

Prepared for

Orica Australia Pty Ltd

Prepared by

Ramboll Australia Pty Ltd

Date

31 August 2020

ORICA KOORAGANG ISLAND 2020 INDEPENDENT ENVIRONMENTAL AUDIT

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APPENDICES

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Independent Audit Tables

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Independent Audit Declaration Form

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Planning Secretary Audit Team Agreement

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Site Inspection Photographs

GLOSSARY

MP 08_0129	Major Project Approval MP 08_0129 to increase the ammonium nitrate manufacturing capability of the site from 500 kilo tonnes per annum to 750 kilo tonnes per annum
MP 08_0129 EA	The Environmental Assessment titled <i>Proposed Ammonium Nitrate Facility Expansion Environmental Assessment</i> , dated June 2009
MP 08_0129 MOD1	Modification to Major Project Approval MP 08_0129 approved on 11 July 2012 to amend the plant and equipment layout
MP 08_0129 MOD1 EA	The Environmental Assessment titled <i>Kooragang Island Modification Request Environmental Assessment</i> , dated 20 April 2011, prepared by AECOM
MP 08_0129 MOD1 Rts	The response to submissions report titled <i>Response to Submissions: Orica Modification 1</i> , dated 22 July 2011, prepared by AECOM
MP 08_0129 MOD2	Modification to Major Project Approval MP 08_0129 approved on 17 December 2014 to allow the construction of three ammonia flares and the relocation and increase in storage capacity of a previously approved nitric acid storage tank
MP 08_0129 MOD2 EA	The Environmental Assessment titled <i>Kooragang Island Modification Request Environmental Assessment</i> , dated 13 November 2013, prepared by AECOM
MP 08_0129 MOD2 Rts	The response to submissions report titled <i>Response to Submissions Report</i> , dated 10 February 2014, prepared by AECOM
MP 08_0129 MOD3	Modification to Major Project Approval MP 08_0129 approved on 17 December 2015 to increase the ammonia production limit from 360,000 tonnes per annum to 385,000 tonnes per annum
MP 08_0129 MOD3 EA	The Environmental Assessment titled <i>Orica Kooragang Island Ammonia Production Limit Increase</i> , dated 6 October 2015, prepared by Orica
Phase 1	The uprate of the existing Ammonia Plant approved under Major Project Approval MP 08_0129
Phase 2	Additional storages for nitric acid (including a 2,000 tonne nitric acid storage tank), solid ammonium nitrate and ammonium nitrate solution and upgrades to existing infrastructure including cooling towers, air compressors, loading facilities, electrical systems, effluent and steam systems approved under Major Project Approval MP 08_0129
Phase 3	Additional Nitric Acid Plant (NAP4) and Ammonium Nitrate Plant (ANP3) approved under Major Project Approval MP 08_0129
Phase 4	Construction of three ammonia flares approved under Major Project Approval MP 08_0129 (MOD2)
Phase 5	Relocation and increase in storage capacity of a previously approved nitric acid storage tank approved under Major Project Approval MP 08_0129 (MOD2)
Phase 6	Minor Design Variation under Condition 7F of MP 08_0129 for relocation of the new site boiler from the original approved location

SSD_7831	State Significant Development consent SSD 7831 for the construction of a containment cell to remediate a former arsenic sludge disposal pit in the north western portion of the site
SSD_7831 EIS	The Environmental Impact Statement titled <i>Orica Kooragang Island Remediation Program</i> , dated 15 February 2015, prepared by Golder Associates Pty Ltd
SSD_7831 RtS	The response to submissions report titled <i>Orica Kooragang Island Remediation Program (SSD 7831) Response to Submissions</i> , dated 22 May 2017, prepared by Orica
The Facility	The Orica manufacturing facility located on Kooragang Island including an ammonia plant, three nitric acid plants, two ammonium nitrate plants and a product dispatch facility and associated remediation works
The Project	The expansion approved under MP 08_0129
The Site	Lots 2 and 3 in Deposited Plan 234288 located at 15 Greenleaf Road, Kooragang Island, Newcastle, New South Wales

ACRONYMS AND ABBREVIATIONS

AEMR	Annual Environmental Management Report
ANP	Ammonium nitrate plant
AQMP	Air Quality Management Plan
AS	Australian Standard
BCA	Building Code of Australia
CCMP	Containment Cell Management Plan
CEMP	Construction Environmental Management Plan
Council	The City of Newcastle
CSS	Construction Safety Study
DP	Deposited Plan
DPIE	NSW Department of Planning, Industry and Environment (or the Department)
EA	Environmental Assessment
EIS	Environmental Impact Statement
EMS	Environmental Management Strategy
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
ERP	Emergency Response Plan
ESCP	Erosion and Sediment Control Plan
FHA	Final Hazard Analysis
FSS	Fire Safety Study
GMP	Groundwater Monitoring Program
HAZOP	Hazard and Operability Study
IAPAR	Independent Audit Post Approval Requirements (May 2020)
IEA	Independent Environmental Audit
KI	Kooragang Island
LTEMP	Long Term Environmental Management Plan
NAP	Nitric acid plant
NC	Non-compliance
NMP	Noise Management Plan
NSW	New South Wales
OEMP	Operational Environmental Management Plan
Orica	Orica Australia Pty Limited
PM ₁₀	Particulate matter less than 10 microns
PM _{2.5}	Particulate matter less than 2.5 microns

Ramboll	Ramboll Australia Pty Ltd
RAP	Remediation Action Plan
RtS	Response to Submissions
RVR	Remediation Validation Report
SMP	Soil Management Plan
SMS	Safety Management System
SSD	State Significant Development
SWMP	Stormwater Management Plan
the Department	NSW Department of Planning, Industry and Environment (or DPIE)
tpa	Tonnes per annum
TSP	Total Solid Particles
WEP	Water Efficiency Plan
WMP	Waste Management Plan

1. EXECUTIVE SUMMARY

Ramboll Australia Ltd (Ramboll) was engaged by Orica Australia Pty Limited (Orica) to conduct an Independent Environmental Audit (IEA) of the Orica Kooragang Island manufacturing facility (the Facility) located at 15 Greenleaf Road, Kooragang, New South Wales (NSW) and described as Lots 2 and 3 in Deposited Plan (DP) 234288 (the Site).

The Facility includes an ammonia plant, three nitric acid plants, two ammonium nitrate plants and a product dispatch facility. Major Project Approval 08_0129 (MP 08_0129) was granted for the expansion of the Facility on 1 December 2009. MP 08_0129 has since been modified on three occasions. The expansion project approved under MP 08_0129 is being staged over six phases and is referred to in this report as 'the Project'. The Facility as it was prior to commencement of the Project is referred to as 'the Initial Operations'. Phase 6 of the Project (installation of a new boiler) was undertaken during the Audit Period. Phase 1 and Phase 4 had been completed in prior audit periods. Phase 2, Phase 3 and Phase 5 of the Project have not yet been undertaken.

A separate state significant development approval number 7831 (SSD_7831) was granted on 10 August 2018 to construct a containment cell to remediate a former arsenic sludge disposal pit in the north western portion of the Site. Construction of the containment cell was completed during the Audit Period.

This audit was required under condition 52 of MP 08_0129 and conditions 15 and 16 of SSD_7831. Two previous IEAs have been undertaken for MP 08_0129. This is the first IEA for SSD_7831. The objective of the audit was to independently assess the environmental performance and compliance status of the Project under MP 08_0129 and the remediation works under SSD 7831 during the Audit Period. A site inspection was conducted on 5 August 2020.

The Auditors assessed the development to be generally compliant with the conditions of approval in MP 08_0129 and SSD_7831. No non-compliances or opportunities for improvement were identified in relation to SSD_7831. Two non-compliances with MP 08_0129 were identified; however, only one has a recommended action. The non-compliances are summarised as follows:

- NC1 (MP 08_0129 condition 23) - Phase 4 of the Project involved installation three ammonia flares that became operational in 2016/17 (during the previous audit period). The flares generally only activate intermittently for short periods and flare activation reports are submitted annually. EPL 828 does not require monitoring of emissions from the flares, it requires only continuous monitoring of gas flow to the flares. Orica sought clarification from the Department in March 2018 regarding the requirement for an Air Quality Verification Study to be completed for the flares as Orica considers it is not practical from a technical perspective. Orica did not receive a response and is working on the basis that this position is acceptable to the Department. The Auditors consider this condition to be non-compliant as the Department has not formally agreed with Orica's position that an Air Quality Verification Study of the flares is not required. It is recommended that formal acceptance be sought from the Department that an Air Quality Verification Study of the flares is not required.
- NC2 (MP 08_0129 condition 40) - Effluent is discharged to the Hunter River at monitoring point 23 under the Environment Protection Licence (EPL). Stormwater is discharged to the Hunter River at six locations (EPL monitoring points 10 to 15). In each year of the Audit Period, Orica has reported non-compliances with conditions relating to effluent and/or stormwater discharges in its Annual Return to the EPA. As the EPL does not include concentration limits for stormwater discharges, Orica applies guideline values from the ANZECC & ARMCANZ (2000) water quality guidelines as criteria for assessing compliance with condition L1.1 of the EPL for monitoring points 10 to 15. As there are regular exceedances of ANZECC & ARMCANZ (2000) guidelines, Orica makes a general statement of non-compliance in the Annual Return. This condition applies to the Project whereas the EPL

applies to the site as a whole (the Project and the Initial Operations). As the causes of non-compliances with EPL requirements cannot be separated between the Project and the Initial Operations that existed prior to the Project, the Auditors have taken a conservative approach in assessing this condition as non-compliant. As the non-compliances with EPL conditions have been reported to the EPA and are subject to improvement programs under the EPL and/or discussions between the EPA and Orica, the Auditors make no further recommendation.

Three opportunities for improvement were identified in relation to MP 08_0129 as follows:

- That the Transport of Hazardous Materials Plan be reviewed for any changes that may be required as a result of changes in the road network since 2013.
- That Orica seek clarification from the Department on the intended application of condition 19 as it appears likely that it is relevant to Phase 3 of the Project (expansion of nitric acid and ammonium nitrate capacity), which has not commenced.
- That the Noise Management Plan be updated when the new boiler is fully operational.

Management systems and environmental performance are considered to be of a generally high standard.

2. INTRODUCTION

2.1 Background

Ramboll Australia Ltd (Ramboll) was engaged by Orica Australia Pty Limited (Orica) to conduct an Independent Environmental Audit (IEA) of the Orica Kooragang Island manufacturing facility (the Facility) located at 15 Greenleaf Road, Kooragang, New South Wales (NSW) and described as Lots 2 and 3 in Deposited Plan (DP) 234288 (the Site).

The Facility includes an ammonia plant, three nitric acid plants, two ammonium nitrate plants and a product dispatch facility and employs approximately 210 permanent employees and around 40 regular contractors. During plant shutdowns there are contractors on site. The Facility is a designated Major Hazard Facility under Work Health and Safety legislation.

The ammonia plant uses natural gas (methane) to produce ammonia (NH₃). This ammonia is used in the manufacture of nitric acid and ammonium nitrate and is also sold for use as an agricultural fertiliser and a refrigerant. The three nitric acid plants (NAP1, NAP2 and NAP3) convert ammonia into nitric acid for sale or for use in the ammonium nitrate plants (ANP1 and ANP2) to produce ammonium nitrate for use as a fertiliser or in the manufacture of explosives for the mining and quarry industries.

The Facility has operated for approximately 50 years. Major Project Approval 08_0129 (MP 08_0129) was granted for the expansion of the Facility on 1 December 2009. MP 08_0129 has since been modified on three occasions. The expansion project approved under MP 08_0129 is being staged over six phases and is referred to in this report as 'the Project'. The Facility as it was prior to commencement of the Project is referred to as 'the Initial Operations'.

The Project broadly consists of:

- The uprate of the existing Ammonia Plant (Phase 1)
- Additional storage for nitric acid, solid ammonium nitrate and ammonium nitrate solution (Phase 2)
- Upgrades to existing infrastructure including cooling towers, air compressors, loading facilities, electrical systems, effluent and steam systems (Phase 2)
- An additional Nitric Acid Plant (NAP4) (Phase 3)
- An additional Ammonium Nitrate Plant (ANP3) (Phase 3).
- Construction of Ammonia Flares (Phase 4)
- Relocation and increase in storage capacity of a previously approved nitric acid storage tank (Phase 5)
- Replacement of old boiler with new boiler in new location (Phase 6)

As a result of a review of the detailed design against operational requirements associated with Phase 2 and 3 of the project, the plant and equipment layout was amended with a modification of MP 08_0129 approved on 11 July 2012 (MP 08_0129 MOD1). The modification was supported by the Environmental Assessment titled *Kooragang Island Modification Request Environmental Assessment*, dated 20 April 2011 (MP 08_0129 MOD1 EA) and the associated response to submissions titled *Response to Submissions: Orica Modification 1*, dated 22 July 2011, prepared by AECOM (MP 08_0129 MOD1 RtS).

MP 08_0129 was again modified on 17 December 2014 (MP 08_0129 MOD2) to allow the construction of three ammonia flares (Phase 4) and the relocation and increase in storage capacity of a previously approved nitric acid storage tank (Phase 5). The modification was supported by the Environmental Assessment titled *Kooragang Island Modification Request Environmental Assessment*, dated 13 November 2013 (MP 08_0129 MOD2 EA) and the associated

response to submissions titled *Response to Submissions Report*, dated 10 February 2014, prepared by AECOM (MP 08_0129 MOD2 RtS).

A third modification was approved on 17 December 2015 (MP 08_0129 MOD3) to increase the ammonia production limit from 360,000 tpa to 385,000 tpa. The modification was supported by the Environmental Assessment titled *Orica Kooragang Island Ammonia Production Limit Increase*, dated 6 October 2015, prepared by Orica (MP 08_0129 MOD3 EA).

A sixth stage of the expansion project (Phase 6) was added as a Minor Design Variation under Condition 7F of the Project Approval for relocation of the new site boiler from the original approved location.

Phase 6 of the Project was undertaken during the Audit Period. Phase 1 and Phase 4 had been completed in prior audit periods. Phase 2, Phase 3 and Phase 5 of the Project have not yet been undertaken.

A separate state significant development approval number 7831 (SSD_7831) was granted on 10 August 2018 to construct a containment cell to remediate historic contamination associated with a former arsenic sludge disposal pit in the north western portion of the Site. The containment cell was completed in 2019 and comprised construction of a low permeability soil/bentonite cut-off wall with an integrated capping system which was designed to hydraulically isolate the identified arsenic contamination in accordance with a Remediation Action Plan (RAP). The cut-off wall component of the integrated system is approximately 12 metres in depth and the cap covers an area of approximately 4,200 square metres. Remediation in accordance with the RAP was required under Management Order 20181401 issued by the NSW EPA under the *Contaminated Land Management Act 1997*.

The Facility is also subject to an Environmental Protection Licence (EPL) issued by the NSW Environment Protection Authority (EPA) under the *Protection of Environment Operations Act 1997* (EPL Licence number 828). EPL 828 is not included within the scope of this IEA except as referenced in the conditions of consent.

This audit is required under condition 52 of MP 08_0129 and conditions 15 and 16 of SSD_7831. Two previous IEAs have been undertaken for MP 08_0129. This is the first IEA for SSD_7831.

2.2 Audit Objectives

The objective of the Audit was to independently assess the environmental performance and compliance status of the Project under MP 08_0129 and the remediation works under SSD 7831 during the Audit Period.

2.3 Audit Scope

MP 08_0129

The requirements for the audit are outlined in condition 52 of MP 08_0129 as follows:

52. 2 years after the commencement of operations of Phase 1 of the Project, and every 3 years thereafter, or at such intervals as the Secretary may agree, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the Project and within 1 month of each audit submit a report to the Secretary. This audit must:

- a) be conducted by a suitably qualified, experienced, and independent team of experts whose appointment has been endorsed by the Secretary;*
- b) assess the environmental performance of the Project, and its effects on the surrounding environment;*

- c) *assess whether the Project is complying with the relevant standards, performance measures, and statutory requirements;*
- d) *review the adequacy of any strategy/plan/program required under this approval; and, if necessary,*
- e) *recommend measures or actions to improve the environmental performance of the Project, and/or any strategy/plan/program required under this approval.*

Note: The audit team must include experts in the field of noise and air quality.

SSD_7831

The requirements for the audit are outlined in conditions 15 and 16 of SSD_7831 as follows:

C15. Within one year of the commencement of operation, and every three years after, unless the Planning Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit (audit) of the development. Audits must:

- a) *be led and conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Planning Secretary;*
- b) *be carried out in consultation with the relevant agencies;*
- c) *assess the environmental performance of the development and assess whether it is complying with the requirements in this consent, and any strategy, plan or program required under this consent;*
- d) *review the adequacy of any approved strategy, plan or program required under this consent; and*
- e) *recommend measures or actions to improve the environmental performance of the development, and any strategy, plan or program required under this consent.*

C16. Within three months of commissioning an Independent Environmental Audit, or within another timeframe agreed by the Planning Secretary, a copy of the audit report must be submitted to the Planning Secretary and any other NSW agency that requests it, together with a response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Planning Secretary.

Note: The audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Planning Secretary.

2.4 Audit Team

The Audit Team comprised Victoria Sedwick (Lead Auditor and Contamination), David Ford (Auditor), Taylor Jackson (Auditor) and Greer Laing (Noise and Air Quality) of Ramboll. The Department of Planning, Industry and Environment (the Department or DPIE) issued a letter of endorsement for the Audit Team on 17 June 2020 (**Appendix C**).

2.5 Audit Period

The site visit for this Audit was conducted on 5 August 2020. The Audit Period for MP 08_0129 is from 8 August 2017 (date of previous audit) to 5 August 2020. The Audit Period for SSD_7831 is from 10 August 2018 (date of consent) to 5 August 2020.

3. METHODOLOGY

The Audit was conducted generally in accordance with Australian Standard AS/NZS ISO 19011:2014 Australian/New Zealand Standards: Guidelines for quality and/or environmental management systems auditing and the Department's revised guideline Independent Audit: Post Approval Requirements, May 2020 (IAPAR 2020).

3.1 Selection and Endorsement of Audit Team

The Ramboll Auditors referred to in Section 2.4 have experience in conducting environmental compliance audits and are independent from Orica. Victoria Sedwick is a certified Lead Auditor with Exemplar Global (Certificate No. 13180). As required under the Conditions of Consent, the Department issued a letter of endorsement of the Audit Team on 17 June 2020 (**Appendix C**).

3.2 Independent Audit Scope Development

The scope for the Audit was developed to assess environmental performance in relation to MP 08_0129 and SSD 7831 during the Audit Period, which included all post approval documents prepared to satisfy the conditions relevant to the Audit Period.

Document review

Ramboll undertook a review of documentation relevant to the environmental management, compliance and performance of the Project including, but not limited to:

- Development consents for MP 08_0129 and SSD_7831
- Supporting environmental assessment documents for MP 08_0129 and SSD_7831
- Management plans and other documentation as listed in Section 4.1
- Complaints Register
- Correspondence records
- Previous Independent Audits for MP 08_0129
- Annual Environmental Management Reports (AEMR) for the Audit Period (2017, 2018 and 2019) relating to MP 08_0129
- Third party assessments and compliance reports.

Develop audit plan

A comprehensive protocol (Audit Table) was developed for each development consent to facilitate onsite interviews and inspection for the assessment of compliance. The Audit Tables include:

- A unique identification number for each condition of consent (ID)
- The exact wording of the compliance requirement
- Evidence used to assess and determine whether each requirement has been complied with
- Commentary on findings and recommendations
- Recording the status of compliance
- A unique identification number for each non-compliance (NC)

The completed Audit Tables are provided in **Appendix 1**.

3.3 Site Inspection and Interviews

A site inspection was undertaken on 5 August 2020 by David Ford and Taylor Jackson. Victoria Sedwick attended the opening meeting by teleconference. The following personnel were interviewed during the site inspection:

- Nathan Robinson, Senior Specialist – Environment
- Drew Williams, Environment Advisor
- Antony Taylor, Senior Manager - Safety, Health, Environment and Security

Photographs taken during the site inspection are provided in **Appendix D**.

3.4 Consultation

The Auditors consulted with the NSW EPA (Steven Tan, Senior Operations Officer, Regulatory Operations – Metro North) in relation to the remediation works under SSD 7831. Subject to the pending findings of the Site Auditor, the EPA did not identify any areas of specific concern in relation to the remediation works.

3.5 Compliance Status Descriptors

This Audit Report has been prepared generally in accordance with the IAPAR 2020. As such, the following compliance descriptors have been used:

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

Observations have also been made that identify opportunities for improvement with recommendations given where relevant (refer to Section 5).

