeping with the identified vegetation community: - Revegetate using species produced from material sourced locally and without fertilisers, where: · the ability to regenerate naturally within a reasonable time frame has been lost, or · to prevent soil erosion. - Revegetation methods can include: · Planting; · brush mulching; and · direct seeding.  Timing to be determined if undertaking revegetation.	Not triggered.	Not Triggered				
	Sediment control 2.9 and Annexure C, Item 1q	Control and prevent further erosion along tracks, trails, and watercourses within the conservation area.  Timing: Carry out sediment and erosion control works within streams and on water front land in consultation with the Office of Environment and Heritage and in accordance with a Controlled Activity Approval under the Water Management Act 2000 or subsequent Act.	The "Orica Richmond Vale Biodiversity Offset Area Monitoring Report – 2016" includes assessment of erosion along tracks and watercourses and measurement actions to reduce erosion.	Compliant				

**Table B12 - Environmental Management Strategy, Assessment of Compliance**

Ref	Sub Ref	Requirement	Evidence 2016/17	Audit Finding 2016/17	Recommendation	Consequences	Likelihood	Risk
	Photograph Conservation Area. Annexure C, Item 1t.	Take photographs at the identified photo-points indicated in the Draft Conservation Plan for the purposes of ongoing monitoring of the conservation values.  Timing: from time to time in consultation with officers of the Office of Environment and Heritage.	The "Orica Richmond Vale Biodiversity Offset Area Monitoring Report – 2016" includes photos taken at each monitoring point for the purposes of ongoing monitoring of the conservation values.	Compliant				

## Appendix C

# Response from OEH



DOC16/549044-2

Ms Alison Dodds  
Environment & Planning  
alison@environment-planning.com.au

Dear Ms Dodds

**Orica ANE Plant, Kurri Kurri – Independent Environmental Audit**

I refer to your letter dated 31 October 2016 requesting input from the Office of Environment and Heritage (OEH) in relation to an Independent Environmental Audit which is being undertaken at Orica's ANE Facility at Kurri Kurri in accordance with Project Approval (09 0090) issued by the Department of Planning and Environment on 26 July 2010.

OEH can confirm that the biodiversity offset required by project approval has been implemented in the form of a Conservation Agreement over part Lot 2 DP 809377. The area covered is 33.14 hectares of land and covers condition 12(b) of Schedule 3 of the Project Approval. The Conservation Agreement was made on 9 March 2012 between the Minister administering the *National Parks and Wildlife Act 1974* and Orica Australia Pty Ltd.

Thank you for the opportunity to provide input into this environmental audit. OEH does not have a formal role in the management of this site and therefore does not have any additional comments or advice in relation to the audit.

If you require any further information regarding this matter please contact Anne Browett, Conservation Planning Officer, on 4927 3160.

Yours sincerely



17 NOV 2016

**RICHARD BATH**  
Senior Team Leader Planning, Hunter Central Coast Region  
Regional Operations