4. AUDIT FINDINGS

4.1 Approvals and Documents Reviewed

Approvals and documents provided by Orica and/or available on the Orica website, as well as the Department's Major Projects website, reviewed by the Auditors included:

MP 08_0129

- Major Project Approval MP 08_0129 to increase the ammonium nitrate manufacturing capability as modified by MOD1 (11 July 2012), MOD2 (17 December 2014) and MOD3 (17 December 2015).
- Construction Environmental Management Plan, Orica, rev 3, November 2016
- Operations Environmental Management Plan, Orica, rev 9, June 2020
- 2017 Annual Environmental Management Report, Orica, December 2017
- 2018 Annual Environmental Management Report, Orica, December 2018
- 2019 Annual Environmental Management Report, Orica, December 2019
- 2017 Independent Environmental Audit, Edge Environment, June 2018
- 2014 Independent Environmental Audit, SLR Consulting, March 2014
- Hazard Audit 2019, Sherpa Consulting, 20 December 2019
- Fire Safety Study, Pinnacle Risk Management, June 2019
- Safety Management System, Orica, September 2019
- Phase 6 Pre-Start Up Compliance Report, Orica, 15 August 2019
- Phase 6 Post Start-Up Compliance Report, Orica, 12 December 2020
- EPL 828 Annual Return 2018/19
- EPL 828 Annual Return 2019/20
- Construction Air Quality Management Plan, GHD, December 2009
- Noise Management Plan, Atkins Acoustics and Associates, August 2011
- Annual Noise Audit, Atkins Acoustics and Associates, June 2020
- Environmental Noise Audit, Atkins Acoustics and Associates, May 2019
- Environmental Noise Audit, Atkins Acoustics and Associates, May 2018
- Bunding Improvement Works Report 2018-2019, Orica, March 2019
- Bunding Improvement Works Report 2019-2020, Orica, March 2020
- Landscape Plan, AECOM, June 2011
- Ammonia Plant Uprate Waste Management Plan, Orica, February 2013
- Annual Ammonia Flare Activation Summary (January 2019 – December 2019), Orica, 13 March 2020.
- Ammonia Flare Activation Summary (July 2018 – September 2018), Orica, 15 September 2018.
- Various communications between the Department and Orica

SSD 7831

- State Significant Development consent SSD 7831 for the construction of a containment cell to remediate a former arsenic sludge disposal pit in the north western portion of the site.
- Construction Environmental Management Plan, AECOM, October 2018
- Health and Safety Plan, Orica, 18 September 2018
- Arsenic induction (PowerPoint) dated February 2019
- Project induction register from 25/01/19 to 17/06/19
- Remediation Validation Report, Golder Associates, 24 December 2019
- Long Term Environmental Management Plan, Golder, rev 0, May 2019
- Long Term Environmental Management Plan, Golder, rev 1, May 2020
- Sampling, Analysis and Quality Plan (for the Groundwater Monitoring Plan), Golder, rev 1, May 2020

- July 2019 Biannual Arsenic Groundwater Monitoring Event, Orica Kooragang Island, Golder Associates, 28 August 2019
- Post Remediation Annual Groundwater Monitoring Event – March 2020, Golder Associates, 4 May 2020
- Containment Cell Management Plan, Golder, rev1, November, 2018
- Remediation Action Plan, Golder Associates, rev 2(a), February 2017
- Interim Advice - Long-Term Environmental Management Plan: Arsenic Remediation Project, Orica Kooragang Island, C.M. Jewell & Associates, 5/09/19
- Arsenic containment cell quarterly inspection checklist dated 22/07/20
- Communications Strategy, Orica, rev3, 6 July 2020
- CRG meeting agenda, 26 August 2019
- CRG meeting notes, 27 May 2019
- Various communications between the Department and Orica
- Various communications between the EPA and Orica

For a complete listing of communications, refer to the Audit Tables in **Appendix A**.

4.2 Compliance Performance

The Auditors assessed the Facility to be compliant with MP 08_0129 and SSD 7831 except for the following non-compliances. Refer to the Independent Audit Table (**Appendix A**) for full details of the identified non-compliances and compliance status of other conditions.

MP 08_0129

Key non-compliances with the conditions of MP 08_0129 are noted in Table 1. Section 5.1 provides recommendations associated with each non-compliance below.

Table 1: Summary of Non-compliances – MP 08_0129

NC#	Condition ID	Non-compliance
NC1	23	Phase 4 of the Project involved installation three ammonia flares that became operational in 2016/17 (during the previous audit period). The flares generally only activate intermittently for short periods and flare activation reports are submitted annually. EPL 828 does not require monitoring of emissions from the flares, it requires only continuous monitoring of gas flow to the flares. Orica sought clarification from the Department in March 2018 regarding the requirement for an Air Quality Verification Study to be completed for the flares as Orica considers it is not practical from a technical perspective. Orica did not receive a response and is working on the basis that this position is acceptable to the Department. The Auditors consider this condition to be non-compliant as the Department has not formally agreed with Orica's position that an Air Quality Verification Study of the flares is not required.
NC2	40	Effluent is discharged to the Hunter River at monitoring point 23 under the EPL. Stormwater is discharged to the Hunter River at six locations (EPL monitoring points 10 to 15). Effluent and stormwater monitoring result are published on Orica's website. In each year of the Audit Period, Orica has reported non-compliances with conditions relating to effluent and/or stormwater discharges in its Annual Return to the EPA. In some cases, the non-compliance relates to a loss of data or failure to collect a sample. For example, in August/September 2019 routine monthly calibration of the pH probe

		<p>at monitoring point 23 did not occur, resulting in data loss due to inaccurate readings (upstream probes showed that the discharge was within EPL limits).</p> <p>In a small number of cases, the non-compliances relate to exceedances of effluent concentration limits.</p> <p>As the EPL does not include concentration limits for stormwater discharges, Orica applies guideline values from the ANZECC & ARMCANZ (2000) water quality guidelines as criteria for assessing compliance with condition L1.1 of the EPL (comply with section 120 of the <i>Protection of the Environment Operations Act 1997</i>) for monitoring points 10 to 15. As there are regular exceedances of ANZECC & ARMCANZ (2000) guidelines, Orica makes a general statement of non-compliance in the Annual Return.</p> <p>This condition applies to the Project whereas the EPL applies to the site as a whole (the Project and the Initial Operations). As the causes of non-compliances with EPL requirements cannot be separated between the Project and the Initial Operations, the Auditors have taken a conservative approach in assessing this condition as non-compliant.</p>
Number of non-compliances identified:		2
Total number of compliance requirements:		73

SSD_7831

No non-compliances with SSD 7803 were identified.

Table 2: Summary of Non-compliances – SSD_7831

NC#	Condition ID	Non-compliance
N/A		
Number of non-compliances identified:		0
Total number of compliance requirements:		80

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

Management Order 20181401 under the *Contaminated Land Management Act 1997* requiring remediation of historic arsenic contamination in accordance with the RAP was issued by the NSW EPA during the Audit Period, replacing an earlier Management Order. No other Agency Notices, Orders, Penalty Notices or Prosecutions were issued during the Audit Period.

4.4 Previous Audit Recommendations (MP 08_0129)

An Independent Audit of MP 08_0129 was conducted in 2017. An assessment of progress on the recommendations made in the previous audit was presented in Table 3.

Table 3: Previous Audit Recommendations – MP 08_0129

Cond.	Audit Recommendation	Action
Non-compliance recommendations		
7C, 17	Ensure the submission requirements relating to new stages in the Project are fully complied with.	Updated staging plans are submitted annually in the AEMR. Submission requirements of condition 17 were met during the Audit Period.
45	Prepare and submit to the Secretary an updated landscape plan and gain approval for a staged implementation of landscaping required under the approval, potentially tied to the broader staging plan submitted annually.	Orica has sought clarification from the Department regarding the timing of the landscaping requirements as landscaping is linked to stage 2 of the project which is yet to commence.
48	Commence implementation of a weekly environmental inspections program when undertaking construction activities associated with the project.	This requirement has been detailed in the Project CEMP.
49B/C	Prepare and implement an Operational Environmental Management Plan for the flares.	The OEMP has been updated with the latest revision (version 9, June 2020) submitted to the Department and awaiting approval. Emissions to air are covered in general in the OEMP, although not specifically in relation to the flares.
53	Ensure all relevant post approval and audit documents are available on the website.	The website includes all relevant information listed under this condition.
Opportunity for Improvement Recommendations		
N/A	Noting the infrequent use of the flares (one reported activation between April and June 2017) it is recommended that Secretary confirmation be sought that an update to the Air Quality Management Plan is not required and that volumetric flow determination remains a suitable method for describing the emissions at points 24-36.	Orica sought clarification from DPE regarding the requirement for an Air Quality Verification Study to be completed relating to the site's three ammonia flares on 29 March 2018 which was viewed as not practical from a technical perspective. Orica did not receive a response and is working on the basis that this position is acceptable to the Department.
N/A	The Noise and Vibration Management Plan should include LAeq and LAmax noise management for the site following the addition of the boiler.	The new boiler is not yet fully operational. The Noise Management Plan will be updated when the boiler is fully operational.
N/A	Once the boiler is constructed and operational, conduct noise verification assessment to ensure noise levels from operation are below 10db. Low frequency components of boilers may require special attention.	The new boiler is not yet fully operational. Noise verification testing will be completed following the commissioning of the Boiler.
N/A	Whilst there have been no complaints regarding traffic management, it is recommended that weekly inspections are undertaken during construction and recorded and that occasional review of this requirement is included.	The Project CEMP includes weekly inspections during construction, although not specifically addressing traffic. There were no complaints relating to traffic during the construction of Phase 6 during the Audit Period.
N/A	The Water Efficiency Plan should be updated after the boiler is operational.	The new boiler is not yet fully operational. The Water Efficiency Plan will be updated when the boiler is fully operational.

4.5 EMP, Sub-plans and Post Approval Documents

Adequacy and compliance with the management plans and subplans relevant to the Audit Period were assessed. Management plans are considered to be adequate. Opportunities to improve two management plans have been identified (refer to section 5.2). Activities at the Site during the Audit Period were considered to be generally consistent with the management plans and sub-plans listed in Section 4.1.

4.6 EMS

The Facility's Environmental Management System (EMS) is integrated with other Site and corporate management systems as part of a comprehensive Quality and Safety Health Environment and Security (SHES) management system including the:

- Quality Management System;
- Emergency Management System including the Kooragang Island Emergency Plan;
- Safety Management System including the Major Hazard Facility Safety Case;
- HR systems and tools including SAP SuccessFactors (for training).

Orica uses computerised systems for the management of safety and environmental performance (Enablon) and maintenance (SAP). Aspects of the management system functions observed during the site visit included:

- Generation of maintenance reports for plant and equipment;
- Waste management records including reports and data on waste types, quantities, costs and disposal methods;
- Record observations and actions from Safety Leadership Interaction (SLI) inspections; and
- Complaints management system.

A Construction Environmental Management Plan (CEMP) has been prepared for the Project in accordance condition 49A of MP 08_0129 (approved version dated November 2016). The CEMP applied to pre-construction and construction activities for Phase 6 of the Project during the Audit Period.

The Project also operates in accordance with an Operational Environmental Management Plan (OEMP) in accordance condition 49B of MP 08_0129 (approved version dated June 2020). The OEMP relates to operational activities including Phase 1, Phase 4 and Phase 6 of the Project.

Other updates made during the Audit Period included:

- Submission of a subsequent Hazard Audit to the Department on 20 December 2019 as required prior to the commencement of construction for each Phase of the Project in accordance with conditions 14 and 15 of MP 08_0129. The initial Hazard Audit report was submitted to the Department on 14 November 2016 and is required to be updated at three yearly intervals.
- The Fire Safety Study was updated in June 2019 and submitted to the Department as part of the Phase 6 Pre-Start Up Compliance Report under condition 16 of MP 08_0129.
- General updates were made to the site's Emergency Plan and a copy supplied to the Department on 2 August 2019.

4.7 Environmental Performance

Management systems and environmental performance are considered to be of a generally high standard. Specific environmental matters are discussed in further detail below.

Air Quality - General

The Site cover is predominantly hardstand, gravel or grass so there is limited potential for surface dust generation. Construction works associated with the new boiler were limited to a small area with minimal potential for dust generation. Dust emissions from the prill tower are a known issue. A variation of EPL 828 was issued on 5 August 2020 (the day of the site visit) to include Pollution Reduction Program (PRP) 50 - Installation of new Pollution Controls at the Prill Tower. The PRP requires Orica to install an irrigated fibrebed scrubber at the Prill Tower (EPL Monitoring Point 16) to minimise PM_{2.5} ammonium nitrate emissions from the premises. Final completion of the installation is required by 31 January 2024.

The Site has undertaken air emissions monitoring in accordance with its EPL during the Audit Period with no exceedances of EPL conditions. Nitric acid plant stacks are monitored continuously for NOx. Other stacks are tested annually. Results are published on the Orica website.

Noise and Vibration - General

Noise modelling detailed in the EA predicted that the noise contribution associated with the site expansion would satisfy the 10dB below pre-expansion predicted levels consent requirement. Annual noise monitoring is undertaken and compared to predictions from the MP 08_0129 EA. The May 2020 noise monitoring report confirmed that noise contributions from the Project satisfied the noise criteria.

Soil and Water - General

The site has a potable and non-potable (recycled) water supplies. Site personnel advised that the Facility uses approximately 80% recycled water.

Stormwater at the Site is managed via a series of six catchments, three of which have first flush systems. Automatic flow samplers for selected catchments were inspected during the site inspection. The samplers appeared to be well maintained and were appropriately labelled to enable easy identification.

Process effluent is discharged to the north arm of the Hunter River. The discharge is monitored under the EPL. Continuous monitoring of effluent allows for diversion of the discharge to holding tanks or a diversion pit if parameters are out of specification. There were no water pollution related incidents directly attributed to Phase 6 construction activities associated with the Project recorded during the Audit Period. There were occasional non-compliances with EPL conditions and/or adopted criteria in relation to effluent and stormwater during the Audit Period as noted in section 4.2. The non-compliances have been reported to the EPA and are subject to improvement programs under the EPL and/or discussions between the EPA and Orica.

Bunding improvement works are undertaken annually in accordance with condition E1 of the EPL. During the Audit Period, the site completed bunding upgrades on the NAP2 and NAP3 oil consoles to minimise the potential for a loss of containment of oil to ground and surface water. Planned improvements in FY20/21 include replacing the effluent pond liner with a triple layer liner or replacing the pond with a bunded tank.

Waste - General

Waste is managed through contracting companies J.R. Richards (solid waste) and Environmental Treatment Solutions (hazardous and liquid wastes) who provide Orica with monthly invoices and waste reports. Example waste reports were viewed by the Auditors during the site inspection. General housekeeping around the Site was observed to be of a good standard with minimal rubbish or redundant equipment around. Separated waste bins were observed during the site inspection. From a brief visual inspection, there appeared to be no contamination issues arising from improper separation of waste streams.

Remediation Works

Remediation works under SSD 7831 are complete and a Remediation Validation Report has been prepared. The Site Auditor is yet to issue a Site Audit Statement and Site Audit Report under the *Contaminated Land Management Act 1997*.

Vegetation covering the containment cell has become dispersed with clover and other nuisance weeds. However, it is noted that these pose minimal environmental risk due to their shallow roots and no root tap weeds were observed. The SSD_7831 EIS (p47) noted that *"The area will be fenced and approval will be required to access and use the land for any purpose other than*

identified maintenance activities or monitoring". Signage indicating restrictions on activities, and a post and wire fence control access to the containment cell. A locked vehicular access gate provides approved access to the cap of the containment cell, with the key available from Security subject to permission from Orica's SHES team.

Soil and Water – Remediation Works

Earthworks and general ground disturbances associated with the construction of the containment cell could have result in mobilisation of sediment. Control measures including sediment fencing along the western boundary fence were in place to prevent sediment from leaving the Site.

The purpose of the remediation is to address historic contamination and improve groundwater quality. The cap and containment system has been designed to minimise the potential for soil and water impacts during the operational phase (SSD_7831 EIS). The containment cell capping system limits surface water infiltration within the footprint of the cell wall alignment. There has been one groundwater monitoring event since completion of the containment cell. Ongoing monitoring as per the LTEMP is required to verify effectiveness of the cell. Results are provided to both the EPA and DPIE. Selected groundwater monitoring bores were inspected by the Auditors during the site visit. The bores were appropriately labelled and appeared to be well maintained.

Air Quality and Odour – Remediation Works

Air quality and odour emissions associated with the Project were expected to be minimal and only limited to the construction phase from activities such as vehicle movements (dust) and excavations (dust and minimal odour). Ambient air quality monitoring was undertaken during construction works of the containment cell. The results spreadsheet was viewed by the Auditors. The monitoring included assessment of TSP, PM₁₀ and arsenic criteria. Some exceedances of PM₁₀ targets occurred during the works; however, none resulted in community complaints. The containment cell is covered with vegetation and there is limited potential for dust generation under long-term management.

Noise and Vibration – Remediation Works

Noise and vibration emissions associated with the remediation works were expected to be minimal and below the construction criteria. Impacts were limited to the construction phase and were anticipated to include a long armed excavator, crane and grader, trucks and light vehicles delivering materials and equipment and a generator for power supply. It was considered in the EIS that traffic movements associated with the Project would not result in any noticeable change to the traffic noise at sensitive receiver locations. No complaints were received relating to noise from the remediation works.

4.8 Complaints

Orica maintains a Community Enquiries & Complaints line with details available on the Orica website (<https://www.orica.com/Locations/Asia-Pacific/Australia/Kooragang-Island/Contact-Us#.XxEsBCqzaiM>). Information on how the community can contact Orica to discuss the Project or make a complaint in relation to site activities is provided in community newsletters, which are distributed to adjacent suburbs.

Complaints received by Orica are recorded in Enablon. Complaints are investigated to establish the root cause and assess whether the complaint is justified.

The following complaints were received during the Audit Period:

- Seven complaints have been received to date in 2020. One was a noise complaint from a resident of Stockton. The others related to odour, dust or visible air emissions. The Complaints Register also recorded a notification by Orica to the EPA of a visible emission

during shutdown of NAP1 so that the EPA would be aware in the event of a community complaint.

- One complaint was received in 2019 in relation to noise during startup of the Ammonia Plant.
- Three complaints were received in 2018 relating to odour issues from residents in Stockton.
- Three complaints from residents and industrial neighbours relating to odour issues and two complaints from residents in Stockton were received in 2017; however, not all of these complaints may relate to the Audit Period.

4.9 Incidents

No incidents requiring notification to the Department occurred during the Audit period.

4.10 Actual Versus Predicted Environmental Impacts

As mentioned in Section 4.9, there have been no significant or reportable incidents during the Audit Period. The Auditors have not identified significant inconsistencies between actual environmental impacts and the predicted environmental impacts. There has only been one groundwater monitoring event since completion of the containment cell under SSD 7831. Ongoing monitoring as per the LTEMP is required to verify effectiveness of the cell.

4.11 Site Inspection

The Auditors carried out a site inspection on 5 August 2020 accompanied by Orica personnel. Photographs taken during the site visit are provided in **Appendix D**.

4.12 Site Interviews

Interviews held at the Site on the day of the site inspection involved the following representatives of Orica:

- Nathan Robinson, Senior Specialist – Environment
- Drew Williams, Environment Advisor
- Antony Taylor, Senior Manager - Safety, Health, Environment and Security (Nathan Robinson and Drew Williams).

Information regarding the history of the Site and the Project was provided and documents and records were reviewed. Further information was later provided on request via email and has been incorporated into this Audit Report where relevant.

4.13 Improvement Opportunities

Opportunities for improvement in relation to MO 08_0129 have also been identified as shown in the following table. Refer to Section 5.2 for recommended actions. Refer to the Independent Audit Table (**Appendix A**) for full details.

Table 4: Opportunities for Improvement – MP 08_0129

Condition	Recommendation
15(a)	The Transport of Hazardous Materials Plan has not been updated since 2013. There may have been changes in the road network since then.
19	The application of Condition 19 is not clear. It appears likely that it is relevant to Phase 3 (expansion of nitric acid and ammonium nitrate capacity), which has not commenced.
32	The previous Independent Audit (Edge, 2018) recommended the Noise Management Plan be updated following installation of the new boiler. Although the new boiler commenced operating in December 2019, it is not yet fully operational and the old boiler has not yet been decommissioned.

5. RECOMMENDATIONS AND OPPORTUNITIES FOR IMPROVEMENT

5.1 Non-compliance recommendations

MP 08_0129

Table 5 provides a summary of the recommendations made in relation to non-compliances with MP 08_0129.

Table 5: Non-compliance Recommendations – MP 08_0129

NC#	Condition	Recommendation
NC1	23	That formal acceptance be sought from the Department that an Air Quality Verification Study of the flares is not required.
NC2	40	As the non-compliances with EPL conditions have been reported to the EPA and are subject to improvement programs under the EPL and/or discussions between the EPA and Orica, the Auditors make no further recommendation.

SSD_7831

No non-compliances with SSD 7831 were identified.

5.2 Opportunity for Improvement Recommendations

MP 08_0129

Table 6 provides a summary of the additional continual improvement recommendations identified for MP 08_0129 as part of this Audit. Specific details are included in Appendix 1.

Table 6: Opportunity for Improvement Recommendations – MP 08_0129

Condition	Recommendation
15(a)	That the Transport of Hazardous Materials Plan be reviewed for any changes that may be required as a result of changes in the road network since 2013.
19	That Orica seek clarification from the Department on the intended application of this condition as it appears likely that it is relevant to Phase 3 (expansion of nitric acid and ammonium nitrate capacity), which has not commenced.
32	That the Noise Management Plan be updated when the new boiler is fully operational.

SSD_7831

No opportunities for improvement were identified in relation to SSD 7803.

6. CONCLUSIONS

The Auditors assessed the development to be generally compliant with the conditions of approval in MP 08_0129 and SSD_7831. Two non-compliances with MP 08_0129 were identified; however, only one has a recommended action (that formal acceptance be sought from the Department that an Air Quality Verification Study of the flares is not required). Three opportunities for improvement were identified in relation to MP 08_0129, two of which relate to updating of management plans.

No non-compliances or opportunities for improvement were identified in relation to SSD_7831.

Management systems and environmental performance are considered to be of a generally high standard.

APPENDIX A

INDEPENDENT AUDIT TABLES

Table A-1: Compliance with Project Approval MP 08_0129					
Red text represents MOD 1 dated 11 July 2012; Purple text represents MOD2 dated 17 December 2014; Blue text represents MOD3 dated 17 December 2015					
ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	SCHEDULE 2 – ADMINISTRATIVE CONDITIONS				
	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.	<ul style="list-style-type: none"> Interview with site personnel Site visit observations OEMP (June 2020) CEMP (November 2016) 	A comprehensive management system is in place to manage potential impacts on the environment. General environmental management was observed to be of a high standard.	Compliant	
	Terms of Approval				
2	The Proponent shall carry out the Project generally in accordance with the: a) EA; b) EA (MOD 1); c) EA (MOD 2); d) EA (MOD 3); e) Site layout plans (Appendices A and B); and f) Statement of commitments for the Project (Appendix C).	<ul style="list-style-type: none"> Site visit observations Interview with site personnel 	The development is being carried out generally in accordance with the requirements, with minor exceptions as outlined in this table.	Compliant	
3	If there is any inconsistency between the above plans and 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.		No inconsistency between the documents listed in condition 2 was identified by the Auditors.	Not triggered	
4	The Proponent shall comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of:				
4a	any post approval documents that are submitted in accordance with this approval; and	<ul style="list-style-type: none"> Applicant's website: https://www.orica.com/Locations/Asia-Pacific/Australia/Kooragang-Island/Operations/Site-Projects#.Xw40mygzaiM 	The Auditors were advised that the Secretary requested the OEMP to be on the applicant's public website by 30 June 2020 and the 2016 Independent Hazard Audit to be on the public website in March 2020. The Auditor viewed the applicant's website on 15	Compliant	

Table A-1: Compliance with Project Approval MP 08_0129					
Red text represents MOD 1 dated 11 July 2012; Purple text represents MOD2 dated 17 December 2014; Blue text represents MOD3 dated 17 December 2015					
ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
			July 2020 and confirmed these documents were available.		
4b	the implementation of any actions or measures contained in these post approval documents .	<ul style="list-style-type: none"> 2017 Independent Environmental Audit, Edge Environment, June 2018 2019 AEMR 	Updates on responses to the 2017 Independent Environmental Audit and 2016 Independent Hazard Audit are included in the 2019 AEMR.	Compliant	
Limits on Approval					
5	The Proponent shall not produce more than the following at the Project Site: a) 385,000 tpa of ammonia product; b) 605,000 tpa of nitric acid product; c) 750,000 tpa of ammonium nitrate product.	<ul style="list-style-type: none"> 2017 AEMR 2018 AEMR 2019 AEMR Interview with site personnel 	Product tonnages were below the approved limit during the Audit Period as follows: <u>Ammonia Product</u> <ul style="list-style-type: none"> 2017 - 237ktpa 2018 - 329ktpa 2019 - 324ktpa <u>Nitric acid product</u> <ul style="list-style-type: none"> 2017 - 334ktpa 2018 - 342ktpa 2019 - 348ktpa <u>Ammonia nitrate product</u> <ul style="list-style-type: none"> 2017 - 418ktpa 2018 - 437ktpa 2019 - 408ktpa 	Compliant	
6	Should the works covered by this approval be significantly delayed, or only partially completed, the Secretary may direct the Proponent to conduct the studies outlined in this approval for the completed works.	<ul style="list-style-type: none"> 2019 AEMR Interview with site personnel 	The Auditors understand that no directions have been received from the Planning Secretary. Studies and plans required by this approval are being submitted for approval as required by the Secretary. No construction works were reportedly undertaken in relation to Phase 2, 3 and 5 of the expansion construction program. Regulatory reporting associated with the upgraded ammonia plant (Phase 1)	Not triggered	

Table A-1: Compliance with Project Approval MP 08_0129					
Red text represents MOD 1 dated 11 July 2012; Purple text represents MOD2 dated 17 December 2014; Blue text represents MOD3 dated 17 December 2015					
ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
			has continued in accordance with the conditions of the project approval.		
	Project Staging				
7A	Unless otherwise agreed to in writing by the Secretary, the Proponent shall stage the carrying out of the Project generally in accordance with the approved Staging Plan.	<ul style="list-style-type: none"> 2019 AEMR DPIE letter to Orica re: Orica Kooragang Island (PA 08_0129) 2018/2019 AEMR, 10 February 2020 	Updated staging plans are submitted annually in the AEMR and are approved by the Secretary. Table 3 of the 2019 AEMR includes the most recent revised staging plan for the Audit Period. Approval of the 2019 AEMR, including the revised staging plan, was given by the Department on 10 February 2020.	Compliant	
7B	<p>Prior to the commencement of construction of the next Project stage following the commencement of operation of Phase 1 or within an alternative timeframe agreed to in writing by the Secretary, the Proponent shall prepare a Staging Report for the Project to the satisfaction of the Secretary. The Report shall:</p> <ul style="list-style-type: none"> a) summarise the scope and sequence of development that will be carried out under each Project stage; b) include plans and a description of the nature, duration and likely timing of development that will be carried out as part of each Project stage; c) demonstrate how the conditions of this approval are being complied with as each Project stage is progressively constructed, commissioned and becomes operational; d) report on the status of all post approval documents including which of these documents will be staged and/or combined (see Condition 7D); and 	<ul style="list-style-type: none"> 2017 AEMR 2018 AEMR 2019 AEMR 	Updated staging plans are submitted annually in the AEMRs (Table 3 in the 2017 and 2019 AEMRs and Table 2 in the 2018 AEMR). The Project Staging Plan includes the requirements listed in this condition.	Compliant	

Table A-1: Compliance with Project Approval MP 08_0129					
Red text represents MOD 1 dated 11 July 2012; Purple text represents MOD2 dated 17 December 2014; Blue text represents MOD3 dated 17 December 2015					
ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	e) include triggers for reviewing and updating the Staging Report, including the triggers referred to in Condition 7C				
7C	<p>The Proponent shall review and if necessary update and submit a revised Staging Report for the Project which has been prepared to the satisfaction of the Secretary (or advise the Secretary in writing that no changes to the Staging Report are required):</p> <p>a) no later than 2 months prior to the commencement of construction, commissioning and operation of development within each Project stage;</p> <p>b) within 3 months of any modifications to this approval; and/or</p> <p>c) when directed to do so by the Secretary.</p> <p>Notes:</p> <ul style="list-style-type: none"> These conditions do not relate to staged development within the meaning of Section 83B of the EP&A Act and are only required to be complied with at the time and to the extent that they are relevant to the specific stage(s). Where post approval documents and/or hazard studies have approval to be staged and/or combined under Condition 7D, then each approved document and/or study must clearly describe the specific stage to which the document or study applies, the relationship of this stage to any future stages and the trigger for updating these documents or studies. 	<ul style="list-style-type: none"> 2017 AEMR 2018 AEMR 2019 AEMR 2017 Independent Environmental Audit, Edge Environment, June 2018 	Updated staging plans are submitted annually in the AEMR. Works undertaken in the Audit Period relate to Phase 6 – construction and operation of Expansion Project Boiler. Approval to commence construction of Phase 6 was granted on 27 July 2015, in the prior audit period. The prior audit report (Edge, 2018) noted that a revised staging plan was not submitted two months prior to the commencement of construction of the flares. The Project staging plan was updated in the 2017 AEMR to address this non-compliance.	Compliant	
	Staged Submission of Post Approval Documents and Hazard Studies				
7D	<p>With the written approval of the Secretary, the Proponent is permitted to:</p> <p>a) submit any post approval documents on a progressive basis; and/or</p>	<ul style="list-style-type: none"> 2017 AEMR 2018 AEMR 2019 AEMR 	Orica has submitted plans on a progressive basis following discussions with the Department as confirmed in the previous 2017 Independent	Compliant	

Table A-1: Compliance with Project Approval MP 08_0129					
Red text represents MOD 1 dated 11 July 2012; Purple text represents MOD2 dated 17 December 2014; Blue text represents MOD3 dated 17 December 2015					
ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	b) combine any post approval documents required by this approval.	<ul style="list-style-type: none"> 2017 Independent Environmental Audit, Edge Environment, June 2018 	Environmental Audit, Edge Environment, June 2018. The revised staging plan outlining the progressive submission of plans is submitted annually to the Department in the AEMRs (refer to responses to conditions 7A to 7C).		
7E	<p>With the written approval of the Secretary, the Proponent is also permitted to progressively submit and/or combine certain hazard studies provided that the scope of these studies has been agreed to by the Secretary and that they are tied to and form part of the Staging Report required by Condition 7B.</p> <p>Notes:</p> <ul style="list-style-type: none"> Whilst any post approval documents and/or hazard studies may be submitted on a progressive basis, the Proponent must ensure that operations being carried out on the Project site are covered by approved post-approval documents and/or hazard studies at all times. Until they are replaced by equivalent approved post-approval documents and/or hazard studies required under the terms of this approval, the Proponent must continue to implement all existing post approval documents and/or hazard studies for the Initial Operations. There must be a clear relationship between the approved post-approval documents and/or hazard studies to be combined. 	<ul style="list-style-type: none"> Interview with site personnel 2017 Independent Environmental Audit, Edge Environment, June 2018 2019 AEMR Hazard Audit 2019, Sherpa Consulting, 20 December 2019 	<p>Hazard studies are submitted on a progressive basis for each stage of the Project. Works undertaken in the Audit Period relate to the construction of phase 6 – construction and operation of Expansion Project Boiler. Approval to commence construction of phase 6 was granted on 27 July 2015 (previous audit period).</p> <p>A Hazard Audit was prepared under condition 20 in 2019 and submitted to the Department on 20 December 2019.</p>	Not triggered	
	Minor Design Variations				
7F	At the written request of the Proponent, the Secretary may approve in writing, minor design variations to the plans approved in Condition 2d) in relation to ancillary	<ul style="list-style-type: none"> Interview with site personnel 	No minor modifications were sought by Orica during the Audit Period.	Not triggered	

Table A-1: Compliance with Project Approval MP 08_0129					
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ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	infrastructure but only if the Secretary considers the variations to be minor.				
	Structural Adequacy				
8	The Proponent shall ensure that all new buildings and structures on the site are constructed in accordance with the relevant requirements of the BCA. Notes: <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Interview with site personnel Site visit observations 	No building or structures were constructed or designed during the Audit Period.	Not triggered	
	Protection of Public Infrastructure				
9	The Proponent shall: <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Interview with site personnel Site visit observations 	The Auditor understands that no construction works requiring the use of public roads were undertaken during the period.	Not triggered	
10	Prior to commencement of construction, the Proponent shall prepare a dilapidation report of the public infrastructure in the vicinity of the Project Site (including roads, gutters, footpaths), in consultation with Newcastle Port Corporation and submit a copy of this report to the Secretary.	<ul style="list-style-type: none"> 2014 Independent Environmental Audit, SLR Consulting, March 2014 	The requirements under this condition were satisfied in the 2014 audit.	Not triggered	
11	Prior to the construction of any utility works, the Proponent shall obtain the relevant approvals from service providers, including Hunter Water Corporation.	<ul style="list-style-type: none"> 2014 Independent Environmental Audit, SLR Consulting, March 2014 	The requirements under this condition were satisfied in the 2014 audit.	Not triggered	
	Operation of Plant and Equipment				
12	The Proponent shall ensure that all plant and equipment used on the site is:	<ul style="list-style-type: none"> Site maintenance schedule in SAP 	Orica uses a computerised maintenance management system in	Compliant	

Table A-1: Compliance with Project Approval MP 08_0129					
Red text represents MOD 1 dated 11 July 2012; Purple text represents MOD2 dated 17 December 2014; Blue text represents MOD3 dated 17 December 2015					
ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	a) maintained in a proper and efficient condition; and b) operated in a proper and efficient manner.	<ul style="list-style-type: none"> Interview with site personnel Site visit observations 	SAP in which equipment functional locations are set up and maintenance reports can be generated. The Auditors viewed the register during the site visit. The register included instrumentation calibrations and inspections of protective and/or other preventative measures. Site visit observations and site records indicate that plant and equipment are generally well maintained.		
	Section 94 Contributions				
13	Prior to the operation of the Project, the Proponent shall pay Council \$272,000 in Section 94 contributions. Notes: This contribution is subject to indexation to reflect quarterly variations in the Consumer Price Index All Group Index Number for Sydney, as published by the Australian Bureau of Statistics.	<ul style="list-style-type: none"> 2014 Independent Environmental Audit, SLR Consulting, March 2014 	The requirements under this condition were satisfied in the 2014 audit.	Not triggered	
	SCHEDULE 3 - SPECIFIC ENVIRONMENTAL CONDITIONS				
	HAZARDS				
	Pre-construction				
14	At least one month prior to the commencement of construction of each Project stage (except for construction of those preliminary works that are outside the scope of the hazard studies), or within such further period as the Secretary may agree, the Proponent shall prepare and submit for the approval of the Secretary the studies set out under subsections (a) to (d) (the pre-construction studies).	<ul style="list-style-type: none"> 2017 Independent Environmental Audit, Edge Environment, June 2018 	Works undertaken in the Audit Period relate to the construction of phase 6 – construction and operation of Expansion Project Boiler. Approval to commence construction of phase 6 was granted on 27 July 2015 (previous audit period).	Not triggered	

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14a	A Fire Safety Study to include the Initial Operations and each project stage. This study shall cover the relevant aspects of the Department's 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, to the NSW Fire Brigade;	<ul style="list-style-type: none"> 2017 Independent Environmental Audit, Edge Environment, June 2018 Interview with site personnel Fire Safety Study, Pinnacle Risk Management, June 2019 	The requirements under this condition were satisfied in the previous audit. The Auditors note that Orica elected to update the Fire Safety Study in June 2019 and submitted to the Department as part of the Phase 6 Pre-Start Up Compliance Report under condition 16.	Not triggered	
14b	A Hazard and Operability Study, chaired by a qualified person, independent of the Project approved by the Secretary prior to the commencement of the study (foreach project stage). 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 Proponent intends to defer the implementation of a recommendation, reasons must be documented;	<ul style="list-style-type: none"> 2017 Independent Environmental Audit, Edge Environment, June 2018 Interview with site personnel 	The requirements under this condition were satisfied in the previous audit. No HAZOP reports were submitted during the Audit Period.	Not triggered	
14c	<p>A Final Hazards Analysis (FHA) of the Project as modified, consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis. The Final Hazard Analysis shall:</p> <ul style="list-style-type: none"> report on the implementation of the recommendations of the Preliminary Hazard Analysis; re-evaluate and reconfirm the relevant data and assumptions from the Preliminary Hazard Analysis; re-evaluate and reconfirm all control measures for prevention and mitigation of incidents; and evaluate all relevant findings and recommendations from the official investigation report(s), as available, relating to the accident at West, Texas in April 2013 	<ul style="list-style-type: none"> 2017 Independent Environmental Audit, Edge Environment, June 2018 Interview with site personnel 	The requirements under this condition were satisfied in the previous audit. No FHAs were submitted during the Audit Period.	Not triggered	

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14d	A Construction Safety Study for each Project stage, consistent with the Department's Hazardous Industry Planning Advisory Paper No.7 - Construction Safety Guidelines for each project stage. For a project in which 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.	<ul style="list-style-type: none"> 2017 Independent Environmental Audit, Edge Environment, June 2018 Interview with site personnel 	The requirements under this condition were satisfied in the previous audit. No CSSs were submitted during the Audit Period.	Not triggered	
	Pre-commissioning				
15	The Proponent shall develop and implement the plans and systems set out under subsections (a) to (c), no later than two months prior to the commencement of commissioning of each Project stage, or within such further period as the Secretary may agree. The Proponent shall submit, for the approval of the Secretary, documentation describing those plans and systems. Commissioning shall not commence until approval has been given by the Secretary.	<ul style="list-style-type: none"> Orica letter to DPIE: Boiler Pre-Commissioning Updates, 2 August 2019 DPIE email re: Orica KI - Development Consent 08_0129 - Condition 16 - Pre- Start Compliance Report - Boiler Project - email 1 of 2, 27 August 2019 	Works undertaken in the Audit Period relate to Phase 6 – construction and operation of Expansion Project Boiler. Approval to commission the boiler was given on 27 August 2019.	Compliant	
15a	Transport of Hazardous Materials Plan – arrangements covering the transport of hazardous materials including details of routes to be used for the movement of vehicles carrying hazardous materials to or from the site (Initial Operations and Project). The routes selected shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No 11, 'Route Selection'. Suitable routes identified in the study shall be used except where departures are necessary for local deliveries or emergencies.	<ul style="list-style-type: none"> 2017 Independent Environmental Audit, Edge Environment, June 2018 Interview with site personnel 	Changes to the Transport of Hazardous Materials Plan were not required as part of Phase 6. The Auditors observe that the Plan has been in place since 2013. Although the additional nitric acid plant and ammonium nitrate plant have not yet been built as part of Phase 3, the Auditors recommend that the Transport of Hazardous Materials Plan be reviewed for any changes that may be required as a result of changes in the road network since 2013.	Not triggered	

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15b	Emergency Plan – The Proponent’s Emergency Plan and detailed procedures shall be updated to include the Project as modified and must be maintained for the life of the Project. The plan shall include detailed procedures for the safety of all people including consideration of the safety of all people outside of the facility who may be at risk from the Project. The Plan shall be consistent with the Department of Planning’s Hazardous Industry Planning Advisory Paper No. 1, ‘Industry Emergency Planning Guidelines’.	<ul style="list-style-type: none"> Interview with site personnel Orica letter to DPIE including the updated Emergency Plan as an attachment dated 2 August 2019 	<p>General updates were made to the site’s Emergency Plan and a copy supplied to the Department on 2 August 2019.</p> <p>A desktop emergency exercise was conducted on 4 September 2019 that considered a scenario where a natural gas leak occurs on the boiler and the vapour cloud ignites. No changes to the Emergency Plan were required as part of the exercise debrief.</p>	Compliant	
15c	Safety Management System – The Proponent’s Safety Management System shall be updated to include the Project as modified and must be maintained for the life of the Project. The document shall clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. The procedures shall ensure that the testing frequencies of all safety critical equipment and systems are consistent with the frequencies applied in the fault tree analyses undertaken in the Preliminary Hazard Analysis/Final Hazard Analysis. Records shall be kept on-site and shall be available for inspection by the Secretary upon request. The Safety Management System shall be developed in accordance with the Department of Planning’s Hazardous Industry Planning Advisory Paper No. 9, ‘Safety Management’.	<ul style="list-style-type: none"> Safety Management System, Orica, September 2019 Interview with site personnel Safety Critical Control Inspection report dated June 2020 (extracted from SAP) Process Safety Management Metric Report FY ending September 2019 	<p>The requirements under this condition were satisfied in the previous audit. No changes to the Safety Management System were required as part of Phase 6. A minor update was made during the Audit Period to align the Safety Management System with changes in the overall SHES management system.</p> <p>Safety critical equipment and systems are inspected and tested on a regular basis. The Inspection report extracted from SAP dated June 2020 was viewed by the Auditors during the site visit. Process Safety Management Metric Reports are produced as an annual record of performance, including preventative maintenance targets as well as safety incidents and follow-up actions.</p>	Compliant	
15c Note	Note: If a modification does not require an update of the studies listed in Conditions a) and) above, the Proponent		No modifications were made during the Audit Period.	Not triggered	

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	shall provide written justification to the satisfaction of the Secretary.				
	Pre-Start-up				
16	One month prior to the commencement of operation of each Project stage, the Proponent shall submit to the Secretary, a Pre-Start-up Compliance Report detailing compliance with conditions 14 and 15, 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 any requirement as imposed by the Secretary under condition 20A.	<ul style="list-style-type: none"> 2019 AEMR Phase 6 Pre-Start Up Compliance Report, Orica, 15 August 2019 Orica email to DPIE re: Development Consent 08_0129 - Condition 16 - Pre- Start Compliance Report - Boiler Project, 15 August 2019 	Commissioning of Phase 6 – construction and operation of Expansion Project Boiler occurred in December 2019. A pre-start up compliance report was submitted to the Department on 15 August 2019.	Compliant	
	Post-Start-up				
17	Three months after the commencement of operation of each Project stage, the Proponent shall submit to the Secretary, a Post-Start-up Compliance Report verifying that: a) transport routes specified under condition 15a) are being followed; b) the Emergency Plan required under condition 15b) is effectively in place and that at least one emergency exercise has been conducted; and c) the Safety Management System required under condition 15c) has been fully implemented and that records required by the system are being kept.	<ul style="list-style-type: none"> Phase 6 Post Start-Up Compliance Report, Orica, 12 December 2020 Orica email to DPIE submitting Phase 6 Post Start-Up Compliance Report, 12 December 2020 	Commissioning of the boiler commenced on 28 August 2019 and the boiler became operational on 12 December 2019. A post-start up compliance report was submitted to the Department on 12 December 2019. No changes were made to transport routes as a result of Phase 6. General updates were made to the site's Emergency Plan and a copy supplied to the Department on 2 August 2019. A desktop emergency exercise was conducted on 4 September 2019. No changes to the Emergency Plan were required as part of the exercise debrief. No changes were made to the Safety Management System as a result of Phase 6. A minor	Compliant	

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			update was made during the Audit Period to align the Safety Management System with changes in the overall SHES management system.		
	Risk Reduction Program				
18	<p>Within 12 months of the commencement of final operations of the Project the Proponent shall prepare a program for further risk reduction to the neighbouring land uses. The program shall:</p> <ul style="list-style-type: none"> a) be approved by the Secretary; b) identify the overpressure propagation risk from the Project as per Figure 10.5 of the EA; c) Identify the main risk contributors and analyse the appropriate measures to be implemented to reduce the risk; and d) include an implementation schedule with due dates and a person responsible for the implementation of each measure. <p>Note: In the case that the propagation risk from the Project is reduced earlier than anticipated in the EA, and it meets the NSW criteria, this condition will be satisfied and the risk reduction program will not be required</p>	<ul style="list-style-type: none"> • 2019 AEMR • Interview with site personnel 	Final operations have not commenced. Defined in the dictionary to the consent as: <i>"The operation of the Initial Operations and the Project in its end state, once all approved plants and infrastructure have been constructed and commissioned, as generally depicted on the plan in Appendix B"</i> . Phase 2, phase 3 and phase 5 of the project have not yet commenced construction.	Not triggered	
	Hazard Analysis Update				
19	Three years after the commencement of operations of the Project, or as otherwise agreed to by the Secretary , the Proponent shall undertake a Hazard Analysis of the Initial Operations and the Project to update the hazard analysis contained in the Preliminary Hazard Analysis and the Final Hazard Analysis.	<ul style="list-style-type: none"> • 2017 Independent Environmental Audit, Edge Environment, June 2018 	This requirement was not triggered during the Audit Period. Phase 1 of the Project commence operations in February 2012, meaning the condition would have been triggered during the previous audit period. The previous Independent Audit (Edge, 2018) reported that this condition had not been triggered as final operations had not commenced. The condition does	Not triggered	

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			not refer to final operations; however, it appears likely that it is relevant to Phase 3 (expansion of nitric acid and ammonium nitrate capacity), which has not commenced. It is recommended that Orica seek clarification from the Department on the intended application of this condition.		
	Hazard Audit				
20	<p>12 months after the commencement of operations of Phase 1 of the Project and every 3 years thereafter, or at such intervals as the Secretary may agree, the Proponent shall carry out a comprehensive Hazard Audit of the Existing Operations and the Project as modified and within 1 month of each audit submit a report to the Secretary.</p> <p>a) The audits shall be carried out at the Proponent's expense by a qualified person or team, independent of the Project, approved by the Secretary 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 as well as any outstanding recommendations from previous hazard audit reports (if applicable). If the Proponent intends to defer the implementation of a recommendation, reasons must be documented.</p> <p>c) first site hazard audit report and all subsequent reports shall cover the entire facility and include all Project stages that are in operation at the time of the hazard</p>	<ul style="list-style-type: none"> Hazard Audit 2019, Sherpa Consulting, 20 December 2019 Orica email to DPIE re: Project Approval 08-0129 Conditions 20 and 50 Submissions, 20 December 2019. 	<p>A Hazard Audit report was submitted to the Department on 14 November 2016 (previous audit period). A subsequent Hazard Audit was completed in December 2019 and submitted to the Department on 20 December 2019 (compliant with the required 3-yearly intervals). The 2019 Hazard Audit was undertaken in accordance with a protocol developed from the NSW Hazardous Industry Planning Advisory Paper 5 Hazard Audit Guidelines (HIPAP 5) and NSW Hazardous Industry Planning Advisory Paper 9 Safety Management Systems (HIPAP 9). The audit found that relevant requirements of AS 4326 and the SAFEX International Good Practice Guide: Storage of Solid Technical Grade Ammonium Nitrate have been implemented, as had the recommendations from the CSB</p>	Compliant	

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	<p>audit and shall (in addition to the general requirements detailed in Department of Planning's Hazardous Industry Planning Advisory Paper No. 5, 'Hazard Audit Guidelines'):</p> <ul style="list-style-type: none"> evaluate all relevant findings and recommendations from the official investigation report(s), as available, relating to the accident at West, Texas in April 2013. If necessary, the hazard audit report shall make appropriate recommendations to address any shortfalls; and report on the findings of the audit in relation to compliance with the current version of AS 4326 and the relevant provisions of the current version of the SAFEX International Good Practice Guide: Storage of Solid Technical Grade Ammonium Nitrate. 		investigation report into the West Fertilizer Company fire and explosion in Texas.		
	Further Requirements				
20A	The Proponent shall comply with all reasonable requirements of the Secretary in respect of the implementation of any measures arising from the hazard studies submitted in respect of conditions 14 to 20 inclusive, within such time as the Secretary may agree.	<ul style="list-style-type: none"> 2019 AEMR Letter from DPIE dated 3/3/20 	A Hazard Audit action plan is included in the AEMRs with the latest version in Section 12.1 of the 2019 AEMR. A letter from the Department dated 3 March 2020 was sighted by the Auditors confirming all actions from the 2016 audit had been closed out.	Compliant	
20B	The Proponent shall ensure that the risk associated with increased shipping operations is reduced to so far as is reasonably practicable (SFARP), consistent with the Work Health and Safety Regulation 2011 requirements and compliant with the land use criteria detailed in the NSW Department of Planning's Hazardous Industry Planning and Advisory Paper 4 (HIPAP4) during each stage of the Project. Records of the risk reduction identification and implementation process shall be maintained.	<ul style="list-style-type: none"> 2017 Independent Environmental Audit, Edge Environment, June 2018 	The requirements under this condition were satisfied in the previous audit which noted that Orica had shown that additional ammonia shipments resulted in a decrease in the risk profile, not an increase. Furthermore, the 2019 Hazard Audit found that relevant requirements of AS 4326 and the SAFEX International Good Practice Guide have been implemented.	Not triggered	

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	AIR QUALITY				
	Design				
21	The Proponent shall implement the emission control measures identified in the EA (Section 7.8.1) prior to the commencement of operations of the Project. These shall include: a) absorption columns in the new Nitric Acid Plant No.4 (NAP4) to reduce the NO _x ; b) catalytic reduction from the NAP4 stack to reduce the NO _x ; c) air scrubbing and recirculation technology in the new Prill Tower as part of the new Ammonium Nitrate Plant No. 3 (ANP3) to minimise particulates, including PM10 d) a refrigeration purge gas scrubber to be installed in the existing Ammonia Plant to reduce NO _x e) scrubbers on the new NAP4 and APN3 to remove ammonia	<ul style="list-style-type: none"> 2017 Independent Environmental Audit, Edge Environment, June 2018 2014 Independent Environmental Audit, SLR Consulting, March 2014 Interview with site personnel 	NAP4 and ANP3 have not been built. Only part (d) of this condition has been triggered and the Refrigeration Purge Gas Scrubber was commissioned in 2012 with implementation requirements satisfied in the 2014 Independent Environmental Audit. No changes during this Audit Period.	Not triggered	
	Ammonia and Nitrate Flares				
21A	The Proponent shall ensure that the ammonia and nitrate flares are operated in a proper and efficient manner in accordance with the requirements of the EPL for the premises.	<ul style="list-style-type: none"> EPL 828 NSW EPA POEO Public Register (EPL 828) 	<p>The flares were operational during the Audit Period. Relevant conditions of the EPL relating to operation of the flares are:</p> <ul style="list-style-type: none"> P1.2 – flares relate to monitoring points 34, 35 and 36 O8.2 - flares must be operated so that a flame is present at all times when air impurities are potentially required to be treated M2.1 – specifies air monitoring requirements for points 34, 35 and 36 (continuous volumetric flowrate) 	Compliant	

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			<ul style="list-style-type: none"> R4.1 – relating to annual ammonia flare activation summary reports No non-compliances with the above conditions were noted in the EPL Annual Returns for the Audit Period.		
	Monitoring				
22	The Proponent shall undertake air emission monitoring as required by the EPL for the Project.	<ul style="list-style-type: none"> EPL 828 Annual Return 2018/19 EPL 828 Annual Return 2019/20 Orica website 	The site has undertaken monitoring in accordance with its EPL during the Audit Period with no exceedances of EPL conditions. Results are published on the Orica website.	Compliant	
	Air Quality Verification Study				
23	The Proponent shall undertake an air quality verification study for each relevant stage of the Project to the satisfaction of the Secretary and the EPA. The study shall: <ol style="list-style-type: none"> be prepared by a suitably qualified expert whose appointment has been agreed to in writing by the Secretary; be based on a minimum of 12 months of monitoring data and be completed during the initial 18 months of operation or as otherwise agreed to in writing by the Secretary; include a verification of actual monitored emissions performance against the assumptions adopted within the EIS, including: <ul style="list-style-type: none"> point source pollutant concentrations; point source pollutant mass emission rates; and point source emission parameters as relevant to plume dispersion. confirm, through direct measurement, that applicable EPL air emission limits are being complied with; and 	<ul style="list-style-type: none"> Interview with site personnel EA (MOD 3) EPL 828 	Phase 4 of the project involved installation 3 ammonia flares that became operational in 2016/17 (during the previous audit period). The flares generally only activate intermittently for short periods and flare activation reports are submitted annually. EPL 828 does not require monitoring of emissions from the flares, it requires only continuous monitoring of gas flow to the flares. Orica sought clarification from the Department in March 2018 regarding the requirement for an Air Quality Verification Study to be completed for the flares as Orica considers it is not practical from a technical perspective. Orica did not receive a response and is working on the basis that this position	Non-compliant	NC1

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	e) confirm, using reasonable means, the effectiveness of the implemented emission controls in minimising air quality impacts.		<p>is acceptable to the Department. The Auditors consider this condition to be non-compliant as the Department has not formally agreed with Orica's position that an Air Quality Verification Study of the flares is not required. It is recommended that formal acceptance of this position be sought from the Department.</p> <p>The Air Quality Verification Study for the new boiler (Phase 6) is not yet due as operation commenced in December 2019 and 12 months of data is required.</p>		
24	Should the air quality verification study or routine monitoring required by the EPL indicate that emissions from the Project exceed the relevant regulatory criteria, the Department may request that Orica implement all reasonable and feasible measures to minimise emissions.	<ul style="list-style-type: none"> Interview with site personnel 	The Auditor understands no requests have been made by the Department to implement any additional measures.	Not triggered	
Mitigation					
25	The Proponent shall carry out all reasonable and feasible measures to minimise dust generated by the Project.	<ul style="list-style-type: none"> Site visit observations CAQMP (December 2009) Interview with site personnel 	<p>Table 4-1 in the Construction Air Quality Management Plan (CAQMP) outlines the dust control measures to be implemented during construction. Phase specific CEMPs are prepared if required.</p> <p>Orica has been working in consultation with the EPA to identify improvements to reduce dust emission from the prill tower and a scrubber is to be installed under a Pollution Reduction Program on the EPL (see condition 27).</p>	Compliant	

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26	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.	<ul style="list-style-type: none"> Interview with site personnel 	<p>The CEMP includes the following management measures:</p> <ul style="list-style-type: none"> "Trucks entering and leaving the premises carrying loads of dust generating materials must have their loads covered at all times, except during loading and unloading." "Trucks associated with the Project do not track dirt onto the public road network." <p>There were no bulk earthworks as part of Phase 6 construction. As Phase 6 construction was complete at the time of the Audit, the Auditors were not able to verify compliance; however, the Auditors have no reason to believe the requirements of the condition were not met.</p>	Compliant	
Further Emissions Reductions					
27	The Proponent shall investigate and report on the progress to reduce PM10 emissions from the existing Prill Tower on the Ammonium Nitrate Plant No. 1. The report shall: a) be provided annually, and can be reported through the Annual Environmental Management Report required by condition 50; and b) provide an update on the timeframe for implementation of emission controls.	<ul style="list-style-type: none"> 2019 AEMR 2018 AEMR 	<p>Updates have been provided in the AEMRs. The Auditors note that a variation of EPL 828 issued on 5 August 2020 (the day of the site visit) to include Pollution Reduction Program (PRP) 50 - Installation of new Pollution Controls at the Prill Tower. The PRP requires Orica to install an irrigated fibrebed scrubber at the Prill Tower (EPL Monitoring Point 16) to minimise PM2.5 ammonium nitrate emissions from the premises. Final completion of</p>	Compliant	

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			the installation is required by 31 January 2024.		
	Air Quality Management Plan				
27A	<p>The Proponent shall prepare and implement an Air Quality Management Plan for the Project to the satisfaction of the Secretary. The plan shall:</p> <ul style="list-style-type: none"> a) be prepared by a suitably qualified and experienced expert whose appointment has been agreed to in writing by the Secretary; b) be approved by the Secretary (see Conditions 49A and 49B for scope and timing and Condition 49C for management plan requirements); c) describe the measures that will be implemented to minimise the potential risks to adverse air quality in the regional air-shed including: <ul style="list-style-type: none"> • reasonable and feasible measures being employed on the Project site; • plant and equipment being maintained to ensure that it is in good order; • how the air quality impacts of the Project will be minimised and managed; and • identification of the likely nature and timing of Project-related activities and works that could generate potential elevated air emissions and a description of the mitigation measures that will be implemented to ensure compliance with the relevant conditions of this approval and the EPL. 	<ul style="list-style-type: none"> • 2014 Independent Environmental Audit, SLR Consulting, March 2014 • 2017 Independent Environmental Audit, Edge Environment, June 2018 • Interview with site personnel 	A construction Air Quality Management Plan (AQMP) was prepared for the project for Phase 1 and was assessed in the 2014 audit as compliant. Site personnel advised that the construction AQMP was not implemented for the boiler based on the minimal potential for dust generation. A separate operational AQMP has not been prepared; however, emissions to air are covered under the OEMP.	Compliant	
27B	The Proponent shall consult with the operators of the proposed IPL AN facility adjacent to the Project Site, with the objective of developing an Air Quality Risk Management Strategy suitable for incorporation into the Air Quality Management Plan. The objective of this strategy is to minimise the potential for cumulative air quality impacts		The IPL expansion project approval has lapsed.	Not triggered	

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	from any air emissions from the Project and the proposed IPL facility. This strategy is expected to include protocols for the communication and planning of planned non-routine operations such as plant startup, shutdown and commissioning events between the Project and the proposed IPL facility.				
27C	The Proponent shall provide evidence to the Secretary that it has made genuine and reasonable attempts to consult with the operators of the proposed IPL facility in order to develop a suitable Air Quality Risk Management Strategy for both it and the proposed IPL facility to follow.		The IPL expansion project approval has lapsed.	Not triggered	
27 Note	Note: Conditions 27B and 27C only apply if SSD-4986 is approved and if the proposed IPLAN facility becomes operational.		The IPL expansion project approval has lapsed.	Not triggered	
GREENHOUSE GAS EMISSIONS					
Emission Reductions for the Project					
28	Prior to the commencement of operation of each relevant stage of the Project, the Proponent shall implement the emissions reduction technology identified in the EA including: a) N2O abatement technology on the new Nitric Acid Plant (NAP4); and b) energy efficiency improvements to the Ammonia Plant		Not triggered by Phase 6. NAP4 has not yet been built. Energy efficiency measures included in the Ammonia Plant under earlier phases (in prior audit periods) of the Project included a Pre-Reformer, a new compressor powered by a steam turbine and a larger generator powered by a steam turbine.	Not triggered	
Emission Reductions for the Existing Site					
29	Within 6 months of the commencement of operations of NAP4, the Proponent shall implement N2O abatement technology on the three existing Nitric Acid Plant (NAP1, 2 and 3)		NF NAP4 has not yet been constructed.	Not triggered	

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	NOISE LIMITS				
	Noise Limits				
30	<p>The Proponent shall ensure that noise levels from the operation of the Project are at least 10dB(a) below noise levels from the initial Operations as specified by conditions 31 & 32 below</p> <p>Note: Ammonia flaring events are excluded from the noise limits and levels referred to in conditions 30 and 31.</p>	<ul style="list-style-type: none"> Annual Noise Audit, Atkins Acoustics and Associates, June 2020 Environmental Noise Audit, Atkins Acoustics and Associates, May 2019 Environmental Noise Audit, Atkins Acoustics and Associates, May 2018 	Annual noise monitoring has found that noise contributions from the Project satisfied the project noise criteria.	Compliant	
	Initial Operations – Noise Verification Program				
31	<p>Prior to the commencement of construction, the Proponent shall prepare and implement an Initial Operations Noise Verification Program to the satisfaction of the Secretary. The Program shall:</p> <ol style="list-style-type: none"> be undertaken by a suitably qualified and experienced person; identify future reference points that will be used to demonstrate compliance; collect new or review existing data, and report on the seasonal background levels for the noise catchment; and; confirm the noise levels from Initial Operations. <p>Note: Some construction activities may occur under the Project Approval provided that such activity are not undertaken during the monitoring period of that the proponent can demonstrate that the activity would not contribute to the background noise level, to the satisfaction of the Secretary.</p>	<ul style="list-style-type: none"> 2014 Independent Environmental Audit, SLR Consulting, March 2014 	The requirements of this condition were not triggered during the Audit Period. The requirements were satisfied in the 2014 Independent Environmental Audit.	Not triggered	

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	Noise and Vibration Management				
32	<p>The Proponent shall prepare and implement a Noise and Vibration Management Plan for the Project to the satisfaction of the Secretary. The Plan shall:</p> <p>a) be prepared by a suitably qualified and experienced expert whose appointment has been agreed to in writing by the Secretary</p> <p>b) be approved by the Secretary (see Conditions 49A and 49B for scope and timing and Condition 49C for management plan requirements);</p> <p>c) include a detailed monitoring program for reporting on ongoing compliance. The monitoring program shall:</p> <ul style="list-style-type: none"> outline the proposed receiver sites at Stockton and sites on Kooragang Island that would be monitored; include both attended and unattended noise monitoring; verify that actual noise levels from the Project are consistent with the predictions made in the EA; and verify that noise levels from the Project are 10dB(A) below the noise levels identified in condition 31 for the Proponents Initial Operations; <p>d) provide details of any complaints received in the preceding year relating to noise generated by the Project, and action taken to respond to those complaints; and</p> <p>e) detail procedures for implementing additional reasonable and feasible noise mitigation measures for the Project in response to exceedances of limits and/or noise complaints;</p> <p>f) be updated annually, unless otherwise agreed to by the Secretary; and</p>	<ul style="list-style-type: none"> Noise Management Plan, Atkins Acoustics and Associates, August 2011 2017 Independent Environmental Audit, Edge Environment, June 2018 	<p>No changes were made to the Noise Management Plan during the Audit Period. The previous Independent Audit (Edge, 2018) recommended the Noise Management Plan be updated following installation of the new boiler. Although the new boiler commenced operating in December 2019, it is not yet fully operational and the old boiler has not yet been decommissioned.</p> <p>The Auditors recommend that the Noise Management Plan be updated when the new boiler is fully operational.</p>	Compliant	

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	<p>g) describe the measures that will be implemented to prevent and minimise potential adverse noise and vibration impacts from the Project, including:</p> <ul style="list-style-type: none"> reasonable and feasible measures being employed on the Project site; plant and equipment being maintained to ensure that it is in good order; how potential noise and vibration impacts will be minimised and managed; and identification of the likely nature and timing of Project-related activities and works that could generate potential elevated noise emissions and a description of the mitigation measures that will be implemented to ensure compliance with the relevant conditions of this approval and the EPL. 				
	Ports Precinct Noise Management				
32A	<p>The Proponent shall use its best endeavours to participate in the development and implementation of a precinct wide noise map for the Port of Newcastle should one be developed to the satisfaction of the Secretary.</p> <p>Note: The aim of a noise map is to establish an efficient, equitable and cumulative noise management, monitoring and reporting framework across the precinct.</p>	<ul style="list-style-type: none"> Interview with site personnel 	The Auditors understand that a port wide noise map has not yet been developed.	Not triggered	

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	Hours of construction and operation						
33	The Proponent shall comply with the restrictions in Table 2, unless otherwise agreed by the Secretary. Table 2: Construction hours for the Project and Operation hours for the Project		<ul style="list-style-type: none">CEMP (November 2016)OEMP (June 2020)Interview with site personnel	Construction hours are detailed in Section 8.4.2 of the CEMP consistent with this condition. Site personnel advised that all construction works associated with Phase 6 of the Project were undertaken within these construction hours. The Auditors were not able to verify compliance with construction hours; however, the Auditors have no reason to believe the requirements of the condition were not met. Operation is permitted 24 hours a day, seven days a week.	Compliant		
	Activity	Day					Time
	Construction	Monday - Friday					7:00am to 6:00pm
		Saturday					8:00am to 1:00pm
		Sunday and Public Holidays					Nil
	Operation	All days					24 hours
Notes: Construction activities may be conducted outside the hours in Table 2 provided that the activities are not audible at any residence beyond the boundary of the Project Site.							
33A	Construction works outside of the work hours identified in Table 2 above may be undertaken in the following circumstances: a) works (excluding piling) that generates airborne noise that is inaudible at any residence beyond the boundary of the Project site or is no more than 5 dB(A) above rating background level at any residence in accordance with the Interim Construction Noise Guideline (DEC, 2009); b) works that are consistent with the Proponent’s existing maintenance procedures and are in accordance with the existing EPL; c) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons;		<ul style="list-style-type: none">Interview with site personnel	The Auditor understands that no construction works were undertaken outside the hours specified in condition 33.	Not triggered		

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	d) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm; or e) exceptional circumstances with the written agreement of the Secretary.				
	TRANSPORT				
	Design of Site Access, Internal Roads and Parking				
34	The Proponent shall ensure that new site access points, internal roads and parking associated with the Project are designed, constructed and maintained in accordance with the latest versions of the Australia Standard AS 2890.1:2004 and AS 2890.2:2002.	<ul style="list-style-type: none"> Interview with site personnel 	No new access points, internal roads or parking spaces were designed or constructed during the Audit Period.	Not triggered	
	Vehicle Queuing and Parking				
35	The Proponent shall ensure that all vehicles associated with the Project do not impede traffic flow on Greenleaf Road and Heron Road.	<ul style="list-style-type: none"> Site visit observations 	No vehicles associated with the site were observed impeding traffic flow on Greenleaf Road or Heron Road.	Compliant	
	Construction Traffic Management				
36	Prior to the construction of the Project, the Proponent shall prepare and implement a Construction Traffic Management Plan, consistent with the requirements of the RTA. The plan shall be prepared in consultation with Newcastle Port Corporation and submitted to the Secretary as part of the environmental management strategy for the Project, as required by condition 49.	<ul style="list-style-type: none"> 2014 Independent Environmental Audit, SLR Consulting, March 2014 	The requirements under this condition were satisfied in the 2014 Independent Environmental Audit. No changes to the Construction Traffic Management Plan (CTMP) were made during the Audit Period.	Not triggered	
	WATER EFFICIENCY				
37	The Proponent shall prepare and implement a Water Efficiency Plan for the Project to the satisfaction of the Secretary. The plan must: a) be submitted to the Secretary within 12 months of this approval or as otherwise agreed to by the Secretary;	<ul style="list-style-type: none"> 2014 Independent Environmental Audit, SLR Consulting, March 2014 2017 Independent Environmental Audit, Edge Environment, June 2018 	The requirements for preparation of a Water Efficiency Plan were satisfied in the 2014 Independent Environmental Audit. No changes to the Water Efficiency Plan were made during the Audit Period.	Compliant	

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	b) be prepared with reference to the Guidelines for Water Savings Action Plans (DEUS 2005); and c) include a report on the progress of investigations to receive recycled water from Hunter Water Corporations' recycled water scheme.	<ul style="list-style-type: none"> Interview with site personnel Email to EPA dated 12/12/19 confirming commencement of operation of the boiler (start of commissioning) 	The site receives recycled water from a nearby treatment plant which makes up approximately 80% of water used. It was recommended in the 2018 Independent Environmental Audit that the Water Efficiency Plan should be updated after the new boiler is operational. Operation of the boiler commenced in December 2019; however, it is not yet fully operational and the old boiler has not been decommissioned.		
	CONTAMINATION				
38	Prior to construction of the Project, the Proponent shall provide to the Secretary a detailed Project Site Plan showing the location of known soil and groundwater contamination areas. If the plan identifies that construction of the Project is likely to impact on known contamination areas, the Proponent shall prepare and implement a Remedial Action Plan (RAP), or update the existing RAP, to manage and remediate contaminated material in accordance with the requirements of the Contaminated Land Management Act 1997 and the recommendations of the RAP.	<ul style="list-style-type: none"> 2014 Independent Environmental Audit, SLR Consulting, March 2014 	The requirements under this condition were satisfied in the 2014 audit.	Not triggered	
39	Prior to construction of the Project, the Proponent shall prepare an Acid Sulphate Soil Management Plan in accordance with the Acid Sulphate Soils Manual, Acid Sulphate Soils Management Advisory Committee 1998	<ul style="list-style-type: none"> 2014 Independent Environmental Audit, SLR Consulting, March 2014 	The requirements under this condition were satisfied in the 2014 audit.	Not triggered	

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	STORMWATER				
	Discharges				
40	The Proponent shall ensure the Project meets the EPL requirements for stormwater and effluent discharges to the Hunter River	<ul style="list-style-type: none"> EPL 828 NSW EPA POEO Public Register (EPL 828) 2018 AEMR 2019 AEMR EPL 828 Annual Return 2017/18 EPL 828 Annual Return 2018/19 EPL 828 Annual Return 2019/20 	<p>Effluent is discharged to the Hunter River at monitoring point 23 under the EPL. Stormwater is discharged to the Hunter River at six locations (EPL 828 monitoring points 10 to 15). In each year of the Audit Period, Orica has reported non-compliances with conditions relating to effluent and/or stormwater discharges in its Annual Return to the EPA. In some cases, the non-compliance relates to a loss of data or failure to collect a sample. For example, in August/September 2019 routine monthly calibration of the pH probe at monitoring point 23 did not occur, resulting in data loss due to inaccurate readings (upstream probes showed that the discharge was within EPL limits).</p> <p>In a small number of cases, the non-compliances relate to exceedances of effluent concentration limits. As EPL 828 does not include concentration limits for stormwater discharges, Orica applies guideline values from the ANZECC & ARMCANZ (2000) water quality guidelines as criteria for assessing compliance with condition L1.1 of EPL 828 (comply with section 120 of the Protection of the Environment Operations Act 1997) for</p>	Non-compliant	NC2

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			<p>monitoring points 10 to 15. As there are regular exceedances of ANZECC & ARMCANZ (2000) guidelines, Orica makes a general statement of non-compliance in the Annual Return.</p> <p>Effluent and stormwater monitoring result are published on Orica's website.</p> <p>This condition applies to the Project whereas the EPL applies to the site as a whole (the Project and the Initial Operations). As the causes of non-compliances with EPL requirements cannot be separated between the Project and the Initial Operations, the Auditors have taken a conservative approach in assessing this condition as non-compliant.</p> <p>As the non-compliances with EPL conditions have been reported to the EPA and are subject to improvement programs under the EPL and/or discussions between the EPA and Orica, the Auditors make no further recommendation.</p>		
41	The Proponent shall comply with Section 120 of the Protection of the Environment Operations Act 1997.	<ul style="list-style-type: none"> Refer to Condition 40 	This condition duplicates condition L1.1 of EPL 828 and is addressed above under Condition 40.	Refer to Condition 40	

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Stormwater Management Plan					
42	<p>Prior to the commencement of construction of the Project the Proponent shall prepare and implement a Stormwater Management Plan for the Project in consultation with the Newcastle Port Corporation and to the satisfaction of the Secretary. The plan must:</p> <p>a) include detailed plans of the stormwater management system for the Project, incorporating the requirements for a retention system as specified in the Fire Safety Study;</p> <p>b) include an engineering assessment of the capacity of the Walsh Point stormwater system to accept additional flows;</p> <p>c) describe the procedures for the installation, inspection and maintenance of the stormwater system for the Project; and</p> <p>d) ensure that water sensitive design options avoid infiltration in areas of known soil and groundwater contamination.</p>	<ul style="list-style-type: none"> 2014 Independent Environmental Audit, SLR Consulting, March 2014 Interview with site personnel Site visit observations 	<p>The requirements for preparation of the plan were satisfied in the 2014 Independent Environmental Audit. No changes to the Stormwater Management Plan were made during the Audit Period.</p> <p>During the Audit Period, the site completed bunding upgrades on the NAP2 and NAP3 oil consoles to minimise the potential for a loss of containment of oil to ground and surface water.</p> <p>Planned improvements in FY20/21 include upgrades to the site roadways to minimise the discharge of sediment to the stormwater system.</p>	Compliant	
Bunding					
43	<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 100% 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 DECC's Storing and Handling Liquids: Environmental Protection, Participants Manual.</p>	<ul style="list-style-type: none"> EPL 828 Site visit observation OEMP (June 2020) Bunding Improvement Works Report 2018-2019, Orica, March 2019 Bunding Improvement Works Report 2019-2020, Orica, March 2020 	<p>Bunding improvement works are undertaken annually in accordance with condition E1 of EPL 828. During the Audit Period, the site completed bunding upgrades on the NAP2 and NAP3 oil consoles to minimise the potential for a loss of containment of oil to ground and surface water. The Auditors viewed the completed bunding in these areas during the site visit and the accompanying bunding report. Planned improvements in FY20/21 include replacing the effluent</p>	Compliant	

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			pond liner with a triple layer liner or replacing the pond with a bunded tank.		
	Erosion and Sediment Control				
44	Prior to construction of the Project, the Proponent shall prepare an Erosion and Sediment Control Plan in accordance with Landcom's 2004 Managing Urban Stormwater: Soils and Construction.	<ul style="list-style-type: none"> 2014 Independent Environmental Audit, SLR Consulting, March 2014 	The requirements under this condition were satisfied in the 2014 Independent Environmental Audit. No changes to the Erosion and Sediment Control Plan were made during the Audit Period.	Not triggered	
	VISUAL				
45	Prior to commencement of operations of the Project, the Proponent shall submit to the Secretary a landscape plan providing details of native screening plants to be planted along the eastern boundary of the Project Site. The plan shall demonstrate that the landscaping does not compromise on-site security and shall include a program for implementation.	<ul style="list-style-type: none"> Landscape Plan, AECOM, 3 June 2011 2014 Independent Environmental Audit, SLR Consulting, March 2014 2017 Independent Environmental Audit, Edge Environment, June 2018 Interview with site personnel 	The requirements under this condition relating to preparation of the Landscape Plan were satisfied in the 2014 Independent Environmental Audit. It was noted in the 2014 Independent Environmental Audit that there was no evidence to confirm the Landscape Plan had been submitted to the Secretary. This was not verified in the 2018 Independent Environmental Audit. Additionally, it was recommended in the 2018 Independent Environmental Audit that approval be sought for a staged implementation of landscaping required under the approval. Orica has sought clarification from the Department on timing of implementation of the Landscape Plan as it relates construction of a new site entrance as part of Phase 2 of the Project which is yet to commence.	Not triggered	

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	Lighting				
46	The Proponent shall ensure that lighting associated with the Project: a) complies with the latest version of Australian Standard AS 4282(INT)-Control of Obtrusive Effects of Outdoor Lighting; 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.	<ul style="list-style-type: none"> Interview with site personnel Site inspection observations 	Phase 6 (the new boiler) was the only phase undertaken during the Audit Period. The Auditors were not able to verify that lighting complies with AS 4282; however, the Auditors have no reason to believe the requirements have not been met. The new boiler is located near the centre of the site with other plant of similar scale around it.	Compliant	
	WASTE				
	Operating Conditions				
47	The Proponent shall ensure that all waste generated by the Project during construction and operation is classified in accordance with the DECC's Waste Classification Guidelines 2008 and if required, disposed of to a facility that may lawfully accept the waste.	<ul style="list-style-type: none"> Site visit observations. Example monthly report from JR Richards dated 24/06/20 Waste data form to add data from contractors to Enablon Enablon metrics module with monthly waste reports (example report June 2020) Report dated 24/06/19 checking waste contractor licensing 	Viewed separated waste bins for timber, metal, general waste etc. Orica receive monthly reports from JR Richards and input the data into Enablon. Reports are generated through Enablon. Metrics include waste types, quantities, costs and disposal methods.	Compliant	
	Waste Management Plan				
48	The Proponent shall prepare and implement a Waste Management Plan for the project to the satisfaction of the Secretary . This plan must:	<ul style="list-style-type: none"> Ammonia Plant Uprate Waste Management Plan, Orica, February 2013 	The requirements under this condition relating to preparation and contents of the plan were satisfied in the 2014 Independent Environmental Audit. No changes to the Waste Management	Compliant	

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	a) be submitted to the Secretary for approval within 1 year of the commencement of operations of the Project; b) characterise the various waste streams of the Project and include details of the quantities and destinations of all waste materials; c) describe what measures would be implemented to reuse, recycle or minimise the waste generated by the project; and d) identify a waste reduction target for the Project and detail procedures for measuring the Projects performance against the target; e) include a program to monitor the effectiveness of these measures.	<ul style="list-style-type: none"> 2014 Independent Environmental Audit, SLR Consulting, March 2014 2017 Independent Environmental Audit, Edge Environment, June 2018 Interview with site personnel Safety Leadership Interaction, 17 September 2017 	Plan were made during the Audit Period. It was recommended in both the 2014 and 2017 Independent Environmental Audits that weekly environmental inspections are undertaken as required in the CEMP. No constuction was in progress at the time of this Audit. In general, there is no formal site wide inspection checklist; however, observations know as Safety Leadership Interactions are made and recorded in Enablon. Approximately 500 observations per month are made.		
SITE SECURITY					
48A	The Proponent shall ensure that: a) the site is secured by a perimeter fence and security gates; and b) the perimeter fence and security gates are under surveillance at all times	<ul style="list-style-type: none"> Site visit observations Site Security Plan last updated 15/04/18 Hazard Audit 2019, Sherpa Consulting, 20 December 2019 	A Site Security Plan is in place. The Site is secured by perimeter fence and security gates and is under 24-hour surveillance with cameras. Site personnel advised that additional cameras are currently being installed.	Compliant	
AVIATION SAFETY					
48B	The Proponent must obtain all necessary approvals from the Air Base Command Post of RAAF Base in Williamstown and the Directorate of External Land Planning within the Defence Support Group of the Department of Defence for the erection of all structures that constitute transient/temporary or permanent obstructions in accordance with the Operation of cranes and tall structures in the vicinity of Newcastle Airport (Department of Defence, 2013).	<ul style="list-style-type: none"> CEMP 2016 Email from Defence approving application for crane, 15 July 2015 Email correspondence with Defence on approvals required for NAP1 stack replacement, June and July 2020 	Requirements are outlined in section 11.2.3 of CEMP. Construction of 40m stack for Phase 6 boiler took place during the Audit Period. Approval for the crane had been obtained in the prior Audit Period. The Auditors sighted correspondence with Defence concerning approvals	Compliant	

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			required for the future replacement of NAP1 stack (86 m).		
	SCHEDULE 4 - ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING				
	ENVIRONMENTAL MANAGEMENT STRATEGY				
	Construction Environmental Management Plan				
49A	<p>The Proponent shall prepare and implement a Construction Environmental Management Plan for the construction of the Project to the satisfaction of the Secretary. The Plan must:</p> <ul style="list-style-type: none"> a) be prepared by a suitably qualified and experienced expert or team of experts; b) be submitted to the Secretary for approval no later than 4 weeks prior to the commencement of each construction stage of the Project, or within an alternative timeframe agreed to in writing by the Secretary (see Condition 49C for management plan requirements); c) identify the statutory licences, permits and approval/consents that apply to the Project; d) include a copy of all relevant management plans and monitoring programs required by this approval; e) incorporate all relevant management and mitigation measures outlined in Appendix C of this approval; f) outline all environmental management practices and procedures to be followed during construction and demolition works associated with the Project; g) describe all activities to be undertaken on the site during construction of the Project, including a clear indication of construction stages (see Condition 7 and 8); h) detail how the environmental performance of the construction of the Project will be monitored, and what actions will be taken to address identified adverse 	<ul style="list-style-type: none"> • 2017 Independent Environmental Audit, Edge Environment, June 2018 • Interview with site personnel 	<p>The CEMP relates to pre-construction and construction activities for Phase 6 of the Project for the Audit Period. The requirements relating to the initial preparation of the site CEMP were confirmed in the 2018 Independent Environment Audit. The CEMP was not updated during the Audit Period. Implementation of the CEMP applied to construction activities associated with phase 6 of the Project during the Audit Period. Implementation of the CEMP has been included in the response to the preceding Schedule 3 conditions.</p>	Compliant	

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	<p>environmental impacts and issues, including (but not limited to):</p> <ul style="list-style-type: none"> Air Quality (see Conditions 21 to 27C); Noise and Vibration (see Conditions 30 to 33A); Transport (see Conditions 34 to 36); Soil and Water (see Conditions 37 to 44); Visual (see Conditions 45 and 46); Waste (see Conditions 47 and 48); Site Security (see Condition 48A); and Aviation Safety (see Condition 48B). <p>i) describe the roles and responsibilities for all relevant employees involved in construction and demolition works associated with the Project;</p> <p>j) include arrangements for community consultation at key stages of the Project;</p> <p>k) include a complaints handling procedure during construction; and,</p> <p>l) include appropriate procedures to allow the regular review of the requirements of each plan to ensure that they are effective and allow for adaptive management to address contingencies that may arise over the life of the Project.</p> <p>Note: The approval of a Construction Environmental Management Plan does not relieve the Proponent of any requirement associated with this approval. If there is an inconsistency with an approved Construction Environmental Management Plan and the conditions of this approval, the requirements of this approval prevail.</p>				
	Operational environmental Management plan				
49B	The Proponent shall prepare and implement an Operational Environmental Management Plan for the operation of the Project. This plan must be submitted to and approved by the Secretary prior to the commencement of operation of	<ul style="list-style-type: none"> Kooragang Island Environmental Management Plan, Orica, Version 9, June 2020 	The 2017 Independent Environmental Audit found this condition as non-compliant as an Operational Environmental Management Plan	Compliant	

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	<p>each stage of the Project (see Condition 49C for management plan requirements);</p> <p>a) provide the strategic framework for environmental management of the Project;</p> <p>b) identify the statutory licences, permits and approval/consents that apply to the Project;</p> <p>c) include a copy of all relevant management plans and monitoring programs under this Project;</p> <p>d) consolidate all relevant management and mitigation measures for the Initial Operations that will continue to be implemented the Project site together with those outlined in Appendix C of this consent;</p> <p>e) outline all environmental management practices and procedures that will followed during the operation of the Project, including those that will continue to be implemented by the Proponent in respect of the Initial Operations (see Condition 7 and 8);</p> <p>f) include a description of all activities to be carried on the site during the operation of the Project;</p> <p>g) detail how the environmental performance of the operation of the Project will be monitored, and what actions will be taken to address identified adverse environmental impacts, including (but not limited to):</p> <ul style="list-style-type: none"> Air Quality (see Conditions 21 to 27C); Noise and Vibration (see Conditions 30 to 33A); Transport (see Conditions 34 to 36); Soil and Water (see Conditions 37 to 44); Visual (see Conditions 45 and 46); Waste (see Conditions 47 and 48); Site Security (see Condition 48A); and Aviation Safety (see Condition 48B). 	<ul style="list-style-type: none"> 2017 Independent Environmental Audit, Edge Environment, June 2018 	<p>(OEMP) did not cover operation of the new flares. The OEMP has since been updated with the latest revision (version 9, June 2020) submitted to the Department and awaiting approval. The requirements of the condition are addressed in the following sections of the OEMP:</p> <p>a) Section 6</p> <p>b) Section 5 and Appendix 2</p> <p>c) Section 8</p> <p>d) Appendix 2</p> <p>e) The whole OEMP document</p> <p>f) Section 2.1</p> <p>g) Air quality – Section 7.1.2 Noise and vibration – Section 7.1.7 Soil and water – Section 7.1.6 (and separate SMP and SWMP) Waste – Section 7.1.9 (and separate WMP) Separate plans cover transport, visual impact, security and aviation safety.</p> <p>h) Section 6.1</p> <p>i) Community information – Section Complaints – Section 6.5.1 Dispute resolution – Section 6.5.1 Non-compliances – Section 6.5.3 Emergencies – Section 6.6</p> <p>j) Appendix 3</p>		

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	<p>h) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the Project;</p> <p>i) describe the procedures that will be implemented to:</p> <ul style="list-style-type: none"> keep the local community and relevant agencies informed about the operation and environmental performance of the Project, including information on and notification during flare activation and operation; receive, handle, respond to, and record complaints; resolve any disputes that may arise during the course of the Project; respond to any non-compliance; and respond to emergencies; and <p>j) include:</p> <ul style="list-style-type: none"> copies of any strategies, plans and programs approved under the conditions of this approval; and a clear plan depicting all the monitoring required to be carried out under the conditions of this approval. 				
	Management Plan Requirements				
49C	<p>The Proponent shall ensure that Management Plans required under this approval are prepared in accordance with any relevant guidelines, and include:</p> <p>a) detailed baseline data;</p> <p>b) a description of:</p> <ul style="list-style-type: none"> the relevant statutory requirements (including any relevant approval, licence or lease conditions); any relevant limits or performance measures/criteria; and the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the Project or any management measures; 	<ul style="list-style-type: none"> Kooragang Island Environmental Management Plan, Orica, Version 9, June 2020 	<p>No new management plans were prepared during the Audit Period. Some existing plans, such as the OEMP (Kooragang Island Environmental Management Plan), were revised during the Audit Period.</p>	Compliant	

Table A-1: Compliance with Project Approval MP 08_0129					
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	<p>c) a description of the measures that will be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;</p> <p>d) a program to monitor and report on the:</p> <ul style="list-style-type: none"> impacts and environmental performance of the Project; and effectiveness of any management measures (see (c) above); <p>e) a contingency plan to manage any unpredicted impacts and their consequences;</p> <p>f) a program to investigate and implement ways to improve the environmental performance of the Project over time;</p> <p>g) a protocol for managing and reporting any:</p> <ul style="list-style-type: none"> incidents; complaints (including a complaints register); non-compliances with statutory requirements; and exceedance/s of the impact assessment criteria and/or performance criteria; and <p>h) a protocol for periodic review of the plan.</p> <p>Notes:</p> <ul style="list-style-type: none"> This condition only applies to management plans that are submitted from 30 November 2014 onwards. The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans. 				
	Revision of Strategies, Plans and Programs				
49D	<p>Within 3 months of the submission of an:</p> <p>a) Annual Environmental Management Report under Condition 50;</p> <p>b) Incident Report under Conditions 51A to 51B</p>		Management plans have been progressively updated where required.	Compliant	

Table A-1: Compliance with Project Approval MP 08_0129					
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	c) any modifications to this approval, the Proponent shall review, and if necessary revise all post approval documents required under this approval to the satisfaction of the Secretary. Note: This is to ensure the post approval documents are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the Project.				
	ENVIRONMENTAL REPORTING				
	Environmental Reporting				
50	The Proponent shall submit an Annual Report to the Secretary and other relevant agencies. This report must: a) identify the standards and performance measures for the Project; b) describe the works carried out in the past 12 months and the works to be carried out in the next 12 months; c) include a summary of the complaints received in the past year, and provide comparison with previous years; d) report results of all monitoring required by this approval and an EPL for the Project; e) provide analysis of monitoring results in the context of relevant criteria and limits, previous monitoring results and the predictions made in the EA; EA (MOD1) and EA (MOD2) f) identify any trends in monitoring results over the life of the Project; and 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.	<ul style="list-style-type: none"> 2019 AEMR 2018 AEMR 2017 AEMR 	The Auditor viewed the AEMRs prepared for the Audit Period which are publicly available on Orica's website. The requirements under this condition were addressed in the following sections (consistent across all AEMRs): a) Section 5 b) Section 6 c) Section 8 d) Section 7 e) Section 7 f) Section 7 g) Section 11.	Compliant	
	Incident				
51A	The Proponent shall notify the Secretary and any other relevant agencies of any incident or potential incident with actual or potential significant off-site impacts on people or	<ul style="list-style-type: none"> Interview with site personnel 	The Auditor understands that no incidents requiring Secretary notification occurred during the period.	Not triggered	

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	the biophysical environment associated with the facility immediately after the Proponent becomes aware of the incident.				
51B	Within 7 days of the date of the incident, the Proponent shall provide the Secretary and any relevant agencies with a detailed report on the incident.	<ul style="list-style-type: none"> Interview with site personnel 	The Auditor understands that no incidents requiring Secretary notification occurred during the period.	Not triggered	
	Flare Activation Reporting				
51C	<p>The Proponent shall provide a report to the Secretary that summarises all ammonia flare activations. The report must be provided on a three-monthly basis for the first 12 months of flare operation, commencing three months following the date of commissioning of the first flare. Following the first 12 months, the Proponent must provide the report annually to the Secretary by 31 March each year. The ammonia flare activation summary report must include, but is not limited to, the following:</p> <ol style="list-style-type: none"> the date and time the ammonia flare activation occurred; the duration of the ammonia flare activation; the estimated quantity of ammonia directed to the flare during the flare activation period; details of operational parameters that affected destruction efficiency during the flare activation; and actions identified to prevent further flare activations. 	<ul style="list-style-type: none"> Annual Ammonia Flare Activation Summary (January 2019 – December 2019), Orica, 13 March 2020. Ammonia Flare Activation Summary (July 2018 – September 2018), Orica, 15 September 2018. 	The nitrates plant ammonia flare became operational in February 2016, under the previous audit period. Current requirement is for annual summaries, although quarterly summaries were prepared until the end of 2018.	Compliant	
	AUDITING				
	Independent Environmental Audit				
52	2 years after the commencement of operations of Phase 1 of the Project, and every 3 years thereafter, or at such intervals as the Secretary may agree, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project and within 1 month of	<ul style="list-style-type: none"> 2014 Independent Environmental Audit, SLR Consulting, March 2014 2017 Independent Environmental Audit, Edge Environment, June 2018 	Independent Environmental Audits have been undertaken at 3 yearly intervals (2014, 2017 and 2020 for this audit). This Independent Environmental Audits has been undertaken in accordance with the	Compliant	

Table A-1: Compliance with Project Approval MP 08_0129					
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	<p>each audit submit a report to the Secretary. This audit must:</p> <ul style="list-style-type: none"> a) be conducted by a suitably qualified, experienced, and independent team of experts whose appointment has been endorsed by the Secretary; b) assess the environmental performance of the project and, and its effects on the surrounding environment; c) assess whether the Project is complying with the relevant standards, performance measures, and statutory requirements; d) review the adequacy of any strategy/plan/program required under this approval; and, if necessary e) recommend measures or actions to improve the environmental performance of the project, and/or any strategy/plan/program required under this approval. <p>Note: This audit team must include experts in the field of noise and air quality</p>	<ul style="list-style-type: none"> • This audit • Auditor Approval Letter from the Department dated 16 June 2020 	<p>requirements specified in this condition. The Audit Team was approved by the Department on 16 June 2020.</p>		
	ACCESS TO INFORMATION				
	Access to Information				
53	<p>The Proponent shall, unless otherwise agreed to in writing by the Secretary:</p> <ul style="list-style-type: none"> a) make the following information publicly available on its website: <ul style="list-style-type: none"> • the EA, EA (MOD 1) and EA (MOD 2) and EA (MOD3); • current statutory approvals for the Project; • all approved post approval documents; • a summary of the monitoring results of the Project, which have been reported in accordance with the conditions of this approval; • copies of any annual reviews (over the last 5 years); 	<ul style="list-style-type: none"> • Orica website: https://www.orica.com/Locations/Asia-Pacific/Australia/Kooragang-Island/Operations/Site-Projects#.Xw-PGygzaiM 	<p>The Orica website was viewed by the Auditors on 16 July 2020. The website included all the information listed under this condition.</p>	Compliant	

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	<ul style="list-style-type: none"> any independent environmental audit, and the Proponent's response to the recommendations in any audit; and any other matter required by the Secretary; and b) keep this information up-to-date.				

Table A-2: Compliance with Development Consent SSD_7831

ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	SCHEDULE 2 - PART A: ADMINISTRATIVE CONDITIONS				
	OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT				
A1	In addition to meeting the specific performance measures and criteria in this consent, all reasonable and feasible measures must be implemented to prevent, and if prevention is not reasonable and feasible, minimise, any material harm to the environment that may result from the construction and operation of the development, and any rehabilitation required under this consent.	<ul style="list-style-type: none"> Interview with site personnel Site visit observations Documentation as described in this table. 	The Auditors did not find evidence of incidents resulting in material harm to the environment occurring during the audit period. Environmental management on site was observed to be of a generally high standard.	Compliant	
	TERMS OF CONSENT				
A2	The development may only be carried out: a) in compliance with the conditions of this consent; b) in accordance with all written directions of the Planning Secretary; c) in accordance with the EIS and Response to Submissions; d) in accordance with the Development Layout in Appendix 1; and e) in accordance with the management and mitigation measures in Appendix 2.	<ul style="list-style-type: none"> Interview with site personnel Site visit observations Letter from Orica to DPIE re: Notification of updates relating to Approval SSD_7831, 18 July 2019 Documentation as described in this table. 	The development is being carried out generally in accordance with the requirements of this condition. Updated 'as built' construction drawings were provided to the Department, relating primarily to adjustments to the finished capping levels based on differences in the estimated and actual volumes of material that were to be placed inside the cell.	Compliant	
A3	Consistent with the requirements in this consent, the Planning Secretary may make written directions to the Applicant in relation to: a) the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this consent, including those that are required to be, and have been, approved by the Planning Secretary; and	<ul style="list-style-type: none"> Interview with site personnel 	No written directions have been received by the Planning Secretary.	Not triggered	

Table A-2: Compliance with Development Consent SSD_7831					
ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	b) the implementation of any actions or measures contained in any such document referred to in A3(a).				
A4	<p>The conditions of this consent and directions of the Planning Secretary prevail to the extent of any inconsistency, ambiguity or conflict between them and a document listed in condition A2(c). In the event of an inconsistency, ambiguity or conflict between any of the documents listed in condition A2(c), the most recent document prevails to the extent of the inconsistency, ambiguity or conflict.</p> <p>Note: For the purposes of this condition, there will be an inconsistency between documents if it is not possible to comply with both documents, or in the case of a condition of consent or direction of the Planning Secretary, and a document, if it is not possible to comply with both the condition or direction, and the document.</p>		No inconsistency between the documents listed in condition 2 was identified by the Auditors.	Not triggered	
LIMITS OF CONSENT					
Lapsing					
A5	This consent lapses five years after the date from which it operates, unless the development has physically commenced on the land to which the consent applies before that date.	<ul style="list-style-type: none"> Interview with site personnel 	The development consent was issued on 10 August 2018 and the development has physically commenced (and construction completed by September 2019).	Not triggered	
Construction of the Containment Cell					
A6	The construction of the containment cell shall be undertaken over a maximum period of one year from the date of commencement of the remediation works, unless otherwise agreed with the Planning Secretary. The Applicant shall notify the Planning Secretary in writing upon the commencement of remediation works.	<ul style="list-style-type: none"> Orica email to DPIE with attachment notification of commencement of construction, 12 October 2018 Orica letter to DPIE, Notification of Commencement of Remediation Works, 28 June 2019 Email from DPIE to Orica, 1 July 2019 Interview with site personnel 	Orica notified the Department in October 2018 that it intended to commence construction on 3 December 2018. Construction of the containment cell did not actually commence until February 2019. Construction of the containment cell was completed on 24 September 2019.	Compliant	

Table A-2: Compliance with Development Consent SSD_7831

ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
NOTIFICATION OF COMMENCEMENT					
A7	The date of commencement of each of the following phases of the development must be notified to the Department in writing, at least one month before that date: a) construction phase of remediation works; and b) completion of construction activities associated with the containment cell.	<ul style="list-style-type: none"> Orica email to DPIE with attachment notification of commencement of construction, 12 October 2018 Orica letter to DPIE, Notification of Completion of Construction Activities, 28 June 2019 Orica letter to DPIE, Notification of Completion of Construction Remediation works relating to Approval SSD_7831, 24 September 2019 	An email from the Department to Orica dated 1 July 2019 noted that the Department was notified of the anticipated date of commencement in a letter dated 12 October 2018, as required by condition A7(a). In June 2019, Orica notified the Department of the anticipated date of completion of the construction activities associated with the containment cell as 29 July 2019. Construction of the containment cell was actually completed on 24 September 2019.	Compliant	
A8	If the construction or operation of the remediation works is to be staged, the Department must be notified in writing at least one month before the commencement of each stage, of the date of commencement and the development to be carried out in that stage.	<ul style="list-style-type: none"> Interview with site personnel 	The Project was not staged.	Not triggered	
EVIDENCE OF CONSULTATION					
A9	Where conditions of this consent require consultation with an identified party, the Applicant must: a) consult with the relevant party prior to submitting the subject document to the Planning Secretary for approval; and b) provide details of the consultation undertaken including: (i) the outcome of that consultation, matters resolved and unresolved; and (ii) details of any disagreement remaining between the party consulted and the Applicant and how	<ul style="list-style-type: none"> Email from Fabiana Quinton of the EPA dated 7/12/18 	Evidence observed of consultation with the EPA in preparation of the Containment Cell Management as required under condition B3.	Compliant	

Table A-2: Compliance with Development Consent SSD_7831					
ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	the Applicant has addressed the matters not resolved.				
	STAGING, COMBINING AND UPDATING STRATEGIES, PLANS OR PROGRAMS				
A10	With the approval of the Planning Secretary, the Applicant may: a) prepare and submit any strategy, plan or program required by this consent on a staged basis (if a clear description is provided as to the specific stage and scope of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program); b) combine any strategy, plan or program required by this consent (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined); and c) update any strategy, plan or program required by this consent (to ensure the strategies, plans and programs required under this consent are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the development).	<ul style="list-style-type: none"> Letter from Orica to DPIE re: Notification of updates relating to Approval SSD_7831, 18 July 2019 Interview with site personnel 	The project was not staged. The Remediation Action Plan and other project documentation including Development Layout Plans were updated, primarily to make adjustments to the finished capping landform based on differences in the estimated and actual volumes of material that were to be placed inside the cell. An updated LTEMP (Rev 1) has been submitted to the Department. The Department has indicated it is awaiting Site Auditor sign off before approving.	Compliant	
A11	If the Planning Secretary agrees, a strategy, plan or program may be staged or updated without consultation being undertaken with all parties required to be consulted in the relevant condition in this consent.	<ul style="list-style-type: none"> Interview with site personnel 	The development was not staged.	Not triggered	
A12	If approved by the Planning Secretary, updated strategies, plans or programs supersede the previous versions of them and must be implemented in accordance with the condition that requires the strategy, plan or program.	<ul style="list-style-type: none"> Letter from Orica to DPIE re: Notification of updates relating to Approval SSD_7831, 18 July 2019 	The project was not staged. The Remediation Action Plan and other project documentation including Development Layout Plans were updated, primarily to make adjustments to the finished capping landform based on	Compliant	

Table A-2: Compliance with Development Consent SSD_7831

ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
			differences in the estimated and actual volumes of material that were to be placed inside the cell. An updated LTEMP (Rev 1) has been submitted to the Department. The Department has indicated it is awaiting Site Auditor sign off before approving.		
	REQUEST FOR INFORMATION				
A13	The Applicant must retain weighbridge records and waste classification records for all waste disposed from the site in accordance with the requirements detailed in the POEO Act. The waste classification records must be made immediately available on request by the EPA and/or the Planning Secretary.	<ul style="list-style-type: none"> Interview with site personnel 	Materials were not removed from site for disposal. ENM was mixed with the bentonite wall.	Not triggered	
	COMPLIANCE				
A14	The Applicant must ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this consent relevant to activities they carry out in respect of the development.	<ul style="list-style-type: none"> Arsenic induction (PowerPoint) dated February 2019 Project induction register from 25/01/19 to 17/06/19 	A project specific induction pack was provided to contractors prior to commencement of works in addition to general site inductions. The induction PowerPoint included environmental controls from the CEMP including topics waste, noise, dust, spills and unexpected finds. A signed induction register was viewed by the Auditors.	Compliant	
	OPERATION OF PLANT AND EQUIPMENT				
A15	All plant and equipment used on site or to monitor the performance of the development must be: a) maintained in a proper and efficient condition; and b) operated in a proper and efficient manner.	<ul style="list-style-type: none"> Interview with site personnel 	Plant and equipment were operated and maintained by the construction contractors. Pre-start checklists were completed by the contractors and audited by Orica.	Compliant	

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ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	UTILITIES AND SERVICES				
A16	Before the construction of any utility works associated with the development, the Applicant must obtain relevant approvals from service providers.	<ul style="list-style-type: none"> Interview with site personnel 	No utility works were undertaken.	Not triggered	
	APPLICABILITY OF GUIDELINES				
A17	References in the conditions of this consent to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, Standards or policies in the form they are in as at the date of this consent.	<ul style="list-style-type: none"> Remediation Validation Report, Golder Associates, 24 December 2019 LTEMP (Rev 0), May 2019 July 2019 Biannual Arsenic Groundwater Monitoring Event, Orica Kooragang Island, Golder Associates, 28 August 2019 Post Remediation Annual Groundwater Monitoring Event – March 2020, Golder Associates, 4 May 2020 	Golder Associates has referred to relevant guidelines in preparation of plans and reports for the development.	Compliant	
A18	However, consistent with the conditions of this consent and without altering any limits or criteria in this consent, the Planning Secretary may, when issuing directions under this consent in respect of ongoing monitoring and management obligations, require compliance with an updated or revised version of such a guideline, protocol, Standard or policy, or a replacement of them.	<ul style="list-style-type: none"> Interview with site personnel 	No written directions have been received by the Planning Secretary.	Not triggered	
	ADVISORY NOTES				
A19	All licences, permits, approvals and consents as required by law must be obtained and maintained as required for the development. No condition of this consent removes any obligation to obtain, renew or comply with such licences, permits, approvals and consents	<ul style="list-style-type: none"> SSD 7831 Management Order 20181401 EPL 828 	No missing licences or permits have been identified.	Compliant	

Table A-2: Compliance with Development Consent SSD_7831					
ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	PART B: ENVIRONMENTAL PERFORMANCE AND MANAGEMENT				
	REMEDIATION				
	Site Auditor				
B1	Prior to the commencement of remediation works, the Applicant must provide evidence to the Planning Secretary that a Site Auditor accredited under the <i>Contaminated Land Management Act, 1997</i> (CLM Act) has been appointed, as required by the Management Order, to independently review the implementation and validation of the remediation works. The scope of the audit is also to include consideration of the suitability of the long-term environmental management plan (LTEMP) (see Conditions B9 and Condition B12, respectively).	<ul style="list-style-type: none"> Orica email to DPIE confirming EPA appointed of Site Auditor, 3 October 2018 	The Site Auditor is Chris Jewel of C.M. Jewell & Associates Pty Ltd.	Compliant	
	Validation Consultant(s)				
B2	Prior to the commencement of remediation works, the Applicant must provide evidence to the Planning Secretary, that a suitably qualified and experienced consultant(s) certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS/ CSAM) scheme has been appointed to validate the remediation works to demonstrate compliance with the Remedial Action Plan (RAP) as required under the Management Order (see Condition B9).	<ul style="list-style-type: none"> Orica letter to DPIE re: Containment Cell Management Plan, 1 November 2018 	Golder Associates was appointed as the Validation Consultant for the works. Qualification and experience details of the Validation Consultants were provided to the Department on 1 November 2018.	Compliant	
	Containment Cell				
B3	Prior to the commencement of remediation works, the Applicant must prepare a Containment Cell Management (CCMP) to the satisfaction of the Planning Secretary. The CCMP must form part of the CEMP	<ul style="list-style-type: none"> CCMP (November, 2018) Letter from DPIE approving the CEMP and sub-plans dated 19/12/18 	A CCMP was prepared by Golder Associates dated 23 November 2018. The CCMP was approved by the Department as a sub-plan of the CEMP on 19 December 2018.	Compliant	

Table A-2: Compliance with Development Consent SSD_7831

ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	<p>required by Condition C2 and be prepared in accordance with Condition C1. The CCMP must:</p> <ul style="list-style-type: none"> a) be prepared by a suitably qualified and experienced person(s); b) be prepared in consultation with the EPA; c) include details of the Construction Quality Control (CQC) and Construction Quality Assurance (CQA) design, procedures, program and performance specifications to be achieved for the construction of the remediation works; and d) be prepared as described in the RAP. 	<ul style="list-style-type: none"> • Orica letter to DPIE re: Containment Cell Management Plan, 1 November 2018 • RAP (July, 2016) • Email from Chris Jewell dated 3/12/18 subject: <i>KI Arsenic CCMP</i> • Email from Fabiana Quinton of the EPA dated 7/12/18 	<p>Construction of the containment cell commenced in February 2019.</p> <ul style="list-style-type: none"> a) The CCMP was prepared by Gary Schmertmann, Gavan Butterfield and Andrew Holloway from Golder Associates. Details of the authors (including CVs) were provided to the Department on 1 November 2018. The Site Auditor provided endorsement of the CCMP on 3 December 2018 b) Comments on the CCMP were provided by the EPA on 7 December 2018 c) Section 1.3 of the CCMP includes details of the CQC and CQA approach. d) The CCMP was prepared in accordance with the RAP as evident by the statement in the document purpose and various references throughout the CCMP to the RAP, including performance specifications (section 2.1.1) and program requirements (section 2.2 and section 3.2). 		
B4	<p>The Applicant must:</p> <ul style="list-style-type: none"> • not commence remediation works until the CCMP required by Condition B3 is approved by the Planning Secretary; and 	<ul style="list-style-type: none"> • Letter from DPIE approving the CEMP and sub-plans dated 19/12/18 	<p>The CCMP was approved by the Department as a sub-plan of the CEMP on 19 December 2018. Construction of the containment</p>	Compliant	

Table A-2: Compliance with Development Consent SSD_7831					
ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	<ul style="list-style-type: none"> implement the most recent version of the CQCMP approved by the Planning Secretary. 		cell commenced in February 2019.		
	Remedial Works				
B5	The Applicant must remediate the site in accordance with the design specifications and requirements detailed in the RAP and relevant guidelines produced or approved under the CLM Act.	<ul style="list-style-type: none"> Remediation Validation Report, Golder Associates, 24 December, 2019 	Section 10 of the RVR states: <i>"Inspection and review activities undertaken by Golder during and after the construction of the containment cell have indicated the construction methods and materials were in accordance with the design requirements... Overall, the design, installation and testing of the remediation system (containment cell) is considered to have successfully met the requirements of the RAP..."</i>	Compliant	
B6	The Applicant must carry out the remediation works using suitably qualified and experienced contractor(s).	<ul style="list-style-type: none"> Remediation Validation Report, Golder Associates, 24 December, 2019 	Menard Oceania constructed the cell cut-off wall. The cap was constructed by Milleen Constructions (earthworks) and Eco Line Solutions (vapour barrier). Construction Quality Assurance was undertaken by Golder Associates.	Compliant	
B7	The Applicant must only place arsenic contaminated material as described in the RAP, in the containment cell.	<ul style="list-style-type: none"> Remediation Validation Report, Golder Associates, 24 December, 2019 	The Site Auditor is yet to issue a Site Audit Report. Based on the Remediation Validation Report, the Auditors have no reason to believe the requirements of the condition have not been met.	Compliant	
	Remediation Validation Report				
B8	Within three months of completion of remediation works, the Applicant must submit a Remediation	<ul style="list-style-type: none"> Remediation Validation Report, Golder Associates, 24 December, 2019 	Remediation works were completed in September 2019. The RVR was prepared by Golder	Compliant	

Table A-2: Compliance with Development Consent SSD_7831

ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	<p>Validation Report (RVR) to the satisfaction of the Planning Secretary. The RVR must:</p> <ul style="list-style-type: none"> a) be prepared by the validation consultant(s) (see Condition B2); b) be prepared in accordance with the RAP and the Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites (OEH 2011); c) include, but not be limited to a: <ul style="list-style-type: none"> (i) CQA report; (ii) design report; (iii) construction report. 	<ul style="list-style-type: none"> • Letter from DPIE to Orica re: Orica Kooragang Island (SSD 7831) Remediation Validation Report, 24 February 2020 	<p>Associates dated 24 December 2019. The requirements under this condition are satisfied as follows:</p> <ul style="list-style-type: none"> a) The RVR was prepared by Golder Associates who is the validation consultant (refer to response to condition B2). b) The RVR was prepared in accordance with the RAP as evident by the various cross-references to the RAP throughout the RVR. c) The requirements under this condition are included in Appendix A (cut off wall CQA report) and Appendix B (capping system CQA report). The Department confirmed its satisfaction with the RVR in February 2020. 		
	Long Term Environmental Management Plan				
B9	<p>Two months prior to the completion of remediation works, the Applicant must submit a LTEMP to the satisfaction of the Site Auditor and the Planning Secretary. The LTEMP must:</p> <ul style="list-style-type: none"> a) be prepared by a suitably qualified and experienced person(s) certified under either the CEnvP(SC) or the CPSS CSAM scheme; b) be reviewed by an EPA accredited Site Auditor as required by Condition B1; c) include, but not be limited to: <ul style="list-style-type: none"> (i) the hydraulic performance of containment cell; (ii) details of the groundwater monitoring program including a description of the procedures for 	<ul style="list-style-type: none"> • LTEMP (Rev 0), May 2019 • Letter from DPIE approving LTEMP, 14/07/20 • Interim Advice - Long-Term Environmental Management Plan: Arsenic Remediation Project, Orica Kooragang Island, C.M. Jewell & Associates, 5/09/19 	<p>Remediation works were completed in September 2019. The LTEMP was submitted to the Department on 27 May 2019 and approved by the Department on 14 July 2020. The requirements under this condition are satisfied as follows:</p> <ul style="list-style-type: none"> a) The LTEMP was prepared by Golder Associates Pty Ltd (noted as a certified consultant) 	Compliant	

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ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	<p>monitoring the integrity of the containment cell;</p> <p>(iii) details of any restrictions placed on the land to prevent development over the containment cell; and</p> <p>(iv) mechanisms to report results to relevant agencies.</p>		<p>b) The LTEMP was reviewed by Chris Jewell of C.M. Jewell & Associates Pty Ltd as an accredited Site Auditor under the <i>Contaminated Land Management Act 1997</i></p> <p>c) The requirements under this condition are met in the following sections:</p> <p>(i) Section 8.2</p> <p>(ii) Section 8</p> <p>(iii) Section 7</p> <p>(iv) Section 8.4.</p>		
B10	Upon completion of the remediation works, the Applicant must implement the LTEMP and manage the containment cell in accordance with LTEMP as required by Condition B9 and any remediation notice issued by the EPA under the CLM Act.	<ul style="list-style-type: none"> LTEMP (Rev 0), May 2019 LTEMP (Rev 1), May 2020 	An updated LTEMP (Rev 1) has been submitted to the Department. The Department has indicated it will wait until Site Auditor sign off before approving.	Compliant	
B11	The Applicant must provide a summary report of the sampling results of the GMP in accordance with the requirements of the Management Order to the EPA and the Planning Secretary.	<ul style="list-style-type: none"> July 2019 Biannual Arsenic Groundwater Monitoring Event, Orica Kooragang Island, Golder Associates, 28 August 2019 Post Remediation Annual Groundwater Monitoring Event – March 2020, Golder Associates, 4 May 2020 Orica email to DPIE re: 200505 Arsenic GMP Annual Summary Report and updated LTEMP, 5 May 2020 DPIE email to Orica re: Orica Kooragang Remediation - Post Approval Document Received - (SSD-7831-PA-1), 14 May 2020 Email to EPA dated 3/09/19 including July 2019 Biannual Groundwater Monitoring results 	Two GMP event have been completed (July 2019 and March 2020). The reports were submitted to the EPA.	Compliant	

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ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
		<ul style="list-style-type: none"> Email to EPA dated 5/05/20 including March 2020 Biannual Groundwater Monitoring results and response back 			
	Site Audit Report and Site Audit Statement				
B12	Within six months of submission of the Validation Report required by Condition B8, the Site Auditor must submit a Site Audit Statement and Site Audit Report to the EPA and to the Planning Secretary in accordance with the requirements of the Management Order.	<ul style="list-style-type: none"> Management Order request for extension email to the EPA dated 5/07/19 and accompanying letter Final notice amendment notice from EPA granting extension to 24/09/20 Email from DPIE dated 8/07/20 noting acceptance of extension agreement with EPA 	The RVR was submitted on 24 December 2019. Therefore, the Site Audit Statement and Site Audit Report would have been due to be submitted by 24 June 2020. Orica requested an extension from the EPA in relation to the requirements under the Management order and the EPA granted an extension to 24 September 2020. Orica informed the Department of the extension from the EPA and the Department responded that the extension was noted.	Not triggered	
	WORK HEALTH AND SAFETY				
B13	The Applicant must ensure that all remediation works are carried out in accordance with <i>NSW Work Health and Safety Regulation 2017</i> (WHS Regulation).	<ul style="list-style-type: none"> Interview with site personnel 	No incidents occurred requiring notification to WorkSafe.	Compliant	
B14	Prior to the commencement of remediation works, the Applicant must prepare a Health and Safety Plan (HSP) to the satisfaction of the Planning Secretary for the remediation works. The HSP must form part of the CEMP required by Condition C2 and be prepared in accordance with Condition C1. The HSP must: <ol style="list-style-type: none"> describe the controls to ensure compliance with the WHS Regulation; identify personal protective equipment (PPE) required for use onsite; describe the procedures for training, education and awareness programs and inductions for site 	<ul style="list-style-type: none"> CEMP (October 2018) HSP (September 2018) Interview with site personnel Orica email to DPIE submitting CEMP for approval, 12 October 2018. Letter from DPIE re Construction Environmental Management Plan and Sub Plans, 19 December 2018 	The HSP is included as Appendix A to the CEMP. The HSP is dated 18 September 2018. The HSP was approved by the Department as a sub-plan of the CEMP on 19 December 2018. Construction of the containment cell commenced in February 2019. The HSP satisfied the requirements of this condition as follows:	Compliant	

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ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	<p>personnel to ensure adequate protection from human health risks;</p> <p>d) identify requirements for health monitoring for site personnel and documentation procedures; and</p> <p>e) details of exclusion zones and decontamination procedures.</p>		<p>a) Section 4 outlines the WHS Regulation requirements along with other relevant legislation and codes of practice</p> <p>b) Section 7.4 describes the PPE requirements which includes as a standard requirement: <i>"steel capped boots, hard hat and safety glasses, long sleeved shirts and long pants"</i>.</p> <p>c) Section 11 outlines the training procedure including inductions, general training and licensing requirements.</p> <p>d) Sections 4.1, 7.4 and 7.5 describe the use of exclusion zones to minimise arsenic exposure. The decontamination procedure is described in Section 7.4.</p>		
B15	<p>The Applicant must:</p> <p>a) not commence remediation works until the HSP required by Condition B14 is approved by the Planning Secretary; and</p> <p>b) implement the most recent version of the HSP approved by the Planning Secretary.</p>	<ul style="list-style-type: none"> Interview with site personnel Letter from DPIE re Construction Environmental Management Plan and Sub Plans, 19 December 2018 	The HSP was approved by the Department as a sub-plan of the CEMP on 19 December 2018. Construction of the containment cell commenced in February 2019.	Compliant	
	AIR QUALITY				
	Dust Minimisation				
B16	All reasonable steps must be taken to minimise dust generated during all works authorised by this consent.	<ul style="list-style-type: none"> Site visit observations Interview with site personnel 60578946_Arsenic Remediation Results 30APR19 	Ambient air quality monitoring was undertaken during construction works. The monitoring included assessment of TSP, PM10 and arsenic criteria.	Compliant	

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ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
		<ul style="list-style-type: none"> Arsenic remediation air quality monitoring results from 13/02/18 to 28/06/19 	The completed containment cell is covered with vegetation and inspected regularly. There is limited potential for dust generation under long-term management.		
B17	<p>The Applicant must ensure that:</p> <ul style="list-style-type: none"> trucks and vehicles entering and leaving the site that are carrying loads of dust generating materials must have their loads covered at all times, except during loading and unloading; remediation works not occur during adverse meteorological conditions; any works are carried out progressively on site to minimise exposed surfaces; all operations and activities occurring at the remediation works must be carried out in a manner that minimises the emissions of air pollutants from the Development; trucks associated with the Development do not track dirt onto the public road network; and public roads used by these trucks are kept clean. 	<ul style="list-style-type: none"> Interview with site personnel 	As construction was complete at the time of the Audit, the Auditors were not able to verify compliance; however, the Auditors have no reason to believe the requirements of the condition were not met.	Compliant	
	Air Quality Discharges				
B18	Equipment must be installed and operated in accordance with best practice to ensure that the development complies with all load limits, air quality criteria, air emission limits and air quality monitoring requirements as specified in the EPL applicable to the site.	<ul style="list-style-type: none"> Interview with site personnel LTEMP (Rev 0), May 2019 LTEMP (Rev 1), May 2020 	The containment cell is a passive system. The completed containment cell is covered with vegetation and inspected regularly. There is limited potential to contribute to dust emissions under long-term management.	Compliant	
	Air Quality Management Plan				
B19	Prior to the commencement of remediation works, the Applicant must prepare an Air Quality Management Plan (AQMP) to the satisfaction of the Planning	<ul style="list-style-type: none"> CEMP (October 2018) 	The AQMP is included as Appendix B to the CEMP. The AQMP is dated 5 October 2018.	Compliant	

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ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	<p>Secretary. The AQMP must form part of the CEMP required by Condition C2 and be prepared in accordance with Condition C1. The AQMP must:</p> <ul style="list-style-type: none"> a) be prepared by a suitably qualified and experienced person(s) whose appointment has been endorsed by the Planning Secretary; b) describe the measures that will be implemented to minimise the potential risks to adverse air quality in the area including: <ul style="list-style-type: none"> (i) the management and mitigation measures to be employed at the site; (ii) plant and equipment being maintained to ensure that it is in good order; (iii) how the air quality impacts of the development will be minimised during adverse meteorological conditions or extraordinary events; (iv) show the locations of dust monitors on and off-site with appropriate trigger values; (v) details regarding the mitigation and management measures to control dust from stockpiles; (vi) report on the performance of the remediation works against the key performance indicators for each emission type using data from the real-time dust monitors; (vii) detail proactive mitigation measures for the control of dust and odour impacts, including procedures to restrict works during adverse meteorological conditions; (viii) detail procedures for consulting with the nearby sensitive receivers to minimise dust and odour impacts; 		<p>Remediation works commenced on 13 February 2019. The requirements under this condition are satisfied as follows:</p> <ul style="list-style-type: none"> a) The AQMP was prepared by David Rollings and Chad Whitburn of AECOM. b) The measures outlined under this condition are included in the following sections: <ul style="list-style-type: none"> (i) Section 5 (Table 5 and Table 6) (ii) Section 4 (iii) Section 5 (Table 5) – <i>"Remediation works will not occur during adverse meteorological conditions"</i> (iv) Section 6.3 describes the locations for the High Volume Air Sampler (HVAS) as well as real time continuous particulate monitoring. Section 6.4 – air quality trigger values. (v) Section 5 (Table 5) under stockpiles sub-heading (vi) Sections 6.2 and 6.3 – air quality criteria. Section 8 – review and continual improvements procedure (vii) Section 5 (Table 5) (viii) Section 3.4 of CEMP. <p>Orica also has a</p>		

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ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	<p>(ix) detail the contingency measures to be implemented to respond to complaints or if dust impacts are identified; and</p> <p>(x) include record keeping, a complaints register and compliance report to identify the control measures that will be implemented for each emission source.</p>		<p>Communications Strategy and operates in accordance with a Neighbour (Off-site) EMP.</p> <p>(ix) Section 5 – reference to the complaints management procedures described in Section 7.1.5 of the CEMP</p> <p>(x) Section 5 – reference to the complaints management procedures described in Section 7.1.5 of the CEMP</p>		
B20	<p>The Applicant must:</p> <p>a) not commence remediation works until the AQMP required by Condition B19 is approved by the Planning Secretary; and</p> <p>b) implement the most recent.</p>	<ul style="list-style-type: none"> Interview with site personnel Letter from DPIE re Construction Environmental Management Plan and Sub Plans, 19 December 2018 	Remediation work commenced on 13 February 2019. Approval of the AQMP (as part of the CEMP) was received from the Department on 19 December 2018.	Compliant	
	Odour Management				
B21	The Applicant must ensure the remediation works does not cause or permit the emission of any offensive odour (as defined in the POEO Act).	<ul style="list-style-type: none"> Interview with site personnel 	No odour complaints in relation to remediation works were recorded during the Audit Period.	Compliant	
	SOIL AND WATER				
	Surface Water Management System				
B22	<p>Prior to the commencement of operations, the Applicant must design and install a surface water management system for the Development. The system must:</p> <p>a) be designed and constructed by a suitably qualified and experienced person(s);</p> <p>b) be generally in accordance with the design diagrams in the Appendix A: Wall Alignment and Detail Design of the RAP;</p>	<ul style="list-style-type: none"> Remediation Action Plan, Golder Associates, July 2016 Site visit observations 	The surface water management system was designed by Golder Associates and appears to be generally in accordance with the design diagrams in the Appendix A: Wall Alignment and Detail Design of the RAP. The Auditors were not able to verify that the system capacity has been	Compliant	

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ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	c) be in accordance with applicable Australian Standards; and d) ensure that the system capacity has been designed in accordance with Australian Rainfall and Runoff (Engineers Australia, 2016) and Managing Urban Stormwater: Council Handbook (EPA, 1997) Guidelines.		designed in accordance with Australian Rainfall and Runoff (Engineers Australia, 2016) and Managing Urban Stormwater: Council Handbook (EPA, 1997) Guidelines; however, the Auditors have no reason to believe the requirements of the condition were not met.		
B23	Within two months of the completion of remediation works, works-as-executed drawings signed by a registered surveyor must be submitted to the Site Auditor demonstrating that the stormwater drainage and finished ground levels have been constructed as detailed in the RAP.	<ul style="list-style-type: none"> Orica email to C.M. Jewell re: Works-as-executed drawing - Stormwater drainage and finished ground levels, 21 November 2019 	Survey was provided to the Site Auditor within two months of the completion of remediation works.	Compliant	
B24	The surface water management system must be operated and maintained for the duration of the Development.	<ul style="list-style-type: none"> Site visit observations Interview with site personnel Arsenic containment cell quarterly inspection checklist dated 22/07/20 	The surface water management system was observed during the site visit to be in good condition. The containment cell is subject to quarterly inspections.	Compliant	
	Erosion and Sediment Control				
B25	Prior to the commencement of any construction or other surface disturbance the Applicant must install and maintain suitable erosion and sediment control measures on-site, in accordance with the relevant requirements of the <i>Managing Urban Stormwater: Soils and Construction - Volume 1: Blue Book</i> (Landcom, 2004) guideline and the Erosion and Sediment Control Plan included in the CEMP required by condition C2.	<ul style="list-style-type: none"> CEMP (October 2018) 	The Erosion and Sediment Control Plan is Appendix C to the CEMP.	Compliant	
	Pollution of Water				
B26	The development must comply with section 120 of the POEO Act, which prohibits the pollution of waters, except as expressly provided for in an EPL.	<ul style="list-style-type: none"> CEMP (October 2018) Site visit observations Interview with site personnel 	Erosion and sediment control measure were in place during construction. As construction was complete at the time of the Audit, the Auditors were not able to	Compliant	

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ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
		<ul style="list-style-type: none"> Post Remediation Annual Groundwater Monitoring Event – March 2020, Golder Associates, 4 May 2020 	verify compliance; however, the Auditors have no reason to believe the requirements of the condition were not met in relation to surface water during construction. The Auditors note that groundwater is included in the definition of waters for the purpose of section 120 of the POEO Act and EPL 828 does not expressly provide for pollution of groundwater. The purpose of the development is to address historic contamination and improve groundwater quality. There has been one groundwater monitoring event since completion of the containment cell. Ongoing monitoring as per the LTEMP is required to verify effectiveness of the cell.		
B27	Any spills must be contained and disposed of at a licenced facility.	<ul style="list-style-type: none"> Interview with site personnel 	No spills reported during construction of the cell.	Not triggered	
B28	Any servicing or repair work of motor vehicles or mobile plant is to be carried out within a sealed area that has environmental controls appropriate for servicing or repair work. This must include bunding where there this work could result in liquids being spilled.	<ul style="list-style-type: none"> Interview with site personnel 	There was no on-site servicing or repair of vehicles or mobile plant associated with the remediation works.	Not triggered	
	Imported Soil				
B29	The Applicant must: <ul style="list-style-type: none"> ensure that only VENM or ENM or other material approved in writing by the EPA is used as fill on the site; 	<ul style="list-style-type: none"> Remediation Validation Report, Golder Associates, 24 December, 2019 	Materials tracking included as Appendix D of the Remediation Validation Report.	Compliant	

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ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	<ul style="list-style-type: none"> keep accurate records of the volume and type of fill to be used; and make these records available to the Planning Secretary upon request. 				
	Unexpected Finds Protocol				
B30	Prior to the commencement of construction, the Applicant must prepare an unexpected finds protocol to ensure that potentially contaminated material is appropriately managed. The protocol must form part of the CEMP required by Condition C2 and must ensure any material identified as contaminated must be disposed off-site, with the disposal location and results of testing submitted to Council, prior to its removal from the site.	<ul style="list-style-type: none"> CEMP (October 2018) Interview with site personnel 	The unexpected finds protocol is included in Section 5.6 of the CEMP. Site personnel advised that no unexpected finds occurred during the works.	Compliant	
	HAZARDS AND RISK				
B31	The Applicant must store all chemicals, fuels and oils used on-site in appropriately bunded areas in accordance with the requirements of all relevant Australian Standards, and EPA's Storing and Handling of Liquids: Environmental Protection - Participants Manual (DECC, 2007) (as may be updated or replaced from time to time).	<ul style="list-style-type: none"> Interview with site personnel 	No bulk fuels were stored on site by the contractors.	Compliant	
	WASTE MANAGEMENT				
	Statutory Requirements				
B32	All waste materials removed from the site must only be directed to a waste management facility or premises lawfully permitted to accept the materials.	<ul style="list-style-type: none"> Interview with site personnel Remediation Validation Report, Golder Associates, 24 December, 2019 	No soil was removed from the site. All material was retained on site as part of the containment cell as outlined in the Remediation Validation Report.	Not triggered	
B33	Waste generated outside the site must not be received at the site for storage, treatment, processing, reprocessing, or disposal, except as expressly permitted by an EPL.	<ul style="list-style-type: none"> Interview with site personnel Remediation Validation Report, Golder Associates, 24 December, 2019 	No waste generated outside the site was received for storage, treatment, processing, reprocessing or disposal as part of the development. VEMN was	Not triggered	

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ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
			received for the cell capping as outlined in the Remediation Validation Report.		
B34	The Applicant must assess and classify all liquid and non-liquid wastes to be taken off site in accordance with the EPA's Waste Classification Guidelines Part 1: Classifying Waste, November 2014, or its latest version and dispose of all wastes to a facility that may lawfully accept the waste.	<ul style="list-style-type: none"> Interview with site personnel Remediation Validation Report, Golder Associates, 24 December, 2019 	No soil was removed from the site. All material was retained on site as part of the containment cell as outlined in the Remediation Validation Report.	Not triggered	
B35	The Applicant must retain all sampling and waste classification data in accordance with the requirements of the POEO Act in accordance with the requirements of the EPA.	<ul style="list-style-type: none"> Interview with site personnel 	Contaminated water collected during groundwater sampling is held in an IBC near the containment cell. Disposal will be arranged once sufficient volume has been generated.	Not triggered	
	Pests, Vermin and Noxious Weed Management				
B36	<p>The Applicant must:</p> <p>a) implement suitable measures to manage pests, vermin and declared noxious weeds on the site; and</p> <p>b) inspect the site on a regular basis to ensure that these measures are working effectively, and that pests, vermin or noxious weeds are not present on site in sufficient numbers to pose an environmental hazard, or cause the loss of amenity in the surrounding area.</p> <p>Note: For the purposes of this condition, noxious weeds are those species subject to an order declared under the Noxious Weed Act 1993.</p>	<ul style="list-style-type: none"> CEMP (October 2018) LTEMP (May 2019) Site visit observations Arsenic containment cell quarterly inspection checklist dated 22/07/20 	Management measures for weeds and pests are included in Section 5.8 of the CEMP and Section 6.2 of the LTEMP. Weed observations are including the quarterly inspections. Some of the cap groundcover is clover; however, no other significant weeds were observed during the site visit.	Compliant	

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ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#									
	NOISE													
	Hours of Work													
B37	<p>The Applicant must comply with the hours of work detailed in Table 1, unless otherwise agreed in writing by the Planning Secretary.</p> <p>Table 1: Hours of Work</p> <table><tr><th>Activity</th><th>Day</th><th>Time</th></tr><tr><td>Remediation works</td><td>Monday – Friday</td><td>7am to 6pm</td></tr><tr><td></td><td>Saturday</td><td>8am to 1pm</td></tr></table>	Activity	Day	Time	Remediation works	Monday – Friday	7am to 6pm		Saturday	8am to 1pm	<ul style="list-style-type: none">CEMP (October 2018)Interview with site personnel	Site personnel advised that all remediation works were undertaken within these construction hours. The Auditors were not able to verify compliance with construction hours; however, the Auditors have no reason to believe the requirements of the condition were not met.	Compliant	
Activity	Day	Time												
Remediation works	Monday – Friday	7am to 6pm												
	Saturday	8am to 1pm												
B38	<p>Works outside of the hours identified in Condition 837 may be undertaken in the following circumstances:</p> <p>a) works that are inaudible at the nearest sensitive receivers;</p> <p>b) works agreed to in writing by the Planning Secretary; and</p> <p>c) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.</p>	<ul style="list-style-type: none">Interview with site personnel	Works were not undertaken outside the standard hours specified in condition B37.	Not triggered										
	Remediation Works Noise Limits													
B39	<p>The development must be constructed to achieve the construction noise management levels detailed in the <i>Interim Construction Noise Guideline</i> (Department of Environment and Climate Change, 2009). All feasible and reasonable noise mitigation measures must be implemented and any activities that could exceed the construction noise management levels must be identified and managed in accordance with the management and mitigation measures in the EIS.</p>	<ul style="list-style-type: none">CEMP (October 2018)Interview with site personnel	Noise and vibration management measures are included in Section 5.4 of the CEMP (Table 16). This includes management in accordance with the <i>Interim Construction Noise Guideline</i> (Department of Environment and Climate Change, 2009). It was predicted that operation of excavation equipment and vehicles would not likely to increase the background noise by a measurable amount.	Compliant										

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ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
			No complaints were received relating to noise from the remediation works.		
	Vibration Criteria				
B40	Vibration caused by construction at any residence or structure outside the site must be limited to: a) for structural damage, German Standard DIN 4150 Part 3 Structural Vibration in Buildings. Effects on Structures; and b) for human exposure, the acceptable vibration values set out in the Environmental Noise Management Assessing Vibration: A Technical Guideline (Department of Environment and Conservation, 2006).	<ul style="list-style-type: none"> CEMP (October 2018) Interview with site personnel 	<p>It was predicted that "<i>Based upon the location of the remediation work the buildings on the adjacent site are located within the safe working distance for cosmetic damage.</i>" Table 16 in the CEMP includes the following safe working distances of vibration intensive equipment will be used during the works for tracked mobile operating plant (excavator/crane):</p> <ul style="list-style-type: none"> Cosmetic damage – 3 m Human response – 13 m. <p>No complaints were received relating to vibration from the remediation works.</p>	Compliant	
	Remediation Works Conditions				
B41	The Applicant must ensure that: a) The development does not result in any queuing on the public road network; b) all vehicular movement to and from the site must be in a forward direction; c) the swept path of the longest vehicle entering and exiting the site, as well as manoeuvrability through the site, is in accordance with the relevant AUSTROADS guideline; d) all loading and unloading of materials is carried out on-site in designated areas; and e) vehicle manoeuvring areas must always be kept clear of any obstacles, including parked cars.	<ul style="list-style-type: none"> CEMP (October 2018) Interview with site personnel 	Traffic management measures are included in Section 5.7 of the CEMP. As construction was complete at the time of the Audit, the Auditors were not able to verify compliance; however, the Auditors have no reason to believe the requirements of the condition were not met.	Compliant	

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ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	Parking				
B42	The Applicant must provide sufficient parking facilities on-site, including for heavy vehicles and for site personnel, to ensure that traffic associated with the remediation works does not utilise public and residential streets or public parking facilities.	<ul style="list-style-type: none"> Interview with site personnel 	No complaints concerning traffic or parking were received. As construction was complete at the time of the Audit, the Auditors were not able to verify compliance; however, the Auditors have no reason to believe the requirements of the condition were not met.	Compliant	
	COMMUNITY ENGAGEMENT				
B43	The Applicant must consult with the community regularly throughout the remediation works, including consultation with the nearby and adjacent landowners, sensitive receivers, relevant regulatory authorities and other interested stakeholders.	<ul style="list-style-type: none"> Communications Strategy, rev3, 6 July 2020 CRG meeting agenda, 26 August 2019 CRG meeting notes, 27 May 2019 Letter to neighbours update 2019 dated 23/03/19 Letter to neighbours dated 19/02/19 Quarterly liaison meeting with EPA, 2 March 2020 	Community Reference Group meetings have included updates on the remediation works. CRG meeting agendas and meeting notes are available on the Orica website.	Compliant	
	PART C: ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING				
	MANAGEMENT PLAN REQUIREMENTS				
C1	Management plans required under this consent must be prepared in accordance with relevant guidelines, and include: a) detailed baseline data; b) details of: (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions); (ii) any relevant limits or performance measures and criteria; and (iii) the specific performance indicators that are proposed to be used to judge the performance	<ul style="list-style-type: none"> CEMP (October 2018) LTEMP, Rev 0 (May 2019) LTEMP, Rev 1 (May 2020) 	<u>CEMP (and sub-plans)</u> a) HSP – Section 5.9 AQMP – Section 5.1 ESCP – Section 5.3 b) CEMP – Section 1.4 HSP – Section 5.9 AQMP – Section 5.1 ESCP – Section 5.3 c) HSP – Section 5.9 AQMP – Section 5.1 ESCP – Section 5.3 d) Section 7.0 of the CEMP	Compliant	

Table A-2: Compliance with Development Consent SSD_7831

ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	<p>of, or guide the implementation of, the development or any management measures;</p> <p>c) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;</p> <p>d) a program to monitor and report on the:</p> <p>(i) impacts and environmental performance of the development; and</p> <p>(ii) effectiveness of the management measures set out pursuant to paragraph (c) above;</p> <p>e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;</p> <p>f) a program to investigate and implement ways to improve the environmental performance of the development over time;</p> <p>g) a protocol for managing and reporting any:</p> <p>(i) incident and non-compliance (specifically including any exceedance of the impact assessment criteria and performance criteria);</p> <p>(ii) complaint;</p> <p>(iii) failure to comply with statutory requirements; and</p> <p>h) a protocol for periodic review of the plan.</p> <p>Note: The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.</p>		<p>e) Section 7.0 of the CEMP</p> <p>f) Section 7.0 of the CEMP</p> <p>g) Section 7.0 of the CEMP</p> <p>h) Section 7.0 of the CEMP</p> <p><u>LTEMP</u></p> <p>a) Section 3.2 (soil contamination) and Section 3.3 (groundwater contamination)</p> <p>b) Section 1.2</p> <p>c) Section 5</p> <p>d) Section 9 (groundwater monitoring program including reporting)</p> <p>e) Section 6.2 of the LTEMP Rev1 includes contingency measures for maintenance procedures.</p> <p>f) Section 9</p> <p>g) The LTEMP does not specifically address incidents, non-compliances or complaints; however, these are addressed in other elements of the SHES management system.</p> <p>h) Section 9</p>		

Table A-2: Compliance with Development Consent SSD_7831

ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN				
C2	<p>The Applicant must prepare a Construction Environmental Management Plan (CEMP) to the satisfaction of the Planning Secretary. The CEMP must:</p> <ol style="list-style-type: none"> be approved by the Planning Secretary prior to the commencement of remediation works; identify the statutory approvals that apply to the development; outline all environmental management practices and procedures to be followed during remediation works associated with the development; describe all activities to be undertaken on the site during remediation works, including a clear indication of construction stages; detail how the environmental performance of the remediation works will be monitored, and what actions will be taken to address identified adverse environmental impacts; describe the roles and responsibilities for all relevant employees involved in remediation works associated with the development; and include the management plans required under Condition C3 of this consent. 	<ul style="list-style-type: none"> CEMP (October 2018) Orica email to DPIE submitting CEMP for approval, 12 October 2018. Letter from DPIE re Construction Environmental Management Plan and Sub Plans, 19 December 2018 	<p>A CEMP was prepared for the Project by AECOM in October 2018. The requirements under this condition were met as follows:</p> <ol style="list-style-type: none"> The CEMP was submitted to the Department on 12 October 2018 and approved by the Secretary on 19 December 2018. Included in Section 1.4 Included in Section 5 Included in Section 2.5 and 2.6 Included in Section 7.1 Included in Section 3 Refer to response to condition C3 below 	Compliant	
C3	<p>As part of the CEMP required under Condition C2 of this consent, the Applicant must include the following:</p> <ol style="list-style-type: none"> Containment Cell Management Plan (see Condition B3); Health and Safety Plan (see Condition B14); Air Quality Management Plan (see Condition B19) Erosion and Sediment Control Plan (see Condition B25); and Unexpected Finds Protocol (see Condition B30). 	<ul style="list-style-type: none"> CEMP (October 2018) 	<p>The requirements under this condition are included in the CEMP as follows:</p> <ol style="list-style-type: none"> Appendix D Appendix A Appendix B Appendix C Section 5.6 	Compliant	

Table A-2: Compliance with Development Consent SSD_7831

ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
C4	The Applicant must: a) not commence construction of the development until the CEMP is approved by the Planning Secretary; and b) carry out the construction of the development in accordance with the CEMP approved by the Planning Secretary (and as revised and approved by the Planning Secretary from time to time).	<ul style="list-style-type: none"> Interview with site personnel Letter from DPIE re Construction Environmental Management Plan and Sub Plans, 19 December 2018 	Remediation work commenced on 13 February 2019. Approval of the CEMP was received from the Department on 19 December 2018.	Compliant	
COMPLIANCE REGISTER TABLE					
C5	The Applicant must submit a Compliance Register Table to the Planning Secretary with any Environmental Management Plans, which details where the relevant conditions have been addressed within the Environmental Management Plan.	<ul style="list-style-type: none"> CEMP (October 2018) 	Table 1 in section 1.2 of the CEMP shows where relevant conditions have been addressed.	Compliant	
REVISION OF STRATEGIES, PLANS AND PROGRAMS					
C6	Within three months of: a) the submission of an incident report under condition C9; b) the submission of an Independent Environmental Audit under condition C15; c) the approval of any modification of the conditions of this consent; or d) the issue of a direction of the Planning Secretary under condition A2(b) which requires a review,	<ul style="list-style-type: none"> Interview with site personnel 	The Auditors note that C6 and C7 should be read together as one condition. None of the events referred to in C6 occurred during the Audit Period, therefore C7 has not been triggered.	Not triggered	
C7	The strategies, plans and programs required under this consent must be reviewed, and the Department must be notified in writing that a review is being carried out.				
C8	If necessary to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Planning Secretary. Where revisions are required, the revised	<ul style="list-style-type: none"> Letter from Orica to DPIE re: Notification of updates relating to Approval SSD_7831, 18 July 2019 DPIE email to Orica re: Orica Kooragang Remediation - Post 	Remediation Action Plan and other project documentation including Development Layout Plans were updated. An updated LTEMP (Rev 1) has been submitted to the	Compliant	

Table A-2: Compliance with Development Consent SSD_7831

ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	document must be submitted to the Planning Secretary for approval within six weeks of the review. Note: <i>This is to ensure strategies, plans and programs are updated on a regular basis and to incorporate any recommended measures to improve the environmental performance of the development.:</i>	Approval Document Received - (SSD-7831-PA-2), 15 May 2020 • Interview with site personnel	Department. The Department is awaiting Site Auditor sign off before approving.		
REPORTING AND AUDITING					
Incident Notification, Reporting and Response					
C9	The Department must be notified in writing to compliance@planning.nsw.gov.au immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one), and set out the location and nature of the incident. Subsequent notification requirements must be given and reports submitted in accordance with the requirements set out in Appendix 3.	• Interview with site personnel	No notifiable incidents have occurred to date.	Not triggered	
Non-Compliance Notification					
C10	The Department must be notified in writing to compliance@planning.nsw.gov.au within seven days after the Applicant becomes aware of any non-compliance.			Not triggered	
C11	A non-compliance notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.			Not triggered	
C12	A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.			Not triggered	

Table A-2: Compliance with Development Consent SSD_7831

ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	Annual Review				
C13	<p>Within three months after the first year of commencement of operation, and in the same month each subsequent year (or such other timing as may be agreed by the Planning Secretary), the Applicant must submit a report to the Department reviewing the environmental performance of the development to the satisfaction of the Planning Secretary. The review must:</p> <ul style="list-style-type: none"> a) describe the development that was carried out in the previous year, and the development that is proposed to be carried out in the current year; b) include a comprehensive review of the monitoring results and complaints records from the previous year, including a comparison of these against the: <ul style="list-style-type: none"> (i) relevant statutory requirements, limits or performance measures/criteria; (ii) requirements of any plan or program required under this consent; (iii) monitoring results of previous years; and (iv) the relevant predictions in the EIS and Response to Submissions; c) identify any non-compliances and any incidents which occurred over in the previous year, and describe what actions were (or are being) taken to rectify the non-compliance or incident and avoid recurrence; d) identify any trends in the monitoring data over the life of the development; e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and 		Remediation works were completed on 24 September 2019. The first Annual Review is due in December 2021.	Not triggered	

Table A-2: Compliance with Development Consent SSD_7831					
ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	f) describe what measures will be implemented over the next year to improve the environmental performance of the development.				
C14	Copies of the Annual Review must be submitted to Council and any interested person upon request.		Remediation works were completed on 24 September 2019. The first Annual Review is due in December 2021.	Not triggered	
Independent Environmental Audit					
C15	<p>Within one year of the commencement of operation, and every three years after, unless the Planning Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit (audit) of the development. Audits must:</p> <ul style="list-style-type: none"> a) be led and conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Planning Secretary; b) be carried out in consultation with the relevant agencies; c) assess the environmental performance of the development and assess whether it is complying with the requirements in this consent, and any strategy, plan or program required under this consent; d) review the adequacy of any approved strategy, plan or program required under this consent; and e) recommend measures or actions to improve the environmental performance of the development, and any strategy, plan or program required under this consent. 	<ul style="list-style-type: none"> • DPIE letter to Orica re: Independent Environmental Audit – auditor endorsement request, 17 June 2020 	This Independent Environmental Audit has been undertaken in accordance with this condition and is the first audit required.	Compliant	
C16	Within three months of commissioning an Independent Environmental Audit, or within another timeframe agreed by the Planning Secretary, a copy of the audit			Not triggered	

Table A-2: Compliance with Development Consent SSD_7831					
ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	<p>report must be submitted to the Planning Secretary and any other NSW agency that requests it, together with a response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Planning Secretary.</p> <p>Note: <i>The audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Planning Secretary.</i></p>				
	Monitoring and Environmental Audits				
C17	<p>Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification and independent environmental auditing.</p> <p>Note: <i>For the purposes of this condition, as set out in the EP&A Act, "monitoring" is monitoring of the development to provide data on compliance with the consent or on the environmental impact of the development, and an "environmental audit" is a periodic or particular documented evaluation of the development to provide information on compliance with the consent or the environmental management or impact of the development.</i></p>			Noted	

Table A-2: Compliance with Development Consent SSD_7831

ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	ACCESS TO INFORMATION				
C18	<p>At least 48 hours before the commencement of construction until the completion of all works under this consent, the Applicant must:</p> <p>a) make the following information and documents (as they are obtained or approved) publicly available on its website:</p> <ul style="list-style-type: none"> (i) the documents referred to in condition A2 of this consent and the final layout plans for the development; (ii) all current statutory approvals for the development; (iii) all approved strategies, plans and programs required under the conditions of this consent; (iv) regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent; (v) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs; (vi) a summary of the current stage and progress of the development; (vii) contact details to enquire about the development or to make a complaint; (viii) a complaints register, updated monthly; (ix) the Compliance Reporting of the development; 	<ul style="list-style-type: none"> • Orica website: https://www.orica.com/Locations/Asia-Pacific/Australia/Kooragang-Island/Environment---Safety/Remediation#.XztlT-hLq2w 	<p>The required information is available on the Orica website. A Complaints Register is not available; however, there have been no complaints in relation to the remediation works.</p>	Compliant	

Table A-2: Compliance with Development Consent SSD_7831					
ID	COMPLIANCE REQUIREMENT	EVIDENCE COLLECTED	INDEPENDENT AUDIT FINDINGS AND RECOMMENDATIONS	COMPLIANCE STATUS	NC#
	(x) audit reports prepared as part of any independent audit of the development and the Applicant's response to the recommendations in any audit report; (xi) any other matter required by the Planning Secretary; and b) keep such information up to date, to the satisfaction of the Planning Secretary.				

APPENDIX B
INDEPENDENT AUDIT DECLARATION FORM

INDEPENDENT AUDIT DECLARATION FORM


Project Name:	Orica Ammonium Nitrate Expansion Project and Remediation Works
Consent Number:	MP 08_0129 and SSD_7831
Description of Project:	Expansions of manufacturing facility and remediation activities at the Orica Kooragang Island facility.
Project Address:	15 Greenleaf Road, Kooragang Island, Newcastle, New South Wales
Proponent:	Orica Australia Pty Ltd
Title of Audit:	Orica Kooragang Island 2020 Independent Environmental Audit
Date:	31 August 2020

I declare that I have undertaken the Independent Audit and prepared the contents of the attached Independent Audit Report and to the best of my knowledge:

- the Audit has been undertaken in accordance with relevant condition(s) of consent and generally in accordance with the *Independent Audit Post Approval Requirements (Department 2018)*;
- the findings of the Audit are reported truthfully, accurately and completely;
- I have exercised due diligence and professional judgement in conducting the Audit;
- I have acted professionally, objectively and in an unbiased manner;
- I am not related to any proponent, owner or operator of the project neither as an employer, business partner, employee, or by sharing a common employer, having a contractual arrangement outside the Audit, or by relationship as spouse, partner, sibling, parent, or child;
- I do not have any pecuniary interest in the audited project, including where there is a reasonable likelihood or expectation of financial gain or loss to me or spouse, partner, sibling, parent, or child;
- neither I nor my employer have provided consultancy services for the audited project that were subject to this Audit except as otherwise declared to the Department prior to the Audit; and
- I have not accepted, nor intend to accept any inducement, commission, gift or any other benefit (apart from payment for auditing services) from any proponent, owner or operator of the project, their employees or any interested party. I have not knowingly allowed, nor intend to allow my colleagues to do so.

Notes:

- a) Under section 10.6 of the *Environmental Planning and Assessment Act 1979* a person must not include false or misleading information (or provide information for inclusion in) in a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is false or misleading in a material respect. The proponent of an approved project must not fail to include information in (or provide information for inclusion in) a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is materially relevant to the monitoring or audit. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000; and
- b) The *Crimes Act 1900* contains other offences relating to false and misleading information: section 307B (giving false or misleading information – maximum penalty 2 years imprisonment or 200 penalty units, or both).

Name of Auditor:	Victoria Sedwick
Signature:	
Qualification:	Exemplar Global Lead Auditor Accreditation No.13180
Company:	Ramboll Australia Pty Ltd
Company Address:	PO Box 560, North Sydney NSW 2060

APPENDIX C

PLANNING SECRETARY AUDIT TEAM AGREEMENT

Nathan Robinson
Senior Specialist
Orica Kooragang Island
PO Box 80
Mayfield NSW 2304

By email only: nathan.robinson@orica.com

16/06/2020

Dear Mr Robinson

**Orica Ammonium Nitrate Expansion Project (MP08_0129)
Independent Environmental Audit – auditor endorsement request**

I refer to your request (MP08_0129-PA-4) for the Secretary of the Department of Planning, Industry and Environment (the Department) to approve a suitable qualified, experienced and independent team of experts to undertake the 2020 Independent Environmental Audit (IEA) for the Orica Kooragang Island Remediation Project in accordance with Schedule 2, Condition 52 of Project Approval 08_0129, as modified (the approval).

The Department has reviewed the information provided in accordance with the conditions of the approval and subsequently endorses the following audit team:

- Victoria Sedwick (audit oversight, contamination advice and peer review);
- David Ford (auditor);
- Greer Laing (noise and air quality specialist); and
- Taylor Jackson (auditor).

The IEA must be prepared, undertaken and finalised in accordance with conditions of the approval. Further, the Department requests, under Schedule 2, Condition 4 of the approval, that the auditors consider the recently released *Independent Audit – Post Approval Requirement* (Department 2020), available on the Department's website, including the use of compliance descriptors "compliant", "non-compliant" or "not triggered" only (<https://www.planning.nsw.gov.au/Assess-and-Regulate/About-compliance/Compliance-policy-and-guidelines/Independent-audit-post-approval-requirements>). Failure to meet these requirements will require revision and resubmission.

In accordance with Schedule 2, Condition 52 of the consent, within one month of the audit, a copy of the audit report must be submitted to the Planning Secretary (via the Major Projects website), together with a response to audit recommendations (RAR) contained in the audit report. Please ensure the RAR includes responses to all non-compliances and auditor recommendations with clear timeframes (dd-mm-yyyy) for implementation of the proposed corrective action.

Finally, please ensure this correspondence is appended to the IEA report.

If you wish to discuss the matter further, please contact Joel Curran, Senior Compliance Officer on (02) 4904 2702 or compliance@planning.nsw.gov.au

Yours sincerely

A handwritten signature in black ink, appearing to read 'H Watters', with a stylized, cursive script.

Heidi Watters
Team Leader Northern
Compliance

As nominee of the Planning Secretary

Nathan Robinson
Senior Specialist
Orica Kooragang Island
PO Box 80
Mayfield NSW 2304

By email only: nathan.robinson@orica.com

17/06/2020

Dear Mr Robinson

**Orica Kooragang Island Remediation Project (SSD-7831)
Independent Environmental Audit – auditor endorsement request**

I refer to your request (SSD7831-PA-3) for the Secretary of the Department of Planning, Industry and Environment (the Department) to approve a suitably qualified, experienced and independent team of experts to undertake the 2020 Independent Environmental Audit (IEA) for the Orica Kooragang Island Remediation Project in accordance with Schedule 2, Part C, Condition 15 of SSD 7831 (the consent).

The Department has reviewed the information provided in accordance with the conditions of the consent and subsequently endorses the following audit team:

- Victoria Sedwick (audit oversight, contamination advice and peer review);
- David Ford (auditor);
- Greer Laing (auditor); and
- Taylor Jackson (auditor).

The IEA must be prepared, undertaken and finalised in accordance with conditions of the consent. Further, the Department requests, under Schedule 2, Part A, Condition A3 of the consent, that the auditors consider the recently released Independent Audit – Post Approval Requirement (Department 2020), available on the Department's website, including the use of compliance descriptors "compliant", "non-compliant" or "not triggered" only (<https://www.planning.nsw.gov.au/Assess-and-Regulate/About-compliance/Compliance-policy-and-guidelines/Independent-audit-post-approval-requirements>). Failure to meet these requirements will require revision and resubmission.

In accordance with Schedule 2, Part C, Condition C16 of the consent, within three months of commissioning the audit, a copy of the audit report must be submitted to the Planning Secretary (via the Major Projects website) and any other NSW agency that requests it, together with a response to audit recommendations (RAR) contained in the audit report. Please ensure the RAR

includes responses to all non-compliances and auditor recommendations with clear timeframes (dd-mm-yyyy) for implementation of the proposed corrective action.

Finally, please ensure this correspondence is appended to the IEA report.

If you wish to discuss the matter further, please contact Joel Curran, Senior Compliance Officer on (02) 4904 2702 or compliance@planning.nsw.gov.au

Yours sincerely

A handwritten signature in black ink, appearing to read 'H Watters', with a stylized, cursive script.

Heidi Watters
Team Leader Northern
Compliance

As nominee of the Planning Secretary

APPENDIX D

SITE INSPECTION PHOTOGRAPHS



Photo 1: Ammonia plant looking south.



Photo 2: Ammonia storage tank within concrete bund.


Title:	2020 Independent Environmental Audit	Approved: VS	Project-No.:	Date:
Site:	15 Greenleaf Road, Kooragang Island		318001004	August 2020
Client:	Orica Australia Pty Ltd			



Photo 3: Bulk aqueous ammonia loading (left) and IBC storage shed (right) with nitric acid plants NAP 2 and NAP3 in the background.



Photo 4: Stormwater first flush system on western side of site, looking south.


Title: 2020 Independent Environmental Audit	Approved: VS	Project-No.: 318001004	Date: August 2020
Site: 15 Greenleaf Road, Kooragang Island			
Client: Orica Australia Pty Ltd			



Photo 5: Weighbridge (left) and loading silo for road bulk load out of ammonium nitrate. Prill tower (centre) and ammonium nitrate plants (right) in background.



Photo 6: New boiler installed during the Audit Period.


Title:	2020 Independent Environmental Audit	Approved: VS	Project-No.:	Date:
Site:	15 Greenleaf Road, Kooragang Island		318001004	August 2020
Client:	Orica Australia Pty Ltd			



Photo 7: Ammonium nitrate plants (left) looking north. NAP1 stack in background (right).



Photo 8: Effluent pond with single liner.


Title: 2020 Independent Environmental Audit	Approved: VS	Project-No.: 318001004	Date: August 2020
Site: 15 Greenleaf Road, Kooragang Island			
Client: Orica Australia Pty Ltd			



Photo 9: Containment cell looking west with surface water catchment in foreground; ammonia storage tank (left rear); and neighbouring cement facility (right rear).



Photo 10: Western edge of containment cell showing monitoring wells either side of cut-off wall and berm for surface water management at top of slope.


Title:	2020 Independent Environmental Audit	Approved:	Project-No.:	Date:
Site:	15 Greenleaf Road, Kooragang Island	VS	318001004	August 2020
Client:	Orica Australia Pty Ltd			



Photo 11: Containment cell looking north east with fence and surface water catchment in foreground.



Photo 12: Containment cell signage.

Title:	2020 Independent Environmental Audit	Approved:	Project-No.:	Date:
Site:	15 Greenleaf Road, Kooragang Island	VS	318001004	August 2020
Client:	Orica Australia Pty Ltd